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WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, September, 1925 No. 1

Annual Convention of Fruit, Flower and Vegetable Show Eau Claire, November 18, 19, 20, 1925.

Three days' program touching every branch of horticulture.

Equal to a college course and much cheaper. Come.

PROTECTION FOR ROSES

Some of the papers on rose growing presented at the Annual Convention have been printed in Wisconsin Horticulture from time to time and others will be included in the Annual Report which will appear soon.

There still remains a portion of the discussion, reporter's transcript too lenghty for the report but altogether too good for the waste basket. There might appear to be no necessity for this preliminary statement but we want our readers to take this for just what it is, a "give and take" round-table talk at the convention. If more of our members could know how much of this valuable talk goes on at our conventions, so much of it that cannot be reduced to readable matter for our paper, more would attend.

PROF. HOTTES: I always dislike to start a talk by apologizing but the whole subject of rose growing has been covered just enough so that I do not know where to begin. I will leave the meeting open to you to ask questions on rose growing. Perhaps you have some questions on the method of growing roses, something about telling the suckers of the root stocks.

I came all the way from Ohio to tell you about varieties of roses and I hear that you can't grow roses because all the best ones are so tender. I'll bet if I lived in Wisconsin I would keep some of the choice roses alive. I know a man who kept a Marechal Neil rose alive; he covered it with a bushel basket, filled with straw, and covered the basket with a load of manure on top of that. If you protect them right you can surely have more roses than rugosa. I would move away if I couldn't grow anything but rugosa.

Question: Why do roses grown in the house start to open and then finally wilt away.

Prof. Hottes: Of course we do not exactly know what it is due to. I should think the worst pest would be red spider. Our houses are too hot and dry to grow roses unless we spray them. The only way to grow roses in your home is to have a little alcove built out from your living room so that you can fill it with plants and thus get a great deal of moisture thrown into the air.

I will tell you a little about raising roses from slips. At home there are several of us have done it successfully. If you will examine any stem of roses you will see that at the bottom of this stem there are leaves that have only three parts or maybe four or five and as you go up you have these five or seven parted leaves until you get to the top where you have three-parted leaves.

The part of the stem at the top with small leaves should be rejected as being useless for a cutting. The florist makes cuttings which have only two or three eyes, but you in open ground cannot root them successfully from such short slips or cuttings. We have found that the shoots are best just when the flower starts to open and then use any part of the stem except the tops where that soft wood is with the three-parted leaves. I would prefer to have a slip that is about six inches long in which you make your cut with a knife. Don't try to break it, make a clean cut.

Insert it in the sand or soil, deep enough to allow one eye protruding from the soil. Don't put it in ordinary soil, at least mix some sand with the soil, and after a short time you will find the roots being developed. When that happens you will find a little shoot starting to grow, providing you confine the atmosphere. You can make fifty and put in a soap box and cover it with a window pane or you can make 2 or 3 and cover with a quart jar to confine the atmosphere.

To protect it for the first winter. At Columbus we always cover the jars or boxes with corn fodder or manure or anything to absolutely shade it for the winter so that no rays of light get in to start this into growth too early and our little cuttings always live over perfectly; they are well rooted.

Providing you use a box of sand instead of putting it in soil we would merely let them get rooted and then move it to a good place which is well drained, planting it in the soil and they will usually live over winter nicely that way, but I suppose as good a way as any would be to use sandy soil.

Mr. Moyle: Does that apply to all roses?

Prof. Hottes: One man has practically a whole rose garden he has propagated that way.

I would prefer a budded rose because the budded roses have stronger roots and therefore they always seem much stronger than the other. The budded roses have larger roots to start with and shoots coming from them are always larger, the stems are longer and are superior in every way.

I used to live in New York state where our conditions are pretty cold and where the trial grounds of the American Rose Society are and I believe they have the same roses that you have here. The list of roses from Minneapolis are the same roses we have and with us there is no difference in the hardiness.

Mr. Brown: The climatic line puts Minneapolis in with northeastern Iowa and southwestern Wisconsin. We are in the same line climatically as Duluth. Mr. Moyle is near the Lake and in the same latitude as Minneapolis.

Prof. Hottes: Under these conditions my opinin of the hardiness is worthless, because I do not know about your climatic conditions.

Stadler: I am 40 years in that business, and I have raised roses in the old country. They have a better kind than here; they must cover them all in the old country. Here in Wisconsin we got to cover them ourselves. Some people use too deep covering and some they do not know the right way to cover them.

Prof. Hottes: Do you think soil is a bad thing to cover them with?

Stadler: Soil is the best.

Prof Hottes: That is what I say. I take the soil out of my flower beds and cover them about eight inches deep. I have my roses in

beds about five feet wide; I take the soil from the sides and heap it into the center then after the soil is frozen get cornstalks and put them over the rose tops. I use corn fodder rather than manure because I find the corn fodder is heavier; I us all my garden trash to shade this and if one can shade the tops in our climate one prevents the alternate freezing and thawing which is the worst thing that harms roses in the spring.

Mr. Brown: Have you got any of those short-tailed mice in your country?

Prof. Hottes: No sir. We live in God's country.

Mr. Brown: When we use corn fodder the mice come in and take all the bark off of our roses.

Stadler: I will tell you how. Lay them down, bending under the ground, and slant the next one in the same direction and cover with dirt. There is no mouse chewing. In the spring the roses look just as green as in the fall.

Prof. Hottes: We have to be careful in using leaves, because they will ferment and mold. The corn fodder is loose and therefore just shades them enough.

Lady: My cuttings do not produce the same colored rose that was on the stock I planted as a slip.

Prof. Hottes: Are you sure? Are you sure you remember the color correctly? We do not believe that roses change much from the slip. Growers propagate thousands of them and there might be one in thousands that would sport. If you had one of those it was very rare and I think that some cuttings grew and you looked at the wrong one.

I can talk about roses but I do not know about your climatic conditions. Might there not be some question about roses that has no reference to the degree of temperature!

Mrs. Strong: I would like to have Professor Hottes give us some names of desirable roses, because we do not all believe what Mr. Moyle says. Conrad F. Meyer grew wonderfully for me and I am a neighbor of Mr. Moyle's. Of course *he* cannot grow them but *we* can.

Prof. Hottes: Pink Radiance and Red radiance are two of our best roses in Columbus. We can get the long stems and never have buds that do not open. A rose which is away up in popularity and is beautiful with us is the the variety Ophelia but we find that Ophelia fades too fast in our hot sun and so we grow Madam Butterfly, which is just a deeper sport of the Ophelia. Frau Karl Druschi is a thing of beauty with us. In my mind it is one of the most prolific roses in existence and the bush has a habit of showing a nice little spray of green back of the bloom. When we have a rose show in Columbus, Ohio, there will be at least six persons who bring in these Frau Karl Druschi that will surpass anything in the way of color and I think that that would be the one bush which I would have in spite of the fact that Radiance is a pink rose. After pruning I find that Frau Karl Druschi to produce these good stems must be pruned like a hybrid tea. In that case I get fewer blooms but they are worth taking to the rose show, and after that they produce other roses later in the season, when the other people have none. I always cut back the strong shoots when they get up high. I pinch back the top and they branch. Sometimes the growth is so strong that it becomes vegetative instead of floral. I pinch it out again at the tip about one-half and by fall I am sure to get about four roses on each of those strong shoots, and I can't see why anyone wants their rose bush much taller than 3 feet when they are in a rose bed and yet some of those shoots will often grow very tall.

I can't use that treatment with the J. B. Clark because it is too strong a grower and never produces blooms more than once.

Mr. Moyle mentioned the Hugonis. I think it is one of the most wonderful; it blooms in May instead of June. Harrison's yellow is of course a good rose but Hugonis blooms before anyone else has roses, the branches are lined with yellow roses. It does very nicely with us and I should imagine it would stand up here. It grows slowly with us but after the first few years the plants increase in size.

My favorite climbing rose is Dr. Van Fleet; I am very fond of Tausendschön but I am much fonder of a new improvement of it which has never faded. It is always a rose pink. It is a new variety known as Rosiere, produced by Mr. Dick Witterstaedtter of Cincinnati; it came as a sport from Tausendschön.

Paul's Scarlet is a climber and is a wonderful scarlet rose. I suppose when they cast another vote for the most wonderful climbing rose that Paul Scarlet may receive the vote. Silver-Moon is the kind of rose people like who love single roses; it is a pure white with a cup of golden stamens in the center. Take Elizabeth Ziegler if you are interested in a rose like Dorothy Perkins but which will blossom after the others are gone. Excelsa is one of the best climbing roses in existence. American Pillar is the most popular climbing rose in England. Duchess of Wellington is the most successful of the Salmon roses. Everybody has been glad to pay $2.50 and $3 for the plants of Souv. Claudius Pernet. This has been perfectly hardy with us in Columbus and everybody seems to be very much charmed with it. It has a black eye when it opens. It is hardy with protection. The Los Angeles is no good in Columbus, although it is beautiful in Cincinnati. We have never been able to get much from it. It has a most wonderful color. Jonkheer J. L. Mock is a two-color rose. It is an especial favorite of mine because it lasts longer in the garden than any other variety. The flowers will stay on the bush from one to two weeks without dropping their petals. Lady Ursula is another successful pink rose with us.

Question: In your climate, does it freeze through the protection?

Prof. Hottes: Yes, but the covering protects it from the sun in the spring. Our soil is frozen about six inches deep in the winter

so that surely it would freeze through the protection, but the protection keeps the sun from thawing it out so quickly in the spring.

Mr. Livingston: I have had a good deal of experience with roses in my garden. I fill in the soil in the fall and leave them that way until the ground is frozen hard and then the mice cannot get in and I have had no further trouble with the mice. They cannot burrow in through that half frozen ground.

Prof. Hottes: That is when I put my protection on because I try to keep my ground frozen by the use of the cornstalks. It is a mistake to put the soil and covering material on at the same time.

Question: Would you advise propagating the Rugosa roses by cuttings or seed?

Prof. Hottes: Pretty hard. Never had any luck. Usually grow them by seed except the Rugosa varieties and they propagate these cuttings by having the plants in greenhouses in the winter. They are rooted in pots.

Mr. Toole: How about root cuttings for some varieties? We have moss roses that we are not able to propagate except by root cuttings. Would that work with the rugosa roses?

Prof. Hottes: Any rose that suckers is supposed to propagate very well from root cuttings.

Mr. Moyle: It is a continual fight to keep down the suckers.

Prof. Hottes: We do not have them in such great percentage in Ohio.

Member: I have had some hybrid teas for several years and now and then a sprout will come along.

Question: Do you have any difficulty in telling the suckers from the regular rose?

Mr. Moyle: As a rule do you prefer budded hybrid teas?

Mr. Hottes: This is a subject that causes more controversy than any other point. Advocates of own-root and budded roses will stick to their preference just the same as to their religion. Everybody has his convictions, and you are just born with it or without it.

Mr. Moyle: You are right, largely. Now I want you to tell them why this foreign stock is better. There is more than one reason why they use this foreign stock for the roses in greenhouse work.

Prof. Hottes: In greenhouse work the grafted stock is much better for the first year and out of doors it has a stronger root system for the first year and then in the greenhouse we feel that a grafted rose will be quite apt to be more subject to black spot early in the season because they are making too rapid growth. I do not know whether that is true out of doors.

Mr. Moyle: It is generally conceded that wild roses are more free from root gall and other fungus diseases; they are more vigorous and therefore with the wild stock they avoid to a certain extent the diseases on their own roots.

Prof. Hottes: I want to be fair about this but it just looks to me that that strong growth from budded roses is the reason I like them.

Mr. Brown: What we want here is a rose root that will stand 20° to 25° below zero.

Prof. Hottes: Well, I suppose multiflora is the hardiest stock you can use. Rugosa is hard to work with.

Mr. Moyle: If you can get some of these scientific men interested in this hybridization and produce something that we can grow in Wisconsin without protection your name will be registered on the highest pillars of the land.

Prof. Hottes: I would not think it wise for me to usurp the ability of Mr. Moyle. I would not think it wise to pass it up to Ohio; we do not need rugosas. I do think rugosa roses are beautiful substitutes for shrubs, for parks it is something neater than the wild rose and has beautiful flowers. That is a wonderful asset.

What do you know about the conditions rugosas like? They don't do so well in Columbus, they look yellow. Why do they look yellow?

Mr. Moyle: It must be a condition of your soil; generally speaking, they are very successful in Wisconsin, Minnesota and Iowa wherever you plant them, in trying locations. We set our hearts on them and our pocket books on them. There are locations in Wisconsin where the soil is quite acid also where there is more limestone soil than where I am located.

Prof. Hottes: We have limestone soil and our rugosas look yellow.

Question: What is the best stock for budding tree roses?

Prof. Hottes: The stock most commonly used is the rugosa. The Canina stock is used in England but it is not hardy enough here. Can you handle the tree roses here? We have great difficulty with them. What about them, Mr. Moyle.

Mr. Moyle: We can grow them only as we dig them up and store them in the cellar.

Mr. Toole: I would like to ask about winter weather conditions. We have varying conditions as in other states and from central Wisconsin northward a heavy snowfall and our experience is that in the northern part of the state it comes early enough so that there is very little freezing of the ground and stays so late in the spring that they can grow a great many things where it is much colder than here where we have a lesser snowfall. I do not know whether there is anyone here who has had experience up there but do you think that they could grow things there we could not grow here?

Prof. Hottes: I imagine those are the conditions they have around Auburn, New York. Where I am at Columbus many things are not hardy with us that are hardy in New York state. Our winters are open in Columbus and the ground is not frozen for any length of time. It will be all thawed out one day and frozen the next so that I should think a good snow would be a good protection and there would be less danger from their freezing out.

You are invited to send suggestions for the winter meeting program. What have you? This is an open market.

SPEEDING UP SEEDS AND CHECKING UP ON THEIR VITALITY

"Taking the gamble out of agriculture" is a proposition that works for every one's welfare. And the fundamental gamble in farming is the seed sown; whether you are working under glass or on a thousand acre ranch. Think of the nurseryman who buys 20,000 dollars worth of seed from abroad, plants them, waits and works a year, and finds out that most of the seed had no life. This really happened. Think of the buyer of wheat seed, and the uncertainty attending this first step toward a "crop", with all the hazards of wind and weather to follow, to say nothing of insects and disease.

Out at Yonkers, New York, there is a nine acre "experimental plot," with a million dollars worth of laboratories, greenhouses and equipment, manned by thirty-five specialists, all employed in this very occupation of studying the laws of plant life, with a view to increasing production. The Boyce Thompson Institute for Plant Research among its many lines of work has in the short time since its dedication in the fall of 1924, made some notable contributions along this line, especially in seed control. A few simple facts have put both speed and certainty into the purchasing and planting of seed.

There has been no quick way of determining the vitality and germinating power of seeds. Prompt delivery and immediate planting meant a costly hazard for the farmer. Now within 12 hours, by a method devised at the Boyce Thompson Institute, seed vitality can be determined, and know whether you are investing labor, time and fertilizer in dead seeds or live ones. Nothing high-browed or abstract about that, is there?

This is the secret of it. All living tissues produce a substance called catalase which is able to split up hydrogen peroxide into water and oxygen, which it does with the foaming that you notice when pouring peroxide on a cut. (This, by the way, doesn't mean infection necessarily; it may only mean you are alive!) Unfortunately, the catalase may remain active after the seed dies. BUT, if you soak seeds in water at the temperature of 126 degrees for 2 hours (or for 12 hours at 90 degrees F) a live seed will produce the foaming just the same, but a dead seed will not, or at least the activity will be greatly reduced. So one may quickly tell the "sheep from the goats" in the seed world; separate the good from the bad seeds, by this simple test of determining the rate at which a given weight of ground seed will free oxygen from hydrogen peroxide; first soaking the seeds in water as described.

While long time germination tests will still have their place as before (some take months or even years), this quick test will be a godsend in the seed trade when quick sales and decisions and deliveries must be made. No matter how seeds have been injured, by age, heating or freezing, this test shows them up.

Another simple but tremendously valuable contribution made recently at the Boyce Thompson Institute, lies in the discovery of the fact that control of temperature will speed up the germination of seeds. Rose seeds for example have usually been sown in beds and subjected to the changes of temperature of the seasons, with the result that they take several years to germinate. Now if these same seeds are kept at a constant low temperature (about 41 degrees F) results may be obtained in four months. Reflect on what this means to the nurseryman awaiting the results of tests in hybridizing, for example. These two discoveries alone have been said, by practical nurserymen, to be worth more to the industry than the Boyce Thompson Institute will ever cost, despite the millions invested in it.

Boyce Thompson Institute for Plant Research, Yonkers New York.

FRUITS FOR LINCOLN COUNTY

A subscriber who lives in Lincoln county asked advice about varieties of tree fruits for his locality. We wrote him as follows: "For twenty years this Society maintained a trial orchard at Wausau. You are in practically the same latitude as Wausau and the best varieties there should the best for you. The five varieties which proved fully hardy and bore heaviest were: Duchess, Dudley, Hibernal, McMahan and Patten Greening. These are all early fall apples. The Hibernal should never be planted except in localities so severe that nothing else will survive as the fruit is scarcely eatable except when well ripened. Patten Greening bears heavily but is not high in quality. Dudley is a very good fall apple. So is the McMahan but the fruit is very delicate and cannot be shipped long distances. Everybody knows the Duchess. Of these varieties Duchess ripens first by a few days and the others are bunched. Wealthy never amounted to anything at Wausau, Northwestern was a little better.

Any crab apple will do well in Lincoln County. Hyslop, Virginia and Martha are good. Don't plant Transcendent on account of tendency to blight.

A few trees of plums will be all right but not over fifty. Plant Hawkeye, Forest Garden, De Soto and Waneta. Do not plant any cherries.

I am sending you some literature and hereby extend an invitation to you to become a member of our Society."

You may be surprised to find that your neighbor never even heard about the State Horticultural Society and WISCONSIN HORTICULTURE. If not convenient for you to tell him send us his name.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curatory of Botany Public Museum, Milwaukee, Wis.

EUROPEAN POTANICAL GARDENS

(Continued from August, p. 182)

The Lyon's gate entrance is on the Kew road but the fartherest one toward Richmond. Coming in by this entrance, the first noticeable exhibit seen is the rose garden. This is maintained in a sunken area that was made from an old gravel pit and is planted with rambler and wild roses. Close by this is a botanical collection of the leguminosae, or pod-bearing plants, some of which are the brooms, gorses, the honey locusts and black locusts. In this same neighborhood is a refreshment pavilion and in the neighborhood of that is a pergola of vines and wisterias, a collection of horse-chestnuts and maples. Across the pagoda vista is a great assemblage of trees and shrubs belonging to the Rose family. The Rose family is one that has the largest number of shrubs and trees in it. Besides the roses themselves, there are cotoneasters, hawthorns, spiraeas, crab-apples, mountain ashes, peaches, cherries, plums and smaller shrubs. The western boundary of the Rose family area is made by the holly walk.

There are two gates that give entrance to the Kew Gardens from the Thames River, called the Brentford and the Isleworth ferry gates. Near the Brentford gate are collections of elms, poplars and birches. Just inside the Isleworth ferry gate is a collection of conifers, pines, spruces, firs, yews, and so on. The most attractive feature in this neighborhood is the lake. This is a body of water about four and a half acres in extent, which was excavated in 1851. It is filled from the Thames River by means of two culverts at times of high tide. Here may be seen hardy waterlilies and marsh or swampy plants. One of their favorite show pieces is a specimen of a bald cypress (Taxodium distichum) which may be seen growing with its roots and several feet of its stem in the water, as it naturally grows in the southeastern part of the United States.

Although we made four or five separate trips to the Kew Gardens, we do not claim to have seen the whole of the two hundred and eighty-eight acres, but we do appreciate the fact that such a wonderful collection is available for the botanists of the world. The English people themselves seem to take a great deal of pride in the garden, and many of them know the plants by their scientific names, as we discovered while listening to their comments.

While the Kew Gardens are the main botanical gardens of England, there are of course other gardens worthy of mention—the Edinborough Gardens in Scotland and in London itself there are three or four fair-sized botanical gardens. One of these is the South Kensington Garden, which is nearer to the heart of London than the Kew Garden. At the South Kensington Garden the planting is more on the conventional type. Practically every one of the castles that are used by the royal family have their own botanical garden, and in some of these places one can see even better examples of rock gardens than he can at the Kew Gardens themselves. There was an especially charming bit of rock garden work at the Windsor Castle. Another old castle that is not used now as a royal residence and has not been used since the time of George IV, is Hampton Court Palace. Most of the Americans who visit England go out to see the Hampton Court Palace. The palace and its grounds were given to the retainers of the King who had taken care of this ground for centuries. It was given to them to cultivate and raise produce to sell. They must also keep it in as near the original shape as it was when it was used for a royal residence. It forms another one of those outdoor breathing spots for the week-enders and is very largely patronized by the Londoners themselves. They make a trip through the palace and see all of the old time oil paintings and furniture just as it was in the days when it was used. The paintings are kept up in the same manner and everything is labeled with metal labels just as it is in Kew Gardens. It would seem as if they had tried to make a rival of the Kew Gardens. There is a wonderful avenue of horse-chestnut trees about a mile in length, and it is called the "Leafy Drive." When the horse-chestnuts are all in bloom, it is quite a sight for the Londoner. They have made better use of the water here than they did at the Kew Gardens; they have established culverts and take the water for the canals from the Thames River at high tide periods. The main canal is nearly a mile long and there are two side laterals that wind about the ground. On these canals may be seen swans with a cygnets swimming around among the water flora, such as the lotus and water lily. The vista from the central upstairs window of the Hampton Court Palace is wonderfully pleasing as one looks down on this long canal and midway between the palace and the beginning of the canal one sees a fine fountain all bordered around with daylilies. Besides the usual plantings of annuals and perennials in beds, there is a hedge of box, enclosing the Old World Gardens, which is very wonderful with its statuary and floral layout.

In a hot-house near the Old World Gardens, may be seen a very old and large vine which produces hot-house grapes. The seperate bunches of fruit of this vine are sold once a year at auction. It is conducted by the King, for the benefit of the orphan asylums of England. At this time a separate bunch of grapes will bring as much as five thousand dollars. No va-

riety of grapes will mature in the open in the British Isles, therefore all of their grapes have to be grown in hot-houses. Many people, in fairly ordinary circumstances, have their own greenhouses attached to their dwelling and raise their own hot-house grapes. While they are large and fine, their flavor is not so superior and hardly equal, we think, to some of the Californian grapes, but the prices they command are certainly greater than any of our own grapes. Just an ordinary price is half a crown a pound (about seventy cents in our money).

The English people are very strong for their week-end recreation, and on Saturday and Sunday the Hampton Court Palace is swarming with the citizens of London. As we walk to the edge of the palace grounds, we can see something of the boating on the Thames. There is an excursion boat, a power boat, a single rowboat with sculls and all of the varied life of the River Thames. Many houseboats are also to be seen and many clubs, where the Londoner spends his week-ends.

The consequence of those fine botanical gardens can be seen all over England. During the summer months, the succession of flower shows and exhibits is practically unbroken. The Royal Horticultural Society alone holds fortnightly shows, that is, every two weeks, and these shows are as large and important as some of our annual flower shows in this country. Not only this, but in every city of any size. in the country, one will see horticultural clubs staging prize exhibitions. We recall one very creditable show that was staged by the railroad employees at the city of Hull, England. There they had a sort of a community garden such as we had in this country during the war, and these railroad employees were allowed plots of ground for growing their garden truck and flowers. The flower show was staged at one of the buildings near the roundhouse and it certainly contributed its share towards beautifying a usually very sordid lot of property. One would find it quite impossible to attend just the important horticultural shows and flower shows in England during the summer time. One man, whom we met, Mr. Thomas Stevenson, Director of the Lowe & Shawyer commercial flower growers, had been doing a great deal of lecturing at these shows, but found his commercial work becoming too pressing to keep up the lecturing. There were plenty of other other lecturers to take his place and most all of this lecture work is done gratis. Even the museum men told us that they were well paid for a lecture when they got the equivalent of five dollars. *(To be continued)*

GARDEN LORE, BY A GARDEN LOVER

The following breezy bit of garden gossip is from a woman who has the care of so many children "she doesn't know what do do" and yet finds time for a garden.

"Is there *anything* so much fun as having a garden? Even a poor stick of a splotchy affair like mine, that never *can* get itself planted according to the plans that I "pleasure" myself with making during the frozen months. *That's* where you get the real thrills, the garden!

When I go out in the lovely sunrise time, to pull weeds, I can see little Mr. Ground Squirrel marauding in the wild flower garden under the cherry trees. He stretches up tall between the Cardinal flowers and the Solomon's plumes, his little paws on his little pit-a-pat, and his little cheek pouches absurdly stuffed out with my cherry seeds, and thrashes his funny little tail at me.

Then a dazzling Ruby-throat zips past my ear and hovers over the Scarlet Bergamot,—then dashes away chasing a robber fly clear off the plantation.

Then as Leaf Cutter Bee comes along—a sort of Oxford Gray little buzzer, with tones pitched lower and sassier than the honey bee, and spoils my phlox blossoms by neatly snipping out oval after oval, which he grasps with his legs, bent up slightly under his naughty little "tummy" and carries off, to where-for what?

Then, after his nightly travels around the garden, Mr. Hoptoad digs himself in among the larkspurs, an almost invisible clod himself, but with a very lively tongue.

Then I go down the row to inspect my cabbages, and find snuggling under a protecting Savoy, a darling blue-eyed Speedwell. *How* I'd like to hear the story of its travels! And how did the dainty little Scarlet Pimpirnel, — Poor Man's Weather-glass,—come to be playing barometer among my Mignonette instead of telling the New England fisherman whether to take out his smack or spin yarns on shore until more element weather? *So many* things I want to know!

Yet my lambs think I know *'most everything!*

I've annexed a baby one, and narrowed down my life almost to the vanishing point as far as any social duties are concerned. *Isn't* it too bad that I haven't sense enough to feel sorry for myself, but just let my friends do it for me?

These lambs are required to dress very simply,—we are trying to develop a "soul above buttons" and establish interests in more substantial things than "wimples and crisping pins".

I laid out a plain little dress for one wee lamb to put on the other day, and she raised such earnest dark eyes to me, saying "Aunt Jeano, there is a ribbon that goes with this dress. It is *perfectly vacant* except for that bow!"

They are all tucked in their little beds and sleeping—(they're *so* good when they're asleep!) and I've inflicted some scribbling on you, (I should have a portable typewriter for the sake of my friends) and now my day is over,—or should be—, for I'm in for a stiff day tomorrow. Wish I *might* go to Bayfield, but it is out of the question this time. Maybe the winter meeting will be nearer at hand.

I'll owe you something if you wade through this before feeding it to the bale, won't I?"

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Advertising rates made known on application.

THE ANNUAL CONVENTION

The Annual Convention or winter meeting will, as previously stated, be held in Eau Claire Nov. 18th-19th-20th. This is the first time in twenty-four years that the winter meeting has been held elsewhere than at Madison. The move is in the nature of an experiment. If it works out all right we will select some other up-state city next year, if not we will come back to Madison. Those who favored the change argued that Eau Claire, Green Bay or any other place than Madison would draw larger crowds; that our programs and exhibits were too good to waste on the very slim attendance furnished by Madison and Dane county. It is true the local attendance has been light for many years. Out of a population of fifty thousand in Madison at least one thousand a day ought to view the Exhibits and two hundred a day attend the exercises. Eau Claire with a population of one-half that of Madison has promised us just that and we have every reason to expect they will make good.

The ball room of the Hotel Eau Claire will be used as our convention room and the Exhibits staged in the spacious lobby. In this way we will all be under one roof all the time.

The general plan of the fruit exhibit will be quite different from that of past years. No premiums will be offered for plates of apples. Only two hundred dollars in cash prizes will be offered for fruit. Trays may or may not be used as the superintendent of exhibits may direct.

Four silver cups will be awarded on fruit and two on flowers, to be suitably engraved. Cash premiums (not less than last year) will be awarded vegetable exhibits.

At least fifty bushels of apples will be purchased for demonstration purposes.

The competitive feature is not eliminated only changed in character.

Save apples only in peck or bushel lots and only of standard varieties not to exceed ten. The apple premium list appears on back cover.

THE PROGRAM

As stated in a former issue the long standing policy of paying expenses of those who were invited to take part in the proceedings at conventions has been revoked by the Board of Managers.

In the opinion of some members this leaves the secretary "up in the air"; won't be any program, etc., etc. Maybe not. And then again, maybe. Time will tell. In the meantime the secretary hereby asks in good faith for volunteers. Any one and every one who reads this is invited to write the secretary stating what he has to offer at the annual meeting to be held at Eau Claire Nov. 18–19–20.

If you have had success in any line tell us, for that is the spirit of the day. If you have encountered difficulties come and tell us about them. There will be a place on the program for you and some one there to help you.

You may think you have nothing of importance to offer but if you will sum up your accomplishments for the past five or ten years you may be surprised to find that you do know something that you can swap for something the other fellow knows.

The secretary is optimistic. Of two thousand members there **must** be one per cent who are willing to take a chance that they will break even on this proposition, that they will get at least as much as they give. Any horticultural topic will be considered, commercial or amateur. Who will be first?

THE STATE FAIR

So far as we are concerned it consists of the Horticultural building, the County Exhibits building and the dining hall. The taxi-cab stand may also be mentioned.

The exhibits of the various divisions of the State Department of Agriculture including Dr. Fracker's were housed in the "Education" building formerly the Automobile building.

At last! Superintendent Rasmussen broke open the north end of the Horticultural building and added a tent. At that there wasn't enough room. The building was packed with high class exhibits, in quality the highest ever shown in thirty years, which is as far back as our experience goes.

There would seem but little opportunity for improvement in quality and certainly none in quantity until a larger building is erected but ample opportunity in other directions. This subject is discussed elsewhere in this issue so why re-

peat it here. If we can only summon nerve enough in 1927 to walk up to the Legislature and demand a new building all will be well.

CONGRATULATIONS SOLICITED

He is real. Not the shadow but the substance. His name is James S. Potter from Illinois. Every other state horticultural society has a secretary but few, very few secretaries have a real assistant. Therefore we solicit congratulations.

I visited three professors of horticulture, all old friends, at three state universities, Ohio, Indiana and Illinois and each introduced to me so many likeable young men that I wanted to engage every one of them. Our finances would not permit this so I invited Mr. Potter to come. He is here. He is young, about twenty-four I should judge, that wonderful age; all life before him, ambition, enthusiasm, determination. He is looking the world straight in the eye, unafraid and asks no odds in the battle. Will he win? There is only one person who can answer that question and his name is James S. Potter. —F. C.

I'M GLAD TO KNOW YOU

When a fellow leaves his native haunts and goes into a strange country he feels as though he is going into the next world. Or maybe he don't know what to expect. At any rate he wants to find that the people that inhabit the place to which he has come will be glad to see him and that the sun still sets in the west when a good day is done.

I came up here to Wisconsin from Illinois. I've spent some of my life in the vicinity of Quincy, Illinois, where they raise some flowers, more apples, lots of berries, and more hogs. And the folks there are all right. And then I've spent some time around the University of Illinois, learning the reason for doing things as well as how to do them; and the reason why things happen, as well as that they happen. And I liked the people there all right. Then I went down into the fruit and vegetable country in Illinois called "Little Egypt", not because it is a "Land of Darkness", but because they can raise bigger and better fruit and vegetables down there. There's also a twelve acre farm planted to Gladioli each spring down there, by the way. And the folks down there are fine. And then came the chance to come up here to Wisconsin.

I started making your acquaintance up in Bayfield. I kept on meeting you all the way down the state until I landed here in Madison and since then I've tried to keep on meeting you. I met some of you at the State Fair, where I saw that beside having good people you have good crops. I want to know more of you, and know you better. The fact is that I'm James S. Potter, the newly appointed assistant secretary of your Society, and I'm glad to know you. Mighty glad. I hope we have a long friendship.

The Garden Book is no longer available. We contemplate getting out a new edition. Suggestions are in order.

PROCEEDINGS

Meeting of the Board of Managers Bayfield Aug. 19, 1925: Present, Pres. Toole, E. S. Leverich and and Secretary.

The following bills were audited:

K. Anna Caspers services	$ 4.85
L. C. Smith Typewriter Co.	1.90
J. E. Leverich Traveling Expenses	38.11
M. B. Goff Traveling Expenses	27.70

Adjourned to meet in Eau Claire Aug. 27th.

The following bills were audited ad interim:

(Note: To save expense of a Board meeting, when no other business is up except audit of bills the vouchers are forwarded by the secretary to the president by mail who in turn sends them to the Vice President who in turn sends them back to the Secretary. These in the future will be listed as 'interim" bills.—Secretary.)

F. Cranefield, trav. exp.	$ 59.00
Blied Office Supplies Co.	1.70
The Neckerman Agency, Notary Bond	3.00
Wisconsin Nurseries, plant premiums	28.00
W. A. Toole, trav. exp.	8.48
H. C. Christensen, trav. exp. delegate Ill. Soc.	32.51
Supt. Public Property, Typewriter	84.00
Supt. Public Property, misc.	2.48
Printing Board 170.84	
2300 June Wisconsin Horticulture	66.16
10,000 Envelopes (Ann. report)	84.36
Misc. printing	20.32
Printing Board, 6 engravings	25.37
F. Cranefield, trav. exp.	7.90
J. T. Fitchett, plant premiums	11.25
W. A. Toole, plant premiums	34.75
Blied Co., office supplies	1.50
Elliott Addressing Mch. Co., Stencils	15.06
Oshkosh Hort. Soc., premiums	25.00
D. E. Bingham, trav. exp. Ann. Convention	49.85
W. A. Toole, trav. exp.	8.61
State printing Board....117.97	
2250 copies July W. H.	65.10
Engravings	49.88
Misc. printing	2.99
F. Cranefield, trav. exp.	45.16

Meeting Board of Managers Eau Claire Aug. 27th.

Present: President Toole, Leverich, Cranefield. On invitation of Mr. Art. Hedquist, secretary of the E. C. Civic Association the Board met in conference with

(Continued on page 13)

THE BAYFIELD MEETING

This was the best summer meeting we have had for many years. Sounds familiar but none who has attended meetings for the past five or six years but will agree.

The program was rather narrow in range but it seemed to exactly suit the audience. The local attendance was good and close attention was paid to every speaker.

Many thanks are due the Bayfield Township Community Club for use of their community club auditorium and many, many more to the women of the Community Club who brought food for the hungry, appetizing, substantial food, all you wanted and lots left over, a regular meal.

Breezes were blowing across the Channel Thursday morning but not too strong to discourage the visiting horticulturists from taking the boat trip among the islands, — excepting only two.

Thursday afternoon was spent in visiting Mr. John Hauser's flower farm as well as exploring various berry farms. So a pleasant time was had by all.

COMMERCIAL HORTICULTURE

We are going to try to fill a long felt want by devoting space in WISCONSIN HORTICULTURE to the problems of commercial horticulture. We want it to embrace all the phases of commercialism; planting, growing, cultivation, spraying, harvesting, marketing, and last but not least costs.

In order to do this we must have material which will be of interest to the commercial man, and we do not feel that this can be done without the help of some of the men themselves. We might publish material which we think would be of current interest, and then have a dozen letters come in telling us that the whole thing was very uninteresting. And so our first request is that all people who have commercial problems write to us and tell us about them. This will give us some idea as to what is wanted. We have had several requests for this department, and now we are going to try to make it, and make it a good one.

We will try to bring together the various districts in Wisconsin which are devoted to commercial horticulture We will try to have the growers in the Kickapoo district on speaking terms with the grower in the Bayfield district. The exchanges of opinions as to methods of getting the most out of horticulture may help to make this state what it should be, a commercial area composed of several groups working in harmony with each other. We want you to feel free to discuss your problems through this department with people who have had the same problem and have solved it.

The long winter months are coming. They are the months when we start thinking about what's to take place during the next growing season. You will probably have a lot of interesting thoughts. If they are interesting to you, they will probably be interesting to someone else. If they are questions, send them in. If we do not know the answer we will find out what it is. The answers which you will get through us will not be based on guess-work, they will be the facts in the case drawn from the most reliable sources of information to which we may have access.

All right, now. What is it? Fertilizer, cultivation, harvesting, pruning, thinning, spraying, dusting, packages, marketing varieties, or what is it? We shall also print articles from outside sources which we think will interest you, but if this commercial department is to be a going concern which will pay dividends on the investment, you commercial growers are going to have to help to make it so.

Did you receive the letter we sent you about your membership?

IT CAN BE DONE

In the August number I commented at considerable length on present and past methods of exhibits of fruit at conventions and fairs mainly a criticism of present methods. Such criticism will be of little or no value unless fortified by some suggestions for improvement.

In the first place I have no thought of the elimination of premiums or prizes, the competitive feature.

Even if we set up as an ideal a purely non-competitive exhibit, one intended to be wholly educational and attractive aesthetically we would find it very difficult to reach this goal at least without great expense until we can change the trend of thought of fruit growers so as to correspond to our ideal.

Nor do I believe that the elimination of competition is either desirable or necessary to meet the ends sought.

Let us then have competition but let's modify it; substitute trophies for cash premiums. In European countries this is the established policy and I am confident it serves to create a deeper and more lasting effect in improving the character of exhibits and interest in the production of high class products than do cash premiums. Money received for premiums is spent and nothing remains but a casual mention in a newspaper or magazine. The trophy whether cup, medal or signed ribbon is of lasting value.

Changing the character of the awards from cash to trophies is one thing but not the big thing. What I want to see is a change in the character of the Exhibits a change that will, I believe, help everybody. I want an exhibit of apples, for example, that means something more than that John Jones found in his orchard 5 Duchess apples or a tray of Duchess superior to any that Mr. James Smith could find in his orchard, these apples shut off from any close inspection by the public by railings or other barriers. I want an exhibit that

will serve to increase the sale of apples by acquainting the consumer with the desirable qualities of the different kinds; an exhibit that will increase the desire to grow apples for the apple's sake if you get what I mean. In other words an exhibit that will be of value to others than the exhibitors as is now the case.

I want the exhibit staged in such a way that every one may approach the fruit, see, smell, handle and taste it. It can be done. I want signs, real signs that tell the truth in the fewest possible words about varieties. I want the fair or association staging the exhibit to have a competent person in charge every minute of the day to answer questions. It can be done.

As it is now exhibits are of but slight value to the exhibitor and of practically no value to the consuming public or the grower who does not exhibit. It can be done.

All of this applies to flower and vegetable exhibits equally well.

Mrs. Strong has led the way at the state fair. Her department this year although it lacked adequate signs was the only really educational exhibit in the horticultural building. The flowers were grouped as annuals, perennials, bulb stock, etc., and Mrs. Strong was on the job every hour of every day to answer questions, to encourage the home owner who has only a scrap of land to grow flowers, to help the ones who have gardens over the rough places and in a thousand other ways to instil in the hearts of people the love of flowers. At the same time every bit of work she was doing helped the professional growers across the aisle. Rich and poor alike love flowers and buy flowers and plants.

In floral exhibits we need the gorgeous, beautiful flowers and floral creations such as shown at the state fair this year by the professional florists. We need every bit of it. It was worth going to the fair to see that transcendently beautiful wreath of lilies, the fountain playing on it. The great vases of tea roses, the corsage bouquets and all the rest. Such a spectacle is worth while. But and again But; is it enough? Cannot something be done to teach us how cut flowers can be used to advantage? The table decorations help, a little, not much, but there are other ways to use flowers in the decoration of our homes. The florists know best what their ways are and are the ones best fitted to teach us. Must amateurs force it on them? It can be done.

In conclusion it should be stated that this and previous articles state the personal opinions of the Editor and do not necessarily reflect the opinion of the society management. These columns are open at all times to expression of opinions by members or others.

FREDERIC CRANEFIELD, *Editor.*

BAYFIELD BLIGHT

The apple growers of Bayfield county are pretty well discouraged over the blight situation but there is really no occasion for such deep discouragement. They look upon it as a sudden visitation, devastating in its effects from which the orchards will never recover. Not so. Some of the trees up there will look worse than the kid who has lost about half of his milk teeth after the blighted branches are cut out next spring but like the kid the tree will grow and 2 or 3 years hence you would never know there had been any blight. This is no sudden visitation of Nature dropping out of the sky on Bayfield orchards. The blight has been there for years awaiting the combination of weather conditions and growth best fitted to its most rapid development. It will *not* proceed in 1926 with the intensity of 1925. It will subside. There is neither sense nor reason in cutting out blight during the growing season, we are all agreed on that. The dead stuff will be cut out next spring and in doing so let's hope, also, most of the "holdover" cases lurking in the trees. That, at present, is our only salvation, to catch the hold-overs some of which will be very much in evidence early next spring on the trunks and larger branches, sticky, exuding cankers, others will not be so evident. If we could catch all of them as well as the ones in our neighbors orchard we would be free of blight at once. In the meantime let's do the best we can and don't be scared. The blight like the poor is always with us, always has been but we have kept right on growing apples in spite of it.

To the scientists who are studying blight we say, "strength to your good right arm;" keep on, we will help you but please don't view the situation with too much alarm, warn us but don't frighten us, we have heart trouble.

COMING!

A friend who formerly lived in Wisconsin and is now in Virginia writes: "The Garden Club movement in this state is a joy to observe. All the small towns have Garden Clubs which means larger flower gardens, flower shows and garden interests. The states all over the country have them and the Garden Club of America which includes only a few from each state has 68 clubs as members. Wisconsin and Madison seem a little behind in the game."

Yes, dear friend, we are behind in the game not a little but several scores. But we are coming! We have been planning for years, watching plays and taking notes. When the W. S. H. S. gets in the game, which will be very soon, dust will fly. We will give Virginia as well as the conservative eastern states a run for their money. Out here is "Where the West Begins." We are coming!

We have a few surplus copies of the 1923 Annual Report. We will send a copy to anyone who sends the names and addresses of three prospects.

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

TRANSPORTING TREES AND PLANTS

Every summer there have been hundreds of automobiles driven by tourists carrying a small bundle of evergreen trees or other trees and shrubs that have been dug up from the woods with the hope of beautifying their homes grounds with them. Sometimes they were purhased from the property owner or sometimes received as a gift, but too often they have been stolen. Unfortunately we have several serious insects and plant diseases which attack these native grown plants. Our state government has recognized the importance of restricting such plant movement and has provided a nursery inspection law, Section 1494 — 10d (2), which reads:

"It shall be unlawful for any person —— —— to remove or ship from a nursery or other premises any nursery stock unless such stock has been officially inspected and a certificate or permit has been granted by the inspector as hereinbefore provided.

Section 1494—1 (c) "The term nursery stock shall include all ————trees, shrubs, vines, cuttings, and grafts————and other plants and plant products for propagation."

Either evergreen or hardwood trees or shrubs may be infected with serious fungus diseases, such as the white pine blister-rust and the poplar canker; or they may be attacked by insect pests such as the elm or oak borers, or the scale insects, without any visible signs of injury in the early stages. In our control work with the San Jose scale insect in the Southern part of the State we found that practically every infestation could be traced to some plum or apple tree that had been given away by some good hearted and well meaning friend.

It is for this reason that digging, removing, selling, giving away, or transporting trees or plants anywhere in the State of Wisconsin are covered by the statute, and that surrounding states have passed similar measures. The owner, therefore, has no authority to grant permission for the transporting live plants without the inspection certificate. Other localities may suffer great losses by the introduction of such organisms.

Express and postal employees are not allowed to accept for shipment any nursery stock not bearing the inspection certificate.

In an attempt to stop the tourists from transporting trees and shrubs on the running boards of the cars, the State Department of Agriculture has erected large signs along the roadside on all the principal highways warning them against violating the state laws. Most trees and shrubs dug in the summer months will not survive the shock of transplanting, and with the treatment that most tourists give them they have no chance at all. Once the roots dry out they are worthless. Why waste the native landscape?

Anyone desiring to ship trees or shrubs, will, upon application before July first, be given an inspection without cost, and if the plants are found to be free from dangerous insects and plant diseases, a per will be issued for the moving of them. Single bundles may be shipped to the State Entomologists office, express prepaid, for inspection, and, if found clean, will be forwarded to any address, express collect. On account of the white pine blister rust quarantine no white pine can be shipped into Illinois, Michigan, Minnesota, and other states maintaining such quarantines.

Once understand the working principle of things and there is no uncertainty: the rest is mere detail.

HORTICULTURE

Who ever invented the word anyway? The dictionary makers wished it on the Latins, *horti* from Greek meaning garden and *cultura* to cultivate. We can't swallow it, neither the word nor the story of its origin. That partly hidden reference to Greek lends plausibility to a theory we have long held viz. and to wit.: Some ancient, very ancient, Greek feeding in his garden, his mouth full of pomegrates, ambrosia and pickles, gathered in a red-hot pepper by mistake and began to holler for help. What neighbors heard sounded like h-o-t-h-e-l-l-cultura which translated meant, "bring me a nice cool drink X X X Henneseey, and don't loiter on the way." Thru centuries the word has of course undergone many changes but it's just as ugly a mouthful as ever. Just try to say it over and over and see if it doesn't sound something like I said the Greek said.

"Green Isle local horticultural society!" Can't blame people if they hesitate to start something like that. Just mention "Garden Club" and watch em lick their chops.

SPRAYING THE BLACK RASPBERRY FOR ANTHRACNOSE

Q. In controlling the anthracnose on the black raspberry, which spray is the most efficient, lime-sulphur or Bordeaux?

Ans. One was about as effective as the other. I think Bulletins recommend lime sulphur because ordinarily that is a little easier to handle, at least it was deemed so by some of those who were spraying. We find it much easier to pour one gallon of lime sulphur into ten gallons of water than to take blue vitriol and lime and mix up the bordeaux according to directions. It is advisable to add a sticker of some kind, because raspberry canes are sometimes glossy and the sprays do not stick to them very well, so a sticker and spreader sometimes helps a little bit.

A TREE CENSUS

How many trees in your city or village? Is it worth while to know? How may the count be made without great expense? All of these questions and several others have been answered in Madison The Madison Forestry Association has asked the common council to pass an ordinance for the protection of street trees, the ones standing between sidewalk and curb. A count of these trees seemed to be an essential feature of the program but no means of accomplishing it seemed feasible until Mr. A. W. Siemiers, chief of four hundred Boy Scouts pledged their aid and within a week the count was made with no expense involved except for printing the cards used by the scouts in checking.

The count served at least two purposes; it formed a basis for argument in favor of the ordinance and more important the count in connection with newspaper notices attracted the attention of the people of Madison to their trees, set them thinking about trees and that's worth while. In addition to counting, block by block, the Scouts classified the trees as to size as shown by the card. This was all in a day's work for the Scouts. They were not forced to do it by their Scoutmaster, they wanted to do it; they were anxious to perform this service for the city, the true Scout spirit.

While we are not authorized to speak for Scouts in other cities we have no doubt that they would gladly undertake the job.

Boy Scout Tree Census, _____, _____
(Name of City) (Date)

	_____Street between_____and_____
Very Large	
Large	
Medium	
Small	
Very Small	

Scout_____ **Troop**_____

ANOTHER GRAPE JUICE RECIPE

Editor WISCONSIN HORTICULTURE: In the August number of Wisconsin Horticulture I notice a receipt for making GRAPE JUICE, and as many here make this article by a much simpler method I thought some of your readers might like to try it.

On a separate sheet I am enclosing the way it is made up here and also in some other parts of the state.

We find this method makes a far better quality than any other we know of.

Yours truly,

PAUL BROWNE.

Wash the grapes and pick from the stems, using only the firm, whole, well ripened grapes.

Sterilize mason jars and tops and rubbers. One cup of grapes to a quart mason jar and add ¾ cup of sugar. Fill jar with boiling water, put on top and stand jar aside for six to eight weeks. After that time you will find as fine grape juice as was ever made.

The amount of sugar will depend on how sweet one likes the drink as more or less may be used.

In using it, it is well to add a little water to each glass and a little lemon juice, which, to many, adds to the flavor.

A thirty cent basket of grapes will make about twelve cups and the sugar will cost very little, so one gets about twelve quarts of grape juice at a cost of around four to five cents a quart.

As this method is so simple and the quality so good we much prefer this way of making the article.

PROCEEDINGS

(Continued from page 9)

County Agent Stauss, several business men of E. C. and fruit growers of E. C. county. Following discussion it was decided to hold the convention at the Hotel Eau Claire the exhibits to be staged in the lobby and mezzanine floor.

The dates of the meeting were fixed as Nov. 18th, 19th and 20th.

The secretary was authorized to prepare for exhibits on the following (tentative) basis: $100 for purchase of fruit; $100 for trophies and $100 cash premiums.

WHAT WE HAVE ALWAYS SAID

For years we have enjoyed correspondence with one of our Milwaukee members, asking and answering questions about the back yard flower garden, gossiping as only gardeners can. Not so long ago we dropped a card to "S. J." about his asters and another about attending the Summer Meeting at Bayfield. In reply he says, in part:—

"Your two letters of July 16 were forwarded to me here, for which I wish to thank you. I should like very much to attend the summer meeting at Bayfield, but I don't believe I shall have finished my work here by that time.

I have good news from home to the effect that my asters seem to be doing fairly well.

I wish I could devote more of my time to the study and culture of flowers, or fruits and vegetables. My interest, of course, extends far beyond my back yard garden. But I started life as an accountant and auditor, and I suppose my living will always come from that source, although at heart I would rather be a horticulturist, both from the point of making a living as well as making a life, which after all is the ony thing worth while.

The profit making element will always be the most important in business, but it is sordid in most of its aspects. *At any rate, it seems to be less evident and less emphasized in horticulture and floriculture than in most other lines.*"

Very truly yours,—S. J.

THE GEM WE SOUGHT

At the end of a long dissertation on Society affairs in the July number we said:—

"Here is another nugget but whether pure gold or merely mica you may judge: If we expect to "get" we must "give." May I add, if you have already "got" you ought in common courtesy be willing to "give." There is something in the Scriptures about that, I wish I could remember what it is."

Now here comes our good friend Chas. Uhlik of Zion, Ill., sending his dollar for renewal of membership and,—"the nuggett you were looking for is in St. Luke 6th Chap., 38th verse leaving it to us to look it up.

"Give and it shall be given unto you; good measure, pressed down, and shaken together, and running over, shall men give it into your bosom. For with the same measure that ye mete withal it shall be measured to you again."

MAKING A LAWN IN AUTUMN

Proper drainage of a lawn is very important. If water stands on the lawn because of surface grade or wet clay soil winter killing will often result due to the lack of oxygen in a saturated soil. Level up the surface so it will drain easily and if necessary lay underdrains, using four-inch tile two and one-half feet deep with a drop of one-eighth of an inch to the foot. A grade of one-sixteenth inch to the foot is safe if the tile is carefully laid.

Soil should be as near a good garden loam as possible and at least three inches deep. It is true that one can greatly improve a lawn by regular and generous top dressings of screened compost or rotted manure but the best time to get a good lawn soil is while you are preparing the lawn and before you put on the seed. Good old fashioned stable manure is still the best remedy for a poor soil.

Whenever the soils are not sour and where bluegrass is already the common field and lawn grass, the easiest and most sensible thing to do is to sow a bluegrass-redtop or white clover mixture.

Wherever the soils are acid and Rhode Island bent is growing naturally you may use any of the finer leaved bents or fescues. There is a distinct advantage in the use of these grasses, because the lawns where they exist can be kept free from weeds by using sulphate of ammonia.

Seed with Kentucky bluegrass and redtop, four pounds of the former to one pound of the latter or substitute one-quarter pound white clover for the redtop if preferred. Rake lightly to settle the seed into the soil and then cross seed in the opposite direction, making a total application of five pounds of seed per 1000 square feet. This is a little more than two hundred pounds per acre but is none too heavy.

The reason for using redtop or white clover with the bluegrass is because bluegrass is a poor starter. Both redtop and white clover start quickly and will cover the ground the first year while the bluegrass is getting underway. Usually it would be unsatisfactory to seed with bluegrass alone because the weeds would get in before the bluegrass could cover the ground. Redtop will be crowded out by the bluegrass during the second or third year but white clover will hang on longer. On such places as grass walks, tennis courts or putting greens white clover will stain shoes and clothes and is entirely too soft and slow.

—Horticulture, Boston, Mass.

KEEPING CIDER SWEET

Cider once more has become a popular beverage, after a period of disrepute because so many owners insisted on having it "hard." The younger generation was long unacquainted with the delicious flavor of cider when it was sweet or had turned just enough to have a little tang to it, while remaining within the legal zone of one-half of 1 per cent.

Cider was a difficult subject to handle in years past because it always insisted on "working" at a rapid gait unless checked by some chemical preservative against the use of which a strong and in most respects wise prejudice had grown up. Cider ought to be a universal drink because of its wholesomeness, its

Annual Convention

Eau Claire

November 18, 19, 20, 1925

Three day program, eight sessions, twenty or more speakers.

Commercial fruit growing, the small orchard, small fruits for the home and the market, raspberry mosaic, fire blight.

Flowers, shrubs, and vines for the home; roses, gladioli, dahlias, are some of the subjects that will be discussed.

Roads will be good, weather will be fine, Everybody going.

Big exhibit, fruit, flowers, and vegetables assured.

delicious flavor and the ease with which a supply may be made at home.

It may easily be preserved from "working" and acquiring the mule kick so well known to the early settlers and their immediate descendants. It is now bottled or "canned" much after the manner of canned fruit and it keeps quite as well. Chemical preservatives, such as the salicylic acid, boric acid, formic acid, benzoic acid and sulphurous acid are not necessary.

The good old apple juice fresh from the mill with all its bouquet and fresh flavor needs only to be sterilized to become as healthful as the apple itself. To keep the cider all year and have it as fresh and delightful in spring as in fall, put it on the stove and heat it to the boiling point. But do not let it boil. This slow heat usually is ample for sterilization. It should then be bottled hot, the bottles being sterilized. Placed in a cool place it will keep as well as any other fruit juice. It has been preserved by the cold-pack method successfully, using patent bottles with a seal to be pulled tight after heating.—*Horticulture.*

A DELPHINIUM FALLACY

In the issue of Horticulture of June 15th in the article on Delphiniums the usual suggestion is made to cut back after each flowering season in order to promote new bloom. This is one of the greatest heresies in all horticulture and permeates practically all books and articles on horticultural subjects. The complaint is frequently made that Delphiniums are short lived, particularly the named varieties received from abroad, and the chief reason for this is the treatment of the plants after flowering. The proper procedure is set forth in the admirable booklet which is being distributed by Horticulture, "Delphiniums and How to Excel with Them," by that unexcelled horticulturist, A. J. Macself. The following are extracts from page fourteen of that booklet:

One of two grave mistakes is often made when the Delphinium blooms have lost their beauty—the one is to leave the faded spikes to weaken the root stock by developing a vast quantity of seed, a task that is exhaustive in its demands upon the vitality of the plant, and the other is to cut the whole growth, flower-stalks and herbage, right away almost to the ground level. The loss of a plant's foliage whilst still in full vigour robs it of its respiratory organs.

Moreover, in all herbaceous plants it is Nature's rule that as the leaf naturally fades a proportion of the nourishment it contains but no longer requires shall return to the rootstock to be stored up in the crowns from which next season's growth shall emerge, thus forming a reservoir supply of nourishment to meet the needs of the young shoots until new foliage shall sufficiently develop to absorb nourishment from the atmosphere. To cut away the foliage whilst still in full vigour consequently robs the plant of the food store that will be required in early spring. Plants that are thus cut down before their time will generally make a desperate effort to retrieve their loss by send-

ing up new shoots and producing a new array of foliage, very often the second growths even throwing late flowers.

So common an occurrence is this that many growers deliberately cut down their plants in summer with the sole object of inducing second flowering late in the season, but this practice is so detrimental to the health and vigour of the plants that it should only be allowed in the case of plants the grower is not anxious to preserve for stock or for a further year's growth.

The proper treatment after flowering is to cut away the flowering stem just far enough below the basal flower-stalks to let the end of the remainder of the stem be hidden by foliage.—*Horticulture.*

QUITE SO! QUITE SO!

A country editor, having worked hard for thirty years, retired with $50,000 capital. He explained as follows:

"I attribute my ability to retire with $50,000 to the fact that I worked very hard and saved every cent—and to the death of an uncle who left me $49,999.50."

Comparatively few men are able to stand on their own convictions: but they all are willing enough to sit on somebody else's!

"The only people who Fail are those who take a Sedative and go to sleep on the Track when they see Trouble Coming.—Elbert Hubbard.

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, October, 1925 No. 2

KEW GARDENS, ENGLAND
(Photo by Huron H. Smith)

ANNUAL CONVENTION

LABORATORIES AND GREENHOUSES, BOYCE THOMPSON INSTITUTE AT YONKERS, N. Y.

BOYCE THOMPSON INSTITUTE

Philanthropy which means progress in some direction is always praiseworthy. Colonel William Boyce Thompson, a western pioneer, a retired Army officer, and a lover of nature's wonders has entered the lists of men who have given that more might be learned of these wonders. He has endowed the Boyce Thompson Institute for Plant Research to the extent of six million dollars.

The Boyce Thompson Institute was founded and endowed in the belief that "the knowledge of the fundamental principles of plant life will make the broadest possible contribution to the future welfare of mankind". It is located in Greystone on the Hudson, Yonkers, New York. It is equipped with the finest of laboratories and the most able of scientific workers. As its Director the Institute is fortunate in having Dr. William Crocker. On the staff are such eminent men as Dr. Coulter, formally of the University of Chicago, Dr. F. E. Denny, and numerous other men of ability. The Institute not only strives to find the fundamentals of plant growth within its own walls, but it cooperates with other experimental stations. It tries to find out the things that we need to know in order that we may be more successful in "plant agriculture."

Some of the interesting problems which are being given attention are: the relation of plant growth to lights, chemicals, and temperatures; the study of plant diseases, which includes the long neglected study of diseases of ornamental plants; the conditions surrounding seed germination; the relation of gases to plant development; and the study of economic insects. To try to outline the scope of the Institute's work in a small space would be as absurd as trying to crowd the State of Texas into the boundaries of Rhode Island. The results of the work are of importance to florists, gardeners, orchardists, and grain growers, amateur and professional.

If it were possible at this time to describe the wonders of the interior of the laboratories it would be well worth while. The cut of the laboratories and greenhouses in this issue of WISCONSIN HORTICULTURE is printed through the courtesy of Director Crocker, and shows the start of a huge quadrangle of laboratories which will be the seat of activity for the three hundred acres of experimental grounds which is hoped to be realized in the future.

This is a step forward in this

FRUIT, FLOWER AND VEGETABLE EXHIBITS

age of complicated plant culture. The results of the work in the Institute are put out from time to time in press bulletin form and such of them as are of interest to our readers will appear in WISCONSIN HORTICULTURE.

Dr. L. R. Jones, of the University of Wisconsin, is one of the Trustees of the Institute.

ROSE BUGS

We have with us, always, aphis, green or greenish "lice" which cluster on buds and the newest stem growth. No use trying to poison them; they don't eat, they suck. Hit them with tobacco extract, "Black Leaf 40," 1 to 1,000. One of those little push guns with a fruit jar reservoir is good. A whisk broom is better then nothing at all, a little.

Also we have thrips, always we have thrips. Thrips are not so green; live bottomside, that is below, on the underside of the leaves; they jump. If you are a good shot you can sometimes bag them. Try it. Get down on your knees and shoot up. For leaf roller and the little varmint (worm) that also works bottomside making pretty road maps on the topside of the leaf use thumb and fore finger.

In conclusion please take notice that this is not a scientific treatise, just a leaf from a amateur's note book. F. C.

"To rise above mediocrity requires enthusiasm and a determination not to be satisfied with anything short of one's ideals."

If by any chance this should turn out to be an eight page paper it will be largely because we have a feeling that you do not care to read much at this time of the year. If we are mistaken let us know.

PROGRAM

Annual Convention State Horticultural Society, to be held at Eau Claire, Wisconsin, Wednesday, Thursday, Friday, November 18th, 19th and 20th, 1925.

Hotel Eau Claire, headquarters.

"The week before Thanksgiving"

The following program is subject to revision. No less than is here offered, probably more, will be given.

WEDNESDAY FORENOON

9:30 O'clock

(1) Greetings—Mayor of Eau Claire.
(2) Introduction of Delegates from Minnesota and Illinois Societies.
(3) Flighty Vistas Around the Home—C. E. Carey, Professor of Landscape Gardening, U. of Minnesota.
(4) Diseases of Ornamental Plants—Prof. R. E. Vaughn, Div. Plant Pathology, U. of W.
(5) Variation in Tree Growth—Dr. R. H. Roberts, Dep't Horticulture, U. of W.

WEDNESDAY AFTERNOON

(1) How I Sell My Apples—R. A. Irwin, Lancaster, Wis.
(2) Wholesale and Retail Selling—C. A. Dutton, Galesville, Wis.
(3) Selling—Alfred J. Gunderson, Cleveland, O.
(4) Selling Wisconsin Berries, and Muskmelons—W. P. Jones, Division of Markets.
(5) Wisconsin Fruit on The Minneapolis Wholesale Market—A Minneapolis Wholesale Fruit Merchant.
(6) What We Think of Wisconsin Fruit on the Chicago Market—A Chicago Dealer.
(7) Discussion.

WEDNESDAY EVENING

(1) Program by Women's Auxiliary, Mrs. W. A. Toole, President.
(2) Illustrated Lecture. (Subject announced later.)

THURSDAY FORENOON

(1) Business Session 9:00 to 10:30.
(2) Fruit Growing in Eau Claire County—W. C. Stauss, County Agr. Agent.
(3) The Tourist Problem—Dr. S. B. Fracker, State Nursery Inspector.
(4) Strawberries—C. H. Beaver, Eau Claire.
(5) Spray Rings, Etc.—C. L. Kuehner.
(6) Food Values in Fruit—Miss Daisy A. Kugel, Director Household Arts & Science, Stout Institute, Menomonie, Wis.

THURSDAY AFTERNOON

RASPBERRY MOSAIC

(1) The Mosaic Problem—R. B. Wilcox, Office of Fruit Disease Investigation, United States Dep't of Agriculture.
(2) Wisconsin's Mosaic Policy—S. B. Fracker, State Nursery Inspector.

EAU CLAIRE, NOV. 18, 19, 20

"BY THEIR FRUITS"

Through the columns of WISCONSIN HORTICULTURE we are going to advocate three things which we believe to be inseparable from successful commercial fruit growing. They are as follows: *Specialized varieties* for Wisconsin, *clean fruit* for any market whether it be local or wholesale, and *a definite knowledge of conditions in markets* to which Wisconsin grown fruit is shipped.

We know from looking back through the history of the now successful commercial districts in the United States and Canada that their success has been due to a great extent by observance of the three ideas.

Every district that gets rid of its fruit profitably today has settled down, the growing of not more than five *specialized varieties* which proved to be best suited to the climatic conditions of that particular area, and which find a ready sale in the markets to which they are shipped. At this time we are not going to say what varieties are the best. We believe that there is one point at which we can all get together for a discussion. What have you found to be the best varieties? Next time it may be that we will have several answers to this, and we will have a basis upon which to start. Remember that Wisconsin is just starting into the game We can't compare ourselves with New York, Oregon, The Piedmont of Virginia, or the Ohio Rome Beauty Districts. We must develop our own characteristics. All of the above mentioned areas are known for three or four varieties which have "made" them.

For example: New York; Northern Spy, Duchess, Wealthy, Baldwin and Ben. Shenandoah; York Imperial, Stayman, Black Twig, Delicious. Washington; Jonathan, Rome Beauty, Spitzenburg, Delicious and Grimes. Oregon; Yellow Newton and Spitzenburg. Illinois; Southern—Transparent, Duchess,

(3) The Mosaic Situation in Illinois—P. A. Glenn, State Nursery Inspector, State of Illinois.
(4) Raspberry Mosaic in Minnesota—A. G. Ruggles, Minnesota State Nursery Inspector.
(5) From the View Point of the Grower—W. H. Hanchett.
(6) How the Nurseryman Feels About It—W. G. McKay.
(7) Discussion.

THURSDAY EVENING

ENTERTAINMENT

"A pleasant time was had by all."

FRIDAY FORENOON

(1) Standards For Judging Vegetables—Representative of Veg. Growers' Ass'n of America.
Discussion led by N. A. Rasmussen, Oshkosh.
(2) Marketing Vegetables—Mr. Chas. Groth, President of the Milwaukee Gardener's Association.
(3) Vegetables and Water, the Overhead Way—J. R. Williams, Montello, Wis.
(4) Old and Young Trees—Peter C. Swartz, Department of Farm Institutes.
(5) Growing Muskmelons in Wood County—R. A. Peterson, County Agr. Agent.

FRIDAY AFTERNOON

(1) Moisture Loving Plants—William Toole, Baraboo.
(2) Some Problems in Connection With Our Street Trees—Dr. R. H. Colley, Pathologist, Forest Products Laboratory, Madison.
(3) Selling Gardens—Mrs. C. E. Strong, West Allis, Wis.
(4) Gardens to Fit Small Pocketbooks—J. W. Roe, Landscape Gardner, Oshkosh, Wis.
(5) Lilies—Herman Christensen, Oshkosh.
(6) Roses—Speaker to be Named Later.

Demonstrations Between Sessions

Cooking Fruit—Daily Demonstrations, conducted by Miss Florence Scoular, Foods Department, Stout Institute.

The Art of Grafting and Budding—Daily Demonstrations.

Nursery Stock—Samples of Nursery Trees and Plants on Exhibit—Daily Talks. Printed List of Varieties of Fruits, Flowers, and Vegetables Recommended by the Society Distributed.

Five Good Varieties of Apples for Planting in Wisconsin. You may see, handle, smell, and taste them. An Expert Constantly in Attendance to Answer Questions.

Grading Apples

Demonstration in Charge of B. B. Jones of the State Department of Markets.

Barrel, Basket, and Box packs; the Art of Packing Demonstrated; Established Grades Explained; Charts Illustrating Diseases of Apples In and Out of Storage.

LIKE A COLLEGE COURSE AND CHEAPER

Benoni, Winesap. Western—Ben Davis, Gano, Willowtwig, Jonathan, Grimes.

And any other area that claims to have a commercial status has developed their own particular line of varieties. Each of these areas has found what market likes a certain pack and when they ship to that market the fruit is in the desired pack. We venture to say that the basket will take care of most of the output from Wisconsin, with some barreled, and a few boxed for the Eastern Markets.

In the next issue we will take up the question of *clean fruit* and show how every bushel of low grade stuff that goes on the market hurts the sales. We will also get the opinion of a dealer.

WHERE ANNUALS FIT IN

While there is a certain satisfaction in growing perrenials that makes them especially dear to one, we cannot get along without all the beautiful annual varieties.

To complete a color arrangement in the garden, at some times of the year, it is often desirable to use annuals in the perennial border, and they are often most useful in filling vacancies or open spots in the border or perennial garden.

Of course there is the Garden of Annuals itself which may be kept entirely distinct from the rest of the garden. Most may be grown in the open ground from seeds, but some will give more satisfaction if started earlier in the greenhouse.—W. A. Toole.

6,416,000 boxes of apples, representing only seven varieties, were shipped out of the Wenatchee Valley district of the State of Washington in 1919, from orchards representing an average investment of $2,000 per acre. SPECIALIZED VARIETIES.

Miniature of home grounds. A model prepared by Prof. F. A. Aust, Professor of Landscape Gardening, University of Wisconsin.

Daily Conferences with Fruit Growers, Dr. R. H. Roberts, University of Wisconsin.

Premiums offered by The State Horticultural Society for exhibits of apples at the annual convention, Fruit, Flower, and Vegetable show to be held in Eau Claire, November 18, 19, 20, 1925.

TROPHIES

1. Best ten bushels McIntosh, The Eau Claire Trophy, Silver Cup.
2. Best exhibit apples, one peck each, not less than 6 nor more than 12 varieties: Silver Cup.
3. Best peck Wealthy: Silver Cup.
4. Best 3 barrels, one each Northwestern, McIntosh, Fameuse (Snow) Commercial Pack: Silver Cup.

CASH PREMIUMS

		1st	2nd	3rd
5.	Best Bushel Delicious	$5.00	$3.00	$2.00
6.	" " McIntosh	5.00	3.00	2.00
7.	" " Northwestern	5.00	3.00	2.00
8.	" " Fameuse (Snow)	5.00	3.00	2.00
9.	" " Wealthy	5.00	3.00	2.00
10.	" " Windsor	5.00	3.00	2.00
11.	" " Wolf River	5.00	3.00	2.00
12–18.	Best peck any above varieties	2.50	2.00	1.00
19.	" " Dudley	2.50	2.00	1.00
20.	" " Golden Russett	2.50	2.00	1.00
21.	" " Tolman	2.50	2.00	1.00

(A) The Score Card method will be used in judging.

(B) Trophies will be awarded only on *high grade* exhibits; the judge may, at his option withhold award of any trophy on this account.

FLOWERS

Annual Convention of State Horticultural Society at Eau Claire, November 18-19-20, 1925. Exhibits must be ready for the judges by 2:00 P. M., November 18, 1925.

CHRYSANTHEMUMS

(1)	Best dozen yellow "Mums"	$6.00	$4.00	
(2)	" " white "	6.00	4.00	
(3)	" " pink "	6.00	4.00	
(4)	Best double bunch Single Pompoms	3.00	2.00	$1.00
(5)	" " " Double "	3.00	2.00	1.00

(6) For the best exhibit of "Mums", a Silver Cup engraved with winner's name, etc.

The exhibits entered in (1) to (5) inclusive may be entered in (6) also and may include as many other colors, varieties, etc., as the exhibitor desires. This cup will be awarded only for a *high class exhibit* and if it is the opinion of the judges that no worthy exhibit is made, no award will be made.

CARNATIONS

		1st	2nd
(7)	Best fifty carnations, any color	$6.00	$4.00

(Continued on page 23)

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

EUROPEAN BOTANICAL GARDENS

HURON H. SMITH

(Continued from July)

The next important botanical garden that we visited was the Berlin Botanical Garden. This is situated in a suburb of Berlin called Berlin-Dahlem. The garden itself is situated on Königin-Louisēn Strasse.

In visiting these various botanical gardens, it is difficult to get literature that gives something of their history. None of the American's works, that we have been able to investigate, has given any light upon this subject and very few of the foreign publications have, so perhaps it will not be out of place to give here a little history that shows the beginning of botanical gardens and establish the place of the Berlin Botanical Garden in history. The first botanical gardens that we know anything about, had their beginning in the fourteenth century—the gardens of Salerno and Venice in Italy. These were more or less medicinal botanical gardens. In the sixteenth century the first of the historical botanical gardens were really founded, the one at Padua in 1545 and the one at Pisa in 1547. The Botanical Garden in Bologna was founded in 1567; in Leiden, Holland, in 1577; and the one in Heidelberg in 1593.

Some of the most famous botanical gardens had their founding in the seventeenth century, and the following gardens were all started during that time; the gardens of Giessen in Hessia, the Paris Botanical Gardens, the one at Jena, at Oxford in England, the Kew Gardens, the Amsterdam Hortus Botanicus, the Berlin Botanical Gardens and the Gardens of Utrecht. In the preceding century gardens were founded in Petersburg; Copenhagen; Upsala and Lund, Sweden. After a hundred years, most of the botanical gardens came to be combined with the different universities where they were found. The German artists speak of the Kew Gardens as being the largest and richest in the world. In Germany they are rated somewhat in the following order: Berlin, Breslau, Halle, Göttingen, Leipsig, München (Munich), Heidelberg, and Marburg. Thus it will be seen that there are a larger number of regular botanical gardens in Germany than there is in any other European country. Most of the German botanical gardens are connected with universities in the various cities, and Americans who go to Germany to study botany usually choose either the Berlin Botanical Gardens, Münchener, or the Heidelburg Botanical Gardens. For our own part, we thought that the Münchener Botanical Gardens offered the best facilities for study, and many of the American botanists that are friends of ours have been to the gardens to study.

When one visits the Berlin Botanical Garden, it is best to enter at the gate on Königin-Louisen Strasse, then one can better follow the public guide that one buys at the garden. As we first go in at this gate, on the right-hand side, we discover a systematic display of plants that are indigenous to Germany. No other garden in Europe has such a wide demonstration of the flora of Europe as will be seen here. We first noted the alluvial forest or the oak forest and the mixed hardwoods of the plains, such as occur in north Germany. Mixed in with these trees are shrubs, perennial and annual herbs of the plains, and so forth. The trees are all shown in their relationship—that is, all of a certain genera will be grouped together, and the accompanying plants are shown in their ecological or their plant association relationships as they usually grow in nature.

Where the beech is the dominant tree of the forest associations, groups are divided (with all associated plants) into the Baltic, north Germany, middle Germany, southeastern, western and southwestern Germany. Ferns, grasses and mosses that are found in such ecological groups will also be seen there in the garden.

There also a special collection of plants from the Thuringia Basin, makes a good culture area for the characteristic and rare flora of that district.

At the border of the mixed hardwood forest, a poor, sandy soil furnishes a habitat for its peculiar flora. Following this, one comes to an open heath with its varieties of heather, and their associated plants, next comes a heath meadow or high moor with its many examples of the huckleberry, Greenland tea, wax bayberry and the like. A beech tree is dominant, generally, in Germany on the best soils, while the pines and birches with their heath and moors are more unassuming. When it comes to planting forests, however, the pines take the precedence in Grmany. One sees them grown generally as a crop all over Germany, and the forest gives the same impression as the cultivated corn crop. They are so regularly planted and of such an even growth, that one can mark the different plantings very easily with the eye. The law in Germany is that two trees must be planted for every one cut, and forest fires are almost negligible. Perhaps this is due to the education along this line in the common schools, and also partly because it is against the law to use any other than a safety match or to offer anything but a safety match for sale. We recall one small village that owned a municipal forest which had been planted by their grandfathers, where the products of the forest products

pays all town taxes and yields a small annual dividend to the citizens.

In the coniferous forests of the botanical gardens there are well established special species' habitats in the needle loam that is dropped from the trees, and there are growing the special forms such as the barberry, different kinds of wintergreen, and various species of carex and grasses. As with us in Wisconsin, these forest floors of the pine trees are also supporting species of club mosses. In this neighborhood also may be seen heaths and moors such as are usually found in coniferous forests. Then, too, there are shown the characteristic shrubs of a coniferous forest, not only this, but several species of mosses.

A space has been given over to the low-lying moors, desert moors and bogs like those of Greenland. Here one may see the bog plants, species of sphagnum moss, and other characteristic plants of "the land of little sticks". In the adjoining section of the pine forest there have been created sand dunes and salt marshes. They have shown a wind-blown sandhill with its very different species of plants such as are seen on the sea shore and washed with salt water. The dunes of the interior part of the continent are shown, and they are quite different from the sea-side dunes. They support a flora richer in annuals, and the broom and willow are shown as the predominating shrubs. In some of these interior dunes there often exists a moist saline soil at the edge of the dune, which supports a peculiar lot of plants. This is known to the botanist as a "halophytic society". In studying over these various plant associations, we realize that there has been a great deal of time and care expended to produce such peculiar conditions of soil and moisture in this botanical garden in order that they may adapt these plants to their environment and cause them to grow so that they may be studied on the spot. The Berlin Botanical Garden is an adjunct of the University of Berlin, and necessarily is primarily a place for study, although it is open to the public at any time they care to see it, at a small fee. We think that the authorities at the Berlin Botanical Garden, who are in charge, have probably spent more time and given more thought in reproducing ecological groups of plants than has been the case at the Kew Botanical Gardens. However, the Berlin Botanical Gardens are not so large nor quite so rich in tree species and shrub species as the Kew Botanical Gardens.

On the left hand, facing these many indigenous groupings, the northern Alpine flora is exhibited upon artificial hills. Alpine flowers are usually of the brighest colors, and to see the hillsides abloom with Erica herbacea with its carmine red flowers, is worth the trip to the Berlin Botanical Gardens. Alpine plants from all parts of Germany have been planted there, and artificial waterfalls have been established. An attempt was made to stimulate the scenery of Switzerland and the Bavarian Alps and the north Tyrol. This waterfalls divides the flora of the north Tyrol and the middle Bavaria from two groups of species of east Bavaria, east Tyrol and lower Austria. The Pyrenees Alps are especially represented with plants from both the Atlantic slope and the eastern end which is covered with all sorts of pines and rhododendrons.

PREMIUM LIST

(Continued from page 21)

ROSES

		1st	2nd	3rd
(8)	Best twenty-five Columbia	$5.00	$3.00	
(9)	" " " Premier	5.00	3.00	
(10)	" " " Butterfly	5.00	3.00	
(11)	Best three Cyclamen Plants	4.00	3.00	
(12)	Best specimen Boston Fern	3.00	2.00	
(13)	Best display Greenhouse Plants	8.00	6.00	$4.00
(14)	Best display Everlasting (straw flowers)	5.00	3.00	
(15)	Best Corsage Bouquet	4.00	3.00	
(16)	Best arranged basket cut flowers—W. S. H. S. Silver Trophy			

The following premiums are offered for exhibits of vegetables at the annual convention, Eau Claire, Nov 18–20.

(1) Best collection, not less than ten entries—W. S. H. S. Silver Cup

		1st	2nd	3rd
(2)	6 Blood Turnip Beets	$1.00	$0.75	$0.50
(3)	3 Rutabagas	1.00	.75	.50
(4)	6 Chantenay Carrots	1.00	.75	.50
(5)	3 Winter Cabbages	1.00	.75	.50
(6)	3 Red Cabbages	1.00	.75	.50
(7)	6 Red Onions	1.00	.75	.50
(8)	6 Yellow Danvers Onions	1.00	.75	.50
(9)	6 White Onions	1.00	.75	.50
(10)	Largest Onion	1.00	.75	.50
(11)	6 Parsnips	1.00	.75	.50
(12)	1 Hubbard Squash	1.00	.75	.50
(13)	3 Table Queen Squash	1.00	.75	.50
(14)	3 Heads Celery	1.00	.75	.50
(15)	3 Chinese Cabbage	1.00	.75	.50
(16)	6 Salsify	1.00	.75	.50
	Greenhouse Grown			
(17)	3 Bunches Radishes	1.00	.75	.50
(18)	5 Tomatoes	1.00	.75	.50
(19)	3 Cucumbers	1.00	.75	.50
(20)	3 Lettuce	1.00	.75	.50

Wisconsin Horticulture

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Remit by Postal or Express Money Order. A dollar bill may be sent safely if wrapped or attached to a card. Personal checks accepted.

Postage stamps not accepted

CONVENTION NUMBER

Without excuses or apologies we offer to our readers this abbreviated and condensed Convention Number.

At this time, October 10th, we have the feeling that the Eau Claire Meeting will be a success. We didn't have that feeling in the beginning, but it's always hard to break away from fixed habits and customs.

If all the fruit entered at this time is shown we will have as much as last year. Of flowers and vegetables there will be more than in 1924.

The program is full to overflowing and promises to be the biggest and best of any for ten years past.

The demonstration list is growing daily so that prospects point to a complete program of instruction outside of the Convention room. Participation in these features will in no way interfere with the regular program. It will be so arranged.

We give warning that shifts may be made in the program, such are inevitable, so the only way to get all of it is to come early and stay late. We will however make no changes from mere caprice, only when necessary to accommodate speakers who come from a distance and can be with us only on certain days. For instance, Mr. Wilcox is unable to tell us at this writing on which day he can reach Eau Claire.

> The Board of Managers hoped and planned to center the entire Convention in the Hotel Eau Claire; exhibits, concessions, and program. But at this writing that appears impractical; the public rooms are not large enough. We are doing the best we can under the circumstances, and may yet be able to accomplish our first intent. In any event the Hotel Eau Claire will be head-quarters and everyone should "head-in" there. The Commercial and Galloway are other hotels. Members and others who intend to attend the Convention should write in for reservations.

There are three outstanding features in the program: Distribution, which means better marketing of fruit, the ever present problem. Owners of small orchards should be interested. The problem of producing clean salable fruit in farm orchards is partially solved; the problem of marketing this fruit is far from being solved. This convention offers an opportunity to get help.

The second topic, if not the first in importance, is raspberry mosaic. The success or failure of raspberry growing in Wisconsin lies in a happy solution of this problem. We will have four experts who ought to be able to tell us how to control the disease. No Wisconsin nurseryman or dealer can afford to miss this program.

The third feature, but not third in importance, is the home making program. We do not live by bread, apples, and gooseberries alone.

Preachers preach, reformers reform (maybe), and the world is going to hell feet foremost. Maybe. And yet again maybe not. Fear has failed, laws have failed. There remains a more potent force; love, love of the beautiful, love of nature, which leads to the love of nature's God. This runs all through our program and is exemplified in our slogan "—a rose in every yard—".

The Convention is to be held in Eau Claire, November 18-19-20.

Will you be there?

ARE YOU BEHIND?

We have been rather slack in reminding you about the expiration of your membership but you will have no cause for complaint on that score from now on. Are you busy? We will make it just as easy for you as possible; a letter gently jogging your memory, a coin card and a self addressed envelope. Really all you have to do is to pay. Just slip a dollar bill inside the card, stick a stamp on the return envelope and we will do the rest. There are nearly two-hundred of you so you will not feel lonesome. Not infrequently the "circulation manager" tries funny little stunts for the purpose of getting in the cash. Here is one of them. The first dollar received in response to this appeal from a member in arrears will be refunded and the member credited for a full year if the member encloses this article with his remittance. We will handicap Madison delinquents by holding out their papers 24 hours. We hope this offer goes off peacefully and that no one is killed or injured in the crush. Well, are you a good sport? Anything is worth trying, once.

WOMEN'S AUXILARY PAGE

EDITED BY MRS. C. E. STRONG

SEEN AND HEARD NEAR THE AMATEUR FLOWER EXHIBIT AT THE STATE FAIR

The Amateur Exhibit of Flowers in the Horticultural building at the State Fair resembles an old fashioned flower garden with its glowing masses of color, and seemingly has the same charm. Every flower lover stops to admire it and chat with the other flower lover who happens to stop beside her. I say "her," I could say "him," just as truthfully, for there are as many men who are genuinely interested in flowers as women.

Slowly, but surely, this exhibit at the Fair is binding together flower lovers from all over the State. People who have never met before are seen talking like life long friends, as they point out old favorites in the exhibit, or exclaim over some new flower.

Names and addresses are written down in note books as they agree to exchange plants or seeds and many interesting stories are told about the different gardens.

"I never supposed there could be so many real interesting things said about a garden," said one listener.

"And what a lot of interesting folks you meet, who are interested in gardens," said another.

"We wanted a different garden than the others on our street, but just what it would be, we hadn't decided. My husband and I enjoyed tramping or hiking all over the country and in the spring we saw such lovely wild flowers we brought a few of each kind home and soon our 'unusual' garden had started. Now our hikes are for the purpose of searching out new flowers to add to our garden. Our friends and neighbors remember us when they go for a trip so we have a number of choice plants from the neighboring states. Whenever we find nice plants, we go to the owner of the land and ask permission to take a few and this permission is usually freely given. In some cases they too have become interested in making wild flower gardens. Sometimes we have found seed and sowed this—thus acquiring a little colony of plants. Our neighbors enjoy this garden almost as much as we do, and we enjoy their gardens as well."

(A coveted Mertensia Virginica, and some seed of Lobelia Cardinalis was added to this garden by interested listening flower lovers.)

"Have you ever tried having a 'one' flower garden? It really is lovely and you learn a whole lot about the different varieties. One year I grew some of every kind and color of poppies listed in my seed catalogues, the next year I had Petunias, then Zinnias, Asters, Verbenas, Phlox D. etc., followed. If you have never tried this, it will be a most delightful new experiment."

"Come spend the afternoon with me and bring your flower catalogues along."

From that invitation and afternoon meeting, grew the Hales Corners Garden Club and some of the most charming gardens I have ever seen. The Club members are all so very enthusiastic and so happy because many of their neighbors and friends are becoming interested in beautifying their home grounds.

Every Garden Club organized is a long stride forward in making Wisconsin more beautiful.

PLEASANT THOUGHTS

My Dear Mrs. Strong:

My thoughts have turned back many times to your article, "Some Favorite Flowers and Why", which I very greatly enjoyed. It has been interesting to me, as I have gone about my garden to match up the "Why", with each well loved posy. How often these "Why's" go back to the days of childhood. Not nearly enough of the children of today are getting these fragrant memories incorporated into their little beings, it seems to me. Aren't there going to be some very *empty* spots, when they have gone far enough along on their journeys to look back? I'd be awfully interested to hear some more of the "Why's" of the inhabitants of sister gardens.

Cordially,

E. C. G.
Mukwonago.

ASTER YELLOWS CONQUERED!

Aster "yellows", the disease dreaded by everyone who grows this beautiful flower, has now been conquered and it now lies within the power of any one of us to grow a crop free from this disease. The remedy is to cover the plants with some such material as cheese-cloth so as to exclude the aster leaf hopper, a small insect which is carrier for the virus which causes the disease.

This is fact, not surmise, determined by Dr. L. O. Kunkle of the Boyce Thompson Institute for Plant Research at Yonkers, New York. So far as we know this fact has not heretofore been published in any popular journal and may be found only in scientific publications.

Two Japanese pathologists, professors of plant pathology in Japan, doing research work under Prof. L. R. Jones of the University of Wisconsin the past season, confirmed Dr. Kunkle's findings. We are indebted to Prof. Jones for the above data. A more complete account will be given later.

Wrapping apples for storage checks transpiration, minimizes bruising, prevents spread of decay, lessens storage scald, and may be a means of advertising.

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

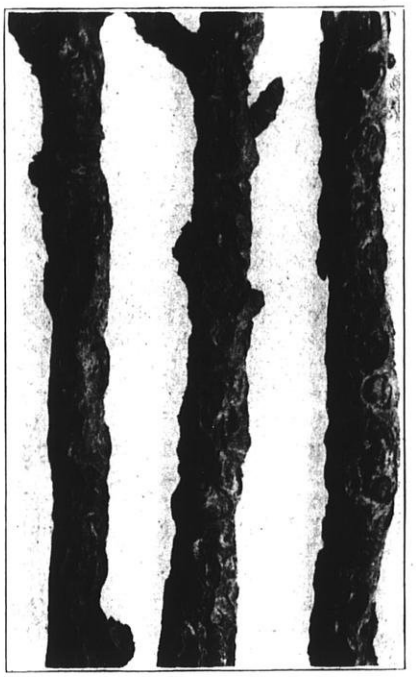
BUFFALO TREE HOPPER INJURIES

There have been a great many inquiries during the past season as to what causes the twigs and branches of the apple tree to be covered and badly disfigured by oval scars such as are shown in the accompanying picture. This severe injury is inflicted by an insect, the Buffalo Tree Hopper *(Ceresa bubalis)* during its act of egg laying in the fall. This pest is one of the true bugs, is about a third of an inch long and of a light grass green color and shaped much like a beechnut. On the front, projecting from either side of its thorax is a sharpened angle or horn, more or less suggesting the horns of a buffalo and consequently was so named.

It usually works on the upper surface of the twigs and seems to show a preference for the south side of the trees. The twigs selected by the female in which to lay her eggs are generally of the second or third years growth and the scars may be borne by either young or old trees. Although the apple is the preferred host, the pest attacks quite a number of other fruit and shade trees.

In the act of oviposition, two opposing slits are made by the insect, slightly curved toward each other rather resembling parenthesis marks and lying in the same general direction as the twigs. Between these two rows of punctures are placed several eggs, usually from six to twelve. This space lying between the two slits soon dies. It is generally believed that the purpose of these slits is to prevent the eggs from being crushed by the growth of the wood about them.

Because of the fact that these pairs of slits are arranged together in two parallel rows lengthwise of the twig and since the deadened space does not keep pace with the growth of the rest of the twig it is evident that in time such limbs become so badly scarred and consequently weakened as to easily snap off when taxed by the burden of a crop or by the force of a storm. After a few years these pairs of slits take on the form of an oval scar, making the twig very rough and unsightly, as is evident from the illustration.



BUFFALO TREE HOPPER

As a means of reducing this injury all weeds and shrubby growth in and around the orchard for a considerable distance out should be kept down as far as is possible and thus starve the insects away. Injury to the trees caused by the feeding of the nymphs and adult insects themselves is slight since they feed almost entirely upon weeds. Spraying with a fairly strong contact insecticide such as an oil or nicotine spray to destroy the nymphs whenever they appear in sufficient numbers to warrant it, may be of value in some instances.

As soon as the leaves fall, the twigs containing the overwintering eggs should be cut out as far as is practical and burned. In some cases, this pruning will be impossible since the entire top of young trees would need to be cut out to get rid of all the overwintering eggs. In such cases, trim out the smaller and worst injured limbs leaving enough top to forward growth. If all the limbs are completely ruined on very young trees and the growth is being seriously checked it may be advisable to cut back to a whip so as to secure an entirely new top, or otherwise replant.

Such extreme injuries will not occur if the weeds are kept down all season and especially during spring and early summer. Cultivated orchards rarely show any such injuries.

E. L. CHAMBERS.

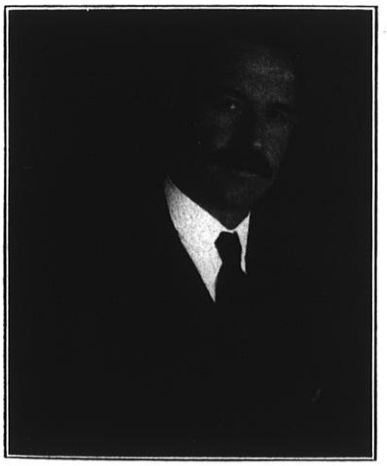
TO BEAT THE QUARANTINE

HURON H. SMITH

A good many growers have seen the handwriting on the wall and are getting ready to meet the 1926 embargo. The only growers that we have heard of in Wisconsin that are making preparations to meet the situation are Holton & Hunkel at Brown Deer. The Holton & Hunkel Brown Deer greenhouses are a model plant factory, the best we have ever seen in the United States. Although they have only eight acres under glass, they do the most with the least help. Roses are their chief crop. Nothing is left to chance. They even have two 80 acre farms that do nothing but produce high grade fertilizer. They buy steers from Texas, feed the silage and corn from the farm to these steers on a concrete feeding floor where nothing is lost. Straw is thrown upon the floor and the steers churn it up day after day. After a course of intensive feeding they are sold, and while they are not then pretty to look at, they have produced a fertilizer that money can't buy.

Last spring they bought another 40 acre farm, a quarter of a mile from their greenhouses and have been planting bulb and nursery stock to anticipate the demand for these after the embargo goes into effect. They have placed James Livingstone in charge. He is probably the best grower in Milwaukee and took up this work after being a gardener for some of the wealthiest people in this city. He was a born gardener, being born 53 years ago at Wishaw, Lanarkshire, Scotland, and had his early training on the Coltness estate, a name still famous to flower growers.

They are just finishing a new storage nursery shed 50 by 150 feet of solid concrete, equipped with boilers to furnish the very little heat needed. When we visited



JAMES LIVINGSTONE

them October 7th, they were transplanting peonies. They have planted 250,000 narcissus bulbs and other kinds in proportion, and are planning to lift them every second year. They have a host of Montbretias in ten varieties, but no gladioli. These will be lifted inside of ten days, as they are much more tender than glads. The past wet season since July first has held stock back and it has not been necessary to lift quite so early.

They had a fine lot of French forcing varieties of hydrangeas this year, also a batch of 6000 spiraeas such as Gladstone, Rubens, Peachbloom and America. All of their forcing stock of roses were grown there: Baby Rambler, Dorothy Perkins, Eugene Jacquet, Rosary, Tausendschön, etc. Both the Japanese and Indica azaleas to the extent of three thousand were grown. All of the outdoor stuff from the greenhouse was grown.

One thing they have been very successful with was evergreens, of which they have a complete line. These were started under slat frames. There were also 23,000 vincas and some English Ivy. Cannas were very scarce here this last spring, so they have an abundance for next year.

Their soil is a sandy loam, fine and loose, easily cultivated, requiring only fertilizer to make the best growth. There is no difficulty in getting a wonderful root system. Their evergreens did especially well this year for that reason. They have been using blood and bone fertilizer and have installed an overhead irrigation system. This was only needed before July 1st in this region, for frequent rains gave Milwaukee a fine growing season after that.

Previous to 1919 one-fourth of the normal commercial apple crop was produced in New York.

Forcing bulbs should be potted or planted in flats of soil as soon as they are received. They are then placed in a cool, dark, moist, but well ventilated cellar for six to eight weeks in order to develop roots before being forced into bloom. The strength and beauty of the flowers will depend quite largely upon the amount of roots produced while in storage.

S. D. HORT. SOCIETY.

Box apples in the Northwest are carefully graded to a uniformity of within one-eighth of an inch.

Useless growth and quite a bit of labor will be saved by careful pruning every year.

NOTICE

Members of the Wisconsin State Horticultural Society are hereby notified that the annual business meeting of the Society will be held in the office of the Secretary, 233 Washington Building, Madison, Wisconsin, Monday, November 9, 1925, at 10:00 A. M., for the purpose of transacting such business as may be presented by the officers and members in attendance.

FREDERIC CRANEFIELD,
Secretary.

This notice is for the purpose of complying with the laws of the State of Wisconsin and the Constitution of the Society.

Annual Convention

Eau Claire

November 18, 19, 20, 1925

Three day program, eight sessions, twenty or more speakers.

Commercial fruit growing, the small orchard, small fruits for the home and the market, raspberry mosaic.

Flowers, shrubs, and vines for the home; roses, lilies, wild flowers, are some of the subjects that will be discussed.

Roads will be good, weather will be fine, Everybody going.

Big exhibit, fruit, flowers, and vegetables assured.

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

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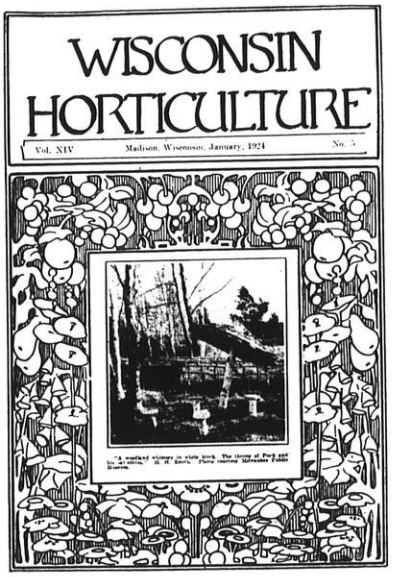

"A sixteen-page monthly magazine devoted exclusively to fruit growing in Wisconsin. Sent free to members."

THE VEGETABLE EXHIBIT.

By David Stone Kelsey.

Each year there comes upon the exhibition stage at our fairs a great new army of enthusiastic producers, anxious to show their good stuff but lacking about 100 per cent in knowledge of what constitutes high-standard products and how they should be arranged for display.

One of the greatest handicaps to a fine and successful horticultural exhibit is a lack of uniformity of standards on judging, and sometimes lack of knowledge of what constitutes a good display on the part of the grower himself, no matter how much we direct and instruct.

Judges are so often lacking in really official score-card guidance, that justice is sometimes difficult. All this is particularly true in regard to vegetable exhibits, either individual varieties or where mass exhibitions or collections are shown.

As compared with our skill in displaying fruits and flowers, these other horticultural products usually make a mighty poor showing, and this is especially unfortunate here in the eastern states where these intensive crops will more and more be grown. A campaign of real education is needed and this may as well begin right at the "business end" of the mule—the score-card.

The Judging Score Card.

As below given, these figures are only broadly suggestive, though, simple as they are, closely following the lines of those adopted by the best state associations in the market gardening east. Given thus, in round numbers, they do not pretend to strictly represent, exact percentage, the relative values of the various points named. Better, however, they furnish a quick reference to which both hurried judge and worried novice exhibitor may turn for assistance—a guide where guidance is constantly needed, without in any way discouraging.

Vegetable Collections.

Arrangement of display		15
Number of varieties		15
Number of species		10
Usefulness of the vegetables		5
Quality		25
Cleanness	10	
Condition	10	
Size	5	
General varietal color		10
Uniformity		10
Labeling		10
		100

Arrangements. The color scheme, the blending of colors, the ease with which all varieties may be seen, provision of plenty of room for all specimens, balancing of the parts so that one side may not be much larger or more noticeable than the other; these are some of the points to be considered.

Number of Varieties. One should not be so desirous of showing a large number of varieties, that several varieties are taken from the same plant, or that varieties never before known to exist are represented. All those shown should be distinct sorts and for the most part well known in the locality where the exhibit is held unless the competition covers a large amount of territory. They should also be in that stage of development that best shows their essential characters.

Number of Species. A collection that contained forty varieties of beans, with perhaps no tomatoes or carrots, would not rank so high as one having fewer beans but more of the other common vegetables. Therefore the varieties should fall in several plant families, so that a large number of foods are represented.

Usefulness. A collection made up largely of odd things like prongy potatoes, peculiar gourds, or little known vegetables, would not rank as high as one made up of those that are commonly consumed in the home.

Cleanness. Potatoes or carrots with dirt on their skins; onions with dry and dead skins left on; sandy snap beans; these should not be seen.

Condition. All specimens should be free from decay and in edible condition. Such specimens as hard and dry sweet corn, withered egg-plants, or over-ripe cucumbers are highly undesirable.

Size. Because of better flavor and firmer and finer texture, vegetables that are of medium size are to be preferred to those of very large size. Uniformity in size is also best as this adds to the appearance of quality.

Vegetable Displays.

General appearance		60
Originality	15	
Color effect	15	
Variety	15	
System of arrangement	15	
Number of species		10
Quality, cleanness, condition		20
Uniformity		10
		100

Explanation. The difference between a collection and a display of vegetables may be given as follows: A collection of vegetables is intended to show what variety of crops are grown on a given farm or in a given locality, and to instruct with respect to vegetable varieties, by showing their differences and likeness, as well as their correct types. It is purely educational and needs careful study.

A vegetable *display,* on the other hand, is intended to arouse enthusiasm for vegetables by showing them tastefully arranged and in large numbers. It should emphasize the attractiveness of well grown clean and skilfully arranged vegetables, and should make special appeals to dealers who have to place their goods before the public; to housewives who have not seen any beauty in celery and cabbage, but who may be induced to use more vegetables when their good points are brought to light; and to both commercial and amateur growers who have seen only dollars in their products.

In general, a vegetable *display* should make one wish to grow and use more vegetables, and a collection should teach him which varieties to grow and which types to work for.

Originality. Displays that are different from the general run of displays, without approaching the ridiculous, are to be highly ranked.

because they attract and hold attention.

Color Effect. The full value of a display cannot be attained without careful study of the materials at hand, so that harmony may be secured and no offensive contrasts brought out.

System in Arrangement. Anyone can dump a lot of vegetables on a table, but not every one can plan a systematic arrangement that makes each vegetable show to best advantage. The completed exhibit should show that the exhibitor had a definite plan in mind.

Variety. As contrasted to monotony. A perfectly accurate arrangement of all species in squares or circles might show a definite plan and the color scheme might be all right, but the exhibit would lack variety; it would not hold attention. By the use of vegetables of different sizes and shapes; by breaking up large flat spaces; and by other similar means, dullness may be avoided.

Number of Species. A large collection of squashes with some green material could be made into an attractive display, but it would hold the attention only of those who cared for squashes. In general, the greater the number of species represented the higher the rank of the display.

Quality. The specimens should be in good salable condition under ripe and over ripe products, and those that show serious decay or disease, are not desirable. Withered leaves and broken stems detract from the appearance.

Uniformity. Large specimens that are not good for sale or home use are still permissible in a display. Whatever size used, however, it should be the same for all specimens of the same variety, and the color and shape should also be fairly uniform, though they need not be so uniform as in a collection.

Single Vegetables

(One plate, bunch, or container competing with others of the same variety.)

Varietal character	20
Condition of exhibit	20
Uniformity	15
Quality (See first score above)	25
Color	10
Size	5
Labelling	5
Total	100

Variety Character. All distinct varieties have characteristics such as form, color, and texture. The exhibit should approach these as nearly as possible.

Uniformity. Specimens of the same lot should be as nearly alike as possible in shape, color, size, and other qualities.

Quality. This, here, includes edible quality and usefulness for home purposes. Specimens that are rough and overgrown lettuce that is stringy or tough or bitter, old and dry beets, would score low.

Color. Every variety has a distinctive color, which should be found in the exhibit. For example, the yellow, the Danvers carrot should be orange yellow and not light yellow; the early Egyptian beet should be dark red and not light red

Size. The most desirable size for home use is the best to exhibit. A medium size is almost always preferred by buyers, and very large specimens are as likely to be rejected as those that are too small.

Labeling. The name on the labels should be correct for the variety. Second, uniform labels neatly written in ink or typewritten are preferred to torn pieces of paper. Finally, labels should be so fastened that they do not get misplaced.

A few items require special scoring, particularly green sweet corn and garden fruits, as the melon and tomato families. Also any of the above that are exhibited "packed" ready for shipping or marketing, as in barrels, boxes or flats. The below will suffice to indicate correct scoring of these:

Sweet Corn Score.

Condition of exhibit	15
Correct varietal character	25
Flavor and quality	15
Labelling	10
Color of cob and husk	10
Rowing of grain	10
Color of grain	10
Tenderness	5
Total	100

Garden Fruits.

Form	15
Color and surface	20
Size	15
Uniformity	20
Flavor and quality	30
Total	100

Package Score.

Color	20
Uniformity	20
Freedom from blemish	15
Packing	15
Size	10
Packing itself	10
Value Standard	10
Total	100

Grains, especially dry corn on the ear, require quite distinct treatment. Flint corn, dent, dry sweet, pop and flour corns, have each their own special points such items as kernels, weight of ear, proportion, butt, tip, row-space, etc., require to be defined more at length than present space permits. —The Market Growers Journal.

WHY PLANT WIZARDS RETIRE.

We don't know why Luther Burbank has decided to retire, but we shouldn't wonder if it were discouragement about the cantaloupe. —Ohio State Journal.

Perhaps so. Then again, if may have been the puzzle of those recently discovered non-alcoholic apples that yield perfectly legal cider.—Milwaukee Sentinel.

Otto Boger and Frank Schmidt, Milwaukeeans received injuries last Sunday afternoon when they fell out of an apple tree while picking apples at the John Boger place, 618 Main street, this city. A branch broke and the men fell to the ground and rolled down a small hillside. Boger received a fractured arm. Schmidt was bruised.—Port Washington Herald.

Moral—don't climb apple trees, use a ladder.

Does your neighbor know about the Horticultural Society and Wisconsin Horticulture?

COMMERCIAL HORTICULTURE

ONE GROWER'S PROBLEMS

The announcement of a Commercial department in Wisconsin Horticulture looks good to me. I am down here all alone and have little opportunity to learn what other growers are doing and thinking. I would like to be of some help, but fear my contributions will be all in the form of questions. For instance—What becomes of the codling moth when there is a freeze after the apples have set? As in May, 1925? Apples may be frozen without killing. This year, 1925, there was neither scab nor worm in the unsprayed farm and back lot orchards of the community until after the Wealthys were ripe. In September, worms appeared in my sprayed apples and there was a late infestation of scab also. Will somebody explain this? I also find many apples damaged by what I believe is called the Railroad worm. Will someone explain this pest's life cycle and best methods of control? Can't we growers learn enough about spraying to know when it is necessary to spray and when it is useless?

I believe this is enough questions for this time.—R. I.

* * *

About the spring freeze and the codling moths. If it so happened that *all* the fruit that was set was killed there would be no codling moth. But there is always some fruit left and so the moths appearing in later broods attack these. Unless the fruit is sprayed there will be practically just as many codling moths the next season. Therefore, it is certain that you should spray whether there is a light infestation of codling moth or whether there is a heavy one.

The second brood codling moth often is not apparent until in September. Just a few moths hatched out from the first brood can cause quite a heavy infestation of worms at the time for the second brood unless the trees have been sprayed carefully. And a fall infection of scab is not unusual. Scab likes cool damp weather for development and sometimes the weather it likes best comes in the fall. In the districts in the South the heaviest infection of scab often occurs in the Fall.

The "railroad worm", I believe, is the apple maggot. Its life history in brief is as follows:

The parent flies, which are blackish two winged flies with yellowish head and legs, appear early in July and continue to be abundant into September. The females begin egg laying after being emerged two or three weeks. During the egg laying period the females may be seen resting on the leaves of the trees or on the surface of the fruit. The female punctures the skin of the fruit with her sharp ovipositor and lays the small white egg under the skin. The eggs hatch in from two to six days. The small maggots start tunneling immediately, but grow very slowly until the fruit begins to ripen or decay. Sometimes it happens that the fruit shows no sign of infestation until the fruit has been picked and stored, and then it will suddenly "go down". This last is particularly true of Fameuse and McIntosh when grown in infested localities. The name "railroad worm" comes from the burrows which run just beneath the skin and show through as darkened trail. After the fruit has fallen the larva leaves the fruit and burrows an inch or so into the soil where it hibernates in a brown puparium, or shell, about the size of a grain of wheat.

The only remedy for the pest that we can find is from New York, where they spray with arsenate of lead, 4 pounds to 100 gallons of water, the first week in July. The same source of information says that if the codling moth sprays are put on efficiently, most of the Apple Maggot flies will be killed by these sprays.

Spraying methods are different in all localities, but we have seen growers who know when and how to spray and when and how not to spray. I believe that the growers *can* learn, and I hope that many of them will try to do so.

WHY COMMIT SUICIDE

Usually a man is adjudged insane when he commits violence against himself, but there are many fruit growers who do just as foolish things as the man who commits suicide. One of these things which fruit growers do is to try to market imperfect fruit. Many times this is done through ignorance, but often the grower thinks that if he can get rid of low grade material that he is "slickering" somebody. But he isn't. He is hurting himself and his fellow growers in a very sure way.

How this works out is very simple. The greater the volume of fruit that reaches any given market the more likely is it that the price level will recede. The greater volume of poor fruit that goes onto the market the lower the price level will be. Therefore even in a time of great demand for fruit, the presence of undesirable fruit will tend to pull down the price. That's economics.

And then there is the side that has to do with human nature. A great many people will buy things by price rather than by quality. The housewife who goes into the market place is looking for some way to lower the cost of feeding her family. When she is attracted by the price of inferior fruit she will haggle about it because of the poor quality, but nevertheless she buys it, and consequently becomes disgusted with fruit. Next time she goes to market she will look at the fruit stand suspiciously or not at all. When the buying public can be educated to buy only first class fruit, and when the grower will realize that he can get larger returns over a longer period of time by cidering his inferior product, or feeding it to the hogs, the fruit market will become much more stable and more people will enjoy using good fruit.

WHEN WE LEARN

It has been the privilege of the writer to spend some time in and around one of the large wholesale fruit markets. During that time he saw the way the buyers worked, and he also saw rejected carloads dumped. The buyer wants good sound fruit. He knows that he will have a better chance of satisfying his customers with good quality than if he takes a chance on buying low grades and selling at a low price. He is a wise man, usually, who knows as much as anyone does about the selling game as well as the buying end. There are, of course exceptions to this. When the day's buying is over there is always some produce left over. Much of it is dumped because the grower has loss enough without having to stand the expense of a reshipment, or loss from breakdown due to imperfect storage. But the mere presence of this inferior fruit on the market has tended to pull down the price which could be obtained for the better quality grades.

There are some years when, in a given locality, it is next to the impossible to grow first class fruit. But on the average in these days of intelligent combat with insects, plant diseases, and poor growth facilities there is little excuse for having the majority of the output of any orchard or fruit farm fall into the inferior class.

There is only one excuse for the fact that Western apples have gained a foothold here in this part of the country, and that is because when Western apples go onto a market the buyers know that the fruit will be good. There will be no knotty, undersized, shriveled up specimens, or at least very few. We can put fruit on the market of just as high color, better flavor, maybe not as much size, but apple for apple ours will be more desirable.

When we learn to put better fruit, and only good fruit on every market we can lay claim to be a fruit growing State.

RELATION OF PLANT VIGOR TO CULTIVATION AND NITROGENOUS FERTILIZER.

Research work of Kraus and Kraybill Resume of publications.

These investigators found that by dividing plants into three groups a certain definite relation is brought out between the nitrates and carbohydrates present in the different groups. These groups are divided as follows:

Group 1. Those plants which seem to be extremely vigorous but rarely bloom, and if they do bloom, set but little fruit.

Group 2. Those plants which make a very fair growth and seem to be in good vigor, bear very abundantly and produce a large number of clusters, the blossoms of which readily set fruit.

Group 3. Those plants which are less vigorous than the second group, bloom profusely, but set fruit very sparingly.

A chemical analysis of the three groups shows that: (1) Those of the first group always contain an abundant amount of moisture and nitrogenous compounds; (2) those of the second group contain a relatively smaller amount of nitrogenous material compared with the carbohydrate content; (3) The plants of the third group contain still less nitrates and proportionally more of the carbohydrates than the second group. It is shown rather conclusively from these experiments that there must be a mathematical ratio between the nitrogen and carbohydrates to receive the best results.

The results of this experiment directly apply to the apple. Examples of the first group are readily found in the trees from one to seven years which have a relatively large amount of nitrogen in ratio to the carbohydrate, such a condition being encouraged by the use of nitrogenous fertilizers, intensive cultivation, and severe heading of the trees. As a result considerable wood growth but little fruit is secured. It is found that by reducing tillage, pruning and other stimulating operations, that one automatically reduces the relative proportion of raw sap and nitrogen and allows the increased leaf areas to manufacture more concentrated foods, such as sugar and starches. As a result the trees begin to form buds, produce fruit and thereby pass into the second class.

In the third group or class of trees, the nitrates have become much reduced in proportion to the carbohydrates. As a result the leaves become yellow and thin, spurs begin to die and the set of fruit is poor. The trees are starving for nitrates amid a plenty of sugar and starches. This explains how a relatively small amount of nitrate added in the spring often produces such remarkable results. It once more creates a balance between the nitrates and carbohydrates. When a proper balance is secured between these two the proper vegetative growth and fruitfulness is obtained.—Folger and Thompson.

Commericial Apple Industry of North America.

We wish to repeat that in order to make progress with this department we must have cooperation from the growers, which may best be expressed by having you send us your opinions and questions.

Washington reports that the apple crop will reach 164 million bushels this year, of this about ninety million bushels will constitute the so-called commercial crop.

Sturgeon Bay observed an Old World custom by having a Carnival at the finish of the year's fruit harvest.

This is no secret, tell everybody you know. The Wisconsin State Horticultural Society wants members, and maybe your friends would like to be members. Ask them.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

EUROPEAN BOTANICAL GARDENS

(Continued from October, p. 23)

The path leads us next to the plants of the Mediterranean region. Here are many plants that must be wintered over in the greenhouses, but are planted out again each spring—even some fair sized trees are treated in this way. All parts of this region are represented in the garden—the plants of the sea beaches the principal cultivated plants of the Mediterranean region, the shrubs of the sea shore and the plants of the Carpathians. The plants of the Sudeten Mountains of north Germany are represented by some fifty species, growing in the next division of the Alps, or rather the artificial Alps. The Scandinavian glacial plants are shown in the artificial Alps of the botanical garden, and one may see that they are quite similar to the same sort of plant in arctic America and Asia. In view of the many excursions that have been made to the polar regions and the large herbaria that exists in many places from the expeditions, it is interesting to see the growing plants of the polar regions situated on the made mountains in the botanical garden. Here one may see the polar willow (Salix polaris), the Dryas actopetala, the Tofieldia borealis and the Linnaean twinflower (Linnaea borealis). At the foot of these made Alps, one may find associated in connection with them plants of the middle Russian Steppes. Next we come to the flora of the Black Sea region. Here we may see their broad-leaved forest trees, oak, linden, hornbeam, and their associated shrubs such as the tatarian maple, the nanny berry, the smokebush, the privets and the Cornellian cherry.

The next group of hills in the garden in the neighborhood of the plants of the Black Sea, contains the flora of the mountains of the Balkan Peninsula, Dalmatian and Grecian mountains. Besides the usual associated flora of these forests, there is a group of oil roses for perfume. This section of Europe is noted for the production of the otto of roses, or as we call it the attar of roses, and a bed of these roses has been established in the garden so that one may see what type of plant is used for these purposes.

We next come to that division known as Asia-Minor, and the plants of the Palestine region are well shown in this section of the ground. A Cedar of Lebanon has attained quite an age and is well worth seeing. Next to the Palestinian plants, are those of the Caucasus Mountains. The plants of the Steppes of northern Caucasus are distinguished by the great number of gray-foliaged plants and the blue-green grasses. There are not so many high mountains in that region, and to bring out the Alpine situation that has been developed in the garden they have added to it such shrubby Alpine plants as are found in that region. All sections of the artificial mountains are rich in species in sub-Alpine coniferae. The garden is planned to carry through with associated geographical districts, and to see the plants of those allied geographical areas as well as the relationship of the flora itself.

The next group of geographical mountains are Altai Mountains, and along with it are shown the sub-arctic Siberian plants. Following the Siberian flora there is a special district given over to the Amur Province of north China. There are many species, strange to the European, to be found in the Amur district such as the cork tree, the Amur yellow-wood, the Mandschurian walnut and ash, peculiar aralias and the strange herbs of Amurland—even the conifers are different. There is a Sphagnum bog that has been established there with species of plants that are similar to those of northern Europe Sphagnum bogs. Many of these plants from north China must be protected from the Berlin winter in northern Germany. One of the beautiful shrubs that grows in the open is the Buddleia veitchiana, which is a native of north China and is especially beautiful because of its clear blue spikes. These honey-scented flower spikes are often times fifteen inches long. We see the same genus grown here by the Milwaukee florists, but they use the white variety or species, and it does not grow nearly so large in the greenhouses here. Among the many beautiful plants of that region might be mentioned Rosa moyesi, with its great dark red blossoms; the snow white blossoms of Exochorda genaldii; the evergreen barberries and Viburnums and the evergreen honeysuckle (Lonicera nitida). There are some very large plants of the saxifrages that resemble that odd Gunnera. Few people in this country have seen the Gunnera, a peculiar plant of the Halorhagidaceae, which looks like a gigantic plant of rhubarb. We saw this plant for the first time in the botanical garden of Kew, and also in the Berlin Botanical Garden. In fact, it was so large that an ordinary picture without the comparison of a human figure, would be doubted so we prevailed upon our friend and guide Mr. Herman Thal, a brother to the Librarian of the Public Museum, to stand there and have his picture taken to give a hight comparison. By the side of a little bridge one may see a larg clump of ever-blooming Rosa chinensis Semperflorens, the original source of our hardy perpetual tea roses.

Among the group of the north China plants we discover many of the original forms of our cultivated rosaceous plants. It will be

remembered when the United States Department of Agriculture had been exploring north China, they reported the source of many of our cultivated rosaceous plants, and it was undoubtedly this section of China. Here we see the origin of such cultivated things as the pear, the apple, the cherry and Spiraea. Also in this planting one may see the magnolia, the Forsythia or "golden bell" of China, the Chinese dogwood, and the honeysuckles. In the group of eastern China, we see a collection of plants similar to those which are found in Japan, such as the varnish plant, the Japanese witch-hazel, the spiraea, the walnut, the cherry, the quince, and so on. In the planting to represent southern China, one sees the golden larch, a ginkgo, and the Paper Mulberry as the dominating trees of the planting. In all of these groups, one must remember that there are also the typical shrubs and the typical herbaceous plants of the district.

The entire group of the Japanese islands are very well represented in the Berlin Botanical Garden — all sections and latitudes. There are numerous Cupressineae, tea plants, camphor trees, holly, Euonymus and species of Litsea of the Laurel family. We see also such Japanese pines as Pinus densiflora and Pinus thunbergii and their accompanying mass of shrubs and herbaceous plants. There are special groups of some of those very ornamental evergreens that originate in Japan, such as the Cryptomerias, the Chamaecypari and the Thujopsis. Among the Japanese hardwoods, one sees such trees as the Japanese chestnut, Japanese maples, buckeyes, magnolias, walnut, the paulownia, and its close ally the catalpa, and many associated shrubs that have become so important to our landscape gardeners. These landscape garden plants that have become so familiar to the American parks, are such things as the Rhodotypos kerrioides, Kerria japonica, Japanese dogwood, Diervillas, Deutzias, Hydrangeas, Yews, and Umbrella Pines. There is more of a variation in plant zones from the northernmost islands of Japan to the southernmost one of the group than we have in the United States, and all of these plant zones are well represented by their peculiar specimens in the Berlin Botanical Garden.

Dr. Anton Engler, who is the Director of the Botanical Garden as a whole, has always been on the lookout for additions to their garden. We enjoyed a very nice visit with Dr. Engler, and he told us about his trip to America in the autumn of 1913. At this time, he gathered a number of seeds illustrating the plant geography of the United States, and most of these, in the twelve years that have elapsed, have progressed far enough to make quite a respectable showing of the North American flora in the large section of the garden that is devoted to the North American flora. At this time Dr. Engler made a plant geographical trip with Dr. F. E. Clements, then of the University of Minnesota and Dr. H. C. Cowles of the University of Chicago. The trip led to the Rocky Mountains and to the regions of Mt. Rainier and the Cascade Mountains of the states of Washington and Oregon. There he found a great many trees and plants that were strange to him, and he brought back seeds with which he established those particular areas in the Berlin Botanical Garden. Although he selected many examples of the flora of our west coast still it was not enough to satisfy Dr. Engler, and asked us to request our friends to send him more seeds so that he can complete that large area of the garden which has been set aside for the North American Alpine flora for he is especially interested in the Alpine plants. The Alpine trees are fairly well represented in the garden. Dr. Engler was especially entranced with the Mt. Rainier flora.

Dr. Engler also made a trip through the Yosemite valley and the "Big Tree Grove" with Dr. Jepsen of Berkeley, California, and Dr. H. H. Hall of Leland Stanford University. There he secured some of the characteristic plants of that region such as the Big Tree, the various hardwoods and many shrubs and herbs that are to be seen now in the Berlin Botanical Garden. It is like a trip back home to see all of our friends of the west coast growing there in Berlin. Dr. Engler also visited the forested areas of Ohio, and Tennessee, and of the Atlantic North American and brought back seeds from which were established plantations in a large section of the garden. There is also a section of the garden devoted to Canada, and sub-arctic America covering the region of the Peace and Athabasca Rivers, Hudson Bay and Labrador.

They have made a beginning of the flora of the Mexican highlands, with the varied genera and species of the Cactus family fairly well represented. There are also many plants of the Lily family such as the sisal hemp plants, the yuccas and so on. Less well represented are the plants of the South American Andes, although examples are shown from southern Peru, Chile and the bordering parts of Argentine Republic.

Australia, New South Wales and New Zealand are fairly well represented in the garden, with species of eucalyptus, acacia, auracaria and the various herbs that accompany them. The strange plants of the Karoo region as strange as the almost extinct fauna are shown, but more of these are to be found in the greenhouses than out of doors. The last large examples of plant collections made upon geographical lines, is called the flora of the Makaronesia. This refers to the islands of the sea, such as the Azores, Madeira and Cape Verde, and the examples of plants that are shown there are comparable in rarity with the strange plants of the Karoo region of Australia. The dragon tree of Teneriffe is there shown.

(To be continued)

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DARWIN CONVERSE DEAD

A head-on collision between two cars during the snowstorm of Saturday night, Nov. 7th, caused the death of Darwin Converse 63, for 30 years Madison representative of Coe, Converse and Edwards Nursery company, early this morning when he died from injuries and a stroke of apoplexy brought on by the shock of the accident.

The collision occurred on the sharp curve near the Morningside sanitorium at the junction of highways 10 and 12 near the city. Mr. Converse was driving to his home in Ft. Atkinson, and after the accident appeared uninjured. He directed the work of towing his automobile to an East Side garage, but when he arrived in the city was unable to speak.

He went at once to a local hospital where he appeared to be suffering only from a slight stroke. Sunday he seemed to be recovering rapidly, and talked with friends and relatives who came to the city from Fort Atkinson to visit him; but early the next morning he suddenly became worse, and suffered the stroke which caused his death.

He is survived by his wife, one son, and two sisters living in Ft. Atkinson, and one sister in Milwaukee. A second son was killed while with the American forces in the World war.—Wisconsin State Journal, Nov. 7th, 1925.

* * *

Darwin Converse loved his fellow men. He held firm faith in the best rather than the worst of human nature. He might have retired from the business of selling trees and plants twenty years ago had he desired to do so but it was his pleasure to go again and again to homes where he had sold plants to visit with these folks he knew so well and who knew and welcomed him. Darwin Converse will be missed in hundreds of Dane County homes this winter and many to whom the notice of his death may be delayed will be waiting for him. A nursery agent, but one who will be held in kindly rememberance by thousands and one whose works will live after him.—F. C.

PROCEEDINGS.

Owing to lack of space, proceedings of the Board of Managers for September were omitted from the October number: There follows here an account of all of the business transacted by the Board since August 27 and a statement of bills audited and paid.

MEETING OF THE BOARD OF MANAGERS

Office of the Secretary, Madison, Wisconsin, Sept. 10, 1925, 2:00 P. M.

Present: President W. A. Toole, Secretary F. Cranefield.

Proceedings:

(a) After discussing the matter of premiums for the Winter Meeting, the Board decided that $200.00 should be added to the amount to be expended, and that the amount shall be apportioned as the Secretary sees fit.

(b) Bills audited.

Meeting adjourned.

FREDERIC CRANEFIELD,
Secretary.

Meeting of the Board of Managers of the Wisconsin State Horticultural Society.

Office of the Secretary, November 9, 1925. Ten o'clock A. M.

Present: President, W. A. Toole, Baraboo; Vice-President, J. E. Leverich, Sparta; Secretary, F. Cranefield, Madison.

Procedure:

Following a discussion of the program and prospective exhibits for the coming convention, the meeting was adjourned.

FREDERIC CRANEFIELD,
Secretary.

ANNUAL MEETING THE WISCONSIN STATE HORTICULTURAL SOCIETY.

November 9, 1925, Office of the Secretary.

Pursuant to call the Society met in the office of the Secretary, 233 Washington Building, Madison, Wisconsin, at ten o'clock in the morning.

Meeting called to order by President Toole.

Mr. J. E. Leverich of Sparta, Wisconsin, moved that an adjournment be taken to Eau Claire, Wisconsin, on Wednesday, November 18, 1925.

Motion seconded by Mr. J. S. Potter of Madison, Wisconsin.

All present voting in the affirmative, the meeting was adjourned.

FREDERIC CRANEFIELD,
Secretary.

BILLS AUDITED

Wisconsin Telephone Co.	7.00
F. Cranefield, trav. exp.	22.09
F. Cranefield, trav. exp.	15.57
Blied Office Supplies	3.60
J. S. Potter, trav. exp.	16.66
J. S. Potter, trav. exp.	48.85
F. Cranefield, casual employees	10.80

State Printing Board	65.99
Nicholl Holding Co., rent	25.00
Meyer News Agency	5.00
Dunn County Hort. Society	19.00
Midwest Cold Storage Co.	7.12
Madison Gas & Electric Co.	1.56
Scott Bros. Drayage Co.	1.50
Wisconsin Telephone Co.	8.37
F. Cranefield, trav. exp.	17.50
Roy Leonard, services	2.00
The Neckerman Agency	3.00
F. Cranefield, trav. exp.	23.35
J. S. Potter, trav. exp.	41.33
L. C. Smith Typewriter Co.	4.00
Mueller Agency Insurance	8.68
State Printing Board	63.92
Midwest Cold Storage Co.	5.55
Elliott Addressing Machine Co.	6.16
F. Cranefield, trav. exp.	35.12
Midwest Cold Storage Co.	4.10
American Rose Society	5.00
St. Louis Button Co.	10.80
R. B. Powers, conv. ribbons	38.67

MORE ABOUT ASTER YELLOWS.

On Wednesday evening, November 11, in the lecture room of the Horticultural Building at the University at Madison, Dr. L. O. Kunkle of the Boyce Thompson Institute for Plant Research, Yonkers, New York, gave an illustrated lecture on what he has accomplished in experimenting with the "aster yellows". He spoke to an audience of about seventy-five florists, students, and flower lovers.

Those who were fortunate enough to be able to hear Dr. Kunkle came away with some valuable knowledge as to how research is carried on and some more valuable practical information as to how to combat the aster yellows.

The "yellows" is a virus disease, and as a result it is impossible to isolate an organism under the microscope, nor is it possible to grow a culture. Therefore to fully establish the fact that the disease is present, it was necessary to transmit the disease to a healthy plant and then retransmit it.

The disease is carried by a specific insect, one of the two leaf hoppers which feed on the aster plant, and it is impossible to transmit the disease without the agency of the insect. At this point it may be explained that about two hundred years ago the Chinese aster was taken from Korea to Europe, and from Europe the plant was imported to the United States. It is thought that the leaf hopper was imported at this time. But it appears that since the disease is not present in either Europe or Korea, that the aster is endemic in China, the insect endemic in Europe, and the disease endemic in America. Dr. Kunkle is of the opinion, however, that if a carrier were introduced into Europe that the disease would become prevalent there.

The positive symptoms of the disease are, clearing of the viens, chlorosis or yellowing of the tissues, standing up of the leaves, and general dwrafing when the disease attacks in the early stages of the plant. Other indications are rosetting, false flowering, and imperfect development of flowers. The degree to which the symptoms become apparent depends on the stage of growth at which the plant has become infected.

The average period of incubation is twenty-one days. The nymph stage of the insect also covers about three weeks and it is at that period that they should be combated because of their inability to fly. Some of the interesting habits of the insect make possible the suggestions of certain remedial measures. The insect does not like to get close to walls, and neither will it of its own accord go inside of a building. It is a wild insect.

Of importance is the fact that the aster yellows attacks several weeds, particularly the horse-weed and the rag-weed, numerous vegetables, and several of our flowers.

It now seems possible to suggest some methods by which the disease may be combatted. Since the disease is present on rag- and horse-weed, keep these weeds down. Since the insect does not like to get near walls, plant the small home bed near a wall. Pull out and burn all plants that show the infection just as soon as it becomes apparent. It has been suggested that spraying the plants with a contact spray such as nicotine sulphate when the insect is in the nymph stage will cut down the number of adults later on. Also a coating of Bordeaux Mixture seems to prevent a number of eggs of the insect from hatching. Greenhouse grown plants are perfectly safe unless somebody carries in a few infected leaf hoppers and turns them loose in the house.

There is no doubt that work on the so-called "yellows" has just begun. Practically speaking very little is known about the disease and its kindred infections, and the research men admit this. But at last work on plant diseases has started and with such capable pathologists as Dr. Kunkle on the job, facts concerning the diseases should begin to pile up.

THE MILWAUKEE GARDENERS ASSOCIATION.

Organized December 16th, 1903.

Incorporated and charter granted March 7th, 1905.

Membership at present, 220.

The Milwaukee Gardeners Association represents an industry engaged in supplying fresh home-grown vegetables to the people of Milwaukee and adjacent territory.

One of its objects is to acquaint the people with the fact that such an organization exists; to demand Home-Grown Vegetables, being best for their table; that its members are actively engaged in producing home grown vegetables and fruits of the best quality and freshness grown by men under skillful methods, giving them a distinctly pleasing taste that lingers.

Soil and climate conditions in this section of the state are favorable for diversified gardening, therefore our Gardeners are able to serve the public at all times with a variety of New Beets, Cabbage, Carrots, Beans, Peas, Turnips, Lettuce, Radish, Celery, etc.

Two years ago we adopted a label, highly lithographed, which has now been adopted by the Vegetable Growers of America. It is already being used in fourteen states by leading growers. It is a label we are justly proud of, consisting of sixteen varieties of vegetables.

Officers are:—

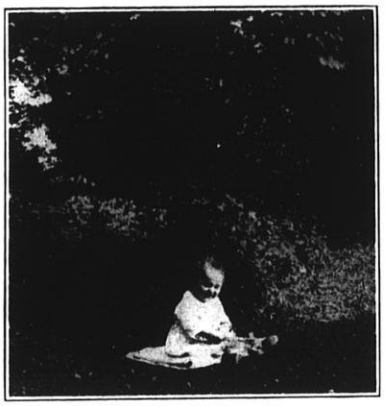
President, George Tesch, West Allis, Wis.

Treasurer, Otto H. Tamms, Station D., R. F. D. 2, Milwaukee.

Secretary, Charles E. Groth, 733 Forest Home Ave., Milwaukee.

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG



CATCH 'EM' YOUNG, VERY YOUNG.

The best way to train Horticulturists is to "Catch 'Em' Young."

Judging by his absorbed interest "Billy Cooper" is planning on following in the foot-steps of Great-grandfather Cooper and become a real horticulturist, for many of the apple trees in the background were raised from seed brought from New York to the new home in the forests of Wisconsin where three generations of Coopers have raised prize winning apples.

It is gratifying to those who belive in—"Training in the days of youth, so that when they are older—they may not depart from these ways,"—to notice how much attention is being paid lately to interest children in the worth while things of farm, garden and home.

I am more than pleased to see the Florist's Club following along this line; offering prizes to the children in the fifth, sixth, seventh and eighth grades,—who give the best essay on description of the Flower Show to be held in the Milwaukee Public Museum. This will teach observation, a better knowledge of flowers and plants—a speaking acquaintance so to say, which will be a pleasure to them all through life.

I should like to see something done like this in connection with the Horticultural Building at the State Fair.

Get the children interested, teach them to really *see* the things they are looking at, to ask questions about them, then indeed will the exhibits be educational and "Children's Day" be worthy of its name.

The State Fair Board, Horticultural Society and Superintendents of the Horticultural Building ought to get together and follow,—perhaps even improve upon—this suggestion of the Florist Club.

OH THESE REFORMERS!

A brilliant woman lecturer speaking before a Woman's Club urged the importance of women getting out and interesting themselves in politics as the men do, of the good they could do if they would devote themselves to this cause—there were so many wrongs that would never be righted until the women got out and worked together. Just think what we could do at election time if every woman voted instead of staying listlessly at home.

At the close of her talk, she invited comments. Very unexpectedly a quiet little woman got up and said: "Your talk was interesting and there was much truth in it, but you have left out entirely, one very important item—children." Most of us are too "sot" in our ways to take more than a passing interest in these things—but children—if you enthusiasts would devote the time and energy you are wasting on us—in teaching the coming generation—if children were taught in the grade schools the importance of good citizenship—and the value of voting—if they were taught to vote—just as their fathers and some of their mothers are voting at election time—in the same manner so they will become accustomed to this simple duty—this next generation would accomplish easily, what you are striving for so strenuously in such a mistaken way. Don't waste your time and energy worrying because you have been wronged and are missing the best things of life—see to it that your children and children's children are taught the better way—and you will live to be rewarded."

THE GARDEN SPEAKS.

By Nancy Byrd Turner in Youth's Companion.

Come, all good birds!
Robin and wren and thrush,
For every one a bush,
Come with glad words.

And all bright flowers;
Phlox and delphinium,
Rose and tall lily, come,
Make fair the hours.

Come, bees, because here
Sweets without measure
Wait for your pleasure.
Butterflies, pause here.

Toads, find you room.
In the sweet thickets,
Humble brown crickets,
Make you at home.

Be kind here, weather!
Rain, wet the tender roots;
Sun, warm the golden fruits;
Dews, softly gather.

Love, be the warden;
Peace, all the borders fold.
God himself once of old
Walked in a garden.

We once saw a paper called Talk, and the editor said it doesn't cost much. Ask questions. We like to talk.

THE WHITE FLY KILLS, KILL THE WHITE FLY.

A member sent leaves of a pelargonium plant, the outer edges dead and the rest covered with small white insects. These Dr. Fracker tells us are "white fly". With that as a basis we replied as follows:—The leaves which you sent in showed that your plant is infested with the white fly. To rid the plants of them spray with nicotine-sulphate which may be obtained under the trade mark of "Black-leaf 40". Make up a solution using one teaspoonful of the "Black-leaf 40" in a gallon of soapy water.

It may be that you will have to make repeated applications in order to get completely rid of the insect.

I believe that the reason for the leaves dying back from the tips may be laid to either excessive or too little watering. It is difficult to reach a happy medium in watering indoor plants because of the varying heat in the average room.

And so I believe that if you treat the plant as outlined and take care in watering you will get better results with your plants.

Feel free at any time to ask us for information. If we don't know we will find the answer from some one who does.

WE DO NOT WEARY OF WELL DOING.

This member offers excuses for taking our time. We feel that we are fortunate to get such a letter. The true garden spirit is here.—Editor.

I have much enjoyed reading the program of the Annual Convention of State Hort. Soc. and do so wish I might attend bodily instead of with mental longings, but am glad for those who can attend. I am much interested in the Thursday P. M. program "The Mosaic Problem", etc., as something has attacked part of our raspberry bushes, something which I've never seen before and I fear is mosaic. I hope any attempts at control of this may be printed in Wis. Hort. at I hate to wait till the next Annual Report. If anything can be done, "it were well it were done quickly".

I also received the Annual Report which I am greatly enjoying. Of course I find things that I do not agree with. For instance, Mrs. F. H. Horstman says she does not grow dahlias any more because she worked so hard taking them up, getting them into the cellar and then watching all winter to see that they do not get too damp. Peonies I love too, but at the best their blossoms are with us not more than three months and often not more than six weeks. My dahlias commenced to bloom very soon after the peonies were gone, this year, and they were beautiful Oct. 3. (The killing frost came Oct. 10). They had blossomed continuously from early in July till Oct. 10. They are surely worth care, work and thought.

I am greatly interested in roses but do not attempt much in the way of roses except the old standby's long since given up by people who have time and money to raise the new varieties.

I have a white rose—not double hardly—I should say about 2 rows of petals and wonderful stamens. I do not know the name—my mother bought the original bush of Vick over 60 years ago. It grows freely—like a wild rose—its foliage is smooth and shiny and its free blossoming is wonderful.

I don't agree with Mr. Moyle about the Druschki rose—to me it is a wonderful rose. My neighbor, who is quite a rose specialist, has a bush she has had 2 seasons and it has been almost a perpetual bloomer.

I am interested in spraying trees. We are able this year to get a neighbor to spray our two dozen old trees, and the results have been great. A Flemish Beauty pear tree, whose fruit last year was of little use—guarled, knotty, small, and wormy,— had great beautiful fruit this year, smooth and perfect. Our apples, too, have been perfect as when the trees were young over fifty years ago and I have found but four wormy apples so far.

Excuse my taking so much of your time. I do so enjoy our magazine, Wisconsin Horticulture.

Yours truly,
MRS. A. C. H.,
Mukwonago.

ROCK COUNTY GARDENERS GET TOGETHER.

On Wednesday afternoon, November 11, a meeting was called by Mr. R. T. Glassco, County Agricultural Agent of Rock County, for the purpose of stimulating interest in horticulture in Rock County. The meeting was well attended, about twenty-five people came and the meeting convened in the Circuit Court Room in the Court House at Janesville.

Professor J. G. Moore, of the University, gave a very interesting and educational talk on the subject of starting an orchard, and then answered questions and identified apple varieties that the people brought in.

After Professor Moore finished speaking it was suggested that a Rock County Horticultural Society be formed. This was met with unanimous approval and so, Mr. Glassco acting as chairman, the following officers were elected:

Mr. Charles Marquette, President.
Mr. Charles R. Van Gelder, Vice-President.
Mr. R. T. Glassco, Secretary.
Mr. George McLay, Treasurer.

With this action as a nucleus, further organization will take place at the December meeting of the Society.

Rock County is fortunate in having a great field for horticulture, and with the enthusiasm displayed at the first meeting as a sample, there is no doubt but what the Rock County Horticultural Society will have a large membership and a fine future.

The State Horticultural Society was represented at the meeting by

(Continued on page 44)

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

IS THE COTTONY MAPLE SCALE COMING BACK?

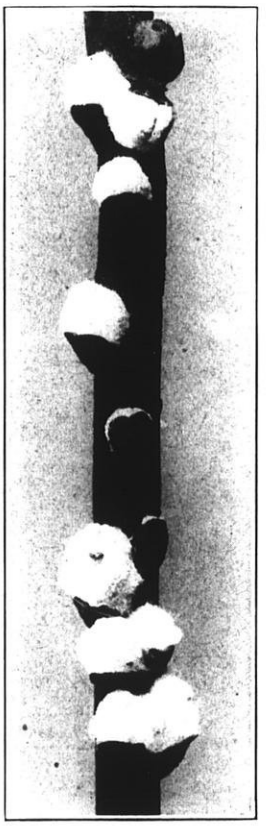
During the past season quite a number of localities scattered over the state were noticed where the Cottony Maple scale (*Pulvinaria vitis*) was again making its appearance in small numbers. This is one of our pests that seem to run in cycles making its appearance for a while as a serious pest and then entirely disappearing for a period of several years before making a return engagement. About twelve years ago unusually severe damage to the soft maple and box elder trees in many of the cities and towns of southeastern Wisconsin resulted from repeated attacks of this insect. Many beautiful and valuable shade trees were killed by successive attacks which might have been saved by a little timely care and attention and without any great expense.

A similar epidemic of less extent occurred about fifteen or twenty years prior to that time but the scale seemed to have yielded to their insect enemies more rapidly at that time than they did during the last epidemic with the consequence that the losses were not so serious.

This disappearance and appearance of the pest in cycles is due primarily to the presence and absence of parasites. Like most of our insect pests we have an epidemic extending over a period of a few years until the parasites find such good "picking" that they develop in enormous numbers. Soon the parasites become so plentiful that they get the upper hand on their insect host and occurring in such large numbers they soon force a food shortage and naturally die out with the result that the host is left unmolested to get a footing and another cycle is started.

A very small hemispherical black ladybird beetle with a red spot on each wing cover is an important destroyer of this scale; its white wooly larva feeding on the eggs and young in the egg sacs. Certain tiny wasp-like parasites attack the scale especially in its immature stages and prevent its growth to maturity.

The Cottony Maple scale is just prior to maturity a rather flat oval shaped dark form insect about one



A Twig Infested with Cottony Maple Scale.

fourth of an inch in diameter and by midsummer is generally lifted at one end from the twig it is on, by a projecting mass of cotton—like threads which the female spins to surround her thousand or even two thousand eggs.

By the middle of June the eggs begin to hatch and the young crawl to the leaves and start feeding. They cover themselves with a thin waxy coating which they secrete. In the fall they migrate to the twigs for the winter becoming adults the following spring. There is but one generation a year. This pest is easily discovered when they appear in a considerable number on account of the large conspicuous white cotton-like masses as shown in the accompaning illustration.

The insect attacks chiefly the soft maples, elms, oak, basswood, locust, sumach, woodbine, currant and bittersweet but also other shade trees and plants as well. Its food consists of sap obtained by sucking it from within the plant tissues.

The English sparrows are believed to be one of the chief disseminators of the scale among shade trees, the young crawling scales which appears much like lice being carried on the feet of the birds, although the active young can of course, themselves crawl for considerable distances from branch to branch. They are also spread by the wind which may blow the crawling stage of the pest about as well as infested twigs.

The chief means of control is by spraying with a miscible oil one part to twelve or fifteen parts of water, just before the buds open in the spring. Scalecide or Sunoco Spray oil are well adapted for this purpose.

Excellent results have been reported by some investigators by spraying as late as the middle of June, when the eggs have all hatched, with a fish oil nicotine spray using one pound of fish-oil soap to five gallons of water to which an ounce of nicotine sulphate has been added.

Partial control may be secured by dislodging the pests with a powerful spray of water against the cottony masses before the eggs have hatched. Local fire companies could be used in this treatment to great advantage and without unreasonable expense to the community. This is one of those pests which require a community clean-up since the work of a few individuals in an infested area would only

be wasted. The Madison fire hose was used against a similar pest the European elm scale during midsummer with excellent results and with no injury to the foliage of dozens of towering elms.

E. L. CHAMBERS.

LIGHT, LIFE: DARKNESS, DEATH—

Why children reared in the dark slums of our great cities grow spindling and pale; why children carefully housed and fed develop rickets, these are two questions on which experiments with rats at the Boyce Thompson Institute for Plant Research are throwing new light.

White rats are being used to supplement studies of the effect on plants of different rays of light. Under glass especially made to separate the rays of the sun, these young rats pass their lives in different colors of the rainbow, one group living in green light, another in blue, and still another in light from which the sun's invisible violet rays have been removed.

These experiments of the Boyce Thompson Institute with light and its effect on living things may eventually have a tremendous effect on man's way of living. For instance, it has already been learned that animals, unlike plants, need the sun's invisible violet rays. Furthermore, our ordinary window pane shuts out this very part of the sun's light. In other words, it is not enough to sit in a sun parlor with clothes on. In order to get the full and beneficial effect of ultra violet rays, one must come into direct contact with sunlight.

Thus when children's bones become soft and misshapen, as in rickets, they may be cured by feeding certain things, such as codliver oil. But an equally good and much simpler treatment is to lay the bare limb of the child, or grown person, in the direct sunlight.

And just here again experiments at the Boyce Thompson Institute may have a vital affect upon our lives. For they show that at least two types of glass, which are now in preparation, permit these all-important, live-giving ultra-violet rays of the sun to pass through, instead of absorbing them as does the glass of our ordinary window panes. Furthermore, these two sorts of glass promise to be comparatively cheap; whereas quartz glass, the only kind hitherto known as not absorbing ultra-violet sun rays, is beyond the price of most people. The two types of glass open up interesting possibilities for constructing sun porches for children and invalids.

Plants, on the other hand, according to Boyce Thompson Institute experiments, do not need the ultra violet rays of the sun, as do animals. Normal plants were grown at the Institute where the rays were completely shut out. But when glass excluded the sun's blue rays as well, then the plants became spindling; and when the green rays also were cut out, the plants became still taller and thinner, with cupped leaves. The bushy soy bean became a twining vine as a result of losing the violet, blue and green rays of the sun.

Dr. Ethel Luce, formerly of Lister Institute, London, working in collaboration with Dr. E. A. Park of the Yale Medical School, is conducting this work at the Boyce Thompson Institute to determine the effect of the different rays of the sun on animals as compared with their effect on plants.—*Boyce Thompson Institute.*

KILL POISON IVY.

A question: "Can you tell me if there is anything that can be used to kill poison ivy? Also will the soil be in condition to grow grass or flowers after treating

We have a little cemetery, which is overrun with the ivy so badly it is difficult to get a caretaker. Will be very thankful for any information on the subject.

* * *

Our answer:—You have a very difficult problem confronting you in the way of getting rid of a large growth of poison ivy.

Frankly, the only method that we know that is at all sure is to grub out the vines. When this is done after the plant has become dormant it is not in any way injurious to the worker if he wears gloves, since the plant oil which causes the blistering is not present in appreciable quantities. Gloves should be worn, however. It is even more sure to cut the vine above the ground at the start of a growing season so that the roots will not develop and then grub out the remaining portions in the fall. This method of eradication is tedious, and must be followed year after year, because the vine will spread rapidly if the greatest care is not taken.

The experiments with the use of chemicals as a means of eradication have been failures so far as we know. In sections where cultivation is possible the pest has been eradicated by preventing any growth, but of course cultivation is impossible in your case.

WHAT FRUIT ACIDS DO.

The acids of fruits, often referred to as very beneficial, mean little to the average person to whom the term "acid" usually carries a significance of a condition in the stomach to be avoided. However, the acids of fruit have nothing to do with our stomach. They are more calculated to prevent it. The gentle acids provided by fresh fruit are a stimulant to the secretion of the digestive juices.

With these acids are found the vitamins, substances which are essential to health and life, and whose exact function and nature is providing an interesting study for scientists. It is now known that rickets, scurvy and kindred complaints are caused by the lack of vitamins in the diet and that supplying them speedily remedies the condition.

The sugars of fruits which usually accompany the acids are of a laxative nature, with the single exception of the blackberry, which is an astringent. The roughage or bulk of the fruit stimulates the churning movement of the stomach, which makes the digestive processes

active through the mixing of the gastric juices with the food in the stomach. This movement is known as peristalsis.

The acids and sugars are carried in water, which makes up the great bulk of the fruit, and are in diluted form easily assimilated when they reach the stomach.

The chief acids are citric, malic and tartaric acids in fruits. The flavor depends upon the mingling of the acids and the sugar in the fruit. Citric and tartaric acid are commonly used in commerce. Tartaric acid is found most abundantly in grapes. Citric acid is the factor in the citrus fruits and green gooseberries. Malic acid is found in the apple, pear, cherry, grape, currant and the common varieties of berries. — *Bulletin American Pomological Society.*

FOOD VALUE OF FRUITS.

That class of substances known to chemists and dieticians as carbohydrates forms the chief nutrient value of fruits. The carbohydrates are chiefly in the form of sugar, cellulose and pectin, the last the substance that makes jelly jell. The ripeness and variety of fruit shows a divergence in the amount of these substances present. Sugar is highest, of course, in dried and preserved fruits and lowest in ripe fresh fruits.

Cellulose is the solid matter contained in the skins, cores, seeds, and granules bodies present in some varieties such as the pears. There is a greater proportion of cellulose in the wild fruits, as cultivation tends to make the production of thinner skin and rind and to the production of fewer seeds.

Cellulose is valuable in adding roughage to the diet and assisting in intestinal activity. It has no food value, but a certain amount of it is necessary in the diet, and fruit provides a pleasant and palatable manner of providing it.

Many of the so-called health foods are designed to provide this factor, particularly the bran compounds. The fruit sugars, as is well known, are essential factors in the diet. They are not readily substituted by commercial sugars, but are best secured by consumption in their natural state—in the fruits themselves which produce them.

The swallowing of grape seeds, a question which has aroused much discussion, by some authorities is considered harmless and only a means of providing roughage. Others declare that owing to the indigestible quality of the seeds and their large size, the practice is not to be advised. However, millions of people let the seeds skid down with the pulp of the Concord and allied forms of grapes and suffer no harm. — *Bulletin American Pomological Society.*

GROW YOUR OWN VITAMINS

Closely associated in our minds with the vitamins they supply are the vegetables that can be grown in almost any home garden—spinach, cabbage, lettuce, carrots, string beans, peas, rutabagas, tomatoes, all the leafy vegetables known as "greens", and many others. We also obtain necessary minerals from these vegetables — iron, calcium, phosphorus—and depend on them for bulk, or "roughage". But our first thought is apt to be—vegetables for vitamins!

The advantages of growing vitamins in our gardens are many and obvious. To begin with, there is the matter of freshness. No matter how near the market may be to the home, it is usually a long way from the farmer who produced the vegetables. Garden products that have been carried over a dusty road, and perhaps exposed for hours before they were sold, can not be compared in desirability of flavor or condition with those just off the vine or out of the earth. The vitamin content of vegetables is also dependent to some extent upon freshness.

Again, when the vegetables are actually at hand in the garden, waiting to be gathered, the chances are that they will be used oftener, and in larger quantities, than when some one has to go to a store to get them. The price often influences the quantity bought when the housekeeper goes to market, but when she steps into her garden she is apt to bring in as much as she believes her family will consume.

The convenience of having a garden frequently leads to a beneficial change in the proportions of the family diet. Vegetables are served more abundantly because they are available, and they satisfy the craving for bulk, lessening the desire for other foods which may lack the necessary vitamins. Almost automatically the garden tends to increase the use of vegetables.

The garden must, of course, be carefully planned so that it will yield an adequate supply of the kinds of vegetables the family likes and needs, both for table use and for canning or storing. If some sort of record is kept from one year to the next to show the quantity of each vegetable grown and the use made of it, a garden budget can be eventually worked out.

Fresh fruits are also important sources of vitamins, and should be considered in connection with the garden plan. Many orchard fruits and berries grow well in all sections of the country, and others are best suited to certain localities. While the citrus fruits—oranges, lemons, grapefruit—are among the best sources of vitamins, they are produced only in warm climates, and must be purchased in other sections; local fruits, however, may be depended on also to supply vitamins. Tomatoes are comparable with citrus fruits as sources of vitamins, and when the latter are lacking, tomato juice, either fresh or canned may be used instead. It goes without saying, therefore, that it is a good thing to include tomatoes in every garden plan.—*Exchange.*

WORKING PLANTS OVERTIME BY MEANS OF ARTIFICIAL LIGHT

The effect on plants, of additional hours of artificial light, applied under carefully controlled conditions, is the basis of one of the ex-

tensive series of experiments under way at the Boyce Thompson Institute for Plant Research at Yonkers, New York.

Adaptation of some of the results to greenhouse practices is one possibility, but the immediate purpose of the work is to establish the fundamental laws of plant growth. The work is done in greenhouses (subject to controlled conditions of temperature and humidity) over which the gantry crane may be suspended at night, subjecting the plants to as many hours of additional light as is desired. This is made possible by the 48 one-thousand watt lights carried by the crane.

Another interesting phase of the work is the increase of the carbondioxide of the atmosphere of the greenhouses, in varying amounts. The gas is "scrubbed" in four towers of glazed tile as it comes from the boilers, and driven directly into the greenhouses. Since a plant is more than 40 per cent carbon (dry weight), this must all be obtained from the air, which contains only 3 parts in each 10,000 the value of this addition of carbondioxide to the plant's ration, especially when it is developing under increased hours of light, is apparent.

Besides the greenhouses there are "constant condition" light and dark rooms, in which the development of different plants under carefully varied conditions may be studied.

Some of the results already observed are most interesting, and the life history of the plants as developed is recorded in photographs, the plants themselves being subjected to every kind of minute analysis in the various chemical and michrochemical laboratories. For example: radish, lettuce, barley and clover bloomed much earlier under constant light; buckwheat and soy beans bloomed later when worked overtime; while certain flowers such as salvia and cosmos refused to bloom at all.

Certain sharp contracts developed. For instance tomatoes grew faster and made better plants when the hours of light were increased up to seventeen hours. But with a longer day they dwindled and constant light killed the plant entirely. On the other hand the clover flourished under 24 hours of light, and produced flowers in 35 days, where two years may be necessary in the field. The clover also responded gratefully, with luxuriant growth and an increase in size and number of blossoms, when it received an extra allowance of carbondioxide with 6 hours of additional light, in comparison with the plant getting extra light only.

Such work, while not translatable into actual practice with present costs of electricity, is nevertheless of the greatest practical interest in highlighting the laws of the plant's being and indicating the environmental conditions best adapted to the rapid and most perfect development of different plants. These results are practical to the last degree in promoting intensive agriculture, and that economic increase in production necessary to keep pace with the rate of increase in population.

The unusual equipment of the Boyce Thompson Institute, makes possible these researches, under such rigidly and minutely controlled conditions, that the basic laws of plant life may be, it is reasonably hoped, uncovered and later practically applied.—*Boyce Thompson Institute.*

REFORESTATION

It was the privilege of the writer, recently, to visit the northeast section of Minnesota, south and west of Duluth. In driving about we saw two forest reserves, both very interesting, but the one near Cloquet was of special interest because it is on country very similar to the great central sandy section of Wisconsin. This section is often spoken of as the "barrens," "blueberry plains," etc.

The Cloquet forest reserve is growing up with pine, so thick that in many places the trees stand thick enough for corn stalks in a corn field. This is with no planting, just care to keep fires out. The young trees are now all the way from one-year-old seedlings to trees six of eight inches in diameter. In one place where the trees were quite large and not very thick, there were also many young ones up to about four feet high.

The timber is jack, Norway and some white pine. The same general conditions exist in the great state of Wisconsin. There is no reason why the same results may not be achieved if we follow the example of our neighbor.

Statistics tell us that there are vast sections of the North Wisconsin cut-over district that are only one to three per cent settled, so Mr. Olbrich need not worry about there not being land for the work of reforestation. One may look from the top of a hill and see many miles of nothing but young timber.

Aside from the sandy section which produces little but pine, there are many thousand acres of the mineral ridge of North Wisconsin and of comparatively level rocky land which is worthless as farm land, but will produce huge trees of white pine, black birch, hard and soft maple, and other valuable timber.

Again, there are other thousands of acres of swamp land which quickly grows up to spruce, balsam and tamarack. Let us join hands and boost as good citizens should. We can get the work done if we will only get together and boost for it. There is plenty of money in the state. Let us try to get some of it turned to this work. —*Irving Smith.*

Start something! Maybe your neighbors are interested in horticulture. Now is the time to start that local Society. Tell them about your State Society and Wisconsin Horticulture. Get together!

ROCK COUNTY GARDENERS

(Continued from page 39)

J. S. Potter, the assistant secretary, who suggested that this newly formed Society affiliate with the State Society as an auxiliary, which would be to the advantage of both. This question will come before the members of the Rock County organization at its next meeting.

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Part of the floral display Eau Claire Convention

"A PEACE THAT PASSETH UNDERSTANDING"

In Illinois there is a town we have never seen but we picture it as a village with shady streets, houses setting back from the road, broad lawns, some with hedges across the front, some with fences and gates that swing wide and easily.

In summer as the sunshine trickles thru the spreading branches of the elms and maples, women bring their chairs and seek shaded spots on the lawn where they read or embroider strange things or perhaps gossip. The name of the town is Cherry Valley.

There are gardens too. In one of them an old man works and in that work finds pleasure greater than most of us will ever know. He has lived four score years and to these other years were allotted him until now he is eighty-six. His name is L. H. Brown, a retired minister. We know him well and greatly enjoy his letters but we have never seen him and it is only thru his written words that we know him. He is a veteran of the Civil war, a kindly, loveable, gracious spirit such as in this money mad world we seldom meet.

For many years Mr. Brown has been a member of our Society and has at last permitted up to publish one of the letters that have come to us from Cherry Valley. These letters tell a story such as we cannot tell altho we have often tried.

Cherry Valley, Ill., Dec. 15,1923.

To Frederic Cranefield,

Madison, Wis.

My Dear Sir: Yours of the 10th was duly received, and noticing the contents I am constrained to write a line or two by which to express my gratitude and say, thank you most sincerely, for your kindness in answering my question, "Who is an amateur," you say, "it is the best answer I can give," and I say, it is good enough. It is in very deed satisfactory. Furthermore I would add a line by way of introduction: I am now past 82 years old, a civil war veteran, have a little home here in Cherry Valley, of nearly an acre, with dwelling house and other buildings and lawn occupying at least one-third. The rest is my garden and orchard, 9 apple trees of 20 or 25 years growth, all in vigorous, healthy condition. I raise vegetables enough for my own needs and some for my neighbors. For the last ten years have been growing tulips, gladioli with a few peonies. Am a downright failure with roses. When my tulips are in bloom I gather them in bunches of 8 or 10, take them to my friends, and many that are sick and old men, my comrades who are confined to their homes. And I go often to the hospitals, in Rockford, making a personal matter of it. And the same when the gladioli and peonies are in bloom, and am never offering any of these for sale. I love to grow the flowers and am well rewarded in the gratitude expressed by all these my friends. For my fall planting of tulips I have seventeen hundred

cultivate. 'Tis a pleasure the whole matter go with you.

I am sending herewith a Kodak picture taken nearly a year ago by a friend of mine from Rockford, he had driven in at the gate as I was coming up from the garden having just finished digging my tulip beds, having brought his camera along he commanded me to sit down in the chair that he had placed saying he wanted to take my picture, and here you have the result, shall say however that it is a real good honest picture, hoping that I have not presumed to generously upon your time and good favor, I beg leave to subscribe my self as your friend, with all good wishes.

Rev L H Brown.

Cherry Valley Ill.

bulbs in the ground all of my own growing. For my spring planting I have better than a thousand gladioli bulbs, also home grown. Since my wife died nearly ten years ago I have lived alone, and my garden, with Wisconsin Horticulture, has been and is my comfort and in large measure my companion, as a preacher you see I am old and out of date, "not wanted" is the label with which I am decorated. Still and all, I am quite well content, and with my pension generously awarded me by Uncle Sam I live quite comfortably.

Again I thank you.

Very truly yours,
Rev. L. H. Brown,
Cherry Valley, Illinois.

There may or may not be a moral to this brief story. If there is one it is not new to those who have sought and found comfort and companionship in gardens.

Here is a man who lived among men, who thru long years as a minister battled with wrong, who was not afraid to fight when fighting was unavoidable, who in his declining years has found, "The peace of God which passeth all understanding." "I love to grow the flowers and am well rewarded in the gratitude expressed by all of my friends,"—

Some of us are going to have rather empty days at the latter end unless we can cultivate an interest in something besides ourselves. The very wealthy find satisfaction in great gifts, the rich thru persuing some expensive hobby that brings pleasure into their own lives but none so poor but he may plant a seed, watch it grow and thru the springtime, summer and autumn learn if he will but heed that "all the truth of life is there; a moment of vision, a sigh, a smile——and the return to eternal rest."

Some of us may have neglected to cover our roses in November, hybrid perpetuals and hybrid teas. It's not too late yet. Heap coal ashes over and around them then set a nail keg over each plant.

"FLIGHTY VISTAS ABOUT THE HOME GROUNDS"

C. E. Cary, Professor of Landscape Gardening, Univ. of Minn.

Given before the Wisconsin State Horticultural Society Annual Meeting, Nov. 18, 1925, Eau Claire, Wis.

Whether or not you have recently ascertained the correct definitions for the words "flighty" and "vistas", you are probably as much in the air as I am as to just what this discussion is to be about. However, while we *are up* in the air, lets *stay* up for a while, and take a bird's eye view of the average home grounds and its landscape development. True—we will seldom enjoy our *own* landscape from this vantage point—but in the development of the home grounds, in ground, we are so apt to lose sight of its third dimensional aspect and to think of the many features and their individual uses and beauty instead of the scheme as a whole.

A well studied plan, in mind or on paper, for the development of the property as a whole, whether it be carried out in its entirety or not, is of course the only sensible way to go about this work.

What do we see from our seat in the clouds,—order, symmetry, balance, beauty, all parts related to the whole—or a jumbled mass, I mean mess, of plant forms and architectural features, proclaiming loudly in variegated hues, unnatural shapes and improper placements, the lack of order and consequent loss of beauty. For heaven's first law is order and without it there is no beauty. As we dip and glide we note the great variety in the sites folks have selected for their homes, the canvasses upon which the home pictures are to be painted. Some are large, some small, many shapes and surfaces, building laws may restrict us here and existing features there, but everywhere, anywhere, the canvas is awaiting the hand of the artist —for art knows no limitations, beauty is not a question of size, the humble cottage dooryard may present to the eye of the beholder complete and enduring satisfactions.

Of course the site would want to be large enough to serve the purpose for which it was intended, in a good neighborhood, served by improved streets, highways, or other transportation facilities, by such public utilities as gas, sewer, electricity and water, and convenient to churches, schools, and shopping centers. Its exposure to winter's sun and summer's breeze is of importance and in the open country its protection from the wintry blasts and the hot dry winds of summer.

Having selected the site for our home (which *of course* has been designed to fit this site—and the reverse also be true) we are presented with the problem of placing this house and its architectural accompaniments so that it may appear as *one* with the site, as though it belonged there and nowhere else, the first step toward unity in our picture.

Here, again, restrictions may hamper all attempts at a successful solution, yet these *same* limitations may aid us in securing a most pleasing result. The one important point to emphasize here, is that once our buildings are located, the size and shape of the remaining areas are determined and in them lies the use and enjoyment toward which our efforts are now directed.

There is, or should be, such a close relationship or connection between the rooms inside the house, their use and furnishings and the out-of-door rooms, their use and furnishings, that we can ill afford not to consider them both when planning either. The ideal is met when house designer, home owner, and landscape architect work hand in hand from the beginning.

A survey of many typical homes of average size, reveals a division of rooms nearly alike in all,—these rooms, in number, size, shape, location, and furnishings dependent upon the use to which they are to be put.

One's first introduction to the new home comes at the front or entrance feature. What sort of a welcome awaits you at your front door? First impressions are lasting ones they say—do those who ar-

rive at your front door receive a favorable one?

The outside area, or room, adjacent to the house entrance, usually called the front yard, plays a most important part in this welcome. Its size, shape, and furnishings should bespeak character of a simple though dignified nature. On the small property, at least, an obvious balance of all parts and materials will aid in giving that feeling of fitness, of belonging there, so lacking in many of our present day dooryards.

In order to secure that feeling of breadth and repose so essential to a satisfactory home picture, the front lawn areas should not be cluttered with meaningless walks, discordant displays of near art and horticultural monstrosities, but left rather open, framed by plantings of trees and shrubs of year round attractiveness with here and there a splendid specimen for shade, for pure ornament or as adjuncts to the larger theme, the house itself.

Into the house again we find a room or a group of rooms given over to the service features of the home. The kitchen, the pantry, the store room, etc.—rooms so located, so designed and so furnished, as to serve their purposes conveniently, and yet attractively. On the average home grounds there is need for similar rooms out-of-doors and *again* for convenience, economy of space and harmony in use and beauty, these service areas will be adjacent to, and directly connected with, the service rooms indoors. Here we will find the garage and other service buildings, the vegetable garden, the bush fruits, the clothes drying yard, and cut-flower garden. *True*, these are features serving primarily a utilitarian purpose, yet they need not lack beauty in form, placement or decoration. Upon the need of or desire for these service elements will the size and shape of our out-of-door service areas depend.

Last, but not least in fact of utmost importance to the fullest enjoyment of our home and its grounds, is the outdoor living room or private area. Properly located on the best exposures for plant growth, it should be connected with the indoor living rooms, either directly or indirectly, actually linking it to this portion of our house with garden paths, turf panels, steps, terraces and porches, or *visually* by creating axis for its principal features through windows or doors in these rooms. It is only by unifying the various parts of our design that we can hope to secure harmony.

Having arranged our floor plan, we are ready to proceed with the construction of our walls, for walls there must be if we are to secure the privacy necessary to the fullest use and enjoyment of our rooms. Walls of earth, of masonry, of frame or of plant forms—the severely trimmed hedge, the informal shrub border, the vine clad wall or fence. And as in our house walls we find various openings for various purposes, so out-of-doors the walls surrounding or dividing our out-door rooms will be broken here and there with doors, enabling us to circulate freely and conveniently for maintenance and pleasure,—and with windows opening out to an attractive view or permitting the sun's rays to aid the growth of some choice group of flowers.

In the out-door living room, these walls will form an admirable background for the display of color in the flower beds or borders, and a splendid foil for the garden furniture, without which our out-door life would be drab indeed.

In selecting the furnishings for these rooms, we should keep in mind the purposes they are to serve. This is frequently lost sight of in choosing the various plant elements. Place the evergreen and deciduous trees *first*, they are the large features in our picture, and at least in the third dimension take up considerable of our canvas. Whether they are to serve for shade, for screen for framing, backgrounds, accents or pure ornaments, they must be selected with care. This is no less true of the shrubs, vines and flowers. However, even with their great diversity in shape, foliage, bark, flower and fruit, they all have these three characteristics in common, FORM, TEXTURE, and COLOR, and if we compose our pictures with these in mind and remember the great art principle of good spacing (good proportion) we will not go far astray in securing the desired use and beauty in our home grounds, for beauty it is we are seeking.

Someone has aptly said that we may live without beauty—but—not so well.

THE LILY

H. C. Christensen

(Read at Annual Convention, Eau Claire.)

The lily is one of the aristocrats of the floral family and its stately beauty appeals strongly to the flower lover. There are some 80 species, all found in the northern hemisphere but only 8 or 10 are native to the United States and in many places these are becoming so rare that it will be necessary to cultivate them if they are to be preserved. Most of our native lilies respond readily to cultivation. Canadense or Meadow lily is probably the commonest of our natives. Its drooping orange red blooms are very graceful. Supurbum or Turks cap likes a sandy moist soil and is often found growing 8 or 10 feet tall in the creek bottoms in the East. I do not think it is native in Wisconsin, but it thrives under ordinary garden cultivation. All of us are acquainted with the old fashioned tiger lily of our grandmother's garden and it is becoming deservedly popular again. Its bright orange red flowers, spotted black are very showy and large clumps of these lilies in many gardens were decidedly atractive to the passerby this past summer. which was unusually favorable for lilies. This variety comes from China and Japan, where the bulbs are used for food. There is a double form which is no improvement over the single except that the blooms are more lasting. It can be propagated from the little bulblets that grow in the axils of the leaves. It takes them two or

three years to attain blooming size. There are several varieties of lilium Elegans, shading from yellow to red and more or less spotted. The flower is upright. The variety known as Torch lily is the one most commonly seen and it is vivid red. Another lily that is hardy in Wisconsin is Tenufolium or Coral lily, which comes from Siberia. Its small oval red blooms with deeply reflexed petals are charming indeed. Since the federal embargo, the bulbs have become very difficult to obtain.

Philadelphicum is a bright orange red with upright flowers. It is native to Wisconsin. So far, all the varieties mentioned will bloom under ordinary garden conditions but if the finer kinds are to be grown they must be given special attention as to soil, drainage and location. All varieties like a deep moist soil but it must be well drained, and if these conditions are not natural they must be made so.

Of our outdoor lilies, Candidum, Madonna, St. Joseph's or Annunciation lily is probably the most beautiful. The purity of its chaste white blooms is responsible for its many names. The bulbs of this variety should be planted in August so it can make the rosette of leaves which are necessary for successful blooming next year. Bulbs from Michigan or northern France should be planted in Wisconsin as southern grown bulbs are less hardy. Sprinkle them with sulphur and lay bulb on side in planting to guard against rot. Most lilies should be planted 10 inches deep, this variety only five or six. There are several varieties of Japanese lilies that are hardy under favorable conditions. They usually only survive two or three years. The Speciosums shade from white to crimson, richly spotted with contrasting colors. Auratum or Gold banded has an immense flower. White, spotted brown with gold band running lengthwise through each petal. As the bulbs were very fine this year and season favorable for its growth it will be more largely planted next year.

The latest addition to our list of varieties is Lilium Myriophyllum or Regale, The Regal lily, and it is rightly named. The blossoms are white, slightly shaded pink on reverse of petals with a beautiful shade of canary yellow at center and extending part way up the trumpet. It is delightfully perfumed, lacking the heavy oppressive odor of most lilies. It was discovered by Prof. Wilson in the mountains of China in 1911. After many difficulties the bulbs reached Massachusetts from where it has spread over the United States. While absolute hardiness is claimed for it I find quite a few who have not had success with it. I have been blooming it for four years, and, on the whole, find it more hardy than Candidum. If the bulbs are set in the spring, they will bloom the same year and be in better shape to go through the winter than when fall planted. While this lily bulb increases by division and bulblets, which form above the old bulb, it is more quickly propagated from seed which it produces freely. Bulbs of blooming size can be raised from seed sown outside while they can be flowered in 19 months from seed if sown in the greenhouse in January or February. Five year old bulbs produced as high as 17 blooms to a stalk and as a single capsule may have as many as three or four hundred seeds, it will probably be generally planted in a few years.

COOPER PEONY FARM SOLD

The following will be of interest to many of our members. It is good news to know that the peonies will not give way to apartment houses,—or potatoes.

Kenosha, Wis., Nov. 9.—Dunmovin, the country estate of the late Henry S. Cooper, which he made famous throughout the entire country by the peony gardens which he had established there, has been sold to a Chicago horticulturist and business man, according to announcement made here.

The sale includes the beautiful country home, known as Dunmovin, the bungalow just north of it, and the tract of land which had been used for the peony gardens and other flower gardens. The amount involved in the transaction was not made public.

The sale will not mean that the peony gardens will be discontinued for the buyer has announced his intention of continuing the business in these flowers which the late Mr. Cooper started and made famous throughout the entire country.

JETSAM

—on the Sands of Time—

Here we will print from time to time stray bits, wise and otherwise, gathered, hither and yon, from a life time of reading hoping our readers will approve. If you do approve, dear readers send your own contribution—little ones, easily read and—perhaps remembered.

"We are so strangely made; the memories that could make us happy pass away; it is the memories that break our hearts that abide."—Mark Twain.

"The wine of life oozes drop by drop."—Credit Lost.

"A foolish consistency is the hob-goblin of small minds."—Emerson.

"The ignorance of the so-called educated classes is colossal."—Huxley.

A PRAYER FOR A LITTLE HOME

God send us a little home
To come back to, when we roam.

Low walls, and fluted tiles,
Wide windows, a view for miles.

Red firelight and deep chairs.
Small white beds upstairs.

Great talk in little nooks,
Dim colors, rows of books.

One picture on each wall,
Not many things at all.

God send us a little ground;
Tall trees standing round.

Homely flowers in brown-sod,
Overhead thy stars, O God.

God bless, when winds blow,
Our home, and all we know.

Florence Bone
in London Spectator.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

EUROPEAN BOTANICAL GARDENS

Huron H. Smith

(Continued from November, p. 35)

While many of the European botanical gardens have a division of medicinal and economic plants, the Berlin Botanical Garden has the greatest section of any. Every medicinal plant in the world that will withstand the climate of Germany may be found there, and many that can only be grown in the hot-house are maintained in their division of greenhouses. In similar large numbers are to be found the economic plants, or plants useful to man, just adjoining the plot of the medicinal plants. These economic plants are not so well known to the public as the use of their parts. Most everyone understands how to use the various economic parts of the plant, but few know what the original plant looks like that furnishes there different parts. Both of these large sections are found on the northwest side of the garden bordering Altensteinstrasse. In another place in the greenhouses tropical economic plants are assembled and grown. Special attention has been given to the useful plants of the former German colonies in their tropical and warm greenhouses.

A special section has been set aside for the growing of beautifully flowered annuals and ornamental shrubs—the garden flowers such as stocks, larkspurs, poppies, touch-me-nots, carnation pinks, petunias, Scabiosa, zinnias, asters and so forth are to be found growing there. The ornamental shrubs are such of those that have been found useful to landscape gardeners. The largest collection of the Berlin Botanical Garden is the arboretum, a systematic collection of trees. There are thousands of species and forms both native and foreign. The location of the garden at Berlin-Dahlem, is far enough away from the city so that evergreens will thrive untrammeled by the smoke and soot of the city.

Dr. Engler, in common with all other German scientific men, is strong on systematic botany, and in the northwest corner of the gardens they have laid out a series of beds to show plants in their relationship, one to another. Here their conception of the evolutionary development of plants is worked out. The work and study that has been given by the Germans with these groups and relationships has been overwhelming in its minutiae. There are plenty of records of a man's entire life being given to the study of one genus; where he has spent his life in hunting for the missing link among fossil forms. Dr. Engler, as the master mind and editor of all of this evolutionary plan in his "Pflanzen Familien" (which covers every living and fossil genus of the world and mentions many species and their economic use) has had the laying out of this garden and the constant advice of those men, who have made their life studies on certain families, to assist him in planting them in an evolutionary and systematic way. In the large encyclopedic work just mentioned, the "Pflanzen Familien" every family is studied in its morphological and anatomical relationship to other families. He is at present at work upon a new series of volumes which he calls the "Pflanzenreich." There are six feet of shelf room already taken up with published parts of this in the Milwaukee Public Museum laboratory. In this work he attempts to describe every plant species of the world in Latin and to furnish the text in German on the knowledge connected with every genus and species and to furnish keys for the identification of every living plant species in the world, living and extinct.

Dr. Engler apologized for the appearance of the gardens at the time we visited them, saying that it had suffered during the late war from lack of care, when men were not available and even women were needed at other occupations than taking care of a botanical garden. Due to this necessary neglect, several of the plants were not covered sufficiently to undergo the winter conditions and died out. That was our only criticism of the Berlin Botanical Garden in that it looked rather unkept and "down at the heels" so to speak.

One of the most beautiful gardens which we saw on our trip, was the Munich Botanical Garden. The entire city of Munich was very agreeable, and there is a great atmosphere of art in the entire city. Many students of music and art congregate here and it is no more than fitting that the botanical garden should be an interesting one. We saw no botanical gardens on the other side that had the immaculate care that the Munich Botanical Gardens had. We noted one of the workmen spending a half a day on raking the gravel on one of the walks between the beds, and when he had finished we doubt if there was a single stone out of place or if the crown of the path was in any but a perfect curve. Although not so large as the Berlin Botanical Garden, the subject matter was more interestingly placed from a popular viewpoint, and the vistas and landscaping of the garden were the finest we had seen in any place.

The Munich Botanical Garden is younger than most other German botanical gardens. The reason for this is that Munich only began in 1807 to study natural history through their Bavarian Academy, and later the University was founded in 1826. Shortly after the Institute or Academy of Natural History's foundation, the first botanical garden was started in 1809, in the neighborhood of the Karls-

gate, upon a small piece of ground. The garden was started under Professor P. Schrank. In 1812 the garden was first opened, keeping its original purpose in view for a hundred years, under the guidance of Schrank and later under the guidance of Von Martius.

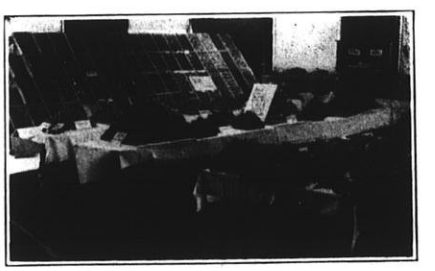
The garden suffered a temporary setback in the year 1854, when the greenhouses were taken for an industrial exhibition, such as the one held at Leipzig, but later new greenhouses were built and a small botanical garden was built on the other side of Sophienstrasse, and the garden divided into two halves. The garden Director, Karl Naegeli, saw the wisdom of locating the garden outside of the city. They soon saw that many plants suffered through the coal smoke and the acids that were to be met in other places in the city, so after considering several different places in the neighborhood of München, they finally chose the territory to the south of the Nymphenburger Castle Park. They chose this place because of its easy access to the city. and for the wind protection that was given in the coniferous forests, and because they could bring warm water over the culvert to water the whole garden from the Nymphenburger canal. After the choice of the location in Nymphenburg in 1909, a new street car line was projected to serve the botanical garden. Professor Karl von Goebel, in 1910, was named as the head of the garden. In 1910 a local firm built a small railroad and took in sixty-eight cubic meters of earth with which to build their mounds and mountains. In 1911 the first work on the new botanical garden at this location began and by the winter of 1911 most of the coniferae had been planted. In 1912 and 1913 the broad-leaved trees were planted. On the 10th of May, 1914, the new botanical gardens were first opened to the public, several small jobs not being finished until the end of 1915. The total cost of the new gardens was established as 2,216,379 marks or $527,709.00. The new gardens have always had a great attendance from the public in spite of the World War that broke out shortly after the gardens were opened.

The gardens include the Botanical Institute, which is headed by Dr. Karl von Boebel, who is eighty-one years of age and supposed to be the best botanist in Europe. However, Dr. Goebel was in Java at the time of our visit, working upon the liverworts and mosses of Java. He had been granted a fund of ten thousand marks by the Carnegie Foundation to make a study of these forms, and also an additional fund of fifteen hundred marks by the Berlin Botanical Gardens. However, Dr. Radlkoper, the Curator of the Phanerogamic Herbarium was there. We suppose he is one of the oldest botanists in the world, as by this time he must be one hundred years old. Dr. Radlkoper is very regular in his hours of work, and may always be found on the job in the Münchener Botanical Garden. Dr. Kupper was the man in charge of the growing work of the greenhouse and outside divisions, and was very courteous in lending his assistance in all matters that pertained to the garden. Dr. Karl von Schoenau is the Curator of the Cryptogamic Herbarium and Conservator of the Museum. He was delighted to show us the school; the physiological department, the histological, the biochemical, the pharmacological and systematic botanical parts of the school. The institute is a very good place to study, and many Americans have taken advantage of it. Several of our personal friends in college have studied at this particular institute.

The plan of the gardens includes five divisions: first the ornamental garden, second the biological group or the ecological groupings, third the economic, medicinal and poisonous plants, fourth the systematic groupings and fifth the arboretum. All of the paths in the garden are named after deceased botanists, especially those of Bavaria and south Germany. At the entrance of the garden in the summer, there are to be found groups of coolhouse plants arranged according to the country of their origin.

In the ornamental garden, the plants included are those with beautiful flowers, beautiful foliage or beautiful autumn coloration of foliage. These are planted in the neighborhood of the institute building, and in the summer-gardens to the east and west. In several instances commercial firms have furnished their new varieties and maintain beds of their special novelties for the sake of the advertisement of their firm name and address. Among such novelties we noted cannas, gladioli, iris, dahlias, China asters, phlox and larkspurs. We thought this a very good innovation in calling in these outside growers in that the display was sure to be of the finest kind and to be kept up very well because it was an advertisement. In the section devoted to foliage plants, there were examples of the huge leaved Gunnera, the Oriental Rheums and many other plants that customarily carry dark red, purple or yellowish leaves through their growing seasons. In the section given over to syringas or lilacs, there were many color variations and crosses. North American Compositae, dominate the autumn gardens and there one may see the many asters that are familiar to us as weeds, also many of our goldenrod, ragworts and varieties of smartweed. In the group of shrubs used to demonstrate autumn coloration, one noted many of the dogwood, the barberries, blackberries and other common shrubs that belong to the flora of eastern North America and Japan.

(To be Continued)



A corner of the apple display at the Eau Claire Convention

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THE EAU CLAIRE CONVENTION

We broke away from tradition in holding the Convention in Eau Claire so the editor will violate another time honored tradition in this account of it. Instead of naming the high lights and letting it go at that let's enumerate first the things that might have been better done and then tell about good things.

First: Our exhibit rooms and auditorium were too small. We could have used one-third more space comfortably.

Second: The demonstrations with one exception were not well advertised nor well attended. Miss Scoular's cooking demonstration was attended by the women of the horticultural society but by few others. Those who did attend were pleased. The apple grading demonstration in charge of Mr. Ades, we fear did not attract the attention it deserved. Again lack of advertising. The grafting demonstration wasn't. No one could be found who could give time to it. The same is true of the nursery stock exhibit. So also people didn't get much chance to "taste and handle" specimens of "five varieties of apples for Wisconsin." Lack of space prevented carrying out the original plan of building a hollow square of tables with an attendant who would invite visitors to taste. Oh well, next time.

The state printer evidently thought the Convention was next year and leisurely set about printing the folders that should have been distributed. P. S. We have them now.

Right now let's say a word about demonstrations in connection with our convention: Few, we believe, will question the value of work of this kind nor that it will attract many to our meetings who would not otherwise attend. At least half a dozen other demonstrations similar to those at Eau Claire could be staged but if they are to be worth while a skilled person must be in charge of each one. No one of our members cares to miss the program in order to do this work, and engaging competent demonstrators involves considerable expense. Another thing is the pulling away of people from the program. Neither members or visitors can well be in two places at once.

The question then arises, shall we try to set up a second school in horticulture, the program being one? To do this well we should add two days to the convention dates, Tuesday and Saturday. Shall we do it or shall we concentrate on the program and eliminate demonstrations? Old timers and new comers please answer, these columns are always open.

The program was too full; it's always too full to allow full discussion. As the writer of these criticisms has built the programs for many years he feels free to criticize. The programs are not too long, the time is too short. There are always so many topics of interest. The trouble in building a program does not lie in finding enough to fill it but in cutting down the number of good things to fit the time. Still there ought to be more time for discussion. Do you agree? If you don't, say so.

The writer will now turn his attention for a moment to the credit side of the account.

Item:—The program was high class. The topics were of interest both to amateur and commercial growers. There really is no distinction in this regard in any horticultural society program. What better guide can the amateur have than the professional?

There were few missing numbers; Mr. Gunderson could not come; whether or not the Minneapolis and the Chicago Fruit Merchants were gun shy or whether their alibis were 100 per cent proof the secretary has been unable to decide, anyway they were not there. W. P. Jones stepped into the breach or breaches, spell it as you like, and covered the field entirely and satisfactorily. The problem of distribution of our fruit crop is the one demanding attention now to the exclusion of problems of growing. The Eau Claire program did much to clarify this question.

The Mosaic ghost may not be laid, but there was much beating of tom-toms on Thursday afternoon and in the next issue of Wisconsin Horticulture we will learn if the incantations were effective.

The fruit display exceeded expectations and the first in our history that emphasized commercial varieties, the kinds we should grow if we expect to cut any figure in the apple markets.

The awarding of silver cups and trophy ribbons proved successful. Ask the winners. While there is opportunity for improvement, naturally, there seems to be no doubt that trophies have come to stay. The floral display excelled in quantity and quality that at any

Trophy awarded to A. K. Bassett for best display of twelve varieties of apples in pecks

previous show. The big wholesale flower growers in Milwaukee had little to gain yet sent splendid exhibits. Even more gratifying was the spirit shown by the Eau Claire florists, who backed their faith by deeds and supplemented the gorgeous show of Milwaukee cut flowers with home grown stock which won prizes. They also stripped their greenhouses of plants to decorate the Library.

The list of awards appears in this issue. The papers read at the convention will be published as space permits.

LIST OF PREMIUM AND TROPHY WINNERS

in Fruit, Flower, and Vegetable show at Eau Claire, November 18-19-20, 1925, annual Convention of the Wisconsin State Horticultural Society.

Corrected with original—J. S. Potter.

Flowers

Holton & Hunkle, Milwaukee, Wis.
Best exhibit of Mums—W. S. H. S.—Silver Cup
1st Yellow "Mums" 6.00
1st Pink "Mums" 6.00
1st Single Pom-poms 3.00
2d Double Pom-poms 2.00
2d White "Mums" 4.00
1st Columbia Roses 5.00
1st Premier Roses 5.00
1st Butterfly roses 5.00

C. C. Pollworth, Milwaukee, Wisconsin
2d Yellow "Mums" 4.00
1st White "Mums" 6.00
2d Pink "Mums" 4.00
3d Double Pom-poms 1.00
1st Carnations 6.00
2d Premier Roses 3.00
2d Butterfly Roses 3.00
Honorable mention Columbia Roses

A. F. T. Lauritzen, Eau Claire, Wis.
Best arranged basket cut flowers—W. S. H. S. Trophy, Silver Cup.
3d Yellow "Mums", Hon. Mention Ribbon
3d White "Mums", Hon. Mention Ribbon
3d Premier Roses, Hon. Mention Ribbon
3d Butterfly Roses, Hon. Mention Ribbon
3d Cyclamen Plants, Hon. Mention Ribbon
3d Single Pom-poms 1.00
1st Double Pom-poms 3.00
2d Carnations 4.00
2d Columbia 3.00
1st Boston Fern 3.00
1st Greenhouse Display 8.00
1st Corsage 4.00

Demmler Floral Company, Eau Claire, Wisconsin
3d Pink "Mums", Hon. Mention Ribbon
3d Carnations, Hon. Mention Ribbon
2d Basket Cut Flowers, Hon. Mention Ribbon
1st Cyclamen plants 4.00
2d Boston Fern 2.00
2d Display Greenhouse Plants.. 6.00

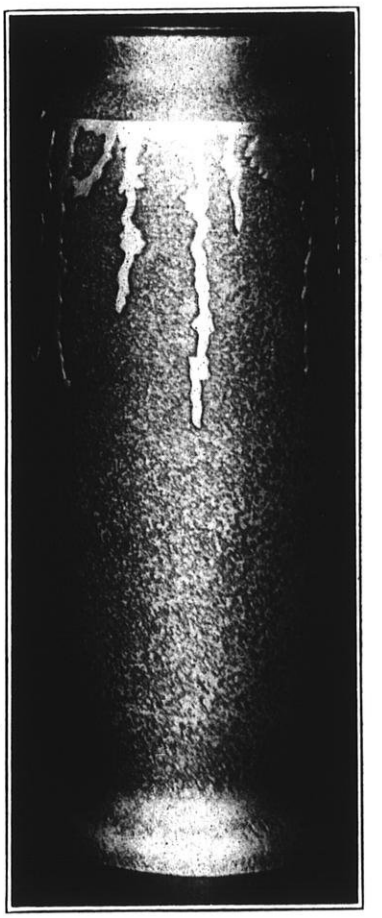
Bluedorn Floral Company, Eau Claire, Wisconsin
2d Single Pom-poms 2.00
2d Cyclamen Plants 3.00

John F. Hauser, Bayfield, Wisconsin
1st Everlasting (Straw Flowers) 5.00

Apples

McLquham Brothers, Chippewa Falls, Wisconsin
Best Ten Bushels McIntosh, Eau Claire Silver Trophy.
1st Peck McIntosh 2.50
2d Peck Northwestern G. 2.00

(Continued on page 55)



Trophy awarded Holton and Hunkle, Milwaukee for the best display of "Mums" at Eau Claire

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

SELLING GARDENS

Mrs. C. E. Strong

(Presented at Annual Convention, Eau Claire, *in absentia.*)

"Selling Gardens," that's a very expressive expression for the work we are doing with the Amateur Flower exhibit at the State Fair. You will notice I say, "the work we are *doing*" not "*trying* to do." We have gotten past the "trying" stage quite some time ago.

Before taking charge of this department I had been an exhibitor for many years and though I was very successful from the blue ribbon and prize money point of view —I was never quite satisfied—there ought to be more to the exhibit than just the mere winning of prizes; (right here let me say that I do consider premiums a great help in bringing out and building up a good exhibit. For many times this prize money enables the exhibitors to add to their collection of flowers and buy the choicer varieties that might otherwise be prohibitive).

I criticized the exhibits and made so many suggestions to our Superintendent, Mr. Rasmussen, and also to Mr. Cranefield—as to what could and should be done with this department—that they finally ordered me *(peremptorily)* to run this department myself for awhile —and see if I could do *some* of the things I talked about.

Well—its one thing to offer advice and criticize—but its several things, when you yourself are expected to do the things you have been saying ought to be done. But I honestly had a vision of what might be done in connection with the Amateur Flower Exhibit—and though rather scared at the responsibility resting upon me, I was secretly very happy in the thought of having a chance to make a dream come true.

I had criticised the exhibits—so my first step must be to raise the standard. I asked some of my flower loving friends to help me out this first year—telling them something of my plans for the future—and offering any and all of the choicest blooms from my own garden to make the exhibit complete, and beautiful. They understood and pledged themselves to make this first exhibit a success. Some of the exhibitors rose gallantly to the challenge. They could do as well, perhaps even better—more than that—they too understood, then—and since— and have given the heartiest co-operation in my efforts to make the Amateur Flower Exhibit, one that would interest those who saw it; make them want to grow flowers and have gardens of their own. Once assured of the quality of future exhibits, I planned on changing also the mode of exhibit. I also asked for and received permission to change the premium list, in order to have masses of the most well known flowers, such as Celosia or Cockscomb, Zinnias, Calendulas, Marigolds and Cosmos. These were arranged on the floor instead of on tables. I tried to reproduce as nearly as possible with cut flowers, and in our limited space an old fashioned garden with its glowing masses of color. When the exhibits were all in place I waited for the verdict that would assure me of success or failure. It came—first from a group of men and women who stopped to admire — I put the men first because it was one of the men who said, "That's nice, looks just like my mother's garden did when I was a small boy." My heart which had been hovering somewhere in the vicinity of the soles of my shoes, came back suddenly to its rightful place, and when a couple of youngsters stood for a long time silently admiring, and then asked what those flowers were that looked like a plush sofa, ending up with, "If there were a few paths, *that* would look just like a garden." I was content. I knew that my vision was real. Many Fair visitors stopped to admire—but listening to the comments I found that very few understood just what the exhibit was—many thinking we had seeds and plants for sale. Of course, when they asked we could tell them, but that only reached a few. So we added a sign: "Amateur Flowers." That helped some. We added some of the annuals not so commonly grown—Salpiglossis, Nemesia, Centaurea Americana, Schizanthus,—then the questions began. What are they? How do they grow? What sort of care do they need? But the most insistent question was: Can anyone grow them? We certainly needed a new sign. Once more fate was in our favor—for our old signs were lost. We simply had to have some new ones. Two signs were put up; one said, "These flowers were all grown in home gardens." The other sign was an invitation to all flower lovers to come and join us. When the fact that these flowers were grown in home gardens, began to really be understood, the interest was great. For while they all admire the products of the florist or nurseryman, there is always the feeling—"this is something I cannot do; it takes professional skill to produce these things"—but when flowers are shown in an Amateur exhibit, they awaken a different sort of interest or spirit—a competitive spirit so to say—that—"I believe I could grow just as nice flowers as those in my garden, if I tried," and they do try—and they do grow flowers, and come back to show them. We have sold them a garden. With others—the beauty of the flowers—the thought that their neighbors, so to say, are growing these lovely things—the eager questions they are hearing answered, the flower lovers who are talking about gardens—all help to enthuse—and soon they too are asking questions—more gardens are sold.

It takes considerable of a combination to sell the garden idea. A

beautiful exhibit, enthusiastic exhibitors; a few good signs and some one who will answer questions, CHEERFULLY—and *correctly*—over and over and over again, and smile while they are answering them, so they will be sure it is a pleasure — not a nuisance. You would not believe me I fear, should I tell you how many times during State Fair week I pronounced the words, Statice Latifolia, also spelled it, told what sort of a plant it was —where it would grow best, and whether it was best to buy plants or raise them from seed. You see we have been featuring perennial plants for several years, and Statice Latifolia is just an example.

But these questions assure us *over* again — that our exhibit is worth while, for the people who come to the State Fair are understanding that this exhibit was put there for more than prizes: that it was meant to be helpful, educational, and they are taking advantage of it more and more, and we know now that we are doing more than just having a flower show: We are reaching out towards that desire—dormant in many people—but still there—that desire for a home—a real home—the sort that some one else's property can never be,—for you cannot plant a permanent garden, trees and shrubs in such a place. When you plant these things that are permanent—we know—and these people are finding out that a bit of themselves is taking root also; that's the charm of a perennial garden—and both they and their children are going to be the richer for it. It's the children of course I have been thinking of all along,—you see I keep remembering a little girl who spent all the happy hours of childhood playing, digging and planting in a garden — unconsciously learning many things that have given her many happy hours in later life. She realizes now what a very fortunate little girl she was, and her greatest wish is that other childern may have that same privilege. There's a splendid opportunity to give the children who come to the State Fair, year after year, a chance to learn something about gardens, even though they may not have one of their own—we *could* teach them to really *see* the things they look at; we *could* give them a speaking acquaintanceship with a flower garden, but we *would* need more room to do this. For a good many children come to the State Fair on Children's Day—but the children of today are the men and women of tomorrow and I believe it would be well to start selling them gardens now—for though there are many ways of selling—the best way is to educate the buyer so he is sure that what you are trying to sell him, is essential to his pleasure and well being and acts accordingly.

In conclusion I wish to say a word of appreciation to those who have made it possible for me to do the things that have been done—and encouraged me to plan and work for still more. Mr. Rasmussen, our Superintendent—who has cheerfully co-operated in every suggestion I made no matter how dubious it looked. Mr. Cranefield whose advice and criticism was always helpful and kindly—our judge, Mr. James Livingstone, who is appreciated by exhibitor and superintendent, not only for his fairness in the awards, but also for his interest in furthering every effort to make the exhibit both beautiful and educational. His willingness to helpfully criticise the exhibits to the exhibitors has done much to raise the standard—and his cash premium has aroused a friendly competition to stand first with the "judge" that was amusing to the bystanders but meant some careful hours of judging for Mr. Livingstone. That exhibit wasn't *easy* to judge.

To my exhibitors I owe more than words can express—their work, their understanding, their loyalty,—has been the *great* thing in the work I have been trying to do, without them there would have been only failure.

To my husband—my able assistant, who has saved me the real *labor,* and whose unfailing sense of humor has helped many a questioner over an embarrassing sense of being very ignorant. After he confessed to not being able to remember those outlandish Latin names after twenty-five years of *drilling*—they were hopeful and happy.

I have put him last—but he is far from least—without him I would not have been able to accomplish all I set out to do.

I am afraid I have said *I* many times, but am sure you will understand that it was merely to explain better or rather more easily this Selling of Gardens at the State Fair. If there hadn't been understanding and harmony, if there hadn't been a get together and work together on the part of Superintendents, Secretary, exhibitors, every one interested, very little could have been done.

PREMIUMS AND TROPHIES

(Continued from page 53)

2d Bu. Northwestern G. 3.00
3d Bu. Wolf River 2.00

A. K. Bassett, Baraboo, Wisconsin
Best exhibit of apples, W. S. H. S. Silver Trophy.
1st Peck Snow 2.50
1st Peck Delicious 2.50
1st Peck Northwestern G. 2.50
1st Peck Windsor 2.50
1st Bushel Windsor 5.00
2d Bushel Snow 3.00

J. D. Smith, Bayfield, Wisconsin
Best Peck Wealthy, W. S. H. S. Silver Trophy.
1st Premium Bushel Wealthy... 5.00

Dr. Charles Babcock, Manitowoc, Wis.
2d Peck Delicious 2.00
3d Peck Wealthy 1.00
3d Peck Golden Russett 1.00

N. A. Rasmussen, Oshkosh, Wis.
1st Peck Wolf River 2.50
2d Peck McIntosh 2.00
2d Peck Golden Russet 2.00
2d Peck Tolman Sweet 2.00
3d Peck Snow 1.00

J. J. Smith, Bayfield Wisconsin
2d Bushel McIntosh 3.00
3d Peck McIntosh 1.00

Joe Aebly, Eau Claire, Wisconsin
3d Peck Northwestern G. 1.00

F. A. Bell, Washburn, Wisconsin
1st Peck Wealthy 2.50
2d Bushel Wealthy 3.00

R. A. Irwin, Lancaster, Wisconsin
1st Peck Tolman Sweet 2.50
2d Peck Wolf River 2.00

(Continued on page 58)

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

NEWS FROM THE CORN BORER CAMP

During the latter part of September two of the state's entomological scouts were sent out to observe the European corn borer "in action at the front" and to learn first handed the exact powers and tactics of this champion member of the "big ten pest conference". These scouts were the entomologists who will be called upon to direct the major part of the battle against this insect when it gets into "Wisconsin territory": they are Doctor S. B. Fracker of the state department of agriculture and Professor C. L. Fluke of the agricultural experiment station.

Although this pest has not gotten into our state as yet and is still quite a long way off, yet from the reports of its spread since its introduction into Massachusetts, where it was only discovered in 1917, it is evident that it will just be a matter of time until we do have it to contend with and we should therefore acquaint ourselves with its appearance and habits in order to assist as much as possible in its detection and control.

According to the report of the above named scouts the main area covered by this insect in the United States is now bounded on the west and south roughly by a line extending from the south end of Saginaw Bay in Michigan, to a point about twenty-five miles east of the west boundary of Ohio, thence southeast to Marion, Ohio, thence east to Ridgeway, Pennsylvania, and northeast through Geneva, New York, to Lake Ontario.

The natural spread has been at the rate of some forty to sixty miles per year, the maximum spread in Ohio this season being about forty miles. The infested area in Ohio as found in 1924 was double that of 1923 when thirty-eight new townships were found infested, but the area for 1925 is about two thousand square miles larger. The greatest spread in Michigan during the past season was to the north, the distribution now practically filling out the so called thumb be-

Does the corn borer do any serious injury?

(Above) A field of dent corn planted between May 15 and May 20 which has gone down under the attack of the corn borer.

(Below) A "close-up" of one of the infested hills shown above.

* Photographed by S. B. Fracker.

tween Saginaw Bay and Lake Huron. They believe this spread is accounted for by the wind currents.

Were it not for the maintenance of a corn borer guard along the principal highways throughout the infested area at the known border line for the past three years there is no telling what might have been the limits of its distribution by this time. Several million cars were stopped and the driver questioned to make sure that no green corn was being carried out of the area which might prove to be infested and be the cause of originating new areas of infestation. Thousands of ears of corn have thus been examined and many infested ones intercepted showing the value of quarantine enforcements. In order to prevent embarrassment and delay, special stickers were provided to auto drivers within the area who agreed not to carry green corn and were thus allowed to pass the guards unmolested at will having upon the receipt of the windshield sticker given their word of honor not to violate any of the quarantine regulations.

In discussing the economic damage in this report these investigators state that about 900 square miles in Ontario are so heavily infested that there is a material reduction of the corn crop and that as a result of the injury last year in this district there has been a thirty percent decrease in the acreage. The damage to sweet corn is said to be greater than to dent corn as the insect is able to establish itself more easily in the sweet corn plants. The time of planting has much influence on the amount of injury sustained They cited for instance a patch of sweet corn planted about May 10, which they examined and found a loss of 75%, and that of ten ears picked at random by the grower for the table, only three were not infested by borers. On the other hand a field of sweet corn grown by the neighbor and planted on the 25th of May was practically all fit for table use.

In answering the question of just how much damage can the borer do, Lawson Caesar, Provincial Entomologist of Ontario gives us a fair idea in his recent circular Number 47 which we quote "To illustrate the damage it is capable of doing when very abundant it will be sufficient to say that in an area in Essex and Kent about twenty miles long by twenty miles wide nearly every field of corn this year (1925) and most of the corn was early—has been almost totally ruined. Most of the fields have an average of over twenty borers to a plant. In these fields practically every tassel has been broken off; every leaf has been killed and either fallen or hangs close to the stalk; the ears have broken down, about one-third of them have rotted, the remainder are stunted and most of them riddled by the borers; the stalks are punctured by borer holes, have numerous castings on the outside and are tunnelled on the inside in all directions. The result is that almost every plant has died long before it was mature and many of them have broken over, thus forming a tangled, filthy mass almost worthless as food for cattle and fit only for hogs to run in and feed upon whatever ears have escaped destruction."

Think what such a menace to the corn crop would mean to Wisconsin and yet we find those who believe we are unduly alarmed about this pest. Most pests run in cycles of a few years and many and are in time checked by their parasites but this insect did not bring its parasites over with it and there are only those few which are brought over and bred artificially and released that are available at present. Until its parasites have become established in this country this insect will continue to increase rapidly. Birds do not seem to be of any value in the control of this pest.

At present there are only two fairly successful types of control measures, these are, (a) destruction of the larvae in the overwintering stalks before the moths can develop and (b) avoiding injury by planting corn so late that it will be too small to attract the moths during the egg-laying period. A good job of plowing results in the death of about 95% of the larvae. The worms are able to reach the surface through the soil which covers them but immediately begin the search for corn stalks or similar places of protection. With these stalks eliminated the borer is exposed to the elements to which it sooner or later succumbs.

LET'S GET TOGETHER

Do you want a garden Club in your community? Unless you *want* it there is no sense in trying to force it on you, we have tried that plan and it failed. We are firmly convinced, however, that you *want* a club where all who are interested in any way in things that grow out of the ground may gather occasionally and *talk*, just *talk*, about gardens. You will at first talk about your own gardens, one to the other, how to plant this, how to cultivate that, and after a few afternoons or evenings of such interchange of rich experience, the thought will surely enter your minds that all these good things are too good to keep to yourselves and out of your deliberations will grow a determination to go out and preach the gospel of gardens in your community. You will know the best way to do this, there is no formula that is of general application. If you want such a club the rest is easy, just get together without formality and talk it over. Then write this office, we have some good news for you. This Society is organized for the purpose of promoting every branch of horticulture. So if you *want* a club write the secretary, he has something up his sleeve. This refers not less to rural communities than to villages and cities.

The Garden Club is the thing; simple and easy, just form a group, then—ask us to help you, that's what we are here for, to help.

If you will ask questions we will answer them; we know where to find an answer to any horticultural question you may ask.

COMMERCIAL HORTICULTURE

THE BIG FIVE

The standard used to judge the inhabitants of a country is to get as many of them at one place as is possible, and then make individual acquaintances. This may be a good way to learn something about the outstanding varieties of apples in the State of Wisconsin.

At our late Convention, the apple show seemed to bring out one thing, that of all varieties that can be grown for market in this State the outstanding ones are McIntosh, Famuese, Northwestern Greening, Wealthy, and Wolf River; five good varieties that find a ready sale. The merits of these five varieties were shown by the remarks of the crowd and the way in which they sold after the show.

There may be differences in the color and form of the same varieties grown in different parts of the State, and this can no more than be expected. Those of us who were there saw, for instance, McIntosh from Bayfield, Eau Claire, Door, and Dunn Counties in large lots, and from other sections of the State in smaller lots. This seems to prove that it is possible to grow this variety in all parts of the State, better in some places, but well in all places. And the exhibits of the remaining varieties named above came from just as representative an area.

We are not going to say that this proves anything. But it makes one wonder if maybe we haven't found the trail of the Big Five varieties of commercial apple growing in Wisconsin. McIntosh, Famuese, Northwestern Greening, Wealthy, Wolf River; five good varieties. And what Wisconsin needs is five varieties, and only that many, to make her mark in commercialism.

What, if anything, do you know about growing lilies in Wisconsin? Mr. Christensen has told us much. Will you add your experience.

TIMBER FOR BUILDING A BOAT

When a group of men started talking about markets the other day we were reminded of a group of castaways on an island, who, among them, had enough material to build a boat and get back to civilization, but for some unknown reason each jealously guarded his particular part.

In Wisconsin there are two groups of fruit growers. One group must sell its product at a local market. The members of this group must face their problems individually. And then there is the other group, whose members must seek their market at some distance because of a large output and a scarcity of local demand.

In this large group one sees men in Bayfield County, Door County, Dunn County, Trempealeau County, and Crawford County, who often find difficulty in disposing of their crops. In Bayfield County, Monroe County and smaller areas may be found growers wondering what's going to happen next when it comes to ways and means of disposing of their small fruits profitably.

The State Horticultural Society is not organized for the purpose of throwing out a dragnet to gather the perplexed growers into a seething, boiling, jealous group. But it will make one suggestion. If the growers make it known that they want to get together to exchange ideas and pour their tales of suffering into the ready ear of some contemporary, the State Horticultural Society stands ready to help in all and any ways possible. The Society has a central office, equipped to take care of correspondence. It can act as a clearing house for the growers who would find it an almost impossible feat to carry on contact directly, each with the other. In other words we are equipped here in this office to take care of detail.

And isn't it logical to suppose that out of a meeting of growers who have the same product to market ideas will arise which will be of benefit to all? It is. This isn't a suggestion for a state-wide cooperative union, it's a suggestion that, instead of bucking each other at every turn in the road, the growers plan to get together several times a year and try to shape some definite idea for the marketing of Wisconsin Fruits.

Let's get these ideas together and see if there isn't enough timber to build a boat. We're not far from civilization.

PREMIUMS AND TROPHIES

(Continued from page 55)

2d	Peck Windsor	2.00
2d	Peck Snow	2.00
1st	Bushel Northwestern G.	5.00
1st	Bushel McIntosh	5.00
2d	Bushel Wolf River	3.00
2d	Bushel Windsor	3.00
3d	Bushel Snow	2.00

Swartz Brothers, Waukesha, Wis.

2d	Peck Wealthy	2.00
3d	Peck Wolf River	1.00
3d	Peck Tolman	1.00

Arno Meyer, Waldo, Wisconsin

1st	Peck Golden Russet	2.50

F. L. McKain, Washburn, Wisconsin

3d	Bushel McIntosh	2.00

State Experiment Farm, Washburn, Wisconsin

3d	Bushel Northwestern G.	2.00

W. A. Toole, Baraboo, Wisconsin

1st	Bushel Wolf River	5.00
1st	Bushel Snow	5.00

H. H. Erickson, Eau Claire

3d	Bushel Wealthy	2.00

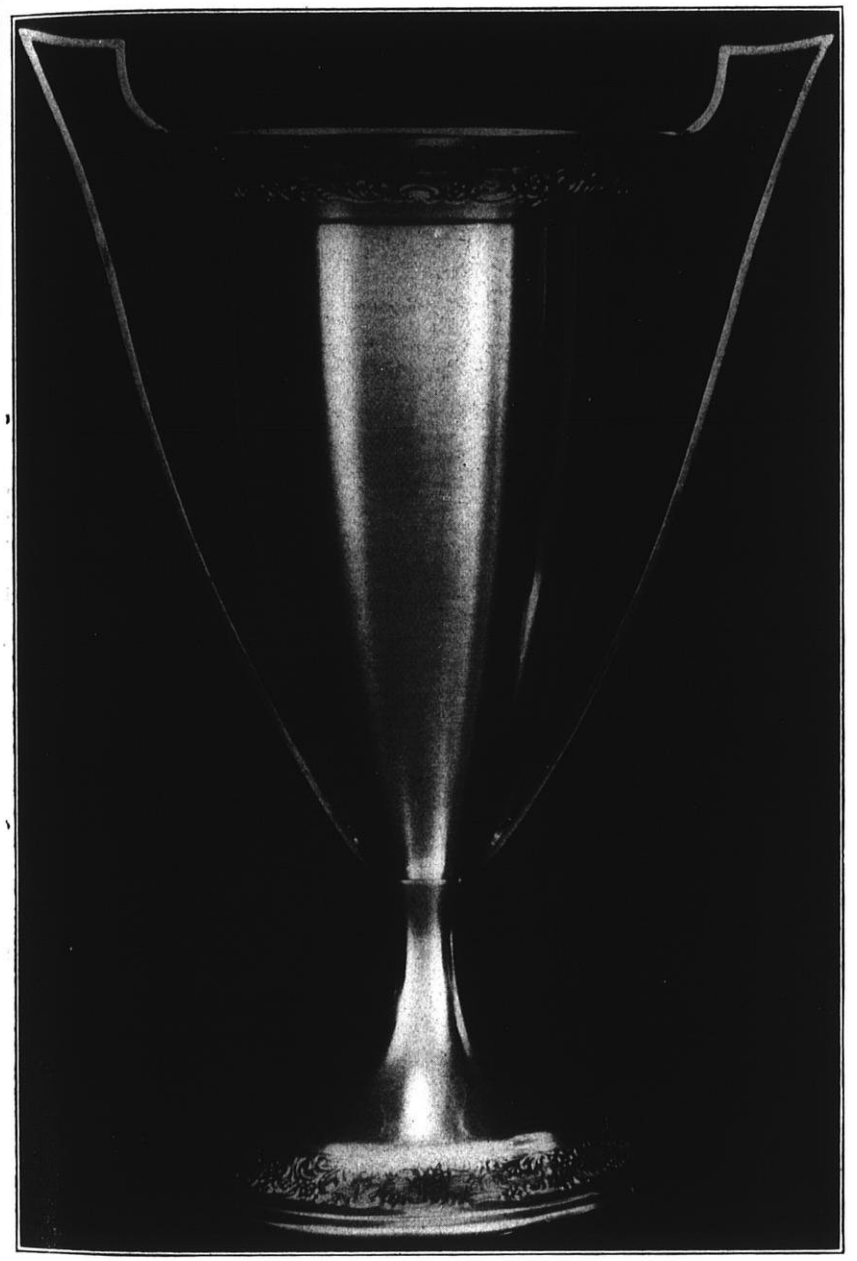
Vegetables

N. A. Rasmussen, Oshkosh, Wis.
Best exhibit of vegetables, W. S. H. S. Silver Cup

3d	Blood Turnips	.50
1st	Rutabagas	1.00
1st	Chantenay Carrotts	1.00
2d	Winter Cabbages	.75
1st	Red Cabbages	1.00
1st	Red Onions	1.00
1st	White Onions	1.00
1st	Largest Onion	1.00
3d	Parsnips	.50
1st	Hubbard Squash	1.00
3d	Table Queen Squash	.50
1st	Celery	1.00
1st	Chinese Celery	1.00
1st	Salsify	1.00

Ernest Wagner, Sta. D, R. No. 2, Milwaukee

1st	Blood Turnips	1.00



Trophy awarded J. D. Smith, Bayfield, for best peck Wealthy apples

Milwaukee Gardener's Association, Milwaukee, Wisconsin

2d Blood Turnips ..... .75
2d Chantenay Carrots ..... .75
1st White Cabbages 1.00
2d Red Onions ..... .75
1st Yellow D. Onions 1.00
2d Largest Onion ..... .75

1st Parsnips 1.00
2d Hubbard Squash ..... .75
1st Table Queen Squash 1.00
2d Salsify ..... .75
2d Tomato ..... .75
1st Cucumber 1.00
1st Lettuce 1.00

John Drydyk, Sta. D, R. No. 1, Milwaukee, Wisconsin

3d Red Onions ..... .50

Herman C. Christensen, Oshkosh, Wis.

2d Yellow D. Onions ..... .75
2d White Onions ..... .75

Louis Klevenow, Sta. D, R. No. 2, Milwaukee, Wisconsin

3d Yellow D. Onions ..... .50
3d Hubbard Squash ..... .50
2d Table Queen Squash ..... .75
3d Salsify ..... .50

Louis Schmidt, Sta. D, R. No. 2, Milwaukee, Wisconsin

3d Largest Onion ..... .50

B. Poblocki, Sta. D, R. No. 1, Milwaukee, Wisconsin

2d Parsnips ..... .75

Henry Randow, Sta. D, R. No 2, Milwaukee, Wisconsin

1st Radishes 1.00

Otto Tammes, Sta. D, R. No. 2, Milwaukee, Wisconsin

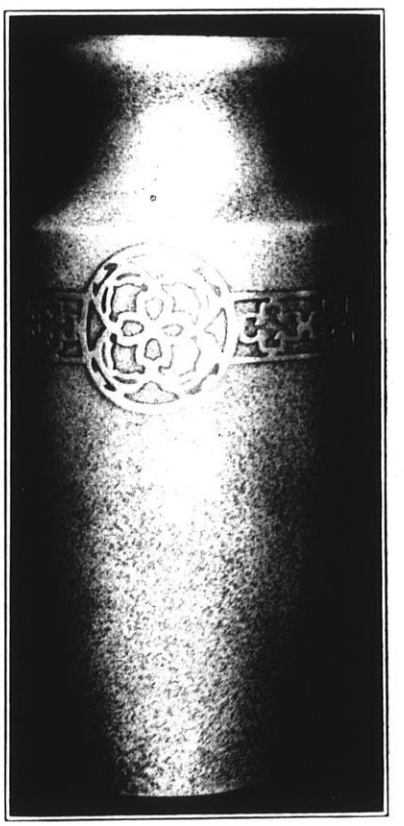
1st Tomato 1.00
3d Lettuce ..... .50

John Budzien, Sta. D, R. No. 2, Milwaukee, Wisconsin

2d Cucumbers ..... .75

Fred Smith, Sta. D. R. No. 2, Milwaukee, Wisconsin

2d Lettuce ..... .75



Trophy awarded Mrs. Archie Hurst, Eau Claire, for the best apple pie.

If there is something you want that you don't see ask for it, that's good manners in this family group.

OUR MISTAKE

It has been brought to our attention from a couple of sources that we made a mistake in the caption for the cut on the front page of the November number of the magazine. Instead of reading "devoted to fruit-growing," the caption should have read "devoted to horticulture."

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, January, 1926 No. 5

Through the White Pines, Boulder Lake, Boulder Junction, Wisconsin.

MORE FRUIT, MORE HEALTH

EDUCATING THE BUYER

By Agnes Carroll Hayward

Read at Convention American Pomological Society, Kansas City, Dec. 9th, 1925.

This is a complicated and intricate age in which we live.

A fruit grower in Idaho plants an apple tree.

A woman in New York City eats an apple grown on that tree.

Many professions, sciences and lines of business are called into service to make it possible for the woman in New York to eat an apple grown in Idaho, and the grower of that apple must be interested in each and every one of them if he is to continue growing apples.

The growing of fruit is at once a science, a profession and a business.

The problems of picking, packing, storing and shipping of fruit calls for equally intelligent handling.

The great questions of transportation—of transporting fruit across the continent and delivering it in first class condition — is another great business, and a most intricate one.

Again, the buying of the fruit from the grower and the selling of this fruit to the retail merchant—that is another full fledged business.

It would seem—when the fruit has left the hands of the grower—after the last box or barrel has been shipped and the last check deposited—that the grower's interest in his fruit could automatically cease.

But it has really just begun—if his business of growing fruit is to continue and continue at a profit.

And your interest in your fruit must continue from the time you engage in the growing of any kind of fruit until that fruit is sold to the ultimate consumer and that ultimate consumer satisfied with both quality and price.

You are no different from the manufacturer who makes any article used in the American home.

If his interest does not follow his goods out of his factory through the hands of the wholesaler, the jobber, the retail merchant, and the consumer—if he does not see to it that his goods satisfy the buying public both in quality and price—what happens?

The buying public will buy something else.

So, if your interest does not continue until your fruit reaches the ultimate consumer with both quality and price to his liking, your consumer will buy something else.

Then what happens?

The same thing that happens the manufacturer.

There is a traffic jam through which it is useless to attempt to send any more of your goods to market.

You have traveled far in your journey between the grower and the consumer.

You have succeeded in securing distribution of fruit all over the United States. You have dealer distribution — you have brought your fruit to the attention of the consumer—but you must not forget the old adage of leading a horse to water.

In this instance you have brought the water to the horse—now your problem is how to make the horse thirsty.

That is where advertising steps in to help.

There are as many definitions of advertising as there are people in the advertising business.

Here is my definition: "Advertising is applied common sense."

The longer I stay in the advertising business the more cautious I become. I regard advertising much as I regard a gun. In the hands of somebody thoroughly familiar with its workings it can be made to hit the mark—but in the hands of an amateur it is more apt to kill the marksman.

And I recommend as much common-sense caution in the handling of advertising as you would use in the handling of a gun you were dead sure was loaded.

Carelessly handled advertising has laid many a business low—usually because too many people wanted the handling of the gun.

This is especially true of association advertising.

Suppose you have the gun—an advertising appropriation.

What do you want to hit with it?

At least 95% of your product is bought by the woman in the home.

Then it is pretty good common sense to aim the gun in that direction, isn't it?

I am not here to advise you how to secure this gun—your advertising appropriation. My work is to tell you what sort of ammunition to use and where to aim the gun so you can hit the mark you have chosen.

Here is a word of warning.

The moment you—or any other association or business—start out with your advertising gun you're going to be surrounded by a horde of people who want to shoot it off for you, or at least do the aiming—for a consideration, of course.

You will be told to aim in every possible direction—that no matter which way you aim you will hit your mark.

If you want to shoot something, aim at it.

And if you wish to reach the ultimate consumer — the woman in the home—direct your message at her instead of around Robin Hood's barn. A straight line is the shortest distance between two points, and it's usually the least expensive.

You can never consider any individual campaign of advertising entirely by itself. You must take into consideration the general advertising trend, note the errors and profit thereby. Nor is it well to copy slavishly any campaign because that campaign apparently made a success. Every advertis-

EAT MORE WISCONSIN FRUIT

ing campaign must needs be a law unto itself—especially association advertising.

I lay no claim to any supernatural gifts that emboldens me to say my advice should be followed to the exclusion of all other advice only this: I am one of the buyers you are attempting to reach.

I know the woman's viewpoint. I know—from experience—how she buys, what she buys and why she buys. I have made it my business to know.

Sometimes when I listen to learned discussions of the woman's viewpoint by some of the very young members of the opposite gender, I am reminded of the story of the old Irish woman and her granddaughter who had just listened to a priest give an inspiring sermon on matrimony. Outside the church the young girl exclaimed: "Oh Granny! And waren't that the grandest sermon!" "Aye, child," responded the grandmother, "but I was thinkin' all the time how little he really knew about it!"

Too much of the advertising directed at the woman in the home is so theoretical that it lacks selling power.

I have one acid test I apply to all advertising copy—a rule I learned in a mining camp in Arizona.

I listened to a young salesman from El Paso try to sell an electric drill to a miner who had never seen or used anything but the old fashioned hand drill.

The miner—a lanky old Texan, who used profanity instead of punctuation yet who was emphatically not profane—listened intently while the salesman glibly recited his copy book sales talk.

He attracted attention.

He created interest—but not the kind he was looking for. Then came the discussion of the product itself, where kilowatt hours, tensile strength, ball bearings, etc., were hurled joyfully at the puzzled prospect.

Finally the dotted line was reached — and as the salesman paused for breath and handed over the order for signature—Old Bill came out of his trance, limbered up his tobacco and said: "Young feller, you've told me mighty nigh everything but what I want to know. What in the hell will the damned thing do?"

Subconsciously every person who reads an advertisement is asking this same question with a personal application: "What will it do?"

And too often the advertisement tells them everything but what they want to know.

MEMBERS!

You Think

That It Does You Some Good

To Belong

To This Society. It Is

A Good Thing

For Some Reason or Other

Or You Wouldn't Belong

You may not realize it, but You are the Society. In order to do the most good we are going to have to have more members. Make it YOUR business to tell the people who don't know just what they are missing. If you won't tell them they may never know.

If You Believe In Your State Horticultural Society, Help It To Grow By Getting More Members.

P. S. Have you a Garden Club? Write in for information about them.

What does a woman want to know about the food she buys?

First: Does it taste good? Will my family like it?

Then, in succession, but in no fixed order, come these questions:

It it good for the health?

Is it expensive?

Is it easily prepared?

How can I prepare it?

Or, summed up, "What will fruit do for me and for my family?

If you would reach the buyer these questions must be answered to her satisfaction.

The first question is easily answered, for nearly everyone likes nearly every kind of fruit. But it never hurts to emphasize a pleasant fact, and it is well to constantly remind the buyer how really delicious fruit is.

Is fruit good for the health?

This is a question generally answered in the affirmative—but few women can give you very definite reasons why fruit is good for the health.

On this point a great deal of splendid information can be given which will prove of tremendous interest, but always remember this is not the first question the woman asks.

There is too often an over-emphasis on the health value of a food to the exclusion of the appetite appeal. People rarely eat what is good for them. They eat what they like, and if it is good for them, fine! If not, well, it's fine for the doctor.

So much of the advertising today makes duty out of something that would otherwise be pleasant. From every newspaper, from every magazine, car card, and bill board we are shouted at to say this, eat that, don't do this, don't do that, until it has become not only monotonous but irritating.

If all the advertisements concerning health foods were taken seriously, can you imagine what the average American table would be like?

One will willingly take treatment in a health food sanitarium, but it is a difficult matter to make any woman turn her home into a sanitarium. Because she possibly knows in advance that if she did she wouldn't have it very long.

Now comes a most important question—one that is sure to be asked by nearly every housewife: "Is it expensive?"

When you consider the unnecessary difference that too often exists between the first selling price and the last buying price you will find one mighty big reason why the sales of fruit are not as heavy as they should be.

The question of price control is intricate and difficult but by no means hopeless. In a carefully worked out advertising campaign much can be done to educate the buyer on the subject so that a great deal of profiteering can be done away with.

The dealer, too, can very well stand education on the danger of pricing fruit beyond the reach of the general public and making it a luxury for the rich instead of a necessity for everyone.

Don't blame the women of the country for their buying habits. They have been following the lines of least resistance, buying what was displayed by the grocer and the fruit man.

In all the fruit advertising I have ever seen—I have yet to read a simple, instructive statement telling the woman how to buy fruit in bulk, and how to care for it after she buys it.

Of course there are many small apartments with small refrigerators where it would not be possible to store a box of apples or a half crate of oranges, but how about the people with homes and larger apartments?

All too often national advertising is written in large cities by people who have been born and raised in these cities who think only in terms of city buying and who forget that Main Street is longer than Fifth Avenue.

No advertiser who has nation-wide distribution of his product should overlook Main Street and its tremendous possibilities.

Educating the woman in the home to better fruit buying habits—the habit of buying fruit in larger quantities—depends greatly on the answers that are made to the last two questions.

"Is it easily prepared?" and "How can I prepare it?"

Of course, a great deal of fruit can be eaten raw, without much of any preparation. But if you are considering how to increase the consumption of fruit in the United States, you will certainly have to educate the housewife on more and different ways of preparing fruit.

Don't take it for granted that women know how to use your product.

Maybe they do know one way or two ways, but there may be another dozen of ways in which your product may be used and it's your business to tell them about that other dozen.

That means recipes.

Now there are two kinds of recipes—the kind that will sell your fruit and the kind that won't.

The type of recipe that will sell your fruit is an advertising recipe and must have the following qualifications:

It must be appetizing. It must be simple. It must be seasonable. It must be inexpensive. It must be easily prepared. It must be fool proof.

And—it should use the maximum of fruit with the minimum of other ingredients.

If you give the housewife a collection of recipes answering the above requirements she will immediately increase her buying of fruit because she has been taught how to use it.

If you give her simple recipes for making small amounts of jams, jellies, preserves and pickles that can cook while the dinner is cooking she will easily be induced to buy a larger amount of fruit each day and will take pride in adding to her store of preserves.

Another most important point is to teach the housewife how to buy fruit. Tell her in advance what fruits are coming on the market—don't wait until they appear in the stores.

Then tell her what can be done with the various kinds of fruit—and why each kind is particularly fine both by itself or in combination with other fruits.

How to judge good fruit and how to care for fruit in the home are two other essential points on which the housewife will welcome a great amount of information.

This will encourage her to buy fruit in bulk, which is most essential if you are to increase your sales of fruit or the buyer is to increase her consumption of fruit.

Summed up, then, your task of educating the buyer is a comparatively simple one.

Remember your buyer is the woman in the home.

Talk to her in person. You do not need an interpreter or a go-between. Don't send your message to some other member of the family and expect it to be brought home. Sometimes it is—but why choose the indirect route when you can be sure of a direct route?

Concentrate on the buyer. Educate her. But don't shout. Don't bully her into buying. Regard the buyer as you would your own wife and use discretion in delivering your message. It's wiser and more productive of good results.

Fruit publicity in every possible form that goes direct to the woman in the home is good business—but if recipes are used be certain that they measure up to the standard just set for them.

Get your message to the domestic science teachers—give them your recipes, but don't wait for the coming generation to grow up to use your product and don't expect the school girls to change the cooking habits of their families overnight.

And don't try to change the buying habits of the nation overnight with a little advertising.

The age of miracles is past. Remember that fruit is only one kind of food and that every other kind of food is competing with it.

But also remember that the women of the nation are buying only about one tenth as much fruit as they should—and as they will if you take the time to educate them.

Plan your advertising carefully. Make every dollar give an account of itself.

But don't expect your dollar to raise a family overnight.

You—the fruit growers of America—have done a great work in bringing fruit to its present state of perfection.

It now seems to be your duty to bring fruit more thoroughly to the attention of the women of the country.

In these days of denatured foods, fruit stands out as one of the few foods that has not been robbed of its health-giving properties.

The greater the consumption of fruit the better the health of the nation.

Your efforts, then, to educate the housewife to buy more fruit will be productive not only of an increased revenue to yourselves but an increase of the greatest national asset—good health.

TREATMENT OF CHRYSANTHEMUM IN THE GREENHOUSE

A beginner in a small way, in greenhouse work asks how to handle chrysanthemum plants after blooming. Mr. Axel Johnson of Lake Geneva answers. The information is late for this season but we hope may not be altogether too late.

"Now that the Chrysanthemum Season is practically over, it remains to take care of the "stock" for future propagation. I usually lift my plants from the benches and put them close together in boxes of suitable size (6" deep 8" wide and any length). They are then placed in the coolest part of the house and as I have not the room to spare on top of the benches they are placed on the floor alongside of the benches, where they do very well until it is nearly time for taking cuttings. If I have room I move them up a couple of weeks before taking cuttings, if not, they remain on the floor. The south side of the bench is of course the best as they get more light there.

"This is a simple way to handle them for anyone with limited space and I have practiced it for many years."

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

EUROPEAN BOTANICAL GARDENS

Huron H. Smith

(Continued from December, p. 50)

In the section devoted to biological groupings, one finds that the groups are scattered throughout the garden and consist of samples of alpine flora, deep moor, dune, pond, fern glen and plant societies groups of the Bavarian flora. To subdivide these groups, one finds plantings to show mutations, (or plants that are changing their form or habit), plant monstrosities, plants which are peculiar in their habit, such as parasitic and insectiverous plants, plants with seeds like burs, water plants, plants illustrating the relation of their vegetative organs to transportation and plants that have developed protective organs against the browsing by animals. There are also plants exhibited in their natural families, exhibits of pollination and hybridization. The distribution of seeds and fruits of plants are shown by labels in various sections of the botanical garden. There is one particular section that is given over to plant multiplication by the vegetative methods, such as use of slips or the planting of parts of plants for multiplying the supply without resort to the planting of seeds.

In the section of the garden given over to mutations may be seen the plants that are in the act of changing their habits. Here is a consideration of the descendants of the results of changing that is obtained in various ways, the change may take place in the leaves or in the colors of the leaves. Species are shown where the presence of anthocyanin has given them a red color. Other leaves are shown that have changed from green to yellow and the white striping of some varieties of leaves are also shown. In a consideration of leaf forms, they show the altering of the parts of the leaf by the production of filiform varieties like that of the cut leaved weeping birch. Some changes are secured by the selection of sprouts or scions, such as the pyramidal forms, weeping forms in the poplars and birches, such as weeping forms of ash, oak and beech produced by top grafting. There are also specimens to show fasciation or the multiplication of stems.

In this section may be seen some of the various changes of the flower and fruit of different plants, such as the changing of rose flowers from white to a color, or changing a variety of rose which normally produces black fruit to one producing yellow fruit. The classical example of *Oenothera lamarckiana* (which was the subject of experimentation by Hugo de Vries), and the related descendant produced by selection, are shown in this section of the garden. In a section of the garden labeled monstrosities by the Germans, such peculiar changes in plants like the snapdragon, Pentstemon, Digitalis and tulips are exhibited. The doubling of blossoms illustrated by wild flowers which under cultivation have been made to produce double flowers, were shown in this section. Variations of form and color in fruit are exhibited, such as round fruited Shepherd's Purse, which we know is customarily flat, and the yellow-fruited Belladonna, which is customarily red to black. Examples are also shown of the horticultural work that has been done in changing white flowers to red ones by hybridization. There is another small section that is given over to monstrosities of sprouting, where the flowers have grown together, as in cock's-comb and various kinds of teasel.

One often reads of peculiar grafting experiments, and in the garden you may see some of these graft hybrids which always arouse the curiosity of the public, like a mixture of two genera or of two species, such as the grafting of two different kinds of beans on root and stalk, and the grafting of the potato and tomato.

There is a section of the garden devoted to plants which get their food in peculiar ways, represented by parasitic and insectiverous species. Among the parasitic plants shown are mistletoe, dodder and broom rape. Most of the insectiverous plants are shown in the greenhouse, such as the sundew, butterworts and pitcher plants.

In the consideration of clinging plants, there are shown a number of different modifications of the epidermis, that enable the plant to cling or stick to other things. Such plants are ivy, goosegrass, the brambles and roses, hop and Clematis illustrate various kinds of modifications. In another section supported by large pergolas or trellises, plants which develop tendrils as leaf modifications are shown such as cobaea,, the sweet-pea and various members of the gourd family.

Near the institute buildings in the ornamental garden, a series of slightly elevated cement tanks are maintained to exhibit water plants. These sections are divided into groups and plants are exhibited where the stems and leaves are above the water, where the leaves and flowers rest on the surface of the water, and where the entire plant is submerged. Plants familiar to Wisconsin ponds and rivers are seen growing here, such as the mare's-tail, hippuris, Azolla, Salvinia, Hydrochasi, Elodea, Isoetes, Potamogeton, Myriophyllum and Ceratophyllum.

There is a section devoted to transpiration, or the giving out of moisture by the plant. The leaf is the organ through which it is effected. Taking it for granted that the ingress and egress of water through the breathing pores (stomates) of the leaf, we may call attention to the various leaf modifications shown here. Examples are shown of the horizontal and ver-

tical leaf positions such as in eucalyptus and of leaves which turn to the sunlight as it changes through the day, such as the compass plant of the United States. Vertical leaf arrangements are demonstrated by such plants as iris, gladiolus, and others, like the acacia. Plants in which there is a reduction of the leaf surface are shown by such specimens as the Australian she-oak (Casuarina). Further reduction of leaf service, together with leathery texture, is shown by the coniferous leaves. Examples of a further reduction of transpiration are shown by plants which are covered by hairs or by the curling of the leaf blade. Sometimes these modifications of the epidermis become very large, and furnish a method of protecting the plant from browsing animals. Prickles, thorns, stinging hairs, etherial oils, milky sap and bitter flavors are some of the means employed to protect the plant from being eaten by animals.

In the section of the garden, devoted to the sex of plants, one finds nine distinctions illustrated by the plants themselves. Monoecious, where the male and female flowers are upon the same plant as in Indian corn; Andromonoecious, where the hybrid and male flowers are on a single plant as in Veratrum album; Gymnomonecious where the female and hybrid flowers are upon a single plant as in Curly dock (Rumex crispus); Trimonoecious, where the hybred male and female flowers are all borne on one plant; Dioecious where the male and female flowers are on different plants as in the stinging nettle (Urtica dioica); androdioecious where the hybrid and male plants are found together as in Geum rivalo; dynodiocious, where the hybrid and female plants are found together as in many of the mints; trioecious, where the hybrid male and female plants, all separated, may be found as in the thyme (Thymus serpyllifolius); and sterile plants like our cultivated snow-ball (Viburnum opulus).

Where the sexes of plants are separated, cross fertilization must take place through pollen transference by wind, animal agency or in water. Examples of these various methods are shown. Many of the grasses illustrate wind pollination as well as many trees, shrubs and flowers. There are fifteen divisions of the garden showing pollination examples. Some plants like the mullein have no nectar, but still are visited by insects. There are several flowers shown that are visited by flies such as the wood anemone (Anemone sylvestris). Numerous flowers visited by honey bees and bumble bees are also shown. Flowers visited by butterflies and moths are exhibited. The variation of colors in the calyx and corolla of the plant with intent to attract insects is noted by several examples. There is also a class of flowers shown like the dandelion that raise their flower high above the leaves as an attraction. Several ways of protection against the wetting of the pollen by the rain are noted. Many plants with sweet nectar and nectar guides in their petals, are exhibited. There is a class of plants like the violet, that has flowers that never emerge from the bud and hence are called cleistogamous. These are also shown. There is a second group of examples of fertilization to exhibit species where the pollen is discharged before the stigma has matured; species where stigmas mature before the pollen is discharged; species where the fertilization is completed before the blossom opens; and species showing mixtures of all of the foregoing. A number of crosses are shown, and attention is called to the fact that most of our garden and cultivated plants have so arisen.

In seed dispersal, the many different modes are shown by the plants grown in that section of the garden. Where the distribution is by wind, the winged seeded plants are shown. Ecballium elaterium the squirting cucumber, and other examples are shown to illustrate explosive fruits. Distribution by and through animals is illustrated by edible fruits and seeds. Those plants with stickers or burs are exhibited. Stone fruits eaten by people, such as cherries, are exhibited to show dispersal by human agencies. Myrmecophilous plants, or those whose seeds are scattered by ants are shown. Asexual multiplications by runners and sprouts are also shown in this section of the garden.

In the central part of the garden, they have constructed a large hill with its accompanying rocks and soils, to imitate alpine conditions, such as one finds at timberline in the mountains. Many of these plants prefer a rocky substratum, and specimens are shown from New Zealand, North America, the Caucasses, Asia and Asia Minor, the Balkan and the Pyrenees of southern Europe and from the eastern, central and western Alps Mountains.

There are treeless tracts where heaths are established with a rich flora of many species of heather (Erica). Associated with the heaths, are moors formed on soil that will not allow water to be absorbed. These moors are of two sorts, the sphagnum bog and the meadow moor. Both sorts may be seen here with their own peculiar flora. In the Sphagnum moor carices, wool grass, cranberries and many ericaceae are seen. In the meadow moors are seen buckbean, some of the carrot family and buttercup. Near the hill given over to Alpine flora, is a sand dune with its typical flora, and the widely spread roots of the plants where they are uncovered by the wind can be seen. Since ferns succeed best in damp air and shade, they have established a rhododendron glen, in the midst of the wood. Rivulets bridged by stepping stones, furnish the moisture as they trickle their way to the pond. Many of the North American ferns are to be seen there as well as the native ferns of Germany and their fern allies such as the club mosses, horse-tails and liverworts.

(*To be Continued*)

If you think it worth your while to belong to this Society, maybe your neighbor would, too. Have you asked him?

Wisconsin Horticulture

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FREDERIC CRANEFIELD, Editor
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Associate Editors—Mrs. C. E. Strong, E. L. Chambers, Huron H. Smith, James S Potter.

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Remit by Postal or Express Money Order. A dollar bill may be sent safely if wrapped or attached to a card. Personal checks accepted.

Postage stamps not accepted

BE SURE YOU ARE RIGHT THEN PLAY FAIR

We spent a profitable two days in another state not long ago gossiping with growers and buyers, and we derived great pleasure in listening to one man in particular because, possibly, he has made a success and is still making a success of a small acreage set to fruit by adhering to some of the principles we believe to be right. And it may be that the things we learned will be profitable to some of our readers who have from one to one-hundred problems to meet.

One of the greatest aids to success, according to our successful friend, is to choose the varieties best suited to your locality. In doing this you not only assure yourself of a good crop but also you are giving the consumer the best that can be grown. This will help in advertising your products, and advertising must be done in order to let the buyer know what you have. But what is to be stressed in the advertisement? One grower can't carry on a national Health Through Fruit Campaign, and neither can he profitably carry out any of the other tricks which may be used in a large advertising effort. But there are some things that, if he will do them, will be a part of his advertising program as well as being something that he may talk about.

Suppose that we have started a planting, using the best varieties for the locality. Next we need to have a standard pack, so that we may help establish the buyers faith in us. Every package of a given variety and given grade as nearly identical as possible. That gives us something to say about ourselves. And to help matters along we might make sure that the pack we are using is attractive and suitable to the needs of the buyers.

All of which brings us to the question of who our buyer is. For our small planting it will be the people who drive out to our place and make their selection; the merchant who sells to the people who do not get out to see the farm; and the passer by who is attracted by our roadside advertisement.

We firmly believe that if a man can honestly say that he is growing the best varieties for his locality in the best way possible, put up in standard packages for the benefit not only of his reputation but also of his buyers that he has the start of a successful selling campaign. We believe it because it has worked in an area much more crowded with competition than any area of small acreages in Wisconsin.

Is every package that leaves your place everything that you say it is, and do you know that the buyer won't come back with a kick? Unless you can tell the truth in advertising it won't pay to advertise.

BRIGHT SAYINGS, GATHERED AT THE A. P. S. CONVENTION, KANSAS CITY, DEC. 1925.

EAT MORE FRUIT.

A doctor in charge of a boys' camp at Plum Lake, Wis., experienced great trouble in keeping the boys well. Kind parents sent cakes, candy and sweets of all kinds; result, indigestion. After an order that only fruit could be sent, indigestion and its attendant ills disappeared.—A. P. S. News.

A suggestion:—An apple a day for undernourished children instead of a glass of milk, or in addition to it. Why not?—Paul Stark.

More Fruit, More Health.—Paul Stark.

Fruit The Happy Way to Health.—Mrs. Hayward.

Let's talk to "Mike" about fruit. Mike is loading the air these winter nights with speeches about the value of milk in the diet, why not let this cock-eyed world know more about the juicy red raspberries grown at Bayfield and Sparta and Chippewa County McIntosh. I propose to do *so*.—A Member.

By a representative of the engineering department of the American Railway Association: — Good containers are more important than good packing; also, poor containers well loaded are better than good containers poorly loaded. He offered no argument to support these statements, which were of course founded on first hand knowledge because, presumably, he did not want to reflect on the intelligence of his audience. Nor, apparently, did he feel like saying, "if you want your berries, cherries or apples to arrive in good condition use a container fit for shipping and learn how to load it, railroads cannot perform the impossible, the shipper must do his share."

F. H. Simpson, Vincennes, Indiana, apple grower and dealer:—Apple Day, first proposed by Captain Handly of Quincy, Ill., has now grown to Apple Week. In every large city in the country the dealers, once called commission

men, spend large sums for apple publicity.

The International Apple Shippers Association took over this project several years ago but the job became so big that later a non-profit organization was formed to carry it on. Three Chicago dealers offered to underwrite the project to the extent of $1000 each. Each city now finances its own Day or Week. The work has received the heartiest co-operation of Railway and Steamship companies, Hotels and the radio.

"The growers are benefited quite as much or more than the dealers, but up to date they haven't contributed a dollar or an apple." Not a grower present said anything in reply. There wasn't anything to say.

Mr. C. A. Bingham of Ohio owns and operates sixteen hundred acres of apple orchard; varieties, two, Baldwin and Spy. The trees have been planted nine years. Mr. Bingham is preparing for a crop of two hundred thousand bushels in 1926.

Mr. Fred Thompson of Yakima this year shipped a car of extra fancy Oregon pears to New York City. The consignee sent Mr. Thompson a check for $3500.00 net, freight and commission deducted from gross sale price. We saw photographic copy of the check. The moral, if any, is grow the kind of fruit you can grow best and then put *quality* into it.

BILLS AUDITED

F. Cranefield, Trav. Exp.	$66.80
Casual Employees Annual Convention	107.00
Tel. and telephone	7.09
Dep't Public Property— Express, freight and dray	9.40
Mimeograph and Multigraph	22.94
Office supplies	3.11
Postage	124.12
Meyer News Service, November	2.50
F. Cranefield, November salary	216.00
James S. Potter, November salary	125.00
James S. Potter, Exp. Annual Conv.	67.01
E. Nichols Holding Co., December rent	25.00
J. E. Leverich, salary as Vice-Pres. 1925	75.00
W. A. Toole, salary as President 1925	75.00
American Express Company	22.77
Drummond Packing Company	6.50
Midwest Storage Co.	9.56
Premium awards to various and divers persons	250.50
M. S. Kellogg, Trav. Expenses	31.69
Gamm Jewelry Co., trophies	95.00
Wis. Telephone Co., Nov. and Dec. exchange and toll	30.34
American Pomological Society	10.00
Mabel D. Holt, reporting and traveling expenses, annual convention	133.02
Vaughn S. Conway, services	25.00
General Paper Company	1.04
Chris Romes, sign painting	16.50
Union Mills Hort. Society, aid	25.00
M. S. Kellogg, trav. expenses	15.10
J. S. Palmer, merchandise	29.14
Guern Weal Farm, fruit for convention	10.07
Door County Fruit Growers Union, fruit	4.00
McKay Nurseries, plants	8.50
W. C. Stauss, services	5.10
Madison Gas & Elec. Co.	1.48
P. A. Glenn, services	45.57
North Ridge Hort. Society, aid	21.00
Gilbert Steno. Office	15.75
Blied Office Supplies	14.02
Madison News Agency	9.00
Conrad L. Kuehner, pruning service	41.39
Wm. E. Spreiter, traveling expenses	21.75
W. A. Toole, traveling expenses	27.30
James Livingstone, traveling expenses	35.45
Wm. Longland, traveling expenses ('24-'25)	21.80
Wm. Longland, traveling expenses	40.48
W. A. Toole, traveling expenses	3.43
Mrs. W. A. Toole, traveling expenses	25.05
J. D. Winter, services	9.74

(*Continued on page 75*)

COMMERCIAL HORTICULTURE

ON GOING OFF HALF COCKED.

Maybe we are wrong.

But there is one thing about the idea which is in the air concerning this Eat More Fruit campaign that strikes us as wrong. Just plain wrong.

How in the world can we of the Middle West and East hope to advertise and sell to the all too gullible public the fruit which we put on the markets? We don't grade carefully, we don't pack carefully, we don't label carefully, we don't even grow carefully. That's what we think is wrong.

In order to get anything for the money and time which we put into advertising we are going to have to speak to the production department and see if something can't be done to produce a product that we won't be ashamed to sell. We even believe that there should be inserted in the Campaign slogan the words "and better". How does it sound? "Eat More and Better Fruit." That gives us something at which to aim from both ends of our game.

"WINDFALLS"

A buyer for a commission house in one of our larger apple markets aired his woes to us not long ago. We can't very well tell all of them, neither may we repeat some of the words he used by way of emphasis. However they were substantially as follows: "The trouble," he said, "with apple growers is that they don't know how to pack their fruit, and they expect us to sell seventy-five different varieties when the market wants only a few. I can't offer a man a good price when he has something nobody wants, no matter how fine looking it is. And I can't contract for fruit from a man when I know I won't be able to tell the man who buys it whether the stamps on the outside of the package are telling the truth or not. Why don't you fellows that are able to tell those growers about it say something."

We say it here. Five varieties for the commercial orchard in Wisconsin. Better grading and packing of Wisconsin fruit.

Twenty men started to use their ideas of pruning on one tree. The stump was left. The amateur barber is apt to run out of hair before he finishes his job.

Judging from the complaints we have heard lately the express companies use apple baskets for handball in transit and count up the score by the number of bruises on the fruit.

It pays to spray every year whether the offensive thing for which we are spraying is very apparent or not. There's an injunction that is old but ever new, let us S(pray).

If there is one particular thing, or any number of particular things, that are bothering you tell them to us, and if we don't know we have the whole wide horticultural world in which to find the answer. And we'll find it if its in existence. If it isn't it will be the basis for some investigation that will bring the trouble to light.

We say it for the third time. In order that we may know what you want, you'll have to tell us. Send in your opinions to be printed or ask questions.

Eat more fruit—and if it's grown in Wisconsin, eat still more.

FRUIT GROWING IN EAU CLAIRE COUNTY.

W. C. Stauss, County Agent, Eau Claire County, at Annual Convention, Eau Claire.

Fruit growing in Eau Claire County may be classified as follows:

A. Orcharding.
   1. Large commercial orchard.
   2. The small commercial orchard.
   3. The home orchard.

B. Small fruit growing.

The large commercial orchard for this section is not an impossibility, judging from the success of the owners of several such orchards ten miles northeast of Eau Claire. The splendid exhibit of ten bushels of McIntosh on display at this show is the product of one of these orchards and proof of the possibilities with a large orchard when properly managed. Of course, there are certain limiting factors, especially our climatic conditions, which necessitate adhering to some of the hardier varieties. The fact that horticulture requires a knowledge of pruning, spraying, etc., will, of course, limit this phase of horticulture to those who are willing to make a careful study of these problems. To my mind, it is not only important to know of the agricultural practices, but it is equally important that those who intend to engage in this enterprise have definite knowledge of markets and marketing requirements. It is, therefore, necessary to know about the quality of the various varieties as well as it is to know of their hardiness to withstand our climatic conditions. After all then, it is not a business to be recommended on a wholesale basis, but only to those who are willing to analyze the situation and make a thorough study of the entire enterprise.

Now, the large commercial orchard is just one of the possibilities for Eau Claire County. I believe there is a field for those who are interested in what might be called the small commercial orchard. However, here, as well as in the

case of a large orchard, it is necessary for the owner to be familiar with his problems. In addition, he will have problems that may not be problems with the big orchardist. For instance, the overhead in machinery will be greater, unless the orchard is run in connection with some other agricultural enterprise so that this same machinery can be used for other purposes. The unequal distribution of labor will likewise become a serious problem, unless it is run in connection with some other agricultural activity. To make the small commercial orchard profitable, some other type of farming, particularly livestock farming, would fit in admirably for our conditions here. This would bring greater diversification and a more equal distribution of labor and income.

Our greatest possibilities, however, are in the promotion and the improvement of our farm orchards. I believe there is a place for a small orchard on each and every farm, but here, too, we have several problems. Knowledge is again necessary, and besides, a little attention and care must be given the orchard. The organization of spray rings seems to be almost a necessity for the ultimate success with this type of orchard. No one farmer can very well afford to invest in spraying machinery which will do the job quickly and satisfactorily. This, however, will come up for explanation and discussion in another number on the program. Small fruits figure in strongly in our Eau Claire County horticulture.

I am glad that this convention is being held here, as it gives an opportunity for our small fruit growers to learn things that they never knew before. I am only sorry to see that there are not more of them here to take advantage of this splendid opportunity.

It seems needless to go into great detail, as the success of the growers will depend upon their ability to analyze their problems and their willingness to gain and accept information on varieties, disease control, cultural practices, as have been found best through the experimentation on the part of the College of Agriculture and the many individuals who are engaged in developing the small fruits.

GROWING MUSKMELONS IN WOOD COUNTY

R. A. Peterson, County Agent, Wood County at Annual Convention, Eau Claire.

The light soil area in the vicinity of Wisconsin Rapids is especially adapted to the growing of strawberries and melons. Both crops have been grown more or less successfully for years. Many of the strawberry growers have used good methods in their production program, while others have merely trusted to luck. All have been on a competitive basis, however, in marketing their berries, and the fact that the majority of them depended entirely on the local market, which was limited, reduced their returns greatly. A Wood County Fruit Growers Association was organized about one and a half years ago, through the assistance of Mr. Frederic Cranefield, Secretary, State Horticultural Association, and the county association was also made a unit of the State Association. A marketing system was developed for the strawberry crop, which proved very satisfactory.

The growing and marketing of melons in this district had been carried on in the same hit or miss method common to the berry crop previous to the organization work. The melons grown were of good quality and flavor, but since each grower worked independently, about fifty different varieties of melons were grown, and very few, if any, of standard marketing varieties.

The Fruit Growers Association assisted itself in the melon program also. Assistance and advice relative to standard marketable varieties of cantaloupes was given us by Mr. W. P. Jones, of the Department of Markets. Two varieties, the Milwaukee Market, and the Hoodoo, or Hearts of Gold, were selected. A total of forty-one acres of melons were planted, about equally divided between the two varieties. Twenty-two growers were interested in the project with plantings varying from one-half acre to four acres. The project was new, so that most of the growers failed to give the ground the additional preparation, fertilization, etc., that in conducive to best results with melons. A few, however, prepared their seed beds well and fertilized quite liberally with well rotted barnyard manure, one of the best fertilizers for the melon crop, and their crops showed the result of the treatment. Michigan and Indiana growers use large amounts of commercial fertilizer on their melons with success. Our local growers tried out a light application of a 4-12-6 fertilizer on a small scale, and were well satisfied with the results.

The seed was planted as early in May as possible in rows six feet apart with the hills four feet apart in the rows. About four or five seeds were planted in a hill. The plants grew well and fairly good care was given the fields by the growers. Extreme dry weather developed during the period when the melons were setting, which reduced the crop to the point of failure in many cases. The better prepared seed beds withstood the drought fairly well, however, so that some melons were produced.

The Milwaukee market variety matured slightly earlier that the Hearts of Gold. They were somewhat larger also, and were of good quality. They varied in size from four to five inches in diameter, with five inch melons on the average. The Hearts of Gold melons average somewhat smaller, but were slightly superior in flavor.

One thousand crates were secured, and about this number of crates of cantaloupe were marketed. The crates were flats, holding twelve and fifteen melons, and sold for an average price of $1.00 per crate. Miss Anna Bamberg, Secretary of the Cranberry Sales Association, acted as sales manager for the melon growers, and handled the proposition very well. Due to the dry weather and the resulting

(*Continued on page 73*)

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

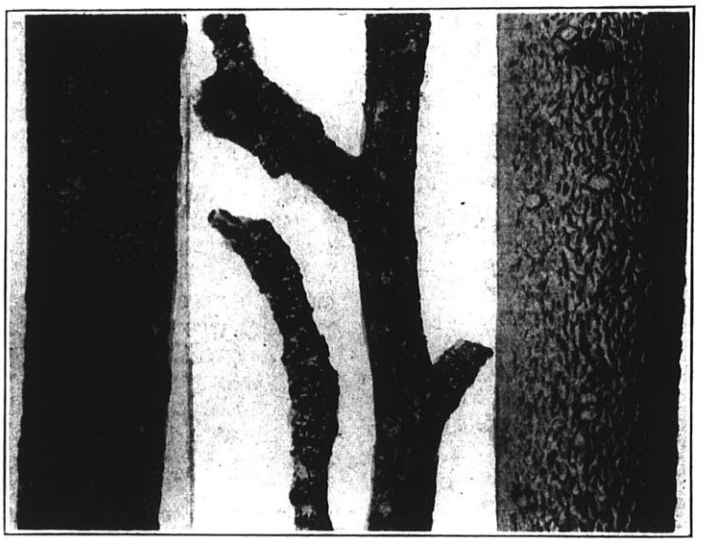
WHEN TO USE THE DORMANT SPRAY.

There are in this state a great many small farm orchards and town lot fruit trees which through thoughtlessness and unintentional neglect are a liability rather than an asset to their owner. Aside from improper soil, unsuited varieties, and a lack of pruning a great many trees will be found infested with insect pests or infected with disease of one kind or other, which are its limiting factors.

The poultryman has long ago learned that a lousy hen never lays enough eggs to be profitable and instead of trying to offset the drain of the parasites by increasing the food supply he "cleans house" and if, after ridding the hen of the lice and making her environment inducive to egg laying she does not respond, she gets the axe.

The fruit grower can expect no more from a lousy tree than a poultryman can from his lousy hen. It is true that the axe would be the best treatment to apply to many trees since they are worth more for firewood than they ever would be worth for fruiting. At least if a tree doesn't bear, is not a desired or an adapted variety and is not worth the upkeep for its shade, then the sooner it is replaced by a desirable one the better. On the other hand many folks do not fully appreciate the value of their trees. They pay out a dollar or so for a young apple tree of good quality and nurse it along until it is ten or twelve years old and when it is just beginning to get to the point of yielding sufficiently to pay for itself it is discovered to be infested with a pest that threatens its existence; and rather than invest a small sum in its treatment it is cut down and replaced by another.

The majority of farm orchards are of necessity neglected because of a lack of time to spend on the mere sideline of their business that their orchard represents. Unfortunately the orchard spraying and other practices are confined to very limited times which conflict with the busiest season of the year on the farm. As a result these orchards often become over run with all kinds of pests and are naturally a menace to a community in which commercial orcharding is attempted, since they serve as a continual source of reinfestation and reinfection. Then again there are many farmers who do not feel that the return from their orchard justifies their going to the expense of caring for it as it should be and yet they allow it to occupy valuable space and act as a nuisance to their community. It is almost useless to attempt commercial orcharding in neighborhoods where neglected orchards are overrun with scale insects and no spraying is done. If the entire community purchases the equipment and sprays everything, there is no reason why the orchard should not be as profitable as any other branch of work on the farm. This is being done by our spray rings.



Three good reasons for spraying

There are a number of very injurious insect pests which attack the fruit trees that if no control is practiced will result in their death in a comparatively short time owing to their rapidity of spread and multiplication. Chief among these are the three scale insects shown in the illustration on this page. I will introduce them to you. On the left we have San Jose scale the most deadly of the three. Its original home was probably China. It appeared in this country about 1870 and by 1910 had succeeded in getting into Wisconsin where it now has been found in about a dozen of our southern counties. The full grown female scale is only about the size of a pin head, nearly circular in outline and rather flat. In the center of the picture we have one of our native scale insects known as the Scurfy scale and on the right we have the oyster-shell scale, another imported pest. This insect came from Europe over a century ago and is now widely distributed throughout the country. The latter pest when full grown is about one eighth of an inch long and has much the form of an oyster shell.

The control measure for all three of these pests is the same and consists of a dormant spray. Any of the standard dormant sprays on the market will be found effective

if properly used. Those used and recommended by the state department of agriculture are as follows: Lime Sulphur, one part to seven parts of water, or Scalecide one part to fifteen of water and Sunoco Spray Oil, one part to twelve of water. For best results at least two applications should be made once in each of two consecutive years.

The dormant spray should be made just as soon as the frost is off of the trees in the spring and when the temperature during the time of application is well above the freezing point. It can be continued with safety until the buds swell sufficiently to show a trace of green. Neither oil nor lime sulphur should be stored where the temperature is liable to fall below freezing since these substances lose their strength upon freezing. Where the spray is liable to be blown against painted surfaces the oils are preferred to the lime sulphur sprays, because the latter will stain the paint temporarily.

The practice of whitewashing the trunks of the trees, although of value as a repellant against the flat head apple borer, does not in the least control the scale insects and should not, therefore, be applied prior to applying the dormant contact spray since it merely serves as a protective coating to the scales beneath, which otherwise would be destroyed by it.

Besides being effective against scale insects the dormant sprays have considerable value in the destruction of overwintering eggs of such pests as the European red mite and various plant lice, as well as having a decided stimulating effect on the trees.

Sometimes plants lose their green color, this is called chlorosis. Professor Gussow reports that "iron sulphate applied to the soil around grape plants resulted in their almost complete recovery in one year". Iron sulphate is cheap and would be worth trying on other plants here in North Dakota when they turn yellow.

News Letter N. D. Hort. Soc.

MORE ABOUT ASTER YELLOWS

Here is another item about aster yellows sent out by The Boyce Thompson Institute of YONKERS, N. Y.

In this connection we immodestly remark that WISCONSIN HORTICULTURE carried the first statement of the carrier of aster yellows and preventive measures of any value to growers, in any amateur or trade journal in this or any other country.

Yellows has proved one of the most baffling of plant diseases, it being hard to determine whether bacteria too small to be seen even through a microscope were the cause, or whether the disease was due to some disturbed physiological condition with the plant.

As the aster was found to be particularly susceptible to yellows, the Boyce Thompson Institute chose this plant for its series of intensive experiments, which have resulted in discovering what is believed to be the germ carrier of the disease. Dr. L. O. Kunkel, plant pathologist of the Institute, has proved that the yellows diseases are always transmitted by one certain insect known as a "leafhopper." Although it is not yet known just what the leafhopper transmits or how he does it, Dr. Kunkel found that when a diseased plant and a well one were imprisoned in a small glass house the contagion did not spread from one to the other unless this particular insect was present. Other insects of similar species were tried in the glass houses; but though they might hop and scurry from the sick plant to the well one, the latter never contracted yellows until the leafhopper was introduced.

One of the striking things about the transmission of yellows is its similarity to the transmission of yellow fever and malaria in man, which is effected by means of the mosquito. The Boyce Thompson experiments in this field are being continued and it is possible that their results will throw light upon human as well as plant diseases.

Now, technical discussions are of little interest and less value to the gardener. It may well be that he ought to know the *why* but he is much more interested in the *how*. The whole story has not been told but we know enough now so that we may have asters free from the yellows. And here is how to do it:

(1) Plants for setting out should be grown in the house or greenhouse. The aster leaf-hopper which spreads the disease does not live indoors, nor in proximity to buildings; plants set near walls or buildings are more apt to be free from the disease than if planted in the open.

(2) The disease affects other plants, weeds.

(3) After the plants are established outdoors, watch for the ones with leaves growing vertically, (like Cos lettuce leaves) as these are infected plants and should be pulled up and destroyed.

(4) Bordeaux mixture seems to repel the hoppers but its use is not of itself a guarantee of yellows free plants.

(5) The leaf-hopper is merely the medium through which the disease is transmitted; it carries it from a diseased plant to a healthy one; therefore if we eliminate diseased plants, which includes certain weeds, we lessen the probability of infection. If we could screen the plants all through the growing season we might expect plants 100 per cent disease free. We do not know what weeds or other plants are subject to the disease nor how far the hoppers hop but Dr. Kunkle is very apt to find out. When he does he will tell us and we will let you know.

GROWING MUSKMELONS IN WOOD COUNTY

(*Continued from page 71*)

small crop, a large percentage of the melons were marketed locally. The balance were sent out by express or truck to nearby cities. The melons were well received by both merchants and consumers. They were pronounced of equal quality to any melons that had been imported.

The growing of cantaloupes offers possibilities on the right kind of soil. The returns are dependent on proper preparation and fertilization of the seed bed, use of good seed, careful management of crop, and of the whims of the weather man. We intend to increase the acreage in 1926 to the point where shipment of cantaloupes can be made in carload lots.

EAT APPLES TO REDUCE

By Dr. John Harvey Kellogg.

The acid of the apple, like that of the lemon, is an antiseptic. A Japanese physician showed that these fruit acids destroy the germs of typhoid fever and also the cholera germ. It has long been known that a diet of apples is an excellent remedy for chronic dysentery. An old distich goes:

"To eat an apple on going to bed
Will make the doctor beg his bread."

Equally well based would be the slogan:

"Six apples a day
Will keep headache away."

Most headaches are due to intestinal toxemia, the result of inactivity of the colon. Apples at meals and at bedtime serve in many cases as an excellent laxative, and thus make an end of the headaches by removing the cause.

The apple is a good means of reducing surplus weight. An overweight person may eat all the apples he wants, provided he will eat nothing but apples, and can easily reduce his surplus flesh at the rate of one or two pounds a day.

If everybody in the United States could be induced to eat six apples a day, it is probable that a good many doctors would have to abandon their profession or else take up horticulture as a side line.

Children are particularly benefited by the free use of apples. Apples are rich in vitamins, particularly C and B, which promotes growth and development. The free use of apples aids materially in the development of sound teeth, and helps to combat constipation, which is increasingly common in children, particularly school children, because of the lack of physical activity necessary to maintain good alimentation.

The idea that apples and other fruits should not be eaten with milk is a popular notion which has no scientific foundation. Apples and milk agree perfectly provided both are properly eaten. When apples disagree it is usually because they have been swallowed hurriedly without proper mastication. If each morsel is chewed until reduced to a smooth puree the apple digests in a surprisingly short space of time, passing out of the stomach more quickly than any other food. Beaumont demonstrated that the apple leaves the stomach within an hour.

Certain varieties of apple are more easily digestible than others. Apples which when ripe have soft, tender flesh, such as the Snow apple are much more easily digestible than apples which are hard or tough.

APPLE A PREHISTORIC FOOD

The universal popularity of the apple, wherever it is available, is due to an instinctive recognition of its merits as a human foodstuff, Dr. J. H. Kellogg of the Battle Creek sanitarium stated in a recent address. The apple was well known to the prehistoric people of Europe. Traces of it are found in the ancient lake dwellings of Switzerland. The earliest settlers of America found the Indians cultivating apple orchards. The apple, with other fruits and nuts, constituted the staples of the bill of fare of primitive man.

"It is plain that fruits and nuts are to be regarded as staple articles of food and by no means as simple relishes or accessories."

And so a new and highly important use has been found for the apple. Everybody whose urine is too acid can eat apples with profit, which means, of course, that every meat eater, every one who drinks tea or coffee, every person who indulges freely in breakfast foods, should eat apples as an antidote for the acid foods which he eats.

The conventional combination of apple sauce with roast pork is another illustration of the wonderful instinctive guidance which we human beings may once have possessed to a much larger extent than now, and which we see so well illustrated in lower animals.

CLEAN UP YOUR ORCHARDS NOW

"Pruning is needed to produce good fruit" says R. H. Roberts of the horticulture department at the Wisconsin College of Agriculture.

"Pruning of the young orchard tree is needed to secure a well balanced top, which will produce uniformly good fruit in old age" maintains this fruit expert in a newly published bulletin on the subject. "After the first few seasons little attention need be given to pruning for the form of the tree, but much attention is usually needed to keep the tree highly productive.

According to Roberts, when the trees begin to bear heavy crops, the annual growth is much reduced, especially on some of the branches. Differences in rate of growth of trees determine their fruiting habits. He advises the fruit growers to watch the kind of wood that bears the best fruit, and then use pruning as a means of getting the whole tree, and all the trees, like this good wood.

Roberts claims that it is much easier to keep a tree in good vigor than it is to revive it after it is in a weakened condition. If undesirable growth and fruiting conditions are to be avoided, it is necessary to know what the fruiting possibilities of the tree are in advance of the trouble.

"There is no iron-clad pruning 'system', which can be followed. Experience shows that no one treatment gives the best results", he claims.

Doctor Robert's Bulletin, Pruning The Bearing Apple Tree will be published in an early issue of WISCONSIN HORTICULTURE.

We have 25 cloth bound (stiff covers) copies of the Annual Report for 1925 and about a dozen of the 1924 report, available for distribution to members who care enough for them to send 25c for a copy. These will eventually be taken by out-of-state institutions at one dollar a copy but we want to serve our members first.

BACK THE AMERICAN POMOLOGICAL SOCIETY

At the St. Louis convention of the A. P. S. in 1920 your secretary guaranteed that Wisconsin would furnish fifty members at three dollars apiece and Wisconsin delivered the goods. At the recent Kansas City meeting Wisconsin's representatives offered to bet a bushel of Chippewa county McIntosh against a carload of Missouri Ben Davis, a rash bet, that Wisconsin would roll up a membership in the A. P. S. of one hundred before April 1st, 1926.

Will you suffer us to eat Ben Davis? More important will the fruit growers of Wisconsin deprive themselves of an opportunity to help themselves!

Membership now includes subscription to "Fruits and Gardens," an excellent monthly magazine formerly the "Fruit Belt" the editorial policy, the subject matter and the advertising are controlled absolutely by the American Pomological Society. Send membership fee to this office. We want to check up on that hundred members. We have a receipt book handy. If you are prompt you will get the January number of Fruits and Gardens. It costs only ONE DOLLAR. Send a dollar bill, your personal check or any equivalent to Frederic Cranefield, 233 Washington Bldg., Madison, Wis.

READ THIS!

This issue has been apples, apples, fruit, fruit, BUT watch for our Garden Number. In the mean time digest what's in this issue and think about Wisconsin fruit, about your orchard, and about making them better. If you have but one tree in your back yard, give it due care. If you buy fruit, buy and eat more and only good fruit, and live longer to enjoy the flowers that are going to bloom.

P. S. If you have plants for sale, or any thing for that matter, you'd be surprised what WISCONSIN HORTICULTURE advertising would do toward increasing your sales.

BILLS AUDITED

(*Continued from page 69*)

H. H. Smith, traveling expenses and services	96.15
J. S. Potter, traveling expenses	20.31
J. S. Potter, December salary	125.00
F. Cranefield, December salary	217.00
K. Anna Caspers, steno. services	19.00
F. Cranefield, miscellaneous expenses	13.81
Postal Telegraph Co.	2.95
N. A. Rasmussen, traveling expenses	33.94
Mrs. N. A. Rasmussen, traveling expenses	39.26
A. K. Bassett, traveling expenses	17.90

WE SHOULD WORRY

The following from the The Milwaukee Journal of December 16th should be of interest to Wisconsin apple growers:

"The United States government report shows large reserves of apples on hand, which is making the market easy. The official report says the supply of apples is 26 per cent more than a year ago, with 4,250,000 barrels on hand, a gain of 15 per cent over last year. There are also 13,000,000 bushel boxes, a gain of 31 per cent over a year ago. Lastly, there are 2,430,000 bushel baskets, which is 80 per cent more than a year ago.

In all there are about 28,000,000 bushels of apples in storage to regale American appetites before the next crop comes in. Broadway commission houses declare the apple is now the cheapest and most plentiful of fruits and that housewives can save money by taking advantage of the large crop and the big storage supply.

Wisconsin Apples. Wisconsin Wealthy, Snow, Wolf River, McIntosh and N. W. Greening were all sold long, long ago and at good prices. We ask you,—why worry about lack of long keeping varieties?

The Big Five! Name them you apple men, if you don't we will. Fifty-seven may be all right for pickles but not for apples, at least not when it comes to marketing them.

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, February, 1926 No. 6

FLOWERS FOR EVERYBODY

Skilled gardeners write mostly for skilled gardeners, for those who have already mastered the elements of the art and who seek mainly news of novelties and advanced methods.

To speak of pergolas, vistas, unity, coherence, shrub borders, the merits of Etoile de Hollande rose as compared with those of Souivenor de Francois Richardier, or the newest dahlia or peony with an unpronounceable name, is just plain discouragement to one who has little time, less money and perhaps no land.

Such people, and there are millions of them, are apt to feel that flower gardens are only for those who have knowledge of the art.

For these millions, in the country where the settings for a "grand garden" are lacking, in cities where space is lacking and especially for that big, big group who live in rented homes, I preach the gospel of simple things, of old fashioned flowers, of annuals, and dahlias, but particularly of annuals.

I preach the gospel of annuals without thought to prejudice the planting of shrubs and perennials; everyone should have all and those who are fortunate in owning a home will have them, but there are others.

I want to talk face to face with the men and women who live in rented homes and have only a few square rods of back yard; who feel that fine flowers are beyond their reach. I want to tell them how they may have beautiful flowers in the greatest abundance at slight cost.

First, about the annuals or plants which flower in midsummer and autumn from seed sown in spring. A nickel or a dime buys more than enough seed of each kind for a garden. Of many kinds a packet of seed will supply plants for two or three gardens.

Here is a list, by name only, of twenty kinds that may be grown in any kind of soil and with the minimum of sunshine. Alyssum, Coxcomb including Amaranthus, Bachelor's Button or Cornflower, Balsam, Snapdragon, Aster, Calendula, Coreopsis, Candytuft, Cosmos, California Poppy, Gaillardia, Gypsophila or Babys Breath, Kochia, Larkspur, Marigold, Mignonette, Nasturtium, Phlox and Zinnia. There are others but these are all worth while. Most everybody knows them or most of them. If descriptions are desired consult any seed catalog, the descriptions therein will be truthful because they are all old standard kinds. It has always seemed to the writer that some of these flowers are temperamental, will not grow for everybody. Some people have no success with Mignonette while others fail with Calendula.

Suppose we cut this list down to ten kinds; Alyssum, Candytuft, Coreopsis, Asters, Cornflower, Marigold, Larkspur, Nasturtium, Phlox and Zinnia.

If you are satisfied to wait until July 1st for the beginning of bloom all may be planted in the garden as soon as the ground is fit for sowing vegetabble seeds.

Of all except Nasturtium and Zinnia the seeds are small and the seed bed should be well prepared. As soon as the ground is fit to work spade it and leave it. A few days later turn the top soil to a depth of three or four inches with a spading fork or wheel hoe and pulverize with the garden rake, raking and raking again and again until it is finer than the proverbial onion bed. Make shallow furrows for the seeds with the sharpened edge of a lath and cover lightly. Lay boards or narrow strips of carpet over the rows to hold the moisture that is in the soil and so avoid the necessity of sprinkling which forms a crust that will prevent the seedlings of many sorts from reaching daylight.

There are only two reasons for covering seeds, a big reason and a little one. The big one is to provide moisture necessary for germination; the little one is to enable the roots of certain kinds to "catch hold" of the soil. After four or five days lift the covers morning and night and as soon as the plantlets have pushed thru the soil remove the covers.

Of the "ten" list Alyssum will be first to appear, as well as the first to blossom, followed directly by Candytuft and Cornflower. The Coreopsis, Aster and others will come bunched in about ten days or sooner if the soil is warm. Nasturtium is tardy and so is Zinnia. Sow the seeds thickly, not less than ten to the inch, except Nasturtium, as in union there is strength. —to lift the soil. Later, thin according to the needs of each kind for room.

Alyssum and Candytuft will furnish the first flowers) from five to six weeks after planting, the Aster the latest.

This garden plan of growing flowers is practical and workable in the south half of the state. In the north the growing season is a little too short.

If early Asters are wanted sow the seed in boxes in the house in March and transplant. A few, only a few, extra days of bloom may be had from the other kinds if started in the house. Its worth trying either way. Only a little land is needed. If you have none at all make or buy window boxes if you live upstairs. Lacking these, get shallow boxes from the grocery store and set them on the back steps. There surely is always a way where there is the will to do.

If you had the forethought last fall to plant a few bulbs, tulips, hyacinth and daffodils you would have flowers in April and May. Keep it in mind this year. One thing you can do, buy a dozen gladiolus bulbs, plant six of them as soon as the ground is fit, about three inches deep, three inches of soil over the tops of the bulbs, and the balance a month later. The first planted will blossom in June. Gladiolus may also be grown in boxes on the back steps if necessary. Buy as many other dozens as means permit.

I dare not tell you what wealth of bloom and what pleasure you will have from this garden of annuals and bulbs if you have not

tried it for you would not believe me.

Of course you cannot stop with the seed sowing, anyone knows that. Daily attention is needed, hoeing, raking, weeding, thinning, transplanting and a dozen other little jobs, but these are all part of the game, the joy of the game.

As I have said two or three times here these suggestions are for those who hestitate to undertake the bigger things in gardening but want flowers. For those who have established homes, plenty of room and who want to spend a little more of time and money there is a bigger field of endeavor and added pleasure in growing perennials for these require planting but once and after a year or two may be divided and live for years. But if you cannot have shrubs and perennials now, plant annuals. You will be glad you did it.

THE THIRD BOOK

In the age-old controversy about the choice of three books for the man marooned on a desolate island—or the choice of the *third* book, rather — for one and two were almost unanimously the Bible and Shakespeare (Shakespeare wouldn't be my second choice, however,—though, "that's neither here nor there)—I support with enthusiastic sympathy the option of the one who fixed upon "*a good seed catalogue*" for his third!

Just to take the edge off, I'm already sending for the Japanese Morning Glories, "Heavenly Blues" and Moonflowers for the trellis under the library window. —Until I have a chance to plan out the larger plantings, I'll be happier with these packets in my hands!

And I wonder what surprises the garden will bring forth the coming season,—"Not nominated in the bond!"

I shall have Calendulas, of course, — the dear pot-marigolds that I first became acquainted with in the Kate Greenaway picture books of my infant days. I wish, by the way, that some one could tell me how they were used as pot-herbs, in Will Shakespeare's time! I want to try it once! My Calendulas gave me a great surprise last year.

Quite a number of them bore, around the circle of a large and perfect blossom, from five to fourteen slender upright flower stalks, about an inch tall, and each surmounted with a small and perfect blossom, perhaps three quarters of an inch across, and somewhat less double than the hostess bloom beneath them.

Calendulas, double Cornflowers, Zinnias, Cosmos, and a few others always grow in long rows, side by side with my carrots, beets, peas and chard,—so there'll be plenty to cut, and a bouquet for every empty hand that finds its way in.

There was a tragedy amongst the Cosmos this last late summer, such as I've never before been witness to.

After a succession of days of chill rain,—and oh, so soft garden! so that I'd kept out perforce for as much as a week, I found, in the web of a garden spider,—(one of those jumpers, that the children in our family called Hammock spiders—I don't know its name) the perfectly dry skin of a little brown bird,—probably a goldfinch in its pre-gold plumage. Wasn't that a strange thing?

Another curious thing that came to light down in the marrow patch was a wonderful cylindrical vial, about an inch long,—a trifle over, I think, made of many perfect oval pieces of green leaves, overlapping, and closed at the ends with perfect fitting circles of what seemed to be the same material! There was no indication, that we could see, of its having been used, or of its having been attached to anything, and the freshness of the leaves of which it was made, gave us the idea that it was newly finished.

What wonderful little leaf-cutting craftsman made that?

The late frost last spring sheared clean three long rows in my garden,—one of Sweet Sultans, one of Scabiosa, or "Mourning Bride", and one of single China Asters.

But "hope springs eternal" and I'll try again this year.

I have Foxgloves, Columbines, (Hybrids), Shasta Daisies, Alaska, and Musk Mallows, rose and white.

I have a fine large Mullein, where the

> "Little Pixie people
> Wing above the walk
> Pouring from the steeple
> Of a mullein stalk."

I couldn't spare my mullein and spoil the chain! Neither could the goldfinch nor the bumble bee. Nor the "St. Simon Stylitis" birds who come and sit atop of it,—for my pure delight, or for their own? Anyway I remember hearing, when my years could be totted up on the fingers of one hand, of my Grandfather's pleasure in meeting the stately mullein in the botanical gardens of London, under the name, American Velvet Plant.

And a little later, when the children were using these leaves for play cosmetics, rouge,—my pretty little schoolmate rubbed through the delicate roseleaf of her cheek, and had an unsightly brown spot for some days.

Well, you see my garden is not devoid of a rambler, even if it isn't a rose.

Soon there'll be a week-end. Then I'll buckle down to that first seed catalogue—and then beware!

Eugenia C. Gillette.

HOW AND WHEN

Plant pansy seeds in a cold frame as soon as the ground can be worked and transplant the little plants to their permanent home when three or four leaves have appeared. These plants will flower some from July on but will be at their best from September till the ground freezes. If not allowed to seed too heavily, the plants will live over winter and will greet you early in the spring with an abundance of flowers.

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

RASPBERRY HAZARDS

E. L. Chambers

The consuming public is practically unanimous in agreeing that a good big dish of Wisconsin's delicious raspberries is the "Queen" of deserts and they are growing much concerned as to why the dishes have been getting smaller and smaller during the last few years until now they are barely getting a taste of the tempting food. Upon inquiry they find that the berries are being held on the market at twenty-five cents a pint or a little more than double the price of a short while back. They investigate the situation and discover that like all other food products the price is being governed by supply and demand. They look up the crop statistics and they find a marked reduction in the raspberry acreage which has been on a steady decline for nearly twenty years.

It is not difficult to understand this decrease in acreage when one studies the discouraging problems the growers of this crop have to cope with. Gambling with winter injury, frost and drought requires a lot of courage but trying to keep the upper hand on a host of fungous diseases and insect pests is a real task. As a result, large numbers of growers were not sufficiently fortified with experience and equipment to meet the heavy toll exacted by these hazards and fell by the wayside.

One by one these fungous troubles and insect pests have been studied and a remedy worked out for it so that any grower equipped with the necessary knowledge and experience can safely accept the challenge of this field and succeed. It has been done and is being done and there is no reason why others can not be equally as successful.

Every spring the State Entomologist is called upon to investigate what is reported to be a serious disease which kills back the roots leaving them black. Upon investigation it is found that the plantation has been caught by a severe cold snap, without sufficient snow on the ground for protection, and that an open winter followed with the result that the roots were killed by a series of sudden freezes and thaws. As a result the plants start slowly in the spring and the bearing canes do not have the necessary root system to carry them and consequently dry up and die just about the time the crop begins to ripen. This trouble can be avoided by laying the bushes down over winter and furnishing a partial covering. The loss from the root injury can be greatly offset by stimulating new root growth with a liberal application of a quick acting commercial fertilizer as soon as the growth is resumed in the spring.

Insects

Cane Borer

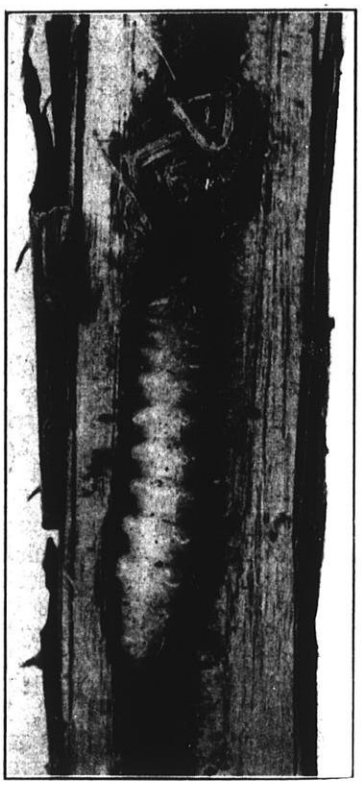
The most destructive insect of raspberries in the state is the cane borer. The adult beetles appear in June and early July at which time the females girdle the canes in two places about an inch apart and deposit an egg usually near the lower one. During July and August the larvae hatching from these eggs bore down the center of the canes spending the winter near the base. Affected canes are dead or very weak the following spring. Practical control of this injury is possible by cutting out and burning the girdled tips of the canes below the lower girdle when they first show signs of wilting during the summer.

Red-Necked Cane Borer

Another very troublesome borer is the red-necked one. The work of the larvae of this species in the cane can be readily recognized in late fall or during the winter and spring by the swellings or galls found at intervals upon the cane, and usually two in number. This insect can be held in check by cutting out these galls during the late fall or early spring and destroying the overwintering larvae by burning.

Tree Cricket

The habit that the female tree cricket has of laying her eggs in the raspberry canes whenever she can conveniently locate them has frequently wrought havoc to raspberry plantations when these insects occur in large numbers. As a result of their injuries the canes fail to put out leaves in the spring and upon examining them they are found to have been killed back. By going over the canes as soon as the growth starts in the spring, those injured may be readily detected and should be cut out and burned. The injury appears as



Larva of the raspberry cane borer

long perforated slits on the sides of the cane and are found to contain a long chain of eggs. The nymphs hatching from these eggs feed mostly upon plant lice and other insects as do the adults and though they may occasionally nibble foliage, they are never injurious and must be regarded as beneficial as far as their feeding habits are concerned. Frequently their injuries are less than their good deeds.

Diseases

Crown Gall

This is probably the most widely distributed disease and likewise the most injurious one to the cane fruit industry. It manifests itself as a warty growth on the roots and due to its development the food supply of the plant is greatly impaired which grows more severe each year until the planting becomes worthless. Only clean healthy stock should be planted such as is furnished by a good reliable nursery. The new patch should be set out in new soil that has never grown berries before, if possible since the bacteria that cause this disease lives in the soil for a long period of time once it becomes introduced.

Anthracnose

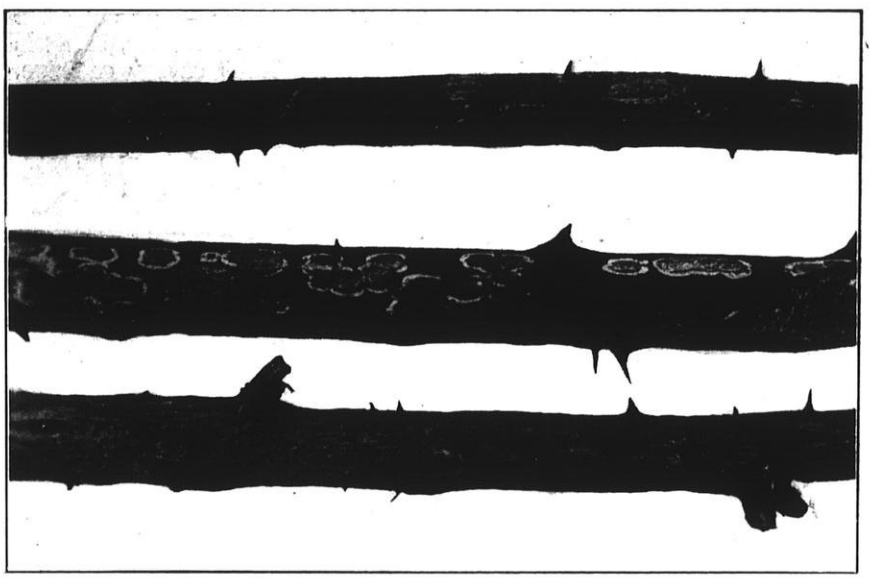
This disease is found wherever raspberries are grown being most serious to the black ones. It attacks the canes, leaves and the fruit. It produces scars or spots on the cane which are pale in the center with irregular brown or purple margins. The individual spots are about the size of a match head but are usually run together, more or less, forming long irregular patches of diseased tissue. Only clean stock should be selected for planting and once established, the disease can be controlled by spraying with a lime-sulphur spray. The first spray should be applied immediately after a few of the leaves begin to appear, using it at dormant strength (1-10). The second spray at summer strength (1-40) should be applied about a week prior to blossoming.

Raspberry Mosaic

This disease derives its name "Mosaic" from the peculiar little checks that you find in the mottled leaves something similar to the effects of a stained glass church window. The causative agent although as yet never found is thought to be an organism which is so small that we can not even see it with a microscope. It acts just like any other infectious organism and is carried from plant to plant by plant lice. The symptoms vary with the variety but in general it has a stunting effect on the infested plant and a mottling of the leaves. If the infected leaves are held up to the light there will be observed small places where the smooth dark green is breaking up and light green portions will be seen scattered thru them. It usually manifests itself as a general running out of the plantation affecting both black and reds but the Cuthbert and Marboro seem to go down the quickest under it. This form of the disease and the leaf curl disease are controlled only by rogueing out the infected plants when they appear and if the entire plantation is becoming generally affected the best policy is to plow it up and set out a new plantation from "mosaic free" stock in a location isolated from an old patch.

Spur Blight.

This disease has been showing up more during the past two seasons and although not usually very serious, it has been causing considerable concern. The disease appears in July and August on the young canes. The lesions are brown to reddish colored, sharply defined, one or two inches long and may half way girdle the canes. Frequently they run together so that the whole lower portion of the canes become dark colored. The lesions are usually very prevalent on old canes causing the loss of the fruit spurs and leaves for a distance of two or three feet above the ground. The canes also split heavily near the base, often exposing the pith for six or eight inches. The control consists in cutting out all of the diseased old canes in the fall and burning and spraying the new canes with the lime-sulphur spray at summer strength (1-40). For best results three applications at two week intervals should be made prior to setting of fruit and one after harvest.



Anthracnose lesions as they appear on fruiting canes of black raspberry.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

EUROPEAN BOTANICAL GARDENS

Huron H. Smith

(Continued from January, p. 66)

As is natural, the flora of Bavaria in all of its varied situations, is collected together so that one may see the native flora by itself.

There are two large groups in the gardens devoted to economic or useful plants, and to medicinal and poisonous plants. Naturally not all plants can be assembled together that are referable to these groups. The useful and medicinal trees are scattered through the aboretum. Many old people believe that every plant has more or less medicinal value, and to feature the electic medicines would be a task no botanical garden could compass. However, the Munich Botanical Garden has assembled most of the official medicines.

The useful plants are subdivided into like products, the grains of the Grass family include wheat, spelt, emmer (wheat in a restricted sense), einkorn, rye, barley, rice, millet, corn and durra, and examples are grown of all of them. The dicotyledonous grains shown are: buckwheat in various varieties, quinoa from Peru, and foxtail *(Amaranthus paniculatus)* used in the tropics for meal. Various kinds of pulse shown are: beans, peas, soy beans and lentils. Various kinds of onions, shallots and garlic are also shown.

Tuberous and rooted vegetables are grown for exhibit. Sprouting tubers such as potato, Jerusalem artichoke, Oxalis crenata from Peru, one of the mint tubers (stachys affinis) cultivated in France, and edible sedge are shown. One kind of vegetable shown is betwixt and between tubers and roots, that is the yam (Dioscorea batatas). The true roots shown are the radish, horseradish, beet, scorzonera and the so-called sweet potato (Impomea batatas). Tobacco is classed with the plant relishes, and there is no doubt that many find a particular relish in the use of it. It may be seen grown along with the black and white mustard chicory (coffee adulterant) and hops which are especially esteemed in Germany. In a section of the useful plants devoted to vegetables and savory herbs, are to be seen the cabbage and its relatives, brussels sprouts, kohlrabi, savory cabbage, rape and cauliflower. In the same sections are water cresses, lettuce, endive, the artichoke and the composite family, cardoon, spinach, orache, docks, and rhubarb. Among the monocots shown are asparagus, shallots, and chives.

One section is devoted to fodder plants, such as those which furnish hay, the grasses and clover and ensilage plants. Another section is devoted to oil plants, like the castor bean, peanuts, hemp, flax, coffee, rape, sunflower and damask rose.

Useful trees and shrubs are mostly planted with their closely related genera in the garden, but are marked by labels and explained in some detail as to their economic importance in their guide books. Fruit trees of the Rose family such as the pear, apple, quince, crab-apple, cherries, plums, prunes, apricots and almonds are shown in close proximity. The brambles and berries of the Rose family are also close at hand. Grapes are shown in variety. Of the nut trees, walnut, hazelnut and chestnut are seen. In the textile plant section, cotton, flax, hemp, ramie and New Zealand flax are shown. Sisal hemp plants are grown in their greenhouses. In the dye plant section indigo, crocus, Carthamnus tinctorius, pole weed berries (Phytollacca decandra), mallow flowers (Althaea rosea), dyer's weed (Reseda luteola) and alizarin (Rubia tinctoria) are shown. Two plants that contain sugar are shown, sugar-cane and the sugar-beet.

Aromatic or spice herbs are given a section. Here are grown peppermints, Summer savory, sweet basil, mayorana, sage terragon for vinegar, dill, fennel, anise, coriander, cumin, celery and parsley. They have even a section in the garden devoted to noxious weeds, as if they were inviting trouble.

Many examples of all the foregoing sections are confined to the greenhouses because they will not stand the winter in Bavaria. This winter must be somewhat more severe than generally supposed in the United States, because chestnuts will not ripen in that locality, while they do around New York State.

In their medicinal and poisonous plant section, it would require too much space to mention what they exhibit. Suffice it to say that most of the official drug plants will be found in this section and several poisonous plants are seen, including our own poison ivy.

The arboretum, which after all furnishes the main background for the whole botanical garden, is planted according to family relationships, and where possible, related shrubs are planted near them. When the shade is too dense to permit the thriving of the shrub, then groups of the gardens. The coniferous trees are planted the farthest away from the city on the eastern end of the garden, in order to be as far away from the acid-bearing smoke of the city as possible. We would say that considerably more foreign forms of trees are planted in the garden than of native species. The evergreens are the best that we saw on the entire trip. There are evidences of careful and intelligent selection. Horticultural evergreen varieties that are no longer to be found in the United States because of the cessation of the nurseries that used to propagate and sell them are to be seen flourishing in this botanical garden. Especially fine are the Japanese arbor-vitae, their Japan-

ese dwarf hybrids and Japanese juvenile forms of juniper.

The writer spent more time in the greenhouses at the Munich Botanical Garden, than at any other greenhouses upon the trip. Although the greenhouses were not so extensive as those in Berlin or in Kew, still they were very well chosen and the stock was in very good shape. Their Victoria regia water-lily house was very well planted and it just chanced that as I visited the garden they were in bloom. This is something that the casual visitor may not always find, as the water-lily is treated as an annual and blooms but once in a year. It seems hard to believe that these tremendous leaves of Victoria regia are the product of annual growth. They had in their greenhouses, three very good succulent houses, which were very well represented in many kinds of cacti and euphorbias. There were two or three orchid houses where the intention evidently was not so much toward a beautiful show, as toward a representation of the many different genera of the orchid. There was one section of the greenhouses devoted to the ordinary house plant, and no doubt it furnished suggestions to the visitors among the fair sex on other varieties of house plants. The center section of the greenhouses was devoted to palms, and while the collection was not large, it was very well tended and kept. In these same houses were also to be found certain economic plants that would not grow out of doors.

Although, as we have said before there were other botanical gardens in Germany run in connection with certain universities, our time was limited, as we had engaged passage on a certain boat for the United States and had to hurry back to catch that boat, so we left Munich bound for Paris. The chief botanical garden at Paris, was the Jardin des Plantes. The Jardin des Plantes was quite good and artistic, though not so large as the Kew or Berlin Botanical Garden. Their sample plots of ecological and systematic groups were rather tiny. The garden tended more toward the conventional system of planting than toward the systematic or botanical method of planting. Many of the designs of cenventional beds were quite pleasing to the eye.

There was a large series of museums in connection with the garden, but which seemed to us impossible from the standpoint of pleasing exhibits. For instance, they had more geological exhibits than our Museum will possibly ever have if we run for a hundred years, but our geological section is a thousand times more interesting than theirs.

The German museums are not much of a visual improvement over the French, but at least in the German museums, the natural objects have been chosen with a view toward their importance and interest from a scientific standpoint, and seemingly from a popular viewpoint. The German mind is different from that of the American, and the public there has a deeper interest in scientific things than we do. We realize it because we watched visitors and listened to their comments. They got the meaning all right, and also seemed familiar with the subject matter more than the American visitor. While we couldn't understand the French comment, the little that we heard or observed was made at the Arts de Mediers Museum. The visitors would try every distorting mirror on exhibit and enjoy it, but had no time for a wonderful model of a machine that took raw cotton, traced it through string to warp and weft, and left it partly woven into a beautiful brocaded piece.

At the Jardin des Plantes the visitors admired the color effect and arrangement, but when a man with crutches and two peg legs appeared on the scene, the "ohs" and "ahs" showed that the French people had a heart, at least, if they were not of a scientific turn of mind. The botanical museum at the Jardin des Plantes was indescribably gloomy and soiled with dust, in cases not dust proof of the old type with many casements dividing the light into small sections. One could easily see the Jardin des Plantes in an hour and observe everything of botanical interest.

The final visit to a European botanical garden was made in Amsterdam. There we were directed by Dr. DeBussy to the Hortus Botanicus. This was quite an old established botanical garden and a part of Amsterdam University. While it is run chiefly for the students, the public is admitted upon payment of twenty-five cents in Holland currency, from the hours of ten in the morning until four in the afternoon. We came to the garden a few minutes after four, but our business card brought us a great welcome from their director.

Although the Hortus Botanicus is located in a very limited space, every inch of the garden is doing its duty. It is even so far ahead of the Jardin des Plantes that there is no comparison. Everything in the garden is well cared for and everything justifies its presence. They had several rather rare things there, which were evidently the pride of the director. The ever-present canal formed one boundary of the garden along side of the greenhouses, and the greenhouses, though small, were the receptacles of quite as good collections as the rest of the garden. The best Chinese maiden-hair trees (Ginkgo biloba) that we have ever seen were flourishing in this garden, also the finest cultivated specimens of the American century plant that we have ever seen. The director of the garden understood German and Dutch, though we got along together very nicely in the German language. He brought in his wife and introduced her to us, and also in honor of the occasion, brought out some cobwebby thirty year-old sweet wine. Together they enjoyed our book of Indian photographs very much, and had many questions to ask about the native American.

We realize that this is a rather lengthy article, and yet we feel that it is necessary because of the few chances of finding any description in English of these gardens in our literature.

So very little has been written

(Continued on page 87)

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ON GENERAL PRINCIPLES

If you don't mind wasting a few minutes, dear reader, I would like to have you read all of this little speech of mine.

There seems to be an impression, gaining ground since the Eau Claire convention, that the State Horticultural Society is now controlled, dominated some put it, by commercial fruit growers.

Strange how ideas change and rumors start! Only a few years ago lots of people were complaining that this was wholly an amateur's society. Neither idea was based on facts. The Society is for all the people of Wisconsin who are interested in growing fruits, flowers or vegetables either for the home or market. When the Society was founded in 1865 and for many years after it was purely an organization of amateurs, largely because there were only amateurs. Commercial interests did not exist. Now the commercial interests have grown, have become conscious of their importance and demand a larger interest in the affairs of the Society, without detracting from the interests of amateurs. This is as it should be. The fair minded fruit growers do not want to "dominate" the Society, they want only a fair deal for all. If, perchance there are a few fruit growers who think otherwise, that the Society is to be run wholly for their benefit, I advise them to provide themselves, at the earliest possible date, with shock absorbers for the lower portion of their spinal columns and territory adjacent thereto. They will need them. The fair minded commercial fruit growers, florists and vegetable growers will furnish the shock.

The development of the commercial fruit growing business in Wisconsin is due very largely to the work of this Society and it is only reasonable that the foster parent should care for its offspring and such care is being given; in fact has been given all these years but most of the growers have been so busy planting orchards that they lacked time to read the publications of the Society. Then there are those who don't read at all; others who only glance and if the article they see first isn't to their taste conclude the balance of the magazine or report is like it. In order to help everyone the different subjects are now labeled, two column heads wide.

Now to resume the thread of my discourse and to quickly end it. The following statement needs no argument: No one will pay one dollar for membership in this Society unless he expects to get the worth of his dollar. The amateurs, comprising ninety-five percent of the membership, get their full share; the florists numbering two hundred and fifty are satisfied with their portion; the state vegetable growers who are soon coming in express their satisfaction with the offer made them. The fruit growers we are certain will also be satisfied so this talk about "control" and "domination" might as well be laid on the shelf. There will be no domination by any interest, none is desired by any interest as a whole. So we are all going to pull together for a bigger and better Society that will serve the interests of all. F. C.

AT LAST!

This is from the Sturgeon Bay News of December 21st: the italics are ours.

"A special effort is being made by the Door County Fruit Growers this winter to clean up the fire blight which has been increasing in importance for the past several years. The Fruit Growers Union and County Agent Bailey are closely cooperating with the plant disease department of the college in staging an organized campaign with the aim of securing the cooperation of every apple grower in the county.

The best methods thus far found for controlling the disease include avoiding the worst blighting varieties, particularly Yellow Transparents and the Transcendent; avoiding forcing the trees into excessively vigorous growth, and cutting out the blighted parts, particularly during the dormant season of fall and early winter. *Cutting during the summer is of doubtful value as the disease may be spread rather than checked by this method.*"

We are patiently waiting for someone who is engaged in horticultural research or teaching to write a book or at least a bulletin on "Rational, Common Sense Methods of Controlling Fire Blight" wherein that ancient and bewhiskered fetish, "cut out the blighted twigs as they appear, cutting well below the point of infection", or words to that effect will be omitted. It will not be an arduous task for substantially the whole text may be found, if needed, in back numbers of WISCONSIN HORTICULTURE, except that the language may require the attention of a censor.

THE AMERICAN POMOLOGICAL SOCIETY.

Should Wisconsin fruit growers give any attention to the "A. P. S."? Read and decide.

It might as well have been named the American Horticultural Society. It was organized in 1848 in Boston or thereabouts by a group of amateur fruit growers. In naming the society these New Englanders presumably adopted European terminology in the selection of a name as well as in other procedure. Anyway it's "Pomological" derived from Pomology which means the science and art of fruit growing.

Very few people know what the word Pomological means and a still smaller number know anything about the Society. Several years ago the Society held its (then) biennial meeting in San Francisco. The badges worn by the eastern delegates, lettered "A. P. S." excited the curiosity of other passengers on the trans-continental train to such an extent that one appealed to the porter for information. It's pretty near impossible to stump a seasoned Pullman porter and this one was no exception. He answered,—"ah'm not quite suah captain but ah believe its the American Pomeranium Society." Such is fame.

We are moving so fast these days that we give but little attention to ancient history so we will, for the present, pass over 66 years of the history of the Society down to 1916 when a handful of men met in Boston, the writer among the number, in attendance at the A. P. S. Convention. There was none. Just a few of the old guard there. Membership, aside from life members only a scattering few, no funds to publish the Report, nobody seemed to care whether the Society lived or died. None except C. P. Close of the Division of Pomology at Washington, D. C., who declared, "you can't kill the American Pomological Society for so long as three of us meet we will carry on the spirit of the past."

Skip eight more years, years of groping for a way out. At last, Prof. Bailey, reluctantly accepted the presidency and from that time to now there has been progress. Realizing that fruit growing in this country had long since passed from the amateur to the commercial stage, he set about reorganizing the Society along commercial lines or rather the encouragement of commercialism without abandoning the amateur spirit. In this reorganization the Wisconsin State Horticultural Society played no small part.

In 1924 at the Atlantic City convention the policy outlined by Bailey seemed likely to be accomplished except there was no funds in the treasury. Not only that, there was a debt of several hundred dollars incurred for printing the reports. In less than two years, due to the ability of President Paul Stark, Secretary Miles and Prof. R. A. Van Meter, Prof. H. B. Tuhey and Prof. A. J. Farley Board of Managers, the entire indebtedness has been wiped out and the membership increased from less than 500 to over 3,000.

How was it done? That's too long a story to tell here. It's sufficient to say that it was done. Some things have been done which may have to be undone, but all were done in good faith. The only thing that need now be considered is that the Society has adopted definite policies which will be of untold benefit to every fruit grower in the United States and Canada, for the Society is international. These policies will be given in detail in this and later issues. It is well to say that the policies have not only been adopted but are being executed. Marketing, storage, better methods of pruning and cultivation, "Eat More Fruit" and other no less important problems are part of the program, but most important of all is the creation of a national spirit of horticulture. The American Pomological Society thru its convention programs and newspaper publicity is succeeding in bringing the fruit growers of the country to think in national terms rather than in state, regional and local terms. Although on the surface the good that could come from a conference of Yakima, Missouri, Virginia and Wisconsin apple growers might seem remote and of doubtful value such conferences have proved to be of great value. The A. P. S. is the organization that has brought this about and it is the only organization in which not only fruit *growers* from every section of the country meet but where these growers meet on terms of equality and friendly feeling the men who handle their fruit.

It has come to the point where no fruit grower whether he has ten bushels of fruit to sell or ten times ten thousand bushels can afford to ignore the American Pomological Society. Nor can he afford to be an outsider. It means as much to Wisconsin growers as to Michigan or Missouri growers, even more. The big men in the big producing sections are better able to take care of themselves than we are.

We will benefit immensely by the

vigorous campaign for increased consumption of fruit now being carried on by the A. P. S.

Wisconsin fruit growers must get in touch and keep in touch with fruit growers throughout the country if they are to succeed. Local and roadside marketing are both satisfactory methods for the disposal of the output of small orchards but are not sound marketing methods. Wisconsin Wealthy must now compete with Illinois Jonathans. Inferior Idaho apples are now offered in bushel baskets on Wisconsin markets. Illinois and Idaho growers and dealers are thinking in national terms. Let's get together with these men thru "Fruits and Gardens", thru A. P. S. conventions; let's think in National terms. The fee for membership is One Dollar a year or Two Dollars for three years which includes subscription price to Fruits and Gardens. Memberships will be received at this office and receipt forwarded direct, but only from members of The Wisconsin State Horticultural Society whose dues are paid in the state society.

Send money order or personal check to Frederic Cranefield, 233 Washington Bldg., Madison, Wis.

LILIUM AURATUM IN A MADISON GARDEN

Mr. Frank Bryant of Madison, an amateur, who had been told that the beautiful Lilium Auratum, or Gold Banded Lily of Japan, could not be grown outdoors in Wisconsin proceeded to prove that Ben Told (apologies to Dr. Brady) was wrong. He ordered two bulbs in the fall of 1921 but as shipment was delayed until after the ground was frozen the bulbs were carried over winter in cold storage and planted outdoors the following spring. Abundant bloom for two seasons has satisfied Mr. Bryant and his neighbors that Ben is not always right. The bulbs were planted nine inches deep imbedded in clean sand after first being dusted with sulphur.

A fence covered with a flowering vine becomes a thing of beauty.

THE GARDEN THE THING

Happiness is an elusive emotion. It can't be corraled by sheer force, and it can't be made to sit upon the right hand of any man who is idle and introspective unless he is unusual and egotistical. Most of us have our most unhappy moments when we are engaged in the art of doing nothing. In order to be happy we must be engaged in doing something which is satisfying to that part of us which is, for better knowledge of ourselves than none, called the soul.

Gardens have been associated with the utmost in happiness since the days when Adam and Eve knew happiness in Eden. Some of our greatest artists make the garden their laboratory. Lovers go to gardens for their trysting. Old age goes to the garden with the memories of a lifetime. The soothing touch of the beauty of flowers is a greater balm to our unconscious self than any other influence. Think! The garden you have or the one you should have—the perfume of the blossoms and the blending of the colors. Isn't it restful; doesn't it make for happiness?

Now in the winter months when everything including ourselves is hidden from the cold, is the time to start planning that garden. Some friends of ours take trips to far countries each year by sending for the travel pamphlets sent out by the large transportation companies and, using them in conjunction with an atlas, imagine themselves travellers. But it's so much easier to take the seed catalogue and nursery pamphlets, use a plat of your own yard for a map, and plan a trip to happiness that can actually be accomplished.

It doesn't make much difference about the size of your garden. If it's small you'll derive just about as much pleasure in taking care of the plants and watching them grow as you would from a whole acre.

The garden's the thing. A place to take your thoughts; a source of pleasure, not only from blooms that come, but also from the joy you'll get because of creating something.

Make the most of the space that is yours for use, and, if you don't know just how to plant the things you want most, some of your neighbors, you will find, are garden enthusiasts. If you know of no one, why not ask us about it?

Plan your trip to happiness via the garden route this winter, and then take it next Spring. We venture to say that you will find that expectation does not exceed realization in this case.

JETSAM

—on the Sands of Time—

The Joy of the Game

There's not a pair of legs so thin,
there's not a head so thick
There's not a hand so weak and white,
nor yet a heart so thick
But it can find some needful job that's
crying to be done,
For the Glory of the Garden glorifieth
everyone.

Kipling, The Glory of The Garden.

Well Spoken

The moral code of decent people is practically the same all over the terrestrial ball and fundamentally it has not changed since the days of Hammurabi. The ideas of gentlemen and sportsmen as to what "is done" and "isn't done" haven't changed since Fabius Tullius caught snipe in the Pontine marshes.

Arthur Train.

Now We Know Why People Are Lucky

—but it is observable that God in His compassion sends the good luck to such as are ill equipped with gifts as compensation for their defects but requires such as are more fortunately endowed to get by labor and talent what others get by chance.

Mark Twain.

A Member, a Woman, Sends This One

As a rule, man's a fool,
When it's hot he wants it cool;
When it's cool he wants it hot—
Always wanting what is not,—
Never wanting what he's got.
As a rule, man's a fool.

(Editor's note:—"Man" is to be considered in the generic sense)

A Dirty Dig by Shakespeare

"A strutting little cock on his own dunghill.

EUROPEAN BOTANICAL GARDENS

(Continued from page 83)

about these botanical gardens and the botanical personnel of the United States has enlarged so greatly that no doubt many of our people would like to know just what they might expect if they make a visit to Europe with a view to studying botanical gardens. Since we had the privilege of going to see them, we decided that it was our province to furnish this description to the botanists of the United States, since no other one has taken it upon themselves to furnish such a description. With the growing interest in home gardens in Milwaukee, we think that Milwaukee County could well establish a botanical garden. This need not be so extensive as the Shaw Botanical Gardens in St. Louis, and we need not make the mistake that Shaw did in locating his garden too close to the city. When he first set it aside, it seemed that it was quite a distance away from the city, but now the garden is in the midst of the city and many of their trees are dying out from the acid qualities of the coal smoke that is given out in that neighborhood. In Milwaukee we could establish a garden so far away from the city that the city would never within a hundred years grow up to the botanical garden. Such a garden could be started in a small way with annuals, perennials and shrubs, while the trees were coming along and getting their growth. It could be located where some natural hill and water were available, say at the foot of the hill, and it would come to be one of the most attractive inducements that we could hold out to tourists to visit Milwaukee.

The seed of Sweet Alyssum is so cheap and it grows so easily that it deserves to be more freely used as an edging plant for perennial and shrubbery borders. The seed may be scattered right where it is to grow and tramped in or lightly covered with soil.

WOMEN'S PAGE

EDITED BY MRS. C. E. STRONG

DO YOU KEEP A GARDEN RECORD?

If you have never kept a record of the seeds and plants you have bought, along with the names of the seedsmen, and during the summer jotted down whether the varieties were satisfactory, true to type and color, you are neglecting one of the greatest helps in satisfactory gardening.

A number of years ago, when I was an enthusiastic exhibitor of plants and cut flowers at the State Fair, I started writing down in an ordinary blank book a list of the seeds and plants and the name of the firm from whose catalogue they had been selected. When I planted the seeds in the cold frame I numbered the rows, and wrote the names in the Garden Book—along with the date of sowing. I found this book very convenient in many ways. If a variety did not germinate well, I made a note of it. If the color was or was not what I expected — that also was added; when the plants bloomed, when they were at their best. Soon, by referring to this book, I found that when I sowed snapdragon, larkspur, salpiglossis, marigolds, etc., etc., on the 15th of April, they were in bloom and just right for exhibition at the State Fair. So also were asters sown on the 5th of May. In my search for the finest varieties of annuals and perennials for exhibition, I sent orders to dozens of firms, keeping a careful record. Soon the record began to be filled with such notes as this: "Snapdragon bought from So-and-So, is the exact shade of exquisite pink have been searching for. Can be depended upon to come true; asters bought from 'Such and Such' are very disappointing, not true to color or type, don't buy seeds from that firm. 10 Roses bought from 'Such and Such' were fine strong plants. All are growing nicely; all are true to name; five were not hardy, tho well protected; Killarney, Gruss or Teplitz, Hermosa, Mrs. Weber, Maman Cochet, lived five years, bloomed profusely with ordinary care. A good buy; believe small rose plants are better in the Hybrid Teas than the large ones; try that firm again—."

"The Liniaria and Nemesia seed came up well; sowed too thick; plants aren't strong; good idea to transplant when qquite small; add them to the permanent list; people asked about them at the Fair; they are very attractive both in garden and as a cut-flower; planted the wonderful imported aster seed today; if they are true to description the blue ribbon will surely be mine; seeds germminated well; plants look sickly; not nearly as strong as the others; glad I planted the standbys; here's where I swear off buying imported novelties; four dollars worth of aster seed, and they are all either single or semi-double, and a dirty lavender or muddy purple." When I remembered the wonderful color combinations set forth so alluringly in the advertisement, I vowed never to buy novelties again, but this was forgotten. They are too alluring and one of the greatest pleasures in gardening as anticipation, so if I bought only the standbys just think of the pleasure I would miss.

During January and February my favorite literature is still the numerous catalogues that come through the mail every few days. Every one is interesting and helpful, and my Garden Books have taught me which are the most dependable. I do not wish to give the impression that I stick to one or two seedsmen. Indeed I do not. And when a "new" catalogue comes with varieties listed that are not well known I like to try them out, and sometimes find an old friend with a new name. However it is satisfactory to deal year after year with a dependable firm, and do you know I believe there are some who are really interested in the orders you send. Why else should the free trial packages of seed not listed in the catalogues that have been sent to me be either blue or pink flowers, while those of another flower lover are red or yellow. Going back to the Garden Record again, I want to add this: That slowly but surely to one who keeps such a record there will grow up a store of knowledge that is invaluable and can only come from personal observation. And you will find it a very satisfactory feeling to be able to sit down on a cold stormy January day and plan your garden with a calm certainty that unless something very unusual happens, the exact shade of pink snapdragon you especially admire will be growing in every available spot, between the Narcissus and Regal Lilies, double blue Centaureas and Rudbekias along the back fence, where I made a new Peony bed. Salpiglossis and Exquisite larkspur among the Iris, annual Gypsophila and Calliopsis between the early Shasta Daisy plants, where the giant Dahlia flowered. Zinnias in the clear soft shades, beautiful as Dahlias and lasting a week when cut, will be tucked close up to the Rambler Roses, in between the Peonies, where they will bloom so freely and lend color to that part of the garden. The garden book has a reminder to sow the seeds of annual larkspur among the perennial poppies, where they will grow bravely and cover up later on with feathery bloom a spot that would otherwise be an unsightly vacant one. And when the garden is all planned to your satisfaction, and the color scheme can be changed easily with a stroke of your pencil) then your garden book once more reminds you to order early—both seeds and pants—so you will not be disappointed. For several times

in my garden book is a regretful note: "Sent in my order too late; do not wait so long next year."

WILD PLANTS FOR THE GARDEN

There is a great deal of interest now in the preservation of our native trees and shrubs and plants in a natural state so that everybody may enjoy them and I am glad there is so much evidence of interest in our beautiful American landscape. Much that has been written and said about despoiling our landscape applies more largely to the regions about the more densely populated areas.

There are still thousands of acres of wild land where different kinds of our native plants grow in quantity. Because of the natural advance of civilization most of this land will be cleared or pastured or drained and the wild plants will be killed. It is from these places "far from the haunts of men", that professional wild plant collectors secure their stock. Many kinds are also being grown in quantities in nurseries. So, if you are situated so that you cannot secure these plants yourself without depriving some one else of the pleasure of seeing them grow wild, you can safely buy them from some of the wild plant nurseries.

The rose, without a doubt, is the favorite flower of the majority of people. Also most people have an idea that it takes supernatural powers to grow roses, but this is not true. Any one with the willingness can grow roses well. In a very short time you will be able to get a "rose bulletin" from this office which will make clear several points on rose culture. We shall be glad to supply information concerning varieties at any time.

"A Rose In Every Yard", and if you have the room have lots of them.

HOME ACRE

SNUG sits my little house among the trees,—
Dear trees, that I have watched since infancy:
And many a night, against the starlit sky,
The graceful groupings of their leaves have seemed
Like boon companions to me, and have soothed
My childish griefs, and lulled me unto rest.

For years, each summer night I looked to see
One leaf-group silhouetted 'gainst the heavens,
That plainly formed two cooing turtle-doves,
Who each to other told of love renewed
As oft as night descended o'er the world.

Another group, Diana and her hounds,
Alert, and waiting for the moon to rise,
Stayed with me but two summers, and I grieved
To part with her companionship. Then came
A ballet dancer, and an eagle spread,
And others, changing with the light and wind.

And when I turned mine eyes, and looked within,
The shadows flickered on my chamber wall
In swaying motion, and I used to think
The kind old tree had clasped me to her heart,
And rocked and rocked me, till I fell asleep.

EUGENIA C. GILLETTE, Mukwonago, Wis.
In The Craftsmaan.

GROW MORE GLADS

The gladiolus is being grown more plentifully each year by amateur gardeners, for it is very easy to grow in almost any garden where there is sunshine, and makes a splendid show in the middle of the summer when flowers are often none too plentiful.

You can make your money stretch further in buying gladioli bulbs with just as good results if you get what are known as third size bulbs, 1 inch or over in diameter. If you are a new hand at gardening, do not feel that you must buy only the newer high priced kinds. There are lots of the older kinds that are as fine or finer than most of the new ones.

By planting some of the Primulinus type as well as a variety of the latter kinds, flowers may be had over several weeks' time. The flowering season can be still farther prolonged planting a succession one or two weeks apart. This planting may be done from April to July 1.

The annual Scabiosa is a free flowering plant, well suited for cutting and comes in a variety of beautiful colors. The seeds need to be started very early, in the house or hot-bed, in March if possible, to get best results.

Did you ever have a rock garden? They are quite the thing now and very fascinating. Rock gardens may be tiny affairs and still accommodate many plants or they may be expanded to large size.

Geometrically perfect flower beds are all right in their place, but don't spoil an expanse of lawn or the garden either, by placing the garden in the middle of the lawn.

Tulips, when planted as a base for shrubbery groups, give a touch of color and "finish" to the landscape.

GREENHOUSE LETTUCE

Success in the growing of greenhouse lettuce, says the bulletin, depends on the use of a soil well supplied with organic matter and available plant food, the control of disease and insect enemies of the crop, the use of varieties and strains adapted to the needs of the grower and the market to be supplied, and the closest attention to every detail of the management of the crop.

Satisfactory financial returns can be secured only when a well-grown, high-quality crop is packed in an suitable size and placed in the hands of consumers in the shortest attractive manner in containers of practicable time.

Lettuce is not particular as to the type of forcing structure in which it is grown, and it is produced in many kinds of greenhouses, but cucumbers and tomatoes, being very particular as to their growing conditions, require greenhouses of a special type. Owing to the fact that the vegetable-forcing industry usually includes the production of several crops, it is necessary to use structures suited to the requirements of all crops grown. Lettuce, cucumbers, and tomatoes are the crops to which the most attention is devoted, and they comprise a large proportion of the annual value of the vegetable forcing crops grown in the United States. Naturally, the houses must be made to suit these difficult crops, which must have a rather high and very uniform temperature and freedom from drafts, thus necessitating excellent heating equipment. While such houses are not absolutely essential to the successful production of the more hardy types of lettuce, it is unquestionably true that the crop thrives better in good greenhouses than in very simple structures. Those proposing to grow lettuce as their main crop, will find it advantageous to build a good type of greenhouse.

Have the flower garden so that it may be seen from the windows of the house.

DELPHINIUM USURY AND DOVE IN THE CHARIOT

To the Editor:

I have been wanting to say "thank you", this long time, for the article in Wisconsin Horticulture, several months back, on "A Delphinium Fallacy".

I had read at every turn about cutting back your delphiniums after blooming to get a second crop of blossoms, and without stopping to think it out, had instinctively resisted it, but finally I got so much of that, that I succumbed, and did it last year, and got my second crop of blossoms, but felt as if I had been unethical and felt no satisfaction in it.

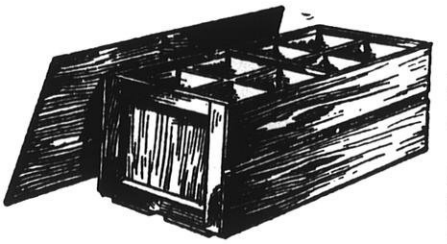
That article showed me how I hadn't given the Delphiniums a square deal, and no more usury for me.

In regard to a question and answer, about Dove in Chariot, in Wisconsin Horticulture, still farther back, I was interested to come across this, in a poem called "Garden Games", from Amy Lowell's Men, Women and Ghosts:

"Let's catch a bee
A gold-black bee darts away in the sunshine.
If we could fly, we could catch him.
We'll follow him in a dove-chariot.
Tall, still and cowled,
Stand the monk's-hoods.
Off comes the cowl,
And there is a purple-painted chariot;
Off comes the forward petal.
And there are two little green doves,
With green traces tying them to the chariot."

I was much obliged to Amy Lowell for telling us just how to make the dove chariot.

Eugenia Gillette.



THE BIG FIVE

Apple growers in Wisconsin are beginning to realize that it is impossible to grow and market profitably a large number of varieties. As a result they have been searching for proof that certain varieties when grown commercially would prove to be the best for Wisconsin conditions.

A summary of conditions this past season brings to light the fact that there are five outstanding varieties which produce well and market well under Wisconsin conditions. They are the McIntosh, Fameuse, Northwestern Greening, Wealthy, and Wolf River. These varieties may be produced to a point near perfection, and cover the eating and cooking demands of the market.

In the home orchard such varieties as Duchess, or Golden Russett may be added to please the owner, but such varieties have proved unprofitable commercially in Wisconsin. The Wisconsin State Horticultural Society has a convenient pamphlet in which is listed fruit varieties which do well in Wisconsin and which may be had upon application to the Secretary at Madison. Those lists have been prepared by experts who are familiar with Wisconsin conditions.—News Letter W. S. H. S.

DO IT NOW

"Plan the farm garden before planting," advises J. G. Moore, of the University of Wisconsin horticulture department.

"Just as a carpenter cannot build a satisfactory house without a plan prepared in advance, so should a gardener not attempt to plant the garden bed before planning for it," declares this authority. "That the garden is to be small is not a good excuse for neglecting to make a plan, it being all the more important to secure maximum returns in such cases. Therefore, the wise gardener will plan his garden on paper well in advance of planting time."

"The plan should show the location of each row, and the crop to be planted,—the distance of each row from one end of the garden,—and the sequence for the different plantings, when more than one planting is to be made.

"The soil is a prime factor in a successful garden," Prof. Moore says. "One of the first essentials is that the garden plot have good drainage, for vegetables cannot thrive in water logged soil." If the land is low and marshy, he advises gardening on raised beds.

Texture of the soil is also very important. The ideal garden soil texture is fine and loose, and to attain these qualities in soils of the lumpy, heavy type, Prof. Moore recommends adding organic material, or lime, and in some cases, applying sand or using coal ashes, where the soil is extremely heavy.—*Press Bulletin*

We welcome the Rock County Horticultural Society and The Brown County Small Fruit Growers to our Society as auxiliaries.

The Rock County organization has been in the process of forming for a few months, and the Brown County Growers have been organized for some time but have just entered this Society.

Make a border of flowers around your backyard vegetable garden. You'll find it quite pleasing.

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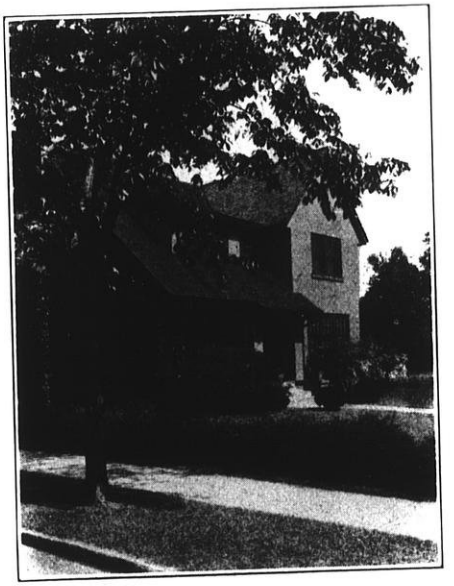


"A SUGGESTION"

PRUNING

Pruning is the act of removing wood from a growing plant in order that a better condition of growth or fruiting may be maintained.

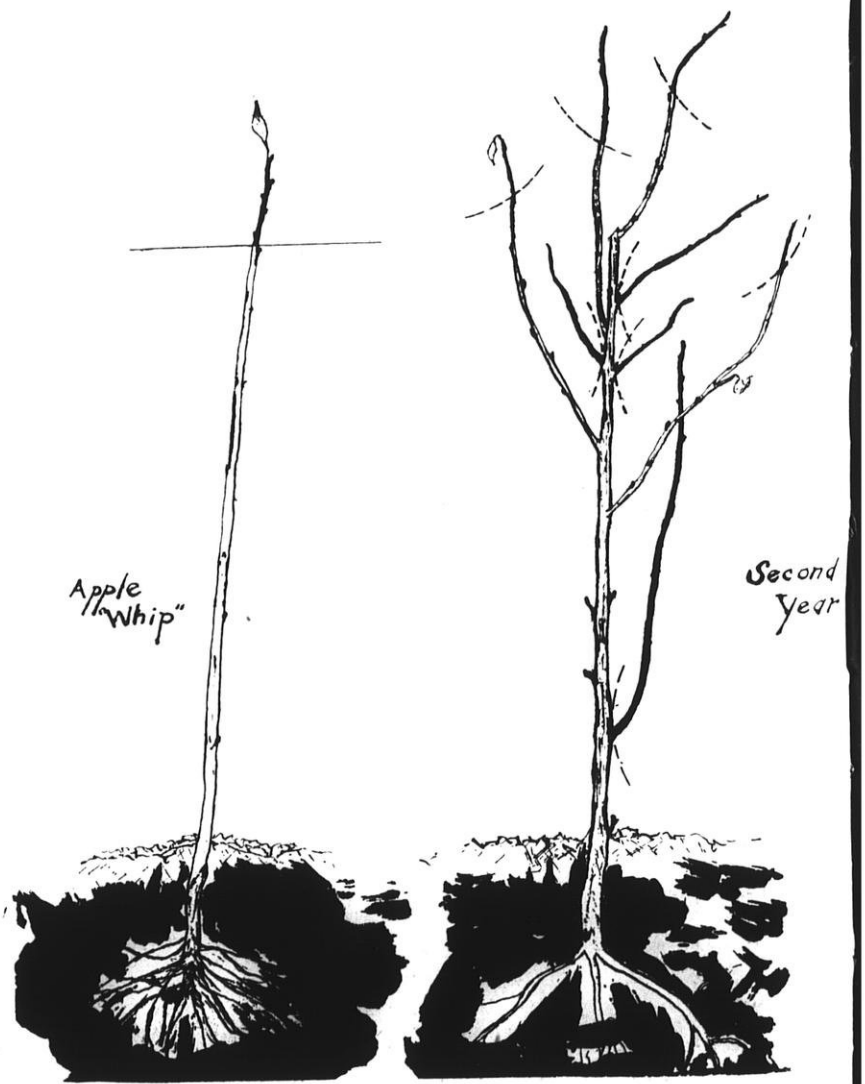
The first essential of pruning is the knowledge of how to cut out the growth desired. This is done by always making a smooth cut very close to the parent branch. If a stub is left the wound will neither heal rapidly nor well and leaves an opening for decay organisms to gain entrance. When the cut is made correctly the process of healing leaves a smooth scar.

Pruning fruit trees should start at once after the tree has been planted. The purpose at this time is to create a frame-work suitable for carrying the burden which will occur in the mature tree. The whip one year tree should be cut back about thirty inches from the ground the first year. From the first year's growth three to five branches should be selected as frame-work branches and the tree pruned to them. The third year further severe pruning to the frame-work branches should occur. Also the fourth season; but at this time it is possible to start allowing more growth to remain, which will eventually be the secondary supports. It is generally admitted that the leader, or central growth should be modified, thus keeping the head of the tree down and establishing a closer ratio between the supporting limbs.

From the time that the frame-work has taken more or less form the severity of pruning should be lessened. The cutting should be for thinning and the removal of crossed and interfering branches. On few varieties is it necessary to do "detailed" pruning.

When the tree arrives at the bearing stage the purpose of pruning is to keep the tree with as much bearing wood as possible, with a little thinning and the removal of interfering branches. Each tree is a separate problem, therefore it is impossible to tell exactly the method of pruning.

A successful orchardist is more or less acquainted with the different sections of his orchard, and can tell the condition of growth and fruitfulness of the various sections or trees. If the trees are not fruiting well the removal of the unprofitable wood and stimulus to a better growth of the tree is needed. A combination of pruning, fertilizing, and cultural practices is necessary at this point. Rarely, if ever, is pruning alone enough to keep a tree in best condition.



It is the opinion of a great many growers that by using a "whip" tree in planting better results will be obtained during the formative period. In the above sketches lines are drawn to show how framework branches may be started in the young trees. The shaded portions are entirely removed leaving the so called framework branches to develop. Orchards pruned from the start with a definite end in view will show results of the effort. A comprehensive discussion is given on the pruning of the bearing apple tree in the new bulletin put out by the University of Wisconsin, Department of Horticulture, entitled "Prune the Bearing Apple Tree".

WATER LOVING NATURE PLANTS

By William Toole, Sr., Baraboo

Thirty-eight years ago when I moved to the farm which I afterward called Pansy Heights, a mental survey of the place was made to estimate its adaptation to some special purposes. Level spaces and fields gently sloping to the north gave promise of sufficient acreage suitable for pansies. Elevation with a north eastern or eastern slope and a good clay soil indicated favorable orchard sites. Along the north edge of the forty was a steep bank well wooded and this seemed adapted to the growth of ferns and other shade loving plants. When the lawn was arranged for in front of the house a natural depression in the drift formation suggested the possibility of a lily pond with kindred water loving plants.

Pansies and other flowering plants have been grown there for many years. A successful orchard has been established from home propogated trees. The wooded northern slope has in later years given much pleasure as a repository for a great variety of native plants and shrubs, but the aquatic garden continues to be something unseen yet hoped for.

A clump of shrubs on the lawn shows what was intended to be a rocky border for a lily pond, but the uncertainty of a water supply from a deep well with a windmill was a discouraging factor in my plans. Later an electric motor has greatly increased the possibilities for success, but the growth of business embraces more plans than opportunities. As the years have gone by my desire for a lily pond has continued and been held in suspense. We read that water lilies can be grown in a wash tub and if one's desires are moderate, a considerable amount of success may be had with a cement basin, but my desires and plans looked for something more extensive.

Ours is a clay soil from medium stiff to very tenacious. If we have not the experience of others to guide us, we have the example of the wallowings of farm animals showing the water holding properties of puddled clay. To satisfy desires there must be a marshy border at one side to make a suitable place for bulrushes, cat-tail, wild rue and other moisture loving plants, which do not need deep water.

The pond part of our project would be given a reasonable depth but it appears that water lilies sometimes have to undergo a considerable amount of freezing. A partial cement border seems desirable and if one's place only included strictly aquatics, a complete cement border should be made, but even then there would be a saving by puddling the bottom.

My plans would not confine the plantings to natives of Wisconsin, but our natives would certainly be given first choice. First in the list would be the white and pink pond lilies which were special favorites of my boyhood days in Rhode Island. I first knew them as Nymphaea odorata, but that name has been transferred to the cow lily, formerly Nyphaea advena.

Our white water lily is now Castelia odorata but we hold water nymph for one of its common names. Next choice after the water nymph or pond lily would be the water chinquapin or Nelumbo lutea. Some people imagine that this is the sacred lotus of the east. There is some variation in color shades of the cow lily but none are especially attractive. Near the border of our pond I wish to have a collection of Saggitaria or Arrowhead; there are several species and a considerable variation within the species.

To me the white flowers are attractive and the odd arrow shaped leaves are interesting. To give more color we must have the blue pickerl weed from further north.

A slight movement of water is desirable and near the drainage outlet the wild calla might grow. At one side our pond is to taper off to a marsh that we may have Sweet Flag, Wild Rice, cat-tail, Bulrush and some of the reed like tall grasses, which grow in the borders of such places.

When a child I was interested in rushes because our folks told of the rush lights which were used for economy in England. These rush lights were tallow dip candles with the pith of rushes for wicks. I thought I knew rushes and in my mind they were bulrushes and common rushes, but looking up the genus Juncus in the botany I find there is a bewildering number of species. If our marsh can be extended to make room for some of the most attractive sedges which we commonly call marsh grass we can draw from an abundant variety of attractive material.

Some people have found the showy Lady Slipper in swamps. It would be interesting to compare the growth in such places with ones in Sauk County, which grow in open woodlands.

We have a wide range of plants in the herbaceous class, also shrubs with some trees which show a preference for wet soils in too great a variety for me to expect to make a special home for them, yet it is interesting to study them in their natural habitat. We would like to have a place in our home garden suitable for cranberries and huckleberries. There is a considerable variety of plants which cause us to wonder because of the extreme variation in their choice of location. We find the white birches and white pines on bleak rocky eminences and again in swamps. We find the same extreme in choice of location by the Spider Lily Cardinal flower and the giant Blue Dahlia and Prairie Pholx. While the Cardinal Flower and Blue Dahlia show preference for dampness we know that they can be successfully grown in dryer soils.

I learn that Mrs. H. A. J. Upham of Kilbourn, Wisconsin, has successfully established a water garden with a puddled clay foundation. Probably nature lovers would be welcome to visit there and learn the results of her success.

As the years go by it seems that our hopes for water gardens can only find place in the land of dreams because at our present home we have no well, but though the years go by there has been

pleasure of hope and anticipation, even more gratifying than in studying over the seed and plant catalogues.

SAN JOSE SCALE NOT CONTROLLED BY DRY LIME-SULPHURS

For a number of years several so-called dry lime-sulphurs have been sold on the market as substitutes for the liquid lime-sulphur spray commonly used in the control of the San Jose scale on fruit trees. Many investigators have tested their value as remedies for the scale but with varying results. Recently the United States Department of Agriculture has completed some tests covering a period of three years. They were conducted under practical orchard conditions in four different states.

These tests, the results and discussion of which have just been published in Department Bulletin 1371, have shown that commercial samples of dry calcium, sodium, and barium sulphurs, even when used at strengths much greater than ordinarily employed, do not furnish a satisfactory control of the San Jose scale.

A copy of the bulletin may be secured, as long as the supply lasts, by writing to the United States Department of Agriculture Washington, D. C.

—*U. S. D. A. Bulletin.*

SOUNDS EASY

At the Illinois Convention Dr. Colby, of the University of Illinois, said that putting water on certain varieties of strawberries increased the yield 200%. And then we came back home to hear that it has been shown up here that overhead irrigation has increased strawberry yields over 600%.

We draw the conclusion that strawberry growers should either pray for rain or pipe water to their fields.

A well planted garden will mean a bowl of flowers for every room in the house for the whole season.

WOMEN'S PAGE

EDITED BY MRS. C. E. STRONG

"A kiss of the sun for pardon,
The song of a bird for mirth,
You are nearer God's heart in a garden
Than anywhere else on earth."

This motto—with a picture of Queen Victoria's garden, was chosen by Queen Alexandra for her Christmas card, and is one that every garden lover appreciates.

After the long winter months—how we look forward to the days when we can be out in the garden, if only for a short time. There is nothing in the world that will help a grouch or a case of blues like digging around in the moist earth, planting seeds, discovering the first shoots of bronzy green that are

coming up in the perrenial garden. And when we see a flash of deepest blue, and know the blue birds have come back singing so sweetly and happily, our hearts are filled with gladness—we haven't any room for grouches; we are looking forward to bloom time. Cold and storm is forgotten and we look with scorn on the pessimist who talks of the frosts and backward springs of bygone years. *This spring* will be different. We call to our flower-loving neighbors that "the new plants we set out last fall, are coming up beautifully." Of course some things did not survive—but if they *had,* perhaps they would not have been as satisfactory as those plants one of the members of your Garden Club gave you. How the members of Garden Clubs enjoy their meetings at this time of the year. Easter hats and gowns are forgotten in the absorbing discussions as to what will grow in shady places—and whether we want one or more varieties of shrubs in foundation plantings. "Where did you say was the best place to buy seeds of perennials?" and "Where did you get those nice sturdy plants?" "Did you see that 'ad' offering small lily bulbs at such a reasonable price per hundred—who wants to go in with me and get them?" I want to write that down so I can feed that particular bug the diet he needs—yes, I think that is correct,—at any rate some of them are particularly fond of some of my plants in cold frame and, if a mixture of paraffine and sugar will help—paraffine and sugar they will get." Every member of a garden club is giving and receiving information that is helpful these spring days. One thing should be noted—it will perhaps be well either to keep the club rather small—or else keep the discussions general—else you will likely hear this wail: "I just can't listen to two or three groups talking all at once—and I need to know all about everything you are telling." We should remember that someone needs to know—we need to know—when we cease to be helped or helpful—we have lost out.

Mrs. Estabrook whom many of our members will remember as a garden enthusiast is spending the winter in Asheville, N. C. and writes of garden interests there.

Asheville, that city, up in the mountains of Western North Carolina has started a movement that it should not permit to lag. The plan is to establish a wild flower garden in a park there where all of the many flowers indigenous to the region would be assembled and grown.

That section of North Carolina has a profusion of such flowers and

plants but only a few of them are accessible to the casual visitor. The rhododendron, the galax and the laurel are easily found but other beautiful specimens can be seen only by long trips into the mountains and over almost impossible roads and up inclines that tire even young muscles.

The Buncombe Flower Growers' Association is back of the plan and the Asheville Chamber of Commerce has endorsed it. To make the garden a success it will be necessary to provide many varieties of soil and this will take time.

GARDEN GUIDES

The seed catalogue obession has me in my spare time these days. I make a list, delete stringently, clear down to absolute necessities, —than add a "necessity", and then another, till I have to slide down the scale again. It's absurd,—but then its a harmless recreation, and certainly not an extravagant one.

I wonder what the general experience is with African Daisies *(Arctotis Grandis)*. I saw them the first time at Lake Geneva, and their gull-blue disks and under surfaces to the dazzling white rays made them so lovely and effective that I hastened to try some in my garden, where they grew and blossomed well, and were quite as lovely as those I saw first, but they shared this bad habit with the dandelion—they would close in the shade.

"Delight in a sunny situation" the catalogue says. And the blossoms certainly did! Unless I kept the bouquet in a window in full sun there was soon no semblance of a daisy in sight.

I have spent some very pleasurable quarter-hours with the little book of Plant Names. Some things I've found I have been waiting to know ever since my botany class days in high school. The enjoyment of that study has lasted me all my life, and the first money I ever earned (except for hiding my father's flute for him when guests were expected, and he didn't want to play) was spent for a leather bound copy of Gray's Manual, which I still have a soft spot for, though some of the classifications, and nomenclature, have altered since then, and I had to get a revised edition.

"Senecio" is one of those long awaited discoveries. And how well I remember just where I found it, close beside a pile of flagstones, taken from a shallow quarry near by, up on Perley's Hill, just over the crest from the old box elders, where you could bounce on a low horizontal limb till you were tired, and then push yourself out to the end and slide off.

"Oenothera" too, with its cobwebby necklaces of pollen that would stick so tenaciously to your nose. And how I hunted and fretted to find out how to pronounce the names of them. And not until January A. D. 1926 did I get the answer. Verily "All things come to him who waits."

EUGENIA C. GILLETTE.

THE FLOWER SHOW

What is a home without a mortgage, asks the real estate man, or, we might add, without a garage, or radio?

Rather would we ask what is a home without a garden, or a town without a flower show. There are a lot of people in every town who grow vegetables and flowers mostly as a pastime, and every mother's son, or daughter, thinks his, or her, vegetables and flowers are the best in the community, and hankers for the chance to prove it. Hence, why not a flower show or horticultural exhibit? Usually because there is no one to start it. Back of the exhibit must be the Garden Club or Horticultural Society. So the State Horticultural Society suggests to folks in each and every community in the state that you get together some evening soon, or any Sunday afternoon and resolve yourselves into such a club or society, then resolve to have at least two shows this year; the first may be held in June, peony season. Even if but few peonies are grown locally this does not mean that there need be but few peonies on exhibit. Any large commercial grower will, on invitation, send blooms of both standard and new varieties.

The midsummer or autumn show will bring in a wide range, dahlias, gladiolus, annuals and perennials galore.

Premium lists and prizes should be prepared and published early, not later than April 1st. Cut cash prizes down to the lowest possible point, right close to zero, and offer seed and plant premiums and trophies. Silver cups may be had for as little as two dollars for a tiny one up to ten dollars, which is as far as a city or village club need go. No premium lists need be given here, any experienced amateur can frame these.

But again we ask; how to do this without an organization to back it?

Garden Clubs affiliated with the State Horticultural Society have many advantages over those not so affiliated. Write to the Secretary about it, 119 E. Washington Ave., Madison, Wis. He knows lots about flower shows and how to stage them. Advice free.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

GREENS

When you buy a few carnations in a flower shoppe, you usually ask the saleslady to put in a few greens, to enhance the bouquet idea, expecting these to be furnished as a sort of lagniappe or bakers' dozen. These same greens are beginning to be the foundation of a line of florists' supplies that cost money, and are becoming increasingly hard to get.

Of course, many flowers are better displayed with greens as a foil and any made-up piece will have an appropriate setting of greens. Roses seldom need it, for their beautiful dull or glossy green leaves make a perfect setting for their velvety petaled blossoms of many shades. Other sorts of flowers carry their own background, such as Easter lilies, calla lilies, forget-me-nots, mignonettes, lily-of-the-valley, snapdragons, calendula, stocks, tulips, violets and stevias, though this last one is often used as a green as much as a flower. But most flowers look better with some sort of green added, graceful and slender like the plumosus fern or heavier and with greater color mass like the Sprengeri fern, string smilax, or Oregon huckleberry. Carnations, daffodils, freesia, hyacinths, rubrum lilies, narcissi, sweet peas and orchids are all enhanced with the proper green.

Besides the large use of greens with cut flowers, there are those that are planted in pots and pans to grow up with the special flowers for holiday trade. An overwhelming lot are used in wreaths that are made up for Christmas or for funeral work. By and large, there are probably not less than three dozen kinds, which we want you to know by reading this article. Remember always that the possibilities are not exhausted. Even this year has seen new greens on the Milwaukee market, and no one can predict what they will be offering ten years hence. It is both an opportunity and a challenge.

Up to the present, flat ferns (Aspidium spinulosum and its varieties) or more properly Shield Ferns, have been the backbone of Wisconsin's offering to the green market. At banquets they are crossed like swords above the plate, and many a floral spray or wreath has them in its foundation. Michigan and Wisconsin furnish almost the total supply. The greatest harvest nowadays comes from Forest and Florence counties and the upper Michigan peninsula. Last year was a poor one for perfect ferns. Forest fires and dry woods cut down the supply, until one Milwaukee wholesaler, who customarily stores three million ferns, could only get a little less than a million. Perhaps they are so much used because usually so cheap. The gatherers camp out in the woods and receive from sixty to seventy cents a thousand for gathering them. The shipper gets a dollar or more, but is well entitled to that because he must dry, store and pack them in such a manner as to leave no trace of heating or moulding. Blackened tips and edges prevent sales. Then comes the express and handling bills, so that the Milwaukee wholesaler usually charges two dollars a thousand. This year it is five dollars. It is a sort of a lark for the boys and young men to gather them. They must tie them in selected, uniform lengths in bundles of 25's, or 40 to the thousand. Good gatherers will collect from seven and a half to ten thousand in a day. An old Ford gathers them up, as much as ninety thousand to a load and takes them down to the buyer and shipper at Townsend, Wisconsin. When they reach Milwaukee, they are stored in a cool, ventilated basement, with dry sphagnum moss to absorb any excess moisture, and held until wanted throughout the coming year.

The shortage of flat ferns this year, meant a skirmish for substitutes and some very worthy ones have appeared. Right now, the backbone of the greens market is Plumosus Fern, which, by the way, is not a fern at all, but Asparagus plumosus nanus, belonging to the lily family. Some of our growers still raise it for their local customers, but mostly it comes from large outdoor plantations in southern Florida. It is fairly cheap and nothing more graceful grows. A close second in popularity is its near relative, Asparagus Sprengeri, which is better for some purposes than plumosus. It sheds its larger leaves much sooner than plumosus fern, which is not so popular with the customer for that reason.

When it comes to a green that is graceful and feathery-looking by itself, the Adiantums are hard to beat. Maidenhair fern is their common name, but they are far from being common. They make a fitting companion for the aristocratic orchid. Adiantums are greenhouse grown by specialists and the trade favors A. cuneatum, A. croweanum and its hybrids, and A. wrightii.

One of the substitute greens that has made quite a hit this winter in the foliage of the Oregon huckleberry (Vaccinium ovatum) and sometimes (Vaccinium ovalifolium), of the heath family. This common shrub of the coastal region of Oregon and California is an evergreen there and retains its foliage a long time after it is used here. The bright-green, waxy leaves flatly disposed upon the twigs, adapt it particularly well to spray and wreath work.

Distinctive floral sprays, with something a bit different as a background, are often made up with Coontie or Comptie (Zamia floridana). This grows abundantly in southern Florida on the east coast, below Palm Beach, in open, comparatively dry, pine woods. It is really an evergreen leaf of the Cycad persuasion, just curved enough to be graceful. In about the same

class as Coontie, are the Cycad leaves of the southern Sago Palm (Cycas revoluta). The stiff, deep-green leaves are colored and varnished for spray work.

From the east coast, we must hurry back to the west coast to discuss the newest green,—shallons. In fact, this has not been discovered yet, although it is well known to the writer. A Milwaukee wholesaler, sojourning in California while this article is being written, sent back a lot of it under the name of lemon leaves, but it proved to be Gaultheria shallon, which is evergreen there. All druggists know that Gaultheria is the proper name for wintergreen. But this is a lot larger than the true wintergreen (Gaultheria procumbens). Shallons or Salal (both Indian names), grows through California, Oregon, and Washington, smaller in its northern range, and produces a fine edible berry, where berries in the woods are scarce.

Another green, that carries its own flowers, is coming here by the carload lot, and that is Scotch heather (Erica persoluta and variety alba, Erica perfecta and Erica ovata). Vast fields are growing in southern California. One of the largest growers is Roy F. Wilcox, of Montebello, California. It reaches Milwaukee in refrigerator cars in prime blossom, and if kept in water, retains its fairy bells for many days. It is a delicate misty flower and adds grace to a bouquet, a spray, a corsage, a wreath or to whatever situation it is consigned.

About this time of year, February, pussy willows begin to make their appearance as accessories, giving us a hope that spring is in the offing. We see their downy catkins and decide that maybe the old groundhog didn't see his shadow after all. But the pussies were forced into bud. The greenhouse men had them spotted out in the swamp, and after giving them a decent rest out of doors, he made a determined raid and took them in out of the cold to soak up water and heat and bloom prematurely. They are much appreciated in bouquets with spring flowers and in the pots of growing tulips, crocus and narcissus.

Possibly few flower buyers know that their old favorite is used as a green,—the rose geranium leaf. Yet it is carried and to the elderly recipient of such an edged bouquet, it calls up fond memories of youthful days. One seems again in grandmother's bay - window, either that or in the bathtub with a cake of Pears' Soap.

In the fall, when chrysanthemums are in their prime, nothing quite seems to suggest fall so well as autumn colored foliage, so the florist has assured himself of a goodly supply of red or bronze autumn leaves in what they call prepared foliage. It is dyed red oak branches (Quercus rubra) treated with gycerine, so that, if nature has not been kind, as it was not last fall, we still can get our autumn leaves. Ain't natue wonderful?

The florists carry laurel, too. It's proper name is Mountain Laurel (Kalmia latifolia) and it is gathered in the states of Maryland, Delaware, Virginia, West Virginia and New Jersey. Florists really use it for a legitimate purpose (to my way of thinking), but did you ever see those mongrel, wax-paper dahlias that they tie on to the laurel and sell in the five and ten cent stores? Come up for air! Artificial flowers are all right in their place (where is that?), but they surely have no business in a flower shop. Flowers are living things and sentiment is intimately connected with them, but who can become enthused over an imitation?

Hemlock (Tsuga canadensis) and Cedar (Thuja occidentalis) are two more trees that furnish graceful twigs for the florist. They are much used in spray and wreath work and are nearly always to be found at a wholesale house.

String smilax (Asparagus asparagoides) has a broad leaf in contra-distinction to the other two species of Asparagus used for greens. It is grown in greenhouses upon strings that reach to the roof. Many debutantes think their entry into society incomplete, if this sort of smilax is not used in the decoration. It is a forecast of its certain use at a later important society function,—the wedding.

Southern or wild smilax is something else again, as the Dutchman says. It really is smilax, growing wild in the woods of Alabama and Georgia. This smilax (S. lanceolata) is shipped to Milwaukee in large crates and literally tons of it are used for interior decorating.

Now we come to those greens that are either seasonal or become accessories to the making of wreaths for funeral work or the cemetery. There are quite as many of these as of those that are used with fresh flowers, and we fear that we may become tiresome, if we go too fully into a discussion of them.

Boxwood will certainly be the first thing discussed, for it is becoming even more popular as a wreath material than holly. Our boxwood (Buxus suffruticosa) comes from Maryland, Virginia, West Virginia, and North Carolina, either escaped from cultivation or sedulously and carefully cultivated on a commercial basis. The cultivated kind is best, because more uniform in its branching. It is easy to work into wreaths, if kept wet, and will stay put when it dries. Holly is almost a thing of the past, though some folks insist upon it at Christmas time. It is so thorny spined on its leaf margins and sheds its berries too soon. Yet we suppose there will always be a certain demand for its prickly foliage by the Scotch; it reminds them so much of thistles and home. Wisconsin has a very pleasing substitute berry for southern holly. It is called winterberry (Ilex verticillata), though it is a true holly and would better be called northern holly. The leaves are unattractive and early deciduous, but the berries are much more numerous than the southern holly. Another Wisconsin offering is our native bittersweet (Celastrus scandens). This is becoming so hard to find that a few florists are growing their own, like M. Philipps, at Wausau, Wisconsin. Under cultivation, it is much improved in yield and uniformity of sprays.

(Continued on page 106)

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EVERYTOWN, YOUR HOME TOWN

There must be in Everytown many people who have real homes not flats or apartments where families stay for a few months at the will of a landlord, mere places of shelter, but homes where people really live from year to year, homes hallowed by sacred memories, homes with grass in front and a garden in the rear. Homes with basements and attics where children may play on rainy days.

I imagine there are still many such homes in Everytown although I suspect apartment houses in your city as in every other city are robbing children of their birthright, a real home. Then too there are other things that are depriving the child of the things that are rightfully his, destroying the sense and feeling that the place where he lives is *home*. However I do not mean to preach on the iniquities of modern life, rather I want to help spread the gospel of beauty, of lawns and trees and flowers; of peonies and dahlias and roses too.

As there are many home owners and home lovers in Everytown so there must be many real gardeners, those who till the soil, plant flowers and vegetables for the sheer love of the game rather than for what such labor brings in dollars and cents. To these I wish to speak a word or two:

I come to you as a fellow member of that world-wide Brotherhood, whose innermost secrets are known only to those who turn the mellow earth in springtime, who plant and cultivate that in the summer nature may bestow on us her most priceless gifts. What I want to say is this, we must not be selfish, we must not keep these good secrets to ourselves, nor be content with bestowing the fruits and flowers of our gardens on others less fortunate or perhaps lazier than we, but we must go out and preach this precious gospel. There is danger in these times that a generation of boys and girls may grow up to be men and women and never know the true meaning of home. Not food, nor clothing, nor shelter, nor even love and kindness is quite enough. Long after the memory of all of these except the love and kindness have faded memories of the lilacs, the peonies and perchance the roses that grew in the garden "back home" will remain. So on you and on me rests a responsibility, we must give freely of our knowledge that, year by year, more people, grown-ups as well as children in Everytown may be tied just a little closer to home.

I have emphasized the responsibility resting on us, that is, we who are real amateur gardeners, and now I want to tell how we can get the greatest pleasure from our work.

It is very simple, just *get together*. It's true we gossip over the back fence about the newest aster or tomato or how best to kill bugs and sometimes when we meet down town in shop or office we exchange experiences or swap yarns about how early we had radishes and maybe lie just a little, just a day or two, in doing it. Not really lie only just confuse dates.

Now suppose just two of you sit down some day and make a list of all the other garden enthusiasts, (cranks, those in the outer darkness call us) you know, call them up some evening and set a date for an informal meeting, Sunday afternoon is a good time. Surely there can be no harm in talking about flowers on Sunday. Make of it an informal meeting, jut sit around a table and discuss the 1926 seed and plant catalogues. I guarantee you will have a pleasant time and resolve to meet again and ask others of the Order to come. At this time it will occur to some of you that you owe a debt to your community. That there are, probably, a hundred homes in Everytown that have no shrubs or flowers on the lawns nor gardens in the rear. Remember these people are as good citizens as you, as well informed on other subjects than gardening as you, and they need only to be shown *how* to be good gardeners. They simply don't know how to make things grow.

At your second meeting issue a call for a meeting where everybody can come. Not only fix the time and place for the meeting but get busy at the telephone and drag people out. Not only that but have a definite plan of action mapped out.

Now I have suggested a call for a garden meeting and something about a plan of action that would awaken a desire for more and bettter gardens front and rear gardens, which in turn would mean more and better homes.

Now that the task is before me I find it more difficult than I anticipated. There are so many things to be done, it's a hard problem to fix on the one or two things of most value. For instance there

are, no doubt, many starved and weedy lawns, many starved and scraggly flowering shrubs or worse none at all, or even worse than that shrubs in wrong places on the lawn; the back yard garden occupied mostly by a garage. So many homes that are not homes.

And then the street trees of Everytown; what about them? Unless Everytown is different from other cities it has been everybody's business to look after the street trees and consequently nobody's business.

Really there are so many things that need to be done that it will be hard to choose. Anyway nothing ever will be done unless somebody starts something and the amateur gardeners are the ones to do it. Will you? Or will you let the matter go by default?

I have offered something for your consideration. I have more to offer, substantial help in any garden movement that may be begun in Beloit, the State Horticultural Society is organized for this very purpose. If someone in Everytown, your home town, who feels that he, or she, wants to do something, will write me I will tell how we will help. I shall watch eagerly my mail.

FREDERIC CRANEFIELD, *Secy.*
119 E. Washington Ave., Madison, Wis.

GROWN IN WISCONSIN

There are people who ignore the possibilities for apple orcharding in Wisconsin and who belittle the meetings of the horticultural society. Wisconsin is a great live stock state, but it has other worth while things in its agriculture. We had the pleasure of meeting two young men at a recent horticultural convention in Wisconsin who are doing things with an old apple orchard. They are James and John McIlquahan, owners of the old Melville estate, at Chippewa, comprising 60 acres of orchard with more than 5,500 bearing trees. Their prize display of McIntosh reds at the Eau Claire show were sent to Kansas City and there won a trophy also. When men can grow 20 bushels of such uniform apples with such fine color and flavor as these, it is time to acknowledge that Wisconsin is a promising orchard region. Those who fail to grasp this fact are behind the times.

—*The Wisconsin Farmer.*

JETSAM

—on the Sands of Time—

POETS AND POETRY

This column is not for the purpose, as might be supposed, of displaying the erudition of the editor. Since browsing in many pastures I have concluded that my literary taste is of a low order. In poetry I much prefer Robert Service to Tennyson or Eddie Guest or Walt Mason to Shakespeare. Still there is much to be said on both sides. It depends on how you read and why. If you read poetry just to be "well read", hurry along from verse to verse or canto to canto, then of course you miss all the beauty, the music, the grandeur of the great poems. If you read poetry merely to be amused, to satisfy the craving of jazz that is in all of us, you miss much, for not all that rhymes is poetry. There are poets and poets. Robert Browning for instance: Very much of a highbrow I feared. I once, for mental discipline, read "The Ring And The Book" and it left me exhausted mentally and physically. Then I stumbled on to his Pippa Passes and felt better. Often I had read, and so have you, the quotation,

"The year's at the spring,
And day's at the morn,
God's in his heaven—
All's right with the world!

but never knew the rest of the story.

Well it seems that Pippa was a little Italian girl who worked in a silk mill, worked every day in the year but one. No Sundays and no holidays except only one. The time was two hundred years ago; it's different now. Here are other lines:

Day!
Faster and more fast,
O'er night's brim, day boils at last;—

Oh, Day, if I squander a wavelet of thee,
A mite of my twelve hours treasure,—

My morning, noon, eve, night—how spend my day?
Tomorrow I must be Pippa who winds silk,
The whole year round, to earn just bread and milk;
But, this one day, I have leave to go,
And play out my fancy's fullest games.

So all day little Pippa wandered through the town, through the fields and to the great mansion on the hill, a ragged little mill girl happy, singing:

Overhead the tree-tops meet,
Flowers and grass spring 'neath one's feet;—
For what are the voices of birds—
Ay, and of beasts—but words, our words.

So at last back to her little room, tired if not happy:

God bless me! I can pray no more tonight,
No doubt some way or other, hymns say right,
All service ranks the same with God—
With God, whose puppets, best and worst,
Are we; there is no last or first.

There are many pages more, a very beautiful poem well worth reading. So are many others by Browning. However, Browning is to be taken in very small doses.

So the idea back of "Jetsam" if any, is to get you to read and to send in, please, a quotation that you have discovered yourself and not found ready made; not poetry alone but prose. Try Kingsley and Joseph Conrad.

WELL! WELL!

The following bit of news was sent in by one of our readers who lives in Michigan and who is directly interested in horticulture.

"I have just had time to read the January issue of "Wisconsin Horticulture". I wish to congratulate you on this issue.

"It is by far the snappiest and best organ issued by any Horticultural Society that I have even seen. And your efforts for better grading, fewer varieties, standardization and better fruits will certainly reap results. More power to you."

Of course we would rather have such praise come from Wisconsin because that is where we are trying to center our work. But when we can have the praise of this sort from a source such as that from which it came, we aren't going to turn a deaf ear.

Now the real reason for printing this is to ask you something. Do you or don't you like the magazine? Are you or aren't you getting anything from it? We'd like to know.

Our New ROSE BULLETIN is ready for distribution. It supplies valuable knowledge to growers who wish to succeed with roses in Wisconsin.

10 cents per copy.

Limited number of copies.

COMMERCIAL HORTICULTURE

LET'S THINK

1. Specialize Wisconsin Varieties
2. Standardize Pack
3. Grow Better Fruit
4. Advertise

To hear some people speak we might think that this world is going to the dogs, that it isn't worth while living and that its not worth while doing anything. We're inclined to risk a statement that the people who are doing all this ranting are not thinking, or else are incapable of thought.

We wonder whether the fruit growers of Wisconsin ever stop to think just how lucky they are. We wonder if the same men realize that they do not have to pray for governmental paternalism or sentimental bally-hooing to solve their problems; or do not have to depend on any contra-economic force to inject life into their enterprise. The Wisconsin fruit grower is not a bit worse off than is any other man who is engaged in a business which uses the same amount of land, labor, and capitol with the weather risk thrown in and is a great deal better off than many.

This page is not written for the purpose of filling up space, so we hope that certain of the ideas will be read and some thought created by the reading. We have headed the page with a list of activities which we believe will help the Wisconsin fruit grower, and it is due him to explain the why of our attitude.

Our first; "Specialized Wisconsin Varieties", has been given you in the form of the Big Five for Commercial Apple Growing in Wisconsin. We have picked McIntosh, Fameuse, Wealthy, Northwestern Greening, and Wolf River because they seem to be the outstanding successes in this state. We choose them because they will have a better chance to survive the competition of the varieties which other states have chosen for their standard. We choose them because we do not wish to be responsible for advocating any variety which will aid in clogging the already phlegmatic storage market. We choose them because they are adapted for state-wide production.

Our second; "Standard pack", has its place in the scheme of things. It would be utterly impossible to create any better market than exists at the present time if we were to continue to offer for sale a conglomerate mass of good, bad and indifferent fruit under the same label. We must come to realize that in order to create interest in our product our packages must be uniform. We recommend the basket as the container for our product which will fit the largest number of demands.

Our third; "Better Fruit", really covers the whole field. What good standard varieties without good fruit? What good standard packages if the packages are made up of poor fruit? What good advertising if all we have to offer is trash?

Our fourth; "Advertising", is self explanatory. Wisconsin Horticulture is going to advertise Wisconsin fruit as long as either exists—but it won't do a nickel's worth of good unless we have the good fruit to sell.

Let's each hold a conference with himself and organize the thoughts and see if we can agree, and if not agree have some constructive opinion to give to all. Let's stop praying for a miracle to happen so that our poor fruit will sell, and start thinking up some way by which our good fruit will sell better.

Heard at the 1925 Convention

Member: "Which kind of soil is better for gardens, light or heavy?"
Speaker (With no hesitation): "Yes, I think so."

* * *

IF YOU BELIEVE IN SIGNS

"A gradual improvement in the apple industry may be expected."
—U. S. D. A. Forecast for 1926.

THE PROBLEM OF LOW GRADES AND WINDFALLS

W. R. Soverill, Illinois, at Annual Convention, November 19, 1925

No orchardist ever spent many anxious hours or sleepless nights over fancy No. 1 fruit, securely packed, ready for market. It is the low grades and windfalls that are the problems.

The cause of low grades may depend on numerous things:

(1) To control insects and diseases, the full spray program must be carried out. The San Jose, oyster shell, scurvy scale, codling moth, canker-worm, scab, etc., all have recommended effective treatments. The degree of adherence to the recommended spray schedule will determine your percentage in fancy fruit.

(2) To control soil moisture, we have mulch, cultivation and irrigation, each has its merits.

(3) Lack of fertility is corrected with legumes, barnyard manure or commercial fertilizer.

(4) Proper distance of planting is a great factor and determines sunlight and air circulation.

(5) Pruning also is a great factor in maturing fancy grades.

The orchardist must seriously consider these items and each and all have a great deal to do with the percentage of low grade fruit.

With the windfall or drops the orchardist is at the mercy of the elements. The wind always blows at the wrong time. The apples drop and thereby lose thirty to ninety percent of their value.

We must do everything to reduce the amount of drops to the minimum. In doing this it embodies most of the problems of low grades and some additional.

We may resort to wind-breaks which some may criticise, or to planting on slopes away from the prevailing destructive winds.

We must bear in mind that some varieties are naturally prone to drop; such as Wealthy and Duchess, while others such as Salome, Delicious and King David tend to hang on.

(Continued on page 106)

ODD VARIETIES WORTHLESS

Clipped from an "Apple Survey of the United States and Canada—

R. W. REES"

"Many factors have contributed continually to decrease the number of varieties for commercial planting. With years of experience growers have a real knowledge of the real market quality and market demands for given varieties, as well as a knowledge of the bearing habits and vigor of the trees. Experience has taught the general range in which the various varieties can be produced successfully."

* * *

"Many growers are finding it more profitable to cut out old orchards of odd varieties and to plant new ones of standard varieties."

* * *

"The loss due to many odd varieties frequently is underestimated. Odd varieties occupy land which otherwise might be profitable. There is a greater cost of harvesting, packing and marketing many small lots than in handling the same volume of a standard variety."

* * *

"It is very important to plant only those varieties which are of established market value, and which experience has proved can be produced successfully in the particular territory."

* * *

"A good variety in its proper location means success; the same variety in a section to which it is not adapted means failure."

* * *

There has been a thirty-seven percent decrease in the number of apple trees in the United States since 1910.

The population of the United States increased 14.9% in the ten years preceding 1920.

—*Apple Survey—N. Y. C. Lines.*

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

STRAWBERRY ENEMIES

The strawberry is the most widely grown of small fruits because it is particularly adapted to the home garden.

Generally speaking, this crop does not require the carrying out of an annual spray program such as is prescribed for most crops. There are, however, a score or more insect pests and fungous diseases that may require treatment in the strawberry beds of this state when conditions become favorable for their development.

White Grubs

Perhaps the insect that has given the strawberry grower the most concern is the all too familiar white grub. With its large brown head, white body and enlarged abdomen, and its habit of curling up in an almost complete circle when at rest, it is easily detected. Many a planting of strawberries, promising looking in May, has begun to show missing plants by June, and great bare patches before the middle of July, due to the voracious appetite of this insect. Living in the soil, it devours the roots of one plant after another, never seeming to tire of eating, while the only visible sign to warn the grower of its presence is the wilting of the injured plant. If unnoticed, so that prompt action can be taken to dig around the plant and destroy the grub it will march down the row leaving a line of dead or badly crippled plants in its path.

There does not seem to be any insecticide that is efficient or practical for the control of this pest. The most satisfactory means of control consists in maintaining a close watch over the patch and destroying the grubs by hand whenever they appear. Usually the ground mole in its attempt to assist the grower in capturing this pest is blamed and punished for causing the grub's injury. Since the mole feeds on these insects it may offset its undesirable tunneling in the berry patch by its good work.

Much of this grub injury can be avoided by exercising certain precautions and using proper cultural methods. For instance, a strawberry planting should never be made in old sod land known to be infested with grubs, since it is evident that with a reduction in roots the grubs would all concentrate their feeding on a few plants, making short work of them.

When white grubs are present in alarming numbers a short rotation of crops should be adopted and legumes planted on old sod land prior to setting out berries. Legumes are much less likely to be injured from the attack of this pest than other crops. Early fall plowing and frequent harrowing will destroy many of the grubs by mechanical injury and by exposing them to the mercy of the birds and the elements.

These grubs are the young or larval stage of the well known "June Bug" or "May Beetle" that flies around the lights during the spring months. The eggs are laid during the early part of June in weedy patches and grass lands, and the young grubs, upon hatching about two weeks later, feed upon the roots of various plants. Three years are spent by the larvae feeding upon the roots they relish most in the soil during the growing season and working down below the frost line to spend the winter.

A larger number of beetles than usual is expected to appear this spring in the southern part of the state since the beetles appear in

White Grub

great numbers every three years and the last beetle year was 1923. It is obvious that clean berry patches and gardens will be a great asset this coming year.

The Strawberry Aphid

The appearance of bare spots in the strawberry patch, in other cases, may be due to an aphis feeding upon the roots. If, upon close examination, ants are found to be present around the plants the root louse may be suspected. When present, these small dark green insects will be found clustered on the roots and stems and will cause the plants to wither and die if present in large numbers.

The eggs are laid by the female aphid upon the stems and along the midrib of the strawberry leaves in autumn. In the spring the eggs hatch and the young aphids after feeding awhile on the leaves work down the stem to the tender young leaves of the crown. Soon these aphids are discovered by the ants and carried underground where they are carefully placed on the roots. Here they feed on the sap of the roots and multiply during the entire summer months, producing honey dew for the ants to feed upon. The ants continue to care for them and carry them to a new food supply as soon as the old one is no longer sufficient for their needs, and thus are responsible for their spread.

If these plant lice have become established, a new planting should not be made in or near the infested soil. Early spring plowing and frequent cultivation of the land will destroy the ant nests and discourage their activities. New beds should be set from known uninfested beds, and if there is doubt or in case aphids are known to be present all plants should be carefully dipped in a nicotine soap solution. This solution can be made up to the desired strength by using two tablespoonsful of Black Leaf No. 40 (Nicotine Sulphate) to each gallon of water in which an inch cube of laundry soap has been previously dissolved.

The Leaf-roller

Occasionally the leaf-roller becomes a real menace to a strawberry patch. Its work is easily identified by the presence of large numbers of leaves folded together and bound with strands of silk. These will be found to enclose small green caterpillars. A badly infested field often by the middle of June appears to be scorched, as though it had been hit by a fire, since many of these folded leaves dry up and turn brown.

This caterpillar is the larva or young of a moth which appears in the field early in May and lays her eggs on the under surfaces of half grown leaves. After the young have hatched about a week later and fed a short time on the upper surface they eat into and along the midrib of the leaf until they have weakened it, and then they commence to fold the edges of the leaf together. They do not leave this folded leaf until they have completed their growth, pupated and are ready to emerge as small reddish brown moths. All of the feeding after the first few days is done within the folded leaf beyond the reach of a spray. The moths can be seen making short flights over the patch during the day.

The pest can be readily destroyed with calcium arsenate by keeping the foliage well covered with it from the time the moths are first observed in the spring until the berries begin to develop. This material can be either dusted or sprayed and should be applied at the rate of 1½ or 2 pounds per acre. In case of severe infestations the planting should be mowed off and the leaves burned after harvest. This will destroy large numbers of the developing larvae and pupae.

Leaf-spot

The most common and widely distributed disease of strawberries

(Continued on page 108)

GREENS

(Continued from page 99)

Leucothoë and galax leaves have been popular with the florists for thirty-six years. Leocothoë leaves (Leucothoë catesbaei) are gathered principally in North Carolina, although it is a wild shrub of the heath family growing from Virginia to Georgia. It is an evergreen there.

Lycopodium or Groundpine as it is known to the florist, comprises several species of Lycopodium,—L. clavatum, the Runningpine; L. Complanatum, the Groundcedar; L. lucidulum, the Shining Clubmoss; and L. obscurum, the Groundpine. It was formerly much in demand for a Christmas green, but Milwaukee fire laws prohibit its use, so that in larger cities there is no call for it. The principal commercial region in the United States was and is in Wisconsin, in the counties of Oconto, Shawano, Langlade, Marathon, Lincoln, Forest, Oneida, Vilas, Taylor and Price. The best collecting grounds are ever moving northward.

Wisconsin furnishes a gread deal of the sphagnum moss from its northern bogs, that florists use for many purposes. One of these uses is in wire wreaths where a stuffed circle forms the base that holds toothpicks with flowers wired to them.

Ruscus (Ruscus aculeatus) or Butcher's Broom, an erect shrub of the lily family, with tough foliage that resembles smilax, is gathered in the southernmost part of the United States. It is shipped natural or dried, bleached and colored. Statice as a term covers a lot of different species, most of them strawflowers. California grows quantities of it outdoors, and the dried and dyed sprays can be obtained in almost any color desired. Statice is a member of the Plumbago family and is called Sea Pink or Sea Lavender, when planted in a perennial garden. Its stiff branches and minute foliage are evergreen and do not readily shatter with handling.

The Christmas season always finds us odd lot of greens or some especially adapted to the season, such as long leaf yellow pine branchlets and mistletoe. No matter how much mistletoe costs, there is a certain element of young folks that will have it, if it is at all obtainable. In the words of the poet:

"A little mistletoe is a dangerous thing,
Look out, or a wedding will from it spring."

When it comes to the strawflower greens such as the Chinese Lantern (Physalis franchetii) and the Helichrysums, that are used in making decorative wreaths, their name is legion. We cannot discuss them here. Every weed in the fields has succumbed to the paint pot to yield artistic effects. There is one weed, though, that it would be well to let alone. That is poison ivy. The berries are pretty, but it is just as poisonous in wintertime as at any other time of the year. Many folks do not believe this until after they have tried it once. One time is sufficient.

L'envoi. Appreciate the task of the florist to find the proper foil for flowers. But do not rush in to help him until you have studied the way such material is prepared for market. Note that he wants a uniform product, of a definite length and a definite number in the bundle. This may be 12, 25, 50 or 100. The market for greens is not in single bundles, either. If you have not as much as a bale or a box, the wholesaler is not interested. Of course there is good money in the greens business, but first submit a sample to your buyer and see if it is what he wants, then you will find him eager to do business with you.

HURON H. SMITH.

THE PROBLEM OF LOW GRADES AND WINDFALLS

(Continued from page 102)

Our problem of when to pack is sometimes difficult. The grower ought to obtain every possible assistance, ought to keep records from year to year, study carefully the condition of the crop, keeping in mind the help available, whether normal crop or larger, and also probable disposition of crop, as to what market it is to be sent. Each season is different and it is no fool's job to decide when to pack.

With all precautions and preventatives there will be some drops, so we should turn our attention to try to keep the quality as good as possible.

Mulch of hay or straw may be put under the trees thus serving as a cushion upon which to fall. Cover crops are beneficial. Sod mulch has its merit. Frequently picking up the drops prevents further injury, and contact with the ground.

So much for preventative measures and alleviative endeavors. These may be used to the limit, but will not entirely prevent the trouble.

Now what are we to do with drops and low grades?

We all agree that these grades do demoralize the markets at certain times of the season, and would

be better if kept off. It will never be possible to keep them entirely off. There is a demand for a limited amount of such at all times.

Where it is possible to deliver these grades direct to consumers or even direct to the fruit peddlers, without too much expense, there is a chance to realize a fair profit on them. There is always a class of trade looking for this cheaper grade. Apple sauce and apple pies are the outlets for much of this fruit, while the better grades are used whole, or as fresh fruit. Here I wish to emphasize what could be done along the line of increased apple consumption.

Growers cooperating with the Horticultural Society, the American Pomological Society and the Apple Shipper's Association could do much in the way of distributing literature and publishing facts concerning the King of Fruits—the apple.

Such booklets as, "197 Ways to use apples" or "Fourteen practical recipes for apple dishes", placed before the public may help materially. The fruit business as one of the big farming interests must adopt business principles and advertise.

In the apple we have a beautiful fruit to look at, a delicious fruit to eat, a fruit that has real value to sustain life and a fruit that keeps you fit. If your breakfast food manufacturers had such a combination of qualities to offer, they would all be millionaires. It has been conservatively estimated that the public average only one third of an apple per day. Taken from the American Fruit Grower, on Markets and Marketing of December, 1924, such slogans as these may be used:

"Health's best way, eat apples every day."

"Apples—King of fruits, nature's richest gifts. Better than medicine."

"Apples are loaded with sunshine and cheer."

"Good for the kiddies—good for you."

"Eat'em raw, baked, fried or stewed."

(Continued on page 108)

STRAWBERRY OUTLOOK

Another early sign of spring is the preliminary report on strawberry acreage to be harvested this season. Total estimate of 137,860 acres is an apparent gain of only 4,000 over last year and is 13,000 below the heavy acreage of 1924. Taking into consideration the area expected to be harvested and the January condition of plants, it seems that good to heavy production may be anticipated in Louisiana and Missouri; fair crops in Alabama and North Carolina and rather light crops in Florida, Arkansas and Tennessee. Although Arkansas' acreage is but little less than last year, condition of plants is poor. Kentucky has a combination of larger acreage offset by only fair condition. The outlook is for a pretty good crop in eastern states from Maryland to New Jersey, but the area to be harvested in Virginia has been greatly reduced. Berry acreage has been increased in the pacific northwest. A few straight carlots are now coming from Florida and recent jobbing prices in New York City have been 60 to 70 cents, quart basis. Only two months ago the price was $3–$4 a quart. Florida berries are without competition until Louisiana shipments begin in late March.—*U. S. D. A.*

STRAWBERRY ENEMIES

(Continued from page 105)

is known as leaf spot. This fungous disease is usually confined to the leaves as its name would indicate. At first, the spots appear of a reddish or purplish tint but as they increase in size the center of each spot becomes lighter and finally almost white. A single fully developed spot is about an eighth of an inch in diameter. These spots are scattered irregularly over the surface of the leaf and often become so numerous as to cause the death of the leaf or even the entire plant. When the disease has gotten a foothold it greatly weakens the plant with the result that the crop is greatly reduced through the loss of needed leaf surface. Should the disease become serious, spraying with Bordeaux 4-4-50 strength from the time the foliage appears in the spring until the fruit is 1/3 grown, at ten day intervals, is recommended for its control.

E. L. CHAMBERS.

THE PROBLEM OF LOW GRADES AND WINDFALLS

(Continued from page 107)

"Apple-butter time."

"197 ways to prepare apples—good any old way."

"Get your share of good apples."

"Apples, buy them by the package."

Another way to market these grades is in the form of cider and vinegar.

A few men are pasteurizing cider and it has great possibilities.

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, April, 1926 No. 8

Wisconsin woodland scene in April

SOME NEGLECTED FRUITS

(Elmer Reeves, Iowa. Read at Annual Convention, Eau Claire)

Of late it has been the custom to hunt new fruits and they have been largely planted and urged on the public while older and valuable sorts have for the time been overlooked. This has been the practice of individuals the country over and our government has done much in this line. They have been and are still searching the world over for anything in the way of fruit or plant that will be of any interest or value to any part of this country. This is well and has resulted in much good to the various sections. Many fruits so introduced have become standards in the region to which they are adapted. Examples of this are the Navel orange, walnut, fig and other fruits of California, the grape fruit in Florida and the date for the big southwest country. Much has also been done in the crossing of various fruits especially of the citrus varieties but I doubt if these will ever become of much importance as commercial varieties.

For the middle west about everything has been tried that has any promise and people are still on the hunt for new fruits. This is commendable all right but in the hunt for the new fruits it would seem that some of the old sorts have lost their places in our plantings.

In my own locality, and I presume the same will apply to most of the states adjoining, the Wolf River apple has hardly been named among the plantings of late while the trees in old orchards are doing well and the fruit is much valued. I have heard this variety condemned on account of its quality but while it can hardly be classed as an eating apple it is excellent for baking and valuable when cooked in other ways. It yields abundant crops and the fruit is very attractive and in years of normal maturing will keep to early winter. Through Wisconsin it should keep later and be a real winter apple. In fact the son of the originator of the Wolf River told me that it would keep all winter when grown in central Wisconsin and he considered it one of the best of apples.

The first orchards planted in Northern Iowa were of the best eastern varieties and they thrived and bore well for a long term of years—in fact as long as the orchards of the latter varieties planted since. We have tried and discarded hundreds of varieties brought from various countries as well as many seedlings produced in our own climate and most of these are already discredited while the old sorts are almost forgotten. Among the apples one of the earliest to ripen is Sops of Wine. This is fairly hardy in tree and a young and abundant bearer of red fruit of good size and preferred by many to any of the other early sorts. This has been entirely neglected of late so that many people never heard of it but it should have its place in every home orchard and a large place in commercial plantings and on account of its color will outsell most other varieties. St. Lawrence is another neglected variety of the old list. This much resembles Duchess in color but is of more even size and smoother in shape. It is somewhat later than Duchess and an excellent eating apple of which we grow too few. Ben Davis might also have a larger place in the modern orchard on account of the keeping quality of the fruit. The tree usually lasts but a few years after coming to bearing but it is productive and supplies fruit after most sorts are gone. I know that it is fashionable to throw slurs at old Ben but I maintain that it has high quality and to prove its good qualities I suggest that you make cider from this variety and I assure you that there will be no trouble in disposing of the juice. On the contrary the juice of Yellow Transparent is of little value as is most early sorts and even Wealthy lacks the rich quality of Ben Davis. Jonathan is at home in the southern half of Iowa and can be grown in all parts of the state and even further north. In fact Jonathans from near La Crosse have taken the premium on that variety at the Mid-west fruit shows, twice at Council Bluffs and last year at Waterloo and I feel sure it can be grown successfully in most parts of Wisconsin and if supplied in sufficient quantity would largely displace other sorts in the markets up to February or March. Other varieties might also be mentioned as of value but the foregoing is enough to suggest what we are missing.

Among gooseberries the Downing appears to be largely in the lead although Carrie, Houghton and other of the small sorts are much planted. These are hardy and good but there are better sorts that at least for home use should find a place. Columbus and Chautauqua among the green sorts and Poorman among the reds should be in every garden on account of both size and quality. If well grown they reach to nearly the size of the Compass cherry and are relished by many as a dessert and served uncooked. The English sorts are much used in this way in Lancashire and other parts of England and the varieties I have mentioned are equal to them in quality if not in size. I consider Poorman the best of all our gooseberries and wonder why the nurseries do not have a supply of this variety.

The pear is a fruit that is rarely grown in the farm orchards of the mid-west country but with care it can be successfully grown even in the open prairie country. At my home I have fruited over forty varieties of the pear and find most of them hardy enough to pay for planting. The best of the list are Flemish Beauty, Keiffer, Clapps, and Lincoln.

Worden, Seckle, Clairgeau, Bartlett and Garber are good while Sudduth is not worth planting. Early Harvest will fruit early of good size but it lacks quality.

Keiffer is usually spoken of as a cooking pear. It is sold in the stores for that purpose and for pickles and it seems that but few realize that it is a choice fruit if properly handled. The fruit should be picked when fully matured and laid away in the dark. It should be watched and as they begin to turn yellow they can be sorted and

at the right stage of ripening it is a choice fruit for dessert. It is not up to Bartlett but still of excellent quality and can be made to last from October to December. If I were to plant but one variety it would be Keiffer and there is no reason why pears should not be in every orchard.

Plant on land not too rich as that causes a late growth and consequent winter injury. Grow the trees slowly and if they make a vigorous growth it should be cut back to about one foot each year. This not only lessens winter injury but will also lessen the injury from blight which is the cause of much loss with pear trees.

Another fruit that should be better known is the High Bush Cranberry. This is a native of Wisconsin and nearby states and perfectly hardy. It closely resembles the Snowball but produces fruit as well as flowers. The wild varieties are usually of more dwarf growth than the cultivated ones with smaller fruit that is often too bitter for any use while some of the better varieties produce fruit that is a good substitute for the swamp cranberry to which it is not at all related.

Our government has done much to hunt out the best sorts and is trying to still further improve its quality.

Other fruits might be mentioned that should receive a part of our attention but the foregoing will suggest some of the things of which we can make more use.

The only thing that sounds like a laugh and isn't very funny is Hoe! Hoe! Hoe!

PROFESSOR EMMETT STULL GOFF

Elmira, N. Y., 1852 — Madison, Wisconsin, 1902

Remarks by L. R. Jones at the unveiling of his portrait

University of Wisconsin, February 2, 1926

Some forty years ago there went across this country a call for science service to agriculture more inspiring than we now readily realize. It was the end of a century of agricultural pioneering. Some of the keenest American intellects had been earnestly applied to commercial plant culture and a select few to amateur plant breeding But the possibilities of a coordinated scientific advance upon these problems which came with the establishment of the State Experiment Stations seemed almost limitless. It was a call especially to the young men and brought to these institutions many such where clear vision and high ideals compensated for lack of previous technical training. Among the first and best of these in plant science was Emmett Stull Goff, the founder and first leader in our department of horticulture. Before this he had been one of the first to contribute his natural skill and devotion in plant studies to the newly organized New York Station. To this task he brought little professional schooling as we know it; there was none to be had. He did bring, however, rare talents for the service then needed;—an inborn love of plants, a keenly inquisitive mind, a vision for the larger things, a sound judgment as to values, a native genius for painstaking persistent research, and an almost puritanic intellectual and moral integrity. The result of his work at the New York Experiment Station led Dean Henry, upon the recommendation of Dr. Babcock, to invite him to Wisconsin when the horticultural department was organized in 1889, and the last dozen years of his life were given in unstinted service to this state. These years with us should naturally have been at least twice twelve, but his was the type that gives in double measure when opportunity and duty summon.

Scarcely a score of years altogether was his for professional service in the two states. Yet in this short time, and especially in his last decade in Wisconsin, his high character and native ability combined to influence in an important degree horticultural science, both fundamental and applied, and nationally as well as state wide. There were those who spoke or wrote more than he; modesty was one of his virtues. There may have been some who worked as earnestly, tho few pressed so dangerously upon the limit of physical endurance as he. But none whom I ever met (in proportion to local opportunity) in the field of horticulture, combined in finer degree than he devoted skill and zeal in teaching, writing, and personal researches during that formative decade. His influence shaped Wisconsin horticulture and his almost religious faith in the worthwhileness of the task brought to his side in unselfish public service a group of kindred devotees through whom his spirit still works.

We recognize his leadership both in creating new fruits and in finding and developing our natural fruit lands; in probing so deeply into the laws of bud formation and seed maturity that the problems he defined yet remain to challenge us.

In unveiling this portrait we honor him for his vision as the first seer of the possibilities of intensive fruit culture in Wisconsin, as a devoted leader in bringing to realization some part of his vision, as at once the conscientious teacher and the keen scientist whose researches progressed from the more evident taxonomic, through the timely genetical to the most obscure physiological aspects of his problems. To his last year he was a leader in this.

But most of all do we honor him because it was leadership inspired by love of truth. His was the fearless spirit of the searcher for this and this alone. In science as in every other path he trod, his un-

swerving purpose was that voiced of old:

"Prove all things,
Hold fast that which is good."

ASTER YELLOWS

In the October, November, and January issues of Wisconsin Horticulture articles appeared dealing with the aster yellows. This resume is for the benefit of the numerous people who have written in asking about this disease within the last few weeks.

Figure 1

Aster yellows may be identified by symptoms which appear in the foliage. The clearing of the viens and chlorosis (yellowing) of the tissues are the first symptoms. (Fig. 1). This is accompanied by irregular growth which is also shown in the cut. Following this, or at the same time upright growth occurs as shown in Figure 2. The plant on the left is infected, and the plant on the right is making a normal growth. Plants showing these symptoms should be removed at once.

Figure 2

Figure 3

When the infection does allow blooms they are usually imperfect or misshapen as shown in Figure 3 in comparison with an uninfected flower. This is the phase which we have noticed the most in our own gardens.

We must remember that the disease is transmitted from the infected to the healthy plants by means of the insect known as a "leafhopper." (Fig. 4). These insects will not enter buildings so that plants started indoors will probably be free from the disease when put out. Neither does the insect like to stay in proximity to walls, so that beds of asters near walls will have a better chance of escaping infection than a bed in the open. Bordeau mixture acts as a repellant *but will not kill* the insect.

The work on aster yellows has been done by Dr. L. O. Kunkle of the Boyce Thompson Institute, Yonkers, N. Y. (Wisconsin Horticulture, Vol. XVI Nos. 2, 3, and 5.)

Two ways to not have a garden. Don't plan it. Get a premature case of Spring fever.

A LETTER ABOUT ROSES

In answer to an inquiry.

I am surely much pleased to know that you are going to plant roses. I am sending you a copy of our new bulletin on roses. This is not intended as a complete guide to rose growing, but you may find in it some hints. Here are some more hints:

Don't try to make the rose bush serve as an ornamental shrub. It isn't. Your idea in growing roses is, or should be, to have roses. You won't get them if you plant the bushes in sod or in borders with other plants or close to the house. Plant your roses *behind* the house, not in *front* of it. There are so many shrubs that are graceful and ornamental that can be used for the embellishment of the lawn that there is no need of using roses for this purpose.

Go in strong for the hybrid perpetuals, those named in the bulletin and others. Send for catalogs. Study these and buy as many as you can afford. Next year try a few hybrid teas. Whenever you get into trouble write us and we will help you.

Figure 4

Yep! Spring's coming! The robin that has been here all winter has ceased to be a curiosity, and's now a robin.

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

AN ALL SEASON BORDER

What shall I plant in a Perennial border in order to have flowers from Spring until Fall?

This was the question asked by a member and as planning a perennial garden is almost as interesting as planting one I will try to guide him, and I hope his neighbors, in their first steps along this fascinating pathway.

First, you must always remember that while perennials once thoroughly established will stand some neglect and still be beautiful they need to be well planted and nourished in order to become established. Spade your ground deeply, enrich with well rotted manure, if very heavy soil lighten with sifted coal ashes and work the ground until it is like a seed bed. Then plant.

Most people start a list of flowers with those for the background. I am going to begin with the low growing spring blooming varieties that are used as edging. Beginning in April the Arabis alpina with its soft gray green foliage will give you masses of white bloom; following closely are the Phlox subulata in white, pink and lavender, a veritable carpet of bloom, Alyssum Saxatile or gold dust flower is rightly named. Iris Pumila or Baby Iris in white, purple, and yellow, are beautifully fragrant border plants and keep up the succession of bloom. Myosotis or forget-me-nots in blue, white and pink will give a month or more of bloom while Myosotis palustris semperflorens starts blooms in June and keeps on until freezing weather if not allowed to go to seed. Violas or tufted pansies as they are sometimes called will begin blooming in May and there will still be flowers when the snow has fallen if they are not allowed to go to seed. Your children or your neighbor's children will enjoy keeping them picked. Mertensia virginica with its pink buds and heavenly blue blossoms, is also an early bloomer. It dies down after blossoming, so mark the spot and do not disturb it. Between the edge and the background is a wide space, in it we will plant the old fashioned Bleeding Heart. Dicentra Spectabilis, and its cousin Formosa or plumy Bleeding Heart with its fern like foliage and miniature sprays of pink hearts that it sends up from May until October. Shasta daisies, both the early and late varieties, Valerian or hardy garden heliotrope, Veronicas, especially the varieties Spicata and Subsessilis. Iris in variety, long spurred Columbines, the fairies of the garden, Lychnis, whose flaming red blossoms won the name of Burning Love in our grandmother's garden. Oriental poppies, double and single Gypsophila or baby's breath, also the misty Statice Latifolia. Phlox—we couldn't imagine a perennial border without Phlox, but remember to cut the fading heads of bloom, for not only will this give you a second crop of flowers almost more beautiful than the first, but you will avoid the possibility of seeds dropping to later spoil your choice plants with ugly purple and magenta seedling plants that are such strong growers they soon crowd and smother the choicer plants. Be sure and plant at least one Clematis recta—it grows to a height of two to four feet and during its blooming period, June and July, is a mass of fragrant white flowers almost identical with those of the climber Clematis Paniculata, Penstemon Barbatus, varieties Torreyi and Coral Gem, the one scarlet, the other rose pink, give a long season of bloom as does Hauchera or Coral bells, Alumroot especially if they are cut freely. Sedums, Spectabile and Brilliant are attractive in both foliage and flower and are also lasting. Gaillardias are a standby; they begin blooming in June and it takes hard freezing to quell their ambition to give more flowers than any other plant in the garden. Lemon Lily, one of the Hemerocallis is one of the earliest of that family to flower and Thunbergi, blooming in July the latest, they are really one of the "must have's." Peonies of course,—we like to plant them in the border, our favorite kinds, their foliage is attractive even when not in bloom. Lilies of course,—also we start with a few of the hardier varieties such as the old fashioned tiger lily, both double and single. They will grow almost anywhere, and the new Regal because of their beauty and fragrance. Then the background plants—Delphiniums—plenty of them, for you may have dozens and every one a different shade of blue. Echinops, var. Ritro, with its deep metallic blue balls of bloom. Artemisa Lactiflora grows 3 to 4 feet high crowned with creamy panicles of fragrant bloom. Aconitum or Monkshood, in blue, and blue and white. Dictamnus or gas plant with thick leathery, glossy leaves and oddly twisted and curled pink or white flowers, strongly lemon scented. Monarda in red or rose; golden Heleniums, Boltonia, some of the newer large flowered hardy asters, and there is a succession of bloom from spring until fall. There are many other worth while plants, of course, that you may want to grow, but these are the sorts that are always satisfactory. You cannot perhaps grow them all in one year—if you have never grown many flowers I would not attempt it, nor wolud I plant one alone of each variety. Three to a dozen plants in a group are much more effective. You can buy your plants or raise them from seed. Raising from seed takes longer of course, but it gives you a chance to get acquainted with your garden. It is a good plan to do both —buy some plants and raise some

(Continued on page 115)

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

MILWAUKEE SPRING FLOWER SHOW

The free spring flower show was held at the Milwaukee Public Museum Friday noon to Sunday night, March 19 to 21, and was most successful in many ways. The number of exhibitors increased by 11 over last show, rising from 59 to 70. The amount of material was greater for this show of two and a half days than the fall show of four days, because replacements were unnecessary. All contributing florists of the Milwaukee Florists Club brought out their finest stock, and many things were grown especially for this show. And lastly, the public came to see it. The first day was a short one, however, there were 22,407 on that day. This was due to the fact that the parochial schools of the city gave their scholars a half holiday to come down and see the show.

On Saturday, 22,502; Sunday, one-half day, 60,316, a total of 105,225. Greatest previous attendance at Spring show was 91,-973, a gain for 1926 of 13,252.

A great deal of interest was shown by the school children, because of a contest among their 5th, 6th, 7th and 8th grade pupils for 12 prizes of Easter Lilies in pots, blooming, offered by the Museum through the courtesy of the Florists Publicity Association. These prizes are to be awarded on the 26th of March for the best essay on "Earthly stars,—the flowers." No public show or gathering in this city called out so many school children as this one has. Thousands of pencils on thousands of note books were flashing, as the children copied names of flowers they meant to use in their essays.

The personal acquaintance of the writer is offered for the fact that the best people of Milwaukee attended this show. The show has always been free from sensationalism and vaudeville methods of attracting the public, yet drawing much newspaper publicity. There has been no direct advertising, and every exhibitor has been satisfied that the tone of the exhibition has been very high and dignified. The staging of the show is due to the good taste of the Aug. F. Kellner Co., of Milwaukee. From Tuesday morn till late Thursday night ten and twelve men were busy transforming the Museum annex and rotunda into something that makes every visitor catch his breath at the first glimpse. The stage this spring was worked out as a formal spring garden viewed from and over a hedge of arborvitae.

A pergola, gazing crystal, drinking fountain and white pigeons added to the spring like touch, of the dutch bulbs, cineraria, narcissi, and cheiranthus allioni in the rockwork at the base.

The entire center of the large hall was filled with several truck loads of large foliage plants and a general assortment of house plants from the Holton & Hunkel Company. This proved to be the butt of many questions from housewives. The side tables in this hall were filled with assortments of orchids, and spring potted plants from many florists. The collection of new cinerarias from Forest Home Cemetery greenhouses was the best that has ever been exhibited in Milwaukee.

The Milwaukee Jewelers association, through Bunde & Upmeyer Co,. made the largest display of accessories ever shown at one of these shows, this year. Ten tables were set, in the rotunda, children's room, and main hall, with proper furniture from the C. Niss Co., and the table services alone were valued at more than $8,000.

The carnations exhibit was as good as a national carnation show with more than a roomfull. Two very fine vases of Radiolite and Betty Lou were personally brought by Mr. A. F. J. Baur & Steinkamp Co., from Indianapolis Indiana. Special mention. must be made of the fine stock of Otto Sylvester, of Laddie and Red Laddie, from Oconomowoc, Wis. There were more than 26 varieties of carnations shown.

Over a hundred vases of sweet peas in excellent quality were exhibited. The list of varieties ran to over thirty. The retailers did some very fine work on centerpieces for table decorations, and the banquet table work of James Fox and Gimbel Bros. deserves especial mention. There were some attractive oddities at the show, such as large orange and lemon trees, ponderosa lemons, and a peculiar African Sacred Lily (Dracunculus vulgaris). The Pernet and Madame Dreux roses came in for a lot of comment from the visitors, as well as the native blooming Showy Ladyslipper from Dick Lietz, the anemones from Fox Point Floral Co. and the Ranunculus Hugo Locker & Sons.

These flower shows have won a place in Milwaukee's affections. It is often questioned whether a pay show or a free show is the best. From the exhibitors standpoint, this show is best, because he reaches ninety thousand people at a minimum of expense,—the stock he contributes. There is no direct advertising. The show is for the good of the business. But neither is there any direct advertising in the National Publicity Campaign of the florists, and yet the majority of florists believe in that. Then, too, it takes the florists to put on a good flower show. City park conservatories in various cities hold their shows, and get very few visitors in comparison to this show, because they do not produce the quality that attracts. They may produce variety and may have the natural setting built up through expensive years of work, but when it comes down to producing prize winning blooms, they are not in it with the commer-

cial florists. That is the answer to small conservatory attendances. Milwaukeeans look forward for months for their free flower show.

H. H. S.

MILWAUKEE SPRING FLOWER SHOW EXHIBITORS

L. E. Olker, Milwaukee—African Lily.

Chas. Oehlenschlager & Son, Oconomowoc, Wis.—Callas and sweet peas.

Sunny Point Floral Co., Milwaukee—Backet of tulips and perennial larkspurs; 20 pots cineraria.

Valley Gardens, Caledonia, Wis.—Eight vases sweet peas.

R. W. Buchholz, Wauwatosa, Wis.—2 pots Amaryllis.

Greenwood Carnation Co., North Milwaukee—8 vases carnations.

Thos. Griebler & Sons, Inc., Milwaukee—6 vases sweet peas; vase of snapdragons; vase carnations; vase pansies; vase of paper whites; 3 pots Easter Greeting Geraniums.

Albin Reinhardt, N. Milwaukee—10 cases carnations; 3 vases sweet peas.

Otto Eggebrecht & Son, Milwaukee—Box Von Sion Daffodils.

Roscoe Godfrey, Wauwatosa, Wis.—Vase of Wards; 4 vases sweet peas.

Gust Pohl, Milwaukee—Vase of Morning Glows.

Riebs Bros., N. Milwaukee—4 vases sweet peas.

Richard Lietz, Milwaukee—Pot Cypripedium spectabile; 13 pots tulips, daffodils and hyacinths.

Frank Zacharias, N. Milwaukee—4 bunches forget-me-nots; vase of Orange King Calendula; 3 vases carnations.

Wm. R. Schroeder, Milwaukee—5 vases carnations.

Grunwaldt Bros., N. Milwaukee—3 vases carnations.

H. Schwebke & Son, Milwaukee—2 vases snapdragons.

Holton & Hunkel Co., Milwaukee—Entire center of large room in foliage, ornamentals, and blooming potted plants.

Forest Home Cemetery, Milwaukee—62 pots cinerarias; 8 pots amaryllis.

C. C. Pollworth Co., Milwaukee—6 vases carnations; 4 vases roses; 12 cineraria; 6 yellow callas; 6 white lilies; 1 schizanthus; 12 ferns; 1 orchid plant; genistas.

Herman Schwann, Cudahy, Wis.—2 vases carnations; 6 vases sweet peas.

Jos. Kowalski, Milwaukee—Basket spring flowers.

Ludington Farms, Milwaukee—Vase of Laddie.

Fox Point Floral Co., Wis.—3 dozen Anemones.

Herman Staeps Floral Co., Elm Grove, Wis.—3 vases carnations.

Kochanski Bros., West Allis—Vase of huge Godfrey Callas.

Loeffler & Benke, Watertown, Wis.—6 vases sweet peas; 4 vases carnations.

Mitchell Park Conservatory, Milwaukee—6 orchid plants; 6 sensitive plants; 6 selaginella plants.

Arthur Arndt, Wauwatosa, Wis.—6 vases sweet peas; 1 ponderosa lemon plant.

Ernst Praefke, Milwaukee—Box primroses; 2 pots Calceolaria; 3 pots Cineraries; Edith Cavill rose.

Lakeview Gardens, Williams Bay, Wis.—Vase Geneva Pink snapdragons.

Norman Schmidt, Fox Point, Wis.—2 pots primroses; 1 of cinerarias.

Eugene Oestreicher, Milwaukee—Four foot cross of white carnations.

E. J. Gregory, Milwaukee—Spring flower basket.

Otto Sylvester Oconomowoc, Wis.—Vases of Laddie and Red Laddie.

Herbert Johannes, Milwaukee—2 boxes primrose; 2 boxes cinerarias.

L. C. Eiffler, Milwaukee—Box each of Hyacinth and daffodils.

Gust. Rusch & Co., Milwaukee—3 vases roses.

Gregerson & Kellner, Milwaukee—Colonial bouquet.

Gimbel Bros., Milwaukee—Banquet table.

F. Gutermuth & Co., Milwaukee—3 baskets spring flowers; 1 box spring flowers; 1 box cinerarias, 1 lily.

House of Roses, Welke & Co., Milwaukee—Vase Coolidge roses.

A. O. Trostel, Milwaukee—Vase of vanilla in flower; 12 cut orchids.

John Rosso, Milwaukee—2 vase Prince of Wales violets.

Currie Brothers, Milwaukee—Basket Pernet roses.

Skinner Floral Co., Milwaukee—Colonial bouquet; basket spring flowers.

Wm. C. Manke Co., N. Milwaukee—4 vases carnations; vase assorted snapdragons; 6 vases sweet peas.

Wauwatosa Floral Co., Wauwatosa, Wis.—9 vases sweet peas; 2 vases carnations; vase of callas.

North Side Floral Co., Milwaukee—Basket of roses.

Echo Flower Shop, Milwaukee—Box of tulips.

Fred Manke, N. Milwaukee—2 vases sweet peas; 2 vases single and double stocks.

Wm. Zimmerman, Milwaukee—Basket display.

Hugo Locker & Sons, Wauwatosa, Wis.—11 vases, amaryllis, calceolaria, genista, lupines, anemones, iris, migonette, Clark's, carnations 3.

Aug. F. Kellner Co., Milwaukee—Entire stage setting; an orange tree. 20 boxes assorted Darwins and hyacinths.

Rudolph Preuss & Sons, Milwaukee—Table centerpieces; Spring basket.

Krosberg Flower Shop, Milwaukee—Table centerpiece.

Chas. Menger & Son, Milwaukee—Trellis box of tulips, pots of narcissus and hyacinth.

Alma E. Balfanz, Milwaukee—Artificial log filled with tulips.

Froemming Bros., Milwaukee—Basket carnations; vase sweet peas.

Mueller Flower Shop, Milwaukee—French bouquet, violets and roses.

Baumgarten, Inc., Milwaukee—Table centerpiece; basket spring flowers.

Lnor Floral Co., Milwaukee—Colonial bouquet; corsage.

Bell Flower Shop, Milwaukee—Colonial bouquet; box hyacinths.

Frank Eberfeld & Sons, Milwaukee—Box primroses. pot primroses; box cineraria; 5 pots tulips.

Edlefsen Floral Co., Milwaukee—Basket spring flowers.

Jos. Aumueller, Milwaukee—4 vases sweet peas.

John C. Rost, Milwaukee—Orange tree.

Baur & Steinkamp, Indianapolis, Ind.—Vase hundred each Radiolite and Betty Lou carnations.

Estelle Gumz, Milwaukee—Spring basket.

James Fox, Inc., Milwaukee—Banquet table setting entire.

H. H. S.

BUSY DAYS

The office of this society had a record run a couple of weeks ago. Over fifty inquiries were answered in one day, and the average for the week was thirty per day.

A LETTER AND ANSWER

"Gentlemen:—Could you please tell me where I could get advice on how to make a garden, what time to plant each vegetable, and how to make a hot bed? Also how to raise plants and shrubbery? Hoping to hear from you soon, I remain,

Respectfully yours,
Mrs. H. G.
New Holstein, Wis.

Dear Madam:—We are enclosing the Wisconsin Garden Book which contains the information which you wish."

There are just a few garden books left, and every Garden Book is a regular book of knowledge for the backyard garden maker.

AN ALL SEASON BORDER

(Continued from page 113)

from seed. If you have a Garden Club and each member tries out a different variety and then exchange plants, you will soon have a beautiful garden; and as you talk over your experiences of your successes and failures—for you *will* have failures, but they are always helpful, really, when you discuss seeds, plants and bulbs, you are bound to be helped. Once in a while have some one who understands the problems you are facing come and talk to you and soon your neighborhood will be noted for its beautiful gardens.

I have tried to answer your questions. If there are others or any thing you do not quite understand this page is always open for questions. I would be glad to see the "page" extend over several pages of questions. We are glad when questions come for it shows interest.

I would also suggest a visit to the Amatuer Exhibit of Flowers at the State Fair. It is a meeting place for flower lovers and there is an opportunity to see many lovely varieties.

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SOMETHING, OR NOTHING, ABOUT COOPERATION

As we have not yet reached that happy state when the average fruit grower is well enough informed to cooperate in demanding that he be not discriminated against in legislation, or in the handling of his crops after he has grown them, it seems to be necessary to take him in hand and compel him to cooperate.

Here is a suggestion: Let the business men, merchants, bankers, lawyers, in the cities where fruit growing is an important industry, herd the growers into a cooperative association and when they have them corralled put leg irons on them so that they will stay put. The weakness of many cooperative organizations is that they seem to be founded wholly on brotherly love.

Almost any fruit grower will join a cooperative association if it offers a chance to get a higher price for his crop than he could get by his own efforts, but the minute an outside buyer comes into the field offering a slightly higher price away he goes. That's why I admire the Wisconsin Tobacco Pool.

William Toole, Senior, of Baraboo died April 7th at the age of 84. Mr. Toole was twice president of the State Horticultural Society and a member of the executive committee for over twenty-five years without interruption, retiring only on the election of his son, W. A. Toole, to the presidency of the Society. An account of his life and services in the field of horticulture will be given in the May number of WISCONSIN HORTICULTURE.

The tobacco grower goes into the pool with his eyes open, its easy enough to get in, but not so easy to get out. A ball and chain is attached to him in the form of a contract and woe betide the pooler who breaks the contract! He is certain to get into court and may even go to jail. Also and furthermore, outside buyers who induce the pool member to break his contract or buy from a pool member are subject to punishment. Now after some years experience with grower managers, the pool hires a lawyer for manager paying him a large salary.

This is as it should be. When the fruit growers get business men to manage their associations better results will be obtained. The amount of salary paid should be a secondary consideration, it's results that count. It may be observed in this connection, however, that a high salary does not *always* mean results. I consider a successful merchant, banker or lawyer better fit to manage the affairs of a cooperative fruit selling association then the average grower. Best of all would be a hard boiled ex-commission man who has reformed and gotten enough but not too much religion.

Then again there is the problem of merging the big growers and the little ones into one organization. If there are one hundred and fifty growers in an organization and ten of them produce fifty percent of the crop, will they be willing to shoulder fifty percent of the grief, and the same percentage of the carrying charges when they could quite as well market their crops on their own account?

It's always the small grower and not the big one who starts trouble, always the small grower who brings in poor fruit and expects the price of first class fruit. So let the big fellows go their way, they are able to take care of themselves, then let some one who has business sense take care of the troubles of the smaller ones. But do not forget the injunction to shackle them securely before trying to help them.

I am not unaware that the sentiments here expressed will be pronounced as rank heresy by those who sit in high places in the Grand Council of Promoters of Cooperation. So be it.

By all means let us have cooperative associations organized for the purpose of circumventing, if we can, the unfair or dishonest wholesaler or retailer, if such exist, for that is one of the purposes of all cooperative associations. But do not look on these as the final solution of the farmers' or fruit growers' problems, only as a temporary expedient.

This is an industrial nation, not is to be, but is such. Industry has not failed to protect itself by securing legislation favorable to its interests. It has accomplished this by intelligent cooperation, by knowing exactly what it wanted

(Continued on page 123)

LOCAL SOCIETIES MEET

Rock County Society met and discussed spraying under the direction of C. L. Kuehner of the Department of Horticulture.

The Dunn County Society, one of our fastest growing locals, met and discussed varieties and culture. They have also planned for their summer flower show. They are showing what a well balanced Society can do.

The Oshkosoh Society met on March first for their annual meeting. We are sorry that we were unable to attend.

We attended a meeting of the Beloit Garden Club, which we hope will be numbered among our local societies before long. The members are real gardeners and for the past two years have been doing good work in pushing the amateur flower garden.

We shall be glad to have news of the locals sent in each month by the secretary or some member. In this way we can establish closer relations between the various organizations. Will you help?

BARABOO MEETS

The Sauk County Horticultural Society had its annual meeting in Baraboo on March 22nd.

The program consisted of musical numbers and talks by Mr. Elmer Ferson, Baraboo; Mr. Phillip A. Wood, Baraboo; and J. S. Potter, Madison.

Following the talks the society held its annual election of officers, and the following members were elected to the indicated offices. Mr. R. B. Griggs, Pres.; Mr. C. A. Hoffman, V. Pres., and Mr. A. J. Gemmill, Sec'y.

The executive committee of this organization now includes four women, bringing the total members to eight. The committee for the coming year is Mr. J. C. Bunn, Mr. H. K. Page, Mr. R. A. Wood, Mr. H. H. Hulbert, Mrs. Augusta Luder, Miss Leissman, Mrs. Reinking, and Mrs. W. A. Toole, Jr.

It is hoped that there will be at least two flower shows in Baraboo this year, and active steps are being taken to promote reforestation, rural school landscaping, highway planting improvements, and home gardens.

The Sauk County Society is increasing its activities and the members realize that they, as a club, can be of great influence in county horticultural matters.

LET'S HAVE A FLOWER SHOW

We who are on the firing line here in the office of the State Horticultural Society have been greatly surprised at the interest shown in flower shows. We have daily inquiries about getting a flower show started; how to go about it.

In the first place there must be some sort of a society or organization to back the show, to say when and where the show will be held, designate classes, prizes, etc.

These things won't simply come out of the air, "drop as the gentle dew from Heaven". Somebody has got to be *it*. Let some woman in the community, who believes in a flower show, appoint herself a committee of one and call in five others, or even two other flower lovers, make up a list of twenty-five to a hundred names of real amateur gardeners and then fix a time and place for a meeting to organize a Garden Club.

The plan of organization should be as simple as possible, adopt a very brief constitution and by laws, elect officers, appoint committees and get to work. *Do Something.*

There must be one who will give considerable time to the movement in the beginning (after the first year it will be easier), who will keep in constant touch with the committees and see to it that things are done.

For the first year one show will be enough and in Wisconsin August is the best month. Peonies, most irises, and roses are gone in August but pretty much everything else is then at the best. Here is a rough sketch of a premium list, very rough, which is intended only for a starting point.

FLOWER SHOW

Best 6 vases gladiolus, 6 varieties.
Best display gladiolus.
Best 6 vases dahlias, 6 varieties.
Best display dahlias.
Best display lilies.
Best display phlox (perennial).
Best 6 vases asters, 6 varieties.
Best display asters.
Best display delphinium.
Best display snapdragon.
Best display zinnias.
Best display other flowers than those named above.

This covers only the popular flowers; as many others may be added as the committee on prizes sees fit.

In addition there should be prizes for table decoration and most artisically arranged vase of flowers.

There should be three prizes for each number for even a third prize is some consolation and lends encouragement to beginners.

The editor favors trophies, either ribbons or certificates not to say small cups, over cash prizes but that is a matter for each club to decide. Dated ribbons, blue, red and white, may be had for twelve to fifteen cents each in small quantities, much less in hundred lots. Metal receptacles may be had at very reasonable prices. This society will buy in wholesale lots and sell to Garden Clubs at cost when the time comes.

We have been promoting Garden Clubs since last November, and the response has been gratifying, but not until last month did we find the key that will unlock a great garden full of Garden Clubs—the Flower Show.

Letters are coming in every day, "We want a flower show but don't know how to start." So we will try to sum up in a few words how to do it.

(1) Leadership, two to six people meet in somebody's parlor.

(Continued on page 122)

COMMERCIAL HORTICULTURE

TAG! YOU'RE IT!

We have information from the English, Australian, and American press that American apples are about to be excluded from England. The reason given is that the apple growers of the United States spray their fruit with arsenate of lead and so contaminate the fruit that it is dangerous to eat it. We may best express the attitude of the English by printing excerpts from some newspaper stories.

London.—If it were not so serious, the great "apple scare" would be the funniest thing of the winter of 1925–26 in Great Britain.

England is nominally a free trade country, but, especially since the war, in various ways it has become more and more a protective tariff country. And when the British want to freeze American goods out of their market means always are found.

For instance, there is used in the United States a preparation which with the addition of boiling water, makes instantaneous coffee. It is guaranteed under our pure food laws. But you can't get a drop of that American coffee in England. You can't even import it. The customs officials keep it out because they say it is improperly labeled.

So with the great apple scare. The apple market of England used to be supplied with the little gnarly, acid apples that grow here. Suddenly the market blossomed out with the beautiful pippins and Jonathans from the United States. There was a regular and steady demand.

And now there is a danger that all these American apples will be shut out of England. Officials have gotten busy and discovered that American apple growers spray their fruit with an arsenate preparation which is a source of danger to the consumer. One paper significantly added.—"Happily it is only American apples which are thus treated."

Happily, also, we may add, the investigation of government officials shows that although the people of the United States eat ten times more apples than do the inhabitants of England no record of arsenical poison as a result of eating apples has been brought to light in this country.

We also find in the Journal of the American Medical Association the following facts as sent to them by their London correspondent.

"The contamination of apples imported into this country (England) from America has been reported. Attention was first drawn to this danger by sickness in North London. The local health officer submitted samples of apples bought in the borough of Hampstead to the public analyist, and these were found to contain on the skin 40 parts of arsenic per million, and 110 parts of lead. This is due to the spraying of the apple with lead arseniate. The public analylist reports state that a person eating one of these apples of an average weight of a quarter of a pound would thereby take a dose of about one-fifteenth grain (4mg) of lead arsenate. As a result the ministry of health issues a warning to local authorities in all parts of the country. Further experiments have proved that the contamination cannot be removed by rain or washing. It is evident that the metal combines with the proteins of the skin to some extent. The report concludes that it is satisfactory to note that the arsenical contamination has been found to be entirely confined to American apples."

This is all very interesting, and the growers in Australasia and Canada who use the same sort of spray to combat chewing insects as we do will be among the interested.

There is no doubt that the ten percent of our normal crop which is usually exported to England would cause quite a stir if it were to be dumped onto our market here at home. No doubt the Australasian growers will feel the bite of the same sort of exclusion. But since they are under the British rule something will no doubt be done, or they will provide a non-poisonous poison for killing chewing insects.

Happily, we may add, we shall not be forced to discontinue the growing of the best apples in the world, nor shall we be forced to eat "little gnarled, acid apples."

But we suppose something had to be done about the American exclusion of foreign narcissus bulbs under quarantine 37.

MORE ABOUT VARIETIES

We are publishing the following letter for the purpose of, or the hope of, getting more opinions from the commercial growers of Wisconsin. We hope that the questions asked in this letter will be answered by all of our growers. You will remember that at the start of the campaign for fewer varieties we stated that we wanted your opinions. We are at last getting answers, and from them a concensus of opinion may be obtained. The great need is to cut down the number of varieties, and any controversy through which this may be done is welcomed in the columns of WISCONSIN HORTICULTURE. We picked the Big Five. Two have been protested already, the Wolf River and the Wealthy. What have you to say about it?

March 17, 1926.

Dear Sir:—My objection to the Wealthy apple for commercial orchards in Wisconsin is not alone on account of the fact that it is subject to blight, but mainly for the reason that from my experience I have found that they are not saleable, or at least that there is no money to be made in raising Wealthy apples. I have talked with the leading fruit frowers in and around Sturgeon Bay and I believe most, if not all, of them feel the same way about the Wealthy apple, and I feel quite sure that if they were resetting their orchards,

that there would not be a Wealthy tree planted.

It is, therefore, not to be wondered at that I feel a little exasperated when I see in Wisconsin Horticulture that the Wealthy is still regarded as one of the four or five desirable apples suitable for a commercial orchard.

I note from your letter of March 8th that you think my Wealthies blighted on account of the fact that they were too well cared for and that if the Wealthy orchard had been seeded at seven years or let run into weeds or grass, the blight would have subsided and that the Wealthy is no more subject to blight than the Snow, and McMcIntosh, or as much as the McMahan and Transparent, and also that you regard the Northwestern Greening as a slower grower than the Wealthy and therefore not so subject to blight as the Wealthy.

In my orchard I have some Snow and McIntosh which received the same culture as the Wealthy which did not show a trace of blight, and also have about two hundred McMahan trees which have been in sod and they have blighted very badly. The clean cultivation of my Wealthy orchard did not make the trees grow more than necessary as they made an annual growth of not more than eight or ten inches while my Northwestern Greening trees made a much greater annual growth and still are free from blight. Trees making no greater growth than the Wealthy did are not being forced and thus, I do not believe that you are right in your theory that clean cultivation of my Wealthy orchard caused the blight.

I wish the other fruit growers in Wisconsin would express themselves in the columns of Wisconsin Horticulture on these questions:

(1) *What has been your experience as to blight in Wealthy trees?*

(2) *What has been your experience as to the saleability of Wealthy apples?*

(3) *If you were resetting your apple orchard, would you plant Wealthy trees for commercial purposes?*

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HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

WHY FEED YOUR GARDEN TO INSECTS?

Garden crops on the whole are very susceptible to insect attack. Besides offering quick growing plants, the garden provides a wide variety of hosts to select from. When one plant gets a little too tough to be relished by the insect it simply moves to another.

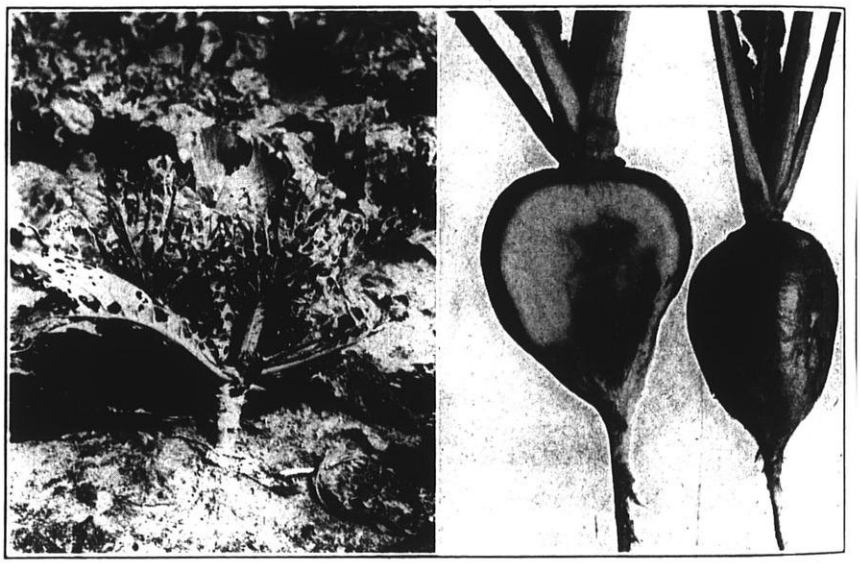
Follow Directions

Upon the discovery that some of his pet choice plants are being destroyed by ravenous insects the gardener's first impulse is to get revenge. He searches his garden manuals for the deadliest poison he can find. The cost does not concern him so much as long as he can be reasonably certain that he will have the satisfaction of seeing the "bugs" lying on the ground about the products of his hard labor, with their "toes turned up," promptly punished for their crime. If immediate results are not obtained there is a tendency to use a much stronger dose than that recommended, reasoning that if a little will kill, a little more ought to bring quicker results. The outcome is that sometimes nearly as much damage is done by spray injury as was done by the pest itself.

It should be borne in mind that the entomologist in working out various recommendations for control has first determined the minimum killing dosage for the insect and then the maximum amount that the plant can stand without injury, and has recommended just as strong a mixture as could be safely used. The killing point of the insect and the amount that can be used with safety to the plant are often very close together and it is for this reason that so much emphasis is placed upon following the recommendations carefully.

Know Your Pest

A poison fatal to one insect pest may be wholly ineffective against another. If the insect devours and swallows portions of the plant, as do various caterpillars, beetles, grasshoppers, etc., it can generally be killed with some arsenical material applied as a light coating to its food which will act as a stomach poison. Calcium arsenate and lead arsenate are the two most generally used.



The work of two imported cabbage pests. The imported cabbage worm (left) and the cabbage maggot (right.)

On the other hand, if no part of the plant seems to be consumed, but it just appears to wilt, dry up and die, probably the insect in question instead of being equipped with strong jaws has a tiny tube-like beak through which it sucks the plant juices, after penetrating the plant tissue. It is evident that covering the surface of the plant with a stomach poison would be useless for the control of a pest of this type. The various aphids, leafhoppers, scale insects, etc. are examples of this group. They must be controlled by spraying with a contact insecticide such as nicotine sulphate, soap, lime-sulphur, etc. or dusting with nicotine dust, sulphur and the like. These substances kill by suffocation and by corroding the insect's tissue.

When the gardener looks into the history of the pests that cause him so much aggravation, honest sweat and expense, and finds that about 80% of them have been imported from foreign countries and now have become established in this country, he wonders why Quarantine 37 has any objectors. He feels, like some of the rest of us, that we have enough pests to deal with already without allowing any more "loop-holes" for their entrance.

Know Your Poison

It is true that some arsenicals are much quicker poisons than others. Paris green, for instance, kills much sooner than either arsenate of lead or calcium arsenate, but on account of its larger percentage of free soluble arsenic it cannot be used on the foliage of some plants without causing severe burning, and hence it is not recommended for such plants. Eventually the slower poison will usually be found to be just as effective since the "bugs" become sick about

as soon in one case as in the other and although they may not keel over as soon, they stop feeding and usually become inactive, dying without doing further injury. Paris green costs more than the other arsenicals named above and does not stick to the foliage after a rain as well as these do.

A mistake made frequently by the gardener is his attempt to apply the insecticide without the necessary and proper equipment. None of the arsenicals recommended for spraying garden plants are soluble in water. The water is simply used in spraying as a carrying agent to distribute the small particles of poison over the foliage in small amounts, just as lime and gypsum are used in the case of dusting. Unless the spray material is kept stirred continually and thoroughly during its application the poison all settles to the bottom of the container just like so much sand in muddy water. It may retain enough of the poison to give the spray its characteristic color but not enough to be of any value as an insecticide. Set aside a sample of your spray mixture in a glass container and see for yourself what takes place. You will then better appreciate the value of thorough agitation in the application of an arsenical spray.

Be Prepared

Timely spraying is the best insurance that can be carried. Why spend your money and your time planting and cultivating a garden without adequate protection against insect enemies? Don't wait until the pests have done sufficient injury to attract your attention, but profit from your past experience and be on the lookout for trouble. Have a supply of spray material and some equipment ready for any emergency.

Every gardener should keep on hand, in a safe place out of the reach of small children, at least two insecticides, calcium arsenate and nicotine sulphate. An occasion for their use will arise time and time again every year and a little bit of attention given your garden when a pest is first detected will often prevent serious losses. It is just like fighting a fire—the sooner you start to fight it the easier it is to check.

For small gardens the equipment should consist of a compressed air sprayer of at least one gallon size, the three gallon size is most efficient. In order to get the spray on both sides of the foliage the sprayer should be equipped with a short flexible hose of at least three feet in length with an angle nozzle. Sufficient pressure should be maintained to form a fine mist, otherwise the material will collect in large drops and run off the foliage carrying the poison with it. A good hand duster will be found about as satisfactory if the various prepared dusts are available. Dusts should be applied early in the morning while the dew is still on.

The use of cultural methods in the control of garden pests is of great importance. Burning of crop remnants in the fall or very early spring destroys the overwintering forms of many of these troublesome insects. The various stalk borers that can not be controlled by spraying once they have become established within the stem of the plant can often be eliminated in this way. Where a borer is discovered in a choice dahlia it can often be exterminated without injury to the plant by injecting a few drops of carbon disulphide into the entrance holes and plugging with a piece of adhesive tape to retain the gas formed.

Among the first pests met with in the spring are the maggots that attack the radish, cabbage, cauliflower and onion. The first three of these are attacked by the cabbage maggot and the latter by the onion maggot. Infested plants are stunted in growth, wilt during the

heat of the day and when severely infested are killed outright. The injury is done by the young larvae or maggots of a fly of the general appearance of the house fly except it is smaller. These pests can be controlled by corrosive sublimate. Use one half ounce dissolved in five gallons of water for each two hundred plants. Simply apply about one-half of a teacup of the poison at the base of each cabbage plant, or in case of radishes or onions, pour it along the row at the rate of a gallon to thirty-five feet. For early cabbage apply soon after setting out, and for radishes when the plants are well above ground.

To prevent damage to potatoes by leaf hoppers, potato beetles and flea beetles, spray with a mixture consisting of Bordeaux and calcium arsenate when the young potato beetles appear, or when the potatoes are about six inches high. This should be repeated twice at two week intervals. The under side of the leaf must be covered thoroughly to be effective. The calcium arsenate should be used at the rate of twelve level tablespoonfuls with twenty-four tablespoonfuls prepared Bordeaux in each gallon of water. Prepared Bordeaux can be purchased with the poison already in it if desired. Hopperburn on dahlias can be controlled by this spray as well. Newly set tomato plants sprayed with this mixture are protected from being riddled by the flea beetle which frequently destroys them shortly after being set.

The striped cucumber beetle can be brought under control by dusting the vines with a mixture consisting of gypsum (land plaster) 20 parts and calcium arsenate one part. The treatment should start as soon as the third leaf appears and be continued at intervals of a week until the beetles have entirely disappeared. Lime has a tendency to stunt the growth of cucumber and melon vines and should not be substituted for gypsum if the land plaster can be obtained.

The cabbage worm can be controlled by spraying or dusting the plants with calcium arsenate. The poison should be used at the rate of four tablespoonfuls to a gallon of water. On account of the waxy nature of the leaves, laundry soap at the rate of an inch cube per gallon of spray should be added to facilitate spreading and sticking. If aphids are present these can be killed at the same operation by adding two tablespoonfuls of nicotine sulphate to each gallon of the mixture. If dusting is preferred one part of calcium arsenate should be mixed with four parts of lime and dusted while the dew is still on.

Asparagus beetles, currant worms, rose slugs, blister beetles and tomato worms are other garden pests that can be held in check by the use of calcium arsenate at the strength recommended for cabbage. The corn earworm can best be controlled by dusting the poison on the silk.

E. L. CHAMBERS.

LET'S HAVE A FLOWER SHOW

(Continued from page 117)

(2) Telephone everybody in town who grows flowers, also the newspapers, that there will be a meeting next Wednesday evening, or next Sunday afternoon, to talk about a flower show.

(3) Organize the Garden Club.

(4) The Club to sponsor the show.

(5) It's late in the season but not too late—get busy.

(6) Call on State Horticultural Society for help—"We answer questions."

(7) Don't leave it to George, do it yourself.

ROCK COUNTY SPRAY RINGS

Under the guidance of R. T. Glassco, county agricultural agent, Rock County, has taken the lead in the number of spray rings. Twenty-three power spray rings are now in use with very satisfying results. Mr. Glassco has also carried on pruning demonstrations.

SOMETHING, OR NOTHING ABOUT CO-OP.

(Continued from page 116)

and going out to get it. Agitators and reformers tell us that the means employed are unfair and dishonest. Maybe. One thing is certain. Industry is growing while Agriculture is standing still, and unless the farmers and fruit grower of the United States are willing to drop to a poor second place and not long hence reach the low level of the peasantry of Europe they must read, study, think, then the farmers of the nation will be able to cooperate intelligently, to demand their fair share (and no more) rather than reach out a begging hand to Government.

VILLAGES AND SMALL COMMUNITIES, TAKE NOTICE

Don't feel that the cities and larger towns are the only communities that can have flower shows. The smaller towns offer greater opportunities than the larger ones. Every town or community of 100 people or more should have a flower show. Read how in another column.

PLENTY OF WOOD

One of our members reports that he removes approximately enough brush in pruning his orchard each year to make a brush pile of 460,000 cubic feet. Three men do the work. Quite a bonfire if it was burned all at one time. Speaking of pruning, is yours done?

It isn't too late to plan your garden. Every flower lover should have a garden whether it be large or small. But get busy, Spring's almost here.

"The good die young, no matter how old they are."—Elbert Hubbard.

SPRAYING TREES IN BLOOM INJURIOUS TO HONEYBEES

When spraying fruit trees, care should be taken to do the work at a time when there is the least danger of poisoning the honeybees which visit the blossoms and which are very necessary for the pollination of the flowers, says the United States Department of Agriculture. Spraying fruit trees while in full bloom with arsenicals is particularly injurious to bees, according to tests which have been completed recently by the Bureau of Entomology.

Of course the beekeeper does not want his bees poisoned, says the department, because as a result his honey crop is reduced. The subject should be of even more interest, however, to fruit growers because with the loss of the honeybees they lose the most effective means of pollination in their orchards. In this respect the beekeeper, the fruit grower, and in fact everyone is benefited by honeybees.

The effect of arsenical sprays on the mortality of honeybees has long been debated, but only a few systematic investigations have been made to aid in settling the dispute. In the hope of answering definitely some of the questions so long debated, these tests were conducted. While they are limited in their scope, they do enable the department to make some recommendations.

Spraying apple trees during full bloom is not recommended because the codling moth can be as well controlled by spraying when 90 per cent of the petals have fallen, and because spraying when the trees are in full bloom is injurious to insect pollinators.

—*U. S. D. R. Bul.*

MORE ABOUT VARIETIES

(Continued from page 119)

If we find the consensus of opinion among the fruit growers in Wisconsin is that the Wealthy is very subject to blight and also that they are hard to sell, and that there is no money to be made in raising Wealthy apples, then let us look the question fairly in the face and leave the wealthy out of the list of apples to be grown in Wisconsin for commercial purposes.

The Wealthy is, of course, a wonderful apple for home use but that, in my opinion, is all it is good for.

Yours very truly,
F. L. B.

(Editor's Note:—All correspondence on this subject will be printed unless the writer specifies otherwise.)

A very interesting and instructive bulletin on Garden Irises has been released by the U. S. Department of Agriculture at Washington. The care of the different varieties and suggestions as to their use is included in the publication. It is Farmers Bulletin 1406 and may be obtained from Washington at ten cents per copy.

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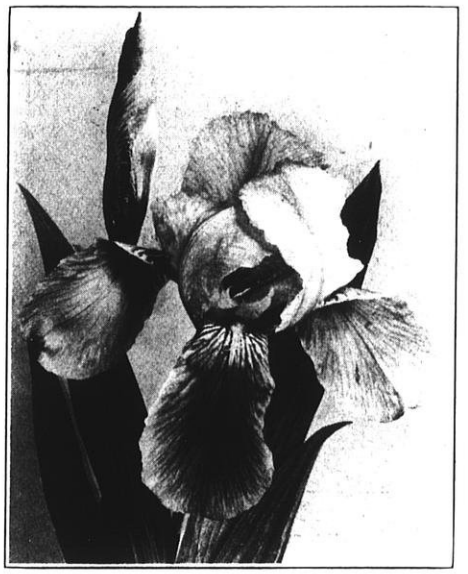


WILLIAM TOOLE, 1841-1926

William Toole, for many years prominent in horticultural work died at his home in Baraboo, April 7th, aged 85 years. The funeral was held in the Presbyterian Church in Baraboo, Saturday, April 11th. Hundreds of friends attended. The floral were banked below the pulpit. On the rough-hewn silver gray casket rested a blanket of pansies, only that. The minister spoke in part as follows:

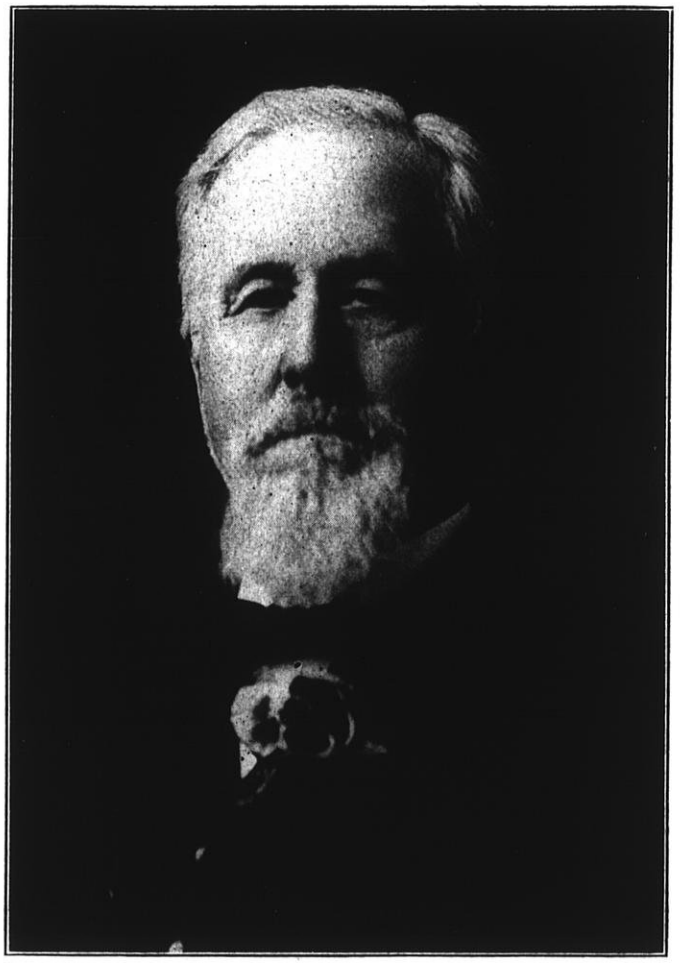
"William Toole was born September 21, 1841, at Radcliffe, a little village near Manchester, England. In 1843 he came with his parents and brothers and sisters to Providence, Rhode Island, where he spent his boyhood. In 1859 the family moved westward to Wisconsin, where they lived a few miles east of Reedsburg for a time. In 1863 they moved to a farm two miles north of Freedom and in 1887 to the present home of W. A. Toole.

He was married in 1872 to Mary Crowley of North Adams, Mass., and to them was born a son, John P. Toole. The mother died very shortly after the birth of the baby. Later he was married to Mrs. Elizabeth Marriott Williams and to them was born W. A. Toole and E. A. Toole. Besides the widow and the three sons he leaves a stepson, R. H. Williams. There are seven grandchildren and six great grandchildren.

Mr. Toole was a great lover of nature in all its aspects and throughout his life was a keen student in the broadest meaning of the word. In addition, he was deeply interested in his fellowmen. In a quiet way he used his influence for the advancement of Agriculture and Horticulture and for the development of the social life of the community. It was this spirit which led to his pioneer work with Farmer's Clubs. His efforts were recognized by the University of Wisconsin when in 1911 they conferred upon him "Honorary Recognition" for his work in the advancement of Agriculture and Horticulture. Other honors have been extended to him, including the presidency of the State Horticultural Society.

During the last years of his life Mr. Toole devoted his efforts to the selection and improvement of our wild flowers, and to the preservation of native vegetation and spots of natural beauty.

To the very last, his thoughts were of future work rather than in retrospect of the past. Had he possessed more personal ambition for greatness he might have been more widely known."



WILLIAM TOOLE

WILLIAM TOOLE'S ASSOCIATION WITH THE STATE HORTICULTURAL SOCIETY

The early records of the State Horticultural society are lamentably incomplete, and only by persistent search has the following been found: Mr. Toole's name appeared first as a member in 1885, though the volume for 1880 contains a paper by him on native ferns. The forty-five volumes since 1880 each includes one or more contributions by him on the cultivation of plants.

In 1889 he was elected a member of the Executive Committee and served in that capacity for twenty-six years. In 1897 he served as vice-president for one term; elected president January, 1909, and re-elected in 1910; 1917 accorded honorary life membership. Served on all important committees for over twenty years.

His presence, not less than his exhibits of pansies and other flowers, at state and county fairs, was in inspiration to all who met him. He contributed to the success of Wisconsin's exhibits of fruits at several national shows.

In 1919 he presented at the winter meeting a paper on "Domesticating Our Native Flowers" which was followed by "Native Shrubs of Wisconsin" in 1920; "Our Wisconsin Native Trees" in 1921;

"Cultivating Our Native Ferns" and "Our Native Climbing Vines" in 1922. These five papers were published by the State Horticultural Society in pamphlet form in 1922, under the title "Native Plants of Wisconsin Suitable for Cultivation."

Mr. Toole contemplated a revision of these papers and the addition of "Color in Our Native Landscape", which was read at our winter meeting January 1925, and "Moisture Loving Native Plants", his last contribution prepared for the Eau Claire Convention program November 1925, read by President W. A. Toole and published in March 1926 Wisconsin Horticulture, page 95.

Mr. Toole's contributions to the literature of horticulture were by no means confined to the publications of this society as he was a contributor for over half a century to many of the leading agricultural and horticultural journals of this and other states. He did not write for pay, did not ask the publisher, "how much do I get?" but wrote because he wanted others to know what he knew. He preached the gospel of Beauty.

IN THE COMMUNITY IN WHICH HE LIVED

He was instrumental if not wholly responsible for the founding of the Sauk County Horticultural Society about 1875. (The records here are fragmentary and incomplete.) This society flourished for several years and like the Madison Horticultural Society and many others founded in that period fell asleep to be revived later.

About twenty-five years later he founded the Skillet Creek Farmers Club at first a modest rural community club, meeting at the homes of members, which has grown not only in numbers but in influence so that now the annual picnic of this club, at Devil's Lake, is attended by thousands, and the proceedings are reported by United Press and Associated Press bureaus. Men of national prominence consider it an honor to be invited to speak at these gatherings.

At our winter meeting in 1914, Mr. Toole said: "There are but few neighborhood communities of size large enough to sustain an active rural organization with thoughts altogether centered on horticulture, and there are none which do not have a considerable interest in all the various influences which concern the mutual welfare of the average rural community.

"The bringing together of young and old of both sexes, which prevails in any well organized farmers club, develops a feeling of comradeship which adds much to the enjoyment of the community."

So William Toole's ideas concerning the betterment of rural life preceded by exactly a quarter of a century such movements as the Country Life Association. His efforts in founding and guiding the destinies of the Skillet Creek Farmer's Club of Sauk County will be his greatest monument.

AS A NATIONAL FIGURE:

William Toole, on account of his cultivation of the pansy and thru his writings, became nationally known among horticulturists.

In 1911 he received honorary recognition by the College of Agriculture for meritorious service in the field of horticulture

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DELPHINIUMS

Henry Tolman

The Delphiniums I consider one of the best perennials to grow, for there is nothing more pleasing than to see masses of the various shades of blue flowers in early summer and also from seedlings later. To obtain the best results they should always be planted in masses, and they make a wonderful display if Lilium Candidum are planted with them. Perhaps a few cultural notes may be beneficial to some of our readers. These I will confine to the first year (seedlings).

Sow the seeds the last week in March or the first week in April, in flats covered about the depth of the seed, in a compost of three parts well decayed sod, or a good soil, and one part leaf-mould, with enough sand to keep it porous and place in a greenhouse or hot bed having a night temperature of 60 degrees Fahrenheit. Give a thorough watering and keep the flats covered with glass and paper until the seedlings begin to show above the soil, turning the glass twice daily to let off the moisture. Mice are very fond of these seeds so the glass will keep them out, and when the seeds have made a start put the glass edgeways around the flats to protect them from mice.

At this season of the year be on the lookout for dampness, and as a preventive dust the seedlings occasionally with pulverized charcoal, especially after watering them. When the seedlings are large enough to handle transplant in flats about half an inch apart, using compost as before, by so doing will encourage root action. Give a thorough watering and a little shade for a few days when the sun is bright.

When the seedlings begin to touch each other, again transplant in flats about two and one-half inches apart, give a thorough watering and shade for a few days when the sun is bright. When the plants are well established and the weather favorable, if you have them in a greenhouse, transfer them to a hot-bed, giving them plenty of ventilation by degrees, this will keep them sturdy always bearing in mind that these plants are perennials.

About the second week in May these plants should be planted outdoors, and if they are given a nursery bed the first year, so much the better, planting them in rows two feet apart and fifteen to eighteen inches apart in the rows.

Give a thorough watering as you proceed with the planting; and any other time when they need it.

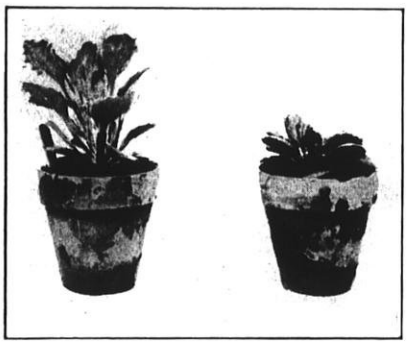
Never neglect the cultivation, and when the hot weather comes along give them a mulch, old hotbed manure is good for this. Do not apply too heavily, just enough

so you can cultivate, and when the mulch is disappearing apply some more. I might say cultivate these plants weekly until they come in bloom.

When you see the first signs of flower spikes, apply a little sheep manure between the rows keeping it away from the stems, using it very lightly and often.

When the flower spikes are about eighteen inches high, they should be staked, not only to keep the blooms in good shape, but to protect the crowns for another season. Do not permit these plants to produce seed for it will weaken them for the following season.

Might say I produced flower spikes of the Delphinium last year five feet in height, five months after sowing the seeds.



ASTER YELLOWS

We have had much to say about the disease known as aster yellows, in fact we had the first important word to say; other horticultural papers are now trailing along. All we had to say we learned from Dr. L. O. Konkle of the Boyce Thompson Institute of Yonkers, N. Y. The last word has not been said but there is one "word" that needs be said over and over, viz. that one of the important steps in the control of the disease is the "rouging" or pulling out of diseased plants *early in the season.* Study this picture, which was printed in April Wisconsin Horticulture and reprinted here for your benefit.

The plant on the left is a diseased plant, the leaves are upright, *vertical;* the one on the right is normal, indicated by the *horizontal* growth of the leaves. Pull up and burn the diseased plant as soon as found because the disease may be transmitted from it to the healthy ones alongside it.

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

"If you and I, just you and I—
Would smile instead of fretting."

I haven't any idea who wrote the words, nor what the rest of the poem is like. I was hurrying down the street a few weeks ago when my eye caught those two lines in a hasty glance at an array of framed poems in the window of an art store.

In the busy weeks that have followed the lines have returned persistently. "If you and I, just you and I, would smile instead of fretting." Just you and I means so many of us. If we refused to find fault, to criticise unkindly, if we persistently smiled at the little hateful, disagreeable things that usually fret us, presently they would fade away, and how much happier we would all be—"If you and I, just you and I, would smile instead of fretting."

A PERENNIAL BORDER

A new member asks this question. "I want a border of perennial plants. What shall I do—buy the plants or raise them from seed?

Ans.—You can do either or both. The easiest way is to decide on varieties wanted, colors, and number of plants, then send your order to a reliable grower. If you have the ground well prepared before the plants come then set them out carefully. Of course your border is made; of course it needs care, cultivation, water and fertilizing whether the plants are ordered from a grower or raised from seed in order to grow in beauty year by year.

Or you can order some plants especially those varieties most difficult to grow and raise some of the other varieties from seed, sowing the seed in boxes in the house or in hot-beds or cold frames always remembering that it is very important to buy good seed. Poor seed is dear at any price. Many perennial seeds are slow in germinating but do not be discouraged and neglect your seed boxes or frames. I would not advise sowing too many varieties at one time, unless you have had considerable experience in raising plants from seed as one or two varieties of well grown, thrifty plants will make a better showing and give more satisfaction than a lot of sickly stunted plants.

When planting your seedling plants in the border, give plenty of room and remember that they will grow. You can fill vacant spaces with annuals in order to have plenty of bloom in the border.

Should you decide to raise all your plants from seed the annuals will encourage you by giving a gay mass of blossoms the first year. Personally I would choose the second method of planting the border by ordering peonies, iris, lilies, funkias, bleeding heart, shrubby clematis, phlox and Astilbe as a nucleus, then adding groups of those plants I admire most by growing them from seed. For in no other way can the amatuer gardener become intimately acquainted with his plants. Besides you will grow dozens of plants from seed, and thus have much more beauty in your gardens. Too many of us feel that money spent for flowers is an extravagance, something we need to apologize for, when we really should be making excuses for not having flowers, shrubs and trees about and in our homes. The following varieties germinate quite easily and will make strong

blooming plants the second year. Aquilegia or Columbine; Alyssum Saxatile, Coreopsis, Shasta Daisy, Myosotis or Forget-me-not, Pyrethrum, Delphinium, Oriental Poppy, Arabis Alpina. They will also give a long period of bloom.

A SPRING DAY IN THE COUNTRY

Eugenia C. Gillette.

That broad path across the marshy
bit at the foot of the hill,—
Between the rise to the stile and
the ridged rim of the little
lake,—
Is it celestial Mosaic? Is it heavenly Cloisonne?
No finite craftsman could fashion
its exquisiteness—
The gray bleached grass blades
athwart the oozy sod
More lovely than platinum,—more
choice than silver settings
For the emerald green, jade green,
greenstone green of the moss
set in,—
Precious and semi-precious greens,
but priceless all—
The red, red halberd heads of
spring flushed sheep-sorrel
Hugging flat to the ground,—flat,
and small and lovely.
A grayish frog dazedly emerging
from its burrow,
Blinking at the sunshine, squats
motionless and happy
While a friendly human finger
gently strokes the white throat
of it.
In the little spring runnel at the
foot of the sleeping shadblow
tree.
Schools of tiny new-born fish with
new tiny might
Strive and strive to go against the
lilliputian current
And are swept back again and
again in an undiscouraged
circle.
Meadow lark, Redwing, Kildeer
and Mourning dove
Song sparrow, Blue bird, at their
matins, make the heart to
sing—
It's a bit of an everyday, somewhat bleak God given Spring
day in the country!

LILIES IN ROCK COUNTY

Mrs. E. M. Livingston

I have grown many lilies with fair success. The old-fashioned tiger lilies are fine here, often growing to a length of seven feet or more. I think there are different varieties, as some grow only 3 or 4 feet. I let them scatter their own bulblets, and also bring in pocketfuls from the farm and just toss them about among the shrubs, and enough grow to make a fine display all about the place. The double tigers I am more careful of. I take the bulblets and sow them in drills and later thin and transplant. These stand about 4 feet. Sometimes the stems are double from the ground up and branch at top. I had such a stalk one year with 47 blooms, most of them open at once. The flowers are more lasting than the single ones. Elegans, in a variety of colors from brilliant red, and an early variety, coming with the late irises, to a short orange colored one, very late, do well here.

Speciosums do not survive for me longer than three years but are well worth growing. I know a garden where they have lived and increased in beauty year by year.

The Madonnas do very well here and have never had the blight. I can't resist cutting them and it is not good for them. (Or is it, *Editor.*)

The Regals I have grown from seed and also set medium sized bulbs. Each year they promise flower stalks but sit down on the job and give no bloom.

Henryii I have planted over and over but it never shows up in the spring. O, yes, I've sulphured it and set in up-right and on the side. I even tried it upside down. It will not grow for me.

My Auratums are my triumph. Have given me continuous bloom for 11 years and were once moved twelve miles at that and they bloomed just the same. Here they give me from one to three blooms on a stalk and grow about 2 ft. high. They send up more flower stalks each year. On the farm they grew much taller and often had 5 or 6 blooms to a stalk. I am usually obliged to cut these also as showers ruin them and winds destroy the beauty of their heavy heads by beating them against adjoining shrubs. Perhaps that is why they grow no taller.

Six varieties of hemerocallis (not true lilies) do well here and give quite a lengthy season of bloom.

Also a big bed of white Day Lilies back of the house give me "sweetness and light." Borders of the little autumn flowering purple ones edge many of my borders making fine division from grass and abundant cut flowers at an off season. Also have the variegated leaved ones for which I do not care.

Also have a hardy amaryllis and other *near lilies* of which I will not speak.

Easter lilies planted out often give second bloom in late summer, but do not live through the winter.

Altogether I have lilies from iris time sometimes until frost takes the last buds of the speciosums. What more could I ask?

This advice was given to commercial men in a florist trade paper: "When plants get sick, fire them out and forget them." It's worth considering for home plant growers too. Keep the plants *well* by good care, which means attention to water, temperature, and light, and a bath now and then with soapy water and tobacco. If you fail to keep them healthy, find wherein you've failed, then fire them out, get new ones, and treat them better. Most plants should be repotted with fresh soil each year.—N. D. Hort. Society Letter.

There is too often an over-emphasis on the health value of a food to the exclusion of the appetite appeal. People rarely eat what is good for them. They eat what they like, and if it is good for them, fine! If not, well—it's fine for the doctor.—Agnes Carroll Hayward.

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

DOES NURSERY INSPECTION PAY?

The beauty of a tree or shrub is usually never fully appreciated until it becomes destroyed by some cause or other. Then its absence seems to unbalance the whole landscape. Even the birds appear to be restless and at loss to find a substitute for their former favorite retreat. You never realized that the loss of a single tree would make so much difference in the appearance and shade in your yard. And yet, how much attention do you give them? Usually they are too near gone to save before you come to their rescue. Make an inventory of your trees and shrubs at least once a year and then you will avoid such losses.

We recall the experience of one of the farmers in a southeastern county of this state where we were carrying on some San Jose scale control work. This farmer had a fine mountain ash tree in his yard that he had been watching grow for some twenty years. He said he had watched it grow from a mere whip into a towering tree and that it was the pride of his farm, loaded each fall with its golden clusters of seed long after its leaves had fallen. It had looked a little sickly, he said, for the past few years but he had attributed it to drought. Last spring it started to leaf-out as usual and then died. Upon holding an "inquest" he discovered a peculiar "scab" encrustation upon the bark and twigs that did not look natural, so he decided to send specimens into Madison for a "tree expert" to look at.

In a short time a letter was received from the State Entomologist stating that the twigs had been examined by him and were found heavily encrusted with San Jose scale, an insect which has a very limited distribution in the southern part of the state and which is a very serious pest.

A copy of bulletin number 73, The San Jose Scale in Wisconsin, issued recently by the State Department of Agriculture was enclosed, which gave a detailed account of the pest's habits, its life history and control measures.

In the meantime in order that no time would be lost he had purchased another fine tree of this same variety from his local nurseryman and had set it out in the same spot.

After reading over the bulletin on the subject he saw clearly the mistakes he had made.

The first crime was committed when in violation of the state nursery inspection law established for the purpose of his protection, he accepted and transported a couple of innocent healthy looking plum seedlings from a relative in one of the San Jose scale infested villages and smuggled them on to his premises.

He "got by" without getting caught by the "strong arm of the law", and thought he had saved a couple of dollars but he found these trees very expensive before he got through. The plum seedlings were so badly encrusted with this scale that they succumbed to it the first year. Since he had set these trees in his chicken yard where they were not in his way they were still standing as evidence of their part in the disaster that followed, at the time of our visit five (5) years later. As the birds play a major role in spreading the scale from tree to tree and as much of their time is spent about the chicken yards picking up food intended for the chickens, these trees were set where they could do the most damage. The young mite-like scales crawling about ruthlessly around the already overpopulated and dying plum seedlings found themselves being accidentally carried to new and much more promising feeding grounds.

After it was too late he realized that a little care at the time the tree first began to look sickly would have saved the tree he wouldn't have sold for a couple of hundred dollars. Now it will take at least twenty years to replace it with a tree of equal size and beauty.

With the scale on his premises it will be necessary now to spray the orchard and all of the host of plants he has with a dormant spray for at least two consecutive years to get it under control in order that any of them can exist. By very careful spraying it can be eradicated, but it will require unusually thorough spraying over a period of two or three years. The principal host plants in Wisconsin are listed in the bulletin mentioned above and include practically all of the fruit trees and shrubs, such as apple, plum, pear, peach, currant, gooseberry, rose, lilac, etc. In fact, there are over a hundred host plants recorded in literature as being attacked by this pest.

This is a costly experience and one that occurs altogether too frequently. All of this loss and work was caused by taking a chance on questionable nursery stock. Figure out for yourself what these trees would cost you if you had them on your premises.

This trouble could have all been avoided if this farmer had simply applied for inspection of the trees. The inspection would have been made without charge by the nursery inspector on his regular rounds during July and August. If he had wanted to move the trees before the regular inspection season he could have sent them express prepaid to the State Entomologist, Capitol Annex at Madison and in case they had been found clean they would have been forwarded to him express collect. These particular trees would have been burned at Madison, and the owner would have then only been out about 60 cents.

Where the shipment is large enough to warrant, an inspector will be sent any time out of the regular inspection season when an inspection would be practical providing the applicant will agree to

pay the traveling expenses of an inspector from Madison and return.

It is evident that the cheapest way to secure nursery stock is to buy it from a reliable inspected nursery. Every certified nursery in this state is inspected at least once each year and no licensed nursery in Wisconsin has any San Jose scale on its premises.

Furthermore, any tree or shrub having any dangerous insect pest or plant disease upon it is destroyed or treated prior to shipment under the direction of the State Entomologist. When you buy from a Wisconsin licensed nursery you are protected against misrepresentation.

A list of growers and dealers of nursery stock in this state can be secured upon application. A nursery agent having a "good line" and some pretty pictures can make his stock fit your wants in fine shape and like in every business there are a few "crooks." There are reliable agents innocently representing unreliable nurseries and unreliable agents representing reliable nuseries. If in doubt ask the agent for his credentials. All agents of nurseries licensed by this state or representing concerns certified in other states are registered in the State Entomologist's office and provided with a card showing that they have agreed to comply with the regulations pertaining to the sale of nursery stock in Wisconsin.

Any misrepresentations or failures to live up to written contracts should be promptly reported for investigation and adjustment.

E. L. Chambers.

OVERHEAD IRRIGATION

Read at Annual Convention by J. R. Williams

Irrigating is a difficult subject to discuss, owing to the many essentials that govern it. There is the soil, particular crops, weather conditions, water supply and last but not least the market conditions.

Light soils are more suitably adapted than heavy soils care should be taken not to irrigate too heavy at any one time because of leaching the soil, and still enough moisture should be applied to encourage rapid growth, and make fertility available. This may only be determined by experience and nature of soil.

I have grown nearly all garden crops under irrigation, vine crops, onions, cabbage, cauliflower and root crops can be watered while sun is shining. Crops such as tomatoes, beans, potatoes, egg plant and peppers must be watered during cloudy weather or in the evening or night. These crops are subject to blight when watered during sunshine. The amount of water applied to these crops is determined by the nature of the crop. Cool weather of course does not call for as much water as warm or hot weather. Maturity of the crop is oftimes gauged by the amount of water applied under different weather conditions. A crop may be lengthened in maturity, making it to late, by water application in cool weather. This is one phase of irrigation that is entirely gauged by the season. Seasons being as radical as this past season, make it difficult to explain how to irrigate to suit the season.

The water supply is the main issue of irrigation. An unlimited supply of water at all times must be avaiable in large quantities. Many growers have been deceived by their water supply. In most cases being short at the most needed time, when it is hot and dry.

Irrigation is a large item of expense, so consequently the grower does not want to irrigate crops that are going into a flooded market which we found very frequently this year. He therefore must be a good judge of market conditions.

I have found the overhead pipe, nozzles, fittings, posts and cost of erecting comes to approximately $300.00 per acre. This does not include the mains, power plant and pump.

Above all things overhead irrigation must be attempted only by good stickers for there are years when the profits are not very encouraging.

EAT FRUIT AND KEEP THIN

Those seeking to melt the too abundant if not too solid flesh that surrounds them find a valuable aid in most of the fruits except bananas, which are largely made up of starch and fattening. Sweets are craved by every human being and are a necessity for health and vigor. But sweets are menaces to the sylph-like figure if taken in the ordinary form of desserts, cakes, pies and the like made from sugar.

They are religiously forbidden by those directing the diet of the man or woman determined to reduce the waist line and other too opulent curves. But the sugar must be taken somehow and fruit offers the solution and in a form which does not put on fat.

A diet recommended consists of fresh fish, lean meats and chicken, eggs, bread in small quantities when stale or toasted, fresh green vegetables, and all kinds of fruit except bananas. Fruits both fresh and stewed without sugar are permissible in the diet of the person seeking to grow thinner.

An apple or a bunch of grapes is a life saver when the pangs of hunger set in between meals because they can be eaten without the danger of undoing the work of abstinence from the fat-forming foods.

Baked apples, grapes, and the pulp, grapefruit, grapes, and the small fruits eaten without sugar or cream are all easily digested and will not add an ounce of superfluous weight. If thoroughly ripe so that the fruit sugars are properly developed they will supply a sufficiency of sweets to the dieting person and satisfy the craving.—*A. P. S. News Bulletin.*

The radish maggot may be controlled by pulling all the radishes in the bed as soon as the crop has matured. Leaving old plants of any kind in the garden after they have passed their usefulness is inviting trouble.—N. D. Hort. Society Letter.

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WILLIAM TOOLE

A TRIBUTE

BY FREDERIC CRANEFIELD

Twenty centuries ago a Roman Tribune said: "we are here to bury Caesar, not to praise him."

Too often we hear only fulsome praise on the death of a man who has been prominent in the affairs of men and too often his real worth is obscured by eulogistic phrases.

I knew William Toole well and yet I find it difficult to set down here what I believe to be an expression of his real worth. It is too early. Twenty-five years from now when someone writes the history of horticulture in Wisconsin, when the influence of his life is still a force for good, a clearer estimate may be made of his life work than now.

In his boyhood he was denied the privilege of an education. Circumstances forced him into employment uncongenial to his tastes. No one urged or taught him to leave the place in which he found himself but by force of will he lifted himself out of his surroundings. An elemental urge within him, a "throw-back" from the generations of gardeners before him, led him into the field of horticulture. He labored for over fifty years in this field with but scant recognition of his efforts.

With plants he was a master craftsman. Our reports abound with papers by him describing how plants should be grown:—Early in life he was attracted to a study of the native plants of Wisconsin. My foreword in the pamphlet "Native Plants" expresses as nearly as I can express it now my estimate of Mr. Toole's work in that field:

"For more than half a century Mr. William Toole has been familiar with the native plants of Wisconsin.

He has studied them, not only as the botanist studies them to set them into an orderly classification, but to know their more intimate habits."

"Mr. Toole's efforts have not been confined merely to acquiring a knowledge of our native plants, their names and habitats, nor to the preservation of them in woods and fields. He has aimed at something better—how to use these plants; their adaptability to our needs in ornamental planting; how to bring their beauty from the woods and fields to our homes."

With no knowledge of botany in the beginning he yet became learned in the science so far as it related to classification and nomenclature. He attained an education in other directions as well and at all times wrote clearly and well. The writings of William Toole were always understandable, and his characteristic mode of expression was a happy medium between the terse and the diffuse.

He had vision. In his paper "What Next", written in 1918, dealing with the work of the society he said: "Our work has been and always it will be for the future."—"The experiences of the past have given us the foundation for what we have in the present. Definite aims and ideals will speed us on to successful results more surely than if we take things haphazard as they come."

Of late years he became the victim of "penny-a-liners", sensation mongers, who sought him merely with the object of providing "human interest" stories, who cared nothing for facts but only to furnish their readers a thrill. He regretted that many of these "stories" were published but he was helpless.

Less than a year ago he said to me, plaintively, "It seems to be the way of life; here I have worked all these years and it is only now, the last year or two, that anyone has come here to write about me and they cannot see the things I want them to see nor tell the things I want them to tell.

On this day, the fifteenth day of April, 1926, I conceive the following to be the outstanding works of William Toole, and on account of these he has left a deeper impression on Wisconsin horticulture than any other worker in the field who has preceded him. I say this without reservation and with due respect for his fellow workers.

Teaching the people of his community to live one with another and bringing to them the great and everlasting gospel of Beauty. This is a work that will live after him. For generations to come this influence will be felt not alone in Sauk County but throughout the state.

His connection with the State Horticultural Society and his contributions to its literature and by this means the dissemination of the science, the art, the practical application of horticultural knowledge; a life spent in preaching the gospel of Beauty.

His work with the native plants of Wisconsin and his plea not only

for their preservation in their native haunts but a rational use in our gardens. No one else in Wisconsin had done this and his work was only well begun.

Bon Voyage

Since time began man has been seeking God. We are still seeking Him. It is not so much a question of sect or creed within the Christian church, for numberless millions who lived and died before Christ was born strived as earnestly as we to pierce the veil of the Infinite. Civilizations come and go, but in the heart of man there remains that restless urge, the search for God.

But a little while ago we were told that religion meant service for was it not said "do unto others as ye would that others should do unto you," and if we lived the Golden Rule we would find God.

We are now told that in Beauty we shall find God. "If you want to study religion search for beauty of life wherever it may be found and when you find it bow down and worship."

Both of these doctrines are as old as mankind. When man first became a conscious being these great and everlasting truths evolved and grew within him.

We know life, we know death. But more than that we do not know, we only believe and hope. Each one of us pictures Heaven but there are none but may believe that it is indeed a great "Windowless Palace of Rest." To me it means just that. I believe that when we reach the shores of Eternity we will find a fair land, not a level land but a land of gentle slopes and valleys of perpetual beauty where the grass is ever green and where celestial flowers bloom perpetually. On the crest a "windowless palace", open to all the soft winds that blow; a palace of rest, rest, rest. In such a palace there rests William Toole.

Sow seeds in rows. That is one sure way of knowing which is a weed and which isn't. It also helps in cultivation.

GLADIOLUS GROWING

We often wondered how the gladioli that are grown by the larger firms always seem to have a certain perfection in them that we had been unable to obtain at home. And then one day we found a grower a few miles away who grew "glads" by the millions for one of the large seed houses of Chicago. He invited us to come over and see his place.

Our first trip was made before planting time and the bulbs were in shallow racks piled one on top of the other just like an onion drying house. The stock had all been graded and the large bulbs were in one set of racks, and the bulblets in another, and the varieties of course were separated and labelled. We also noticed bags and bags of commercial fertilizer in the warehouse.

The next time that we went over to the grower's place we found that a large field had been plowed and that several teams were making the soil work up until it was in perfect condition. And since the soil was a light yellow silt loam, a regular timber soil, this was a rather difficult thing to do. The next operation was the task of marking off the rows with a marker.

Then a machine that looked like a potato planter was brought out to the field, and a wagon load of bulbs and a wagon load of fertilizer came behind it. The bulb hopper was filled, and the fertlizer hopper was filled and the job of planting began. Every time a bulb dropped some fertilizer went with it, and the two small blades covered the bulb with about three inches of soil. After several days of planting the whole field was harrowed.

Before long the tips of the first leaves shot up through the soil and long straight rows made their appearance. Cultivation began immediately and was carried on by team drawn shovel cultivators, and a crew with hoes to do the finishing touches.

The flowers were cut of course before they showed much color and shipped to the markets.

But we learned something about "glad" growing. The next year we made a well worked garden bed, planted the bulbs well under the ground, and added a little commercial fertilizer. Then we made an effort to give them the best cultivation possible, and the first thing we knew we were having sturdy blooms, better than we had ever had before. Still greater was our surprise to find that we had some large healthy bulbs to take up when the time came.

It might have been the good bed, or the fertilizer, or careful cultivation—but we think that it was the combination.

WE AREN'T THE ONLY ONES

Growers Have Too Many Kinds of Apples

Saugatuck, Mich.—Eighty-four varieties of apples were sold to the Saugatuck Fruit exchange last season, according to the annual report. J. W. Prentice, secretary, is making an effort to have growers confine their efforts to fewer varieties.

"Many varieties of apples are not profitable in this section," Mr. Prentice says. "Better results would be obtained if efforts were limited to a small number of varieties."

The local exchange handled 136 carloads of produce last year, doing a $100,000 business.—*Clipping.*

GARDEN CLUB AT EAU CLAIRE

Eau Claire has a newly organized Garden Club which has affiliated with the State Society. This club is an outgrowth of effort of some of the garden lovers in the community, and at the rate it is growing its membership will reach the one hundred mark before long.

They are going to have flower shows up there. They are going to do everything to make a good club. And we're going to help them.

SPRAYING

The following information is from Bulletin 36, published by the State Department of Agriculture, and compiled by Dr. S. B. Fracker and Dr. R. E. Vaughn.

Spraying of fruit trees and gardens has now become so standardized and simplified that it is an easy matter for the amateur to get profitable results without elaborate preparation, if a good spray pump is available.

Standard Sprays for various purposes:

Chewing insects—Arsenate of lead.

Sucking insects—(Aphis) Nicotine sulphate. (Scale) Lime sulfur, Miscible oils.

Plant diseases—Lime sulfur, Bourdeaux mixture, Sulfur dust.

It must be remembered that there is a difference in the time of appearance of blossoms, insects and disease each year. Study, don't merely glance over, the above tables and fit the knowledge that you obtain to the conditions found in your own locality. If you need any help the State Horticultural Society will give it to you.

ORCHARD SPRAY SCHEDULE

Plant	Disease	Insect	Spray	Time of Application				
				1st	2nd	3rd	4th	Remarks
APPLE Regular Annual Program	Scab	Coddling moth curculio others	Lime-sulfur 5 qts., *and arsenate of lead powder 1 lb.; in 50 gal. water	Blossoms, buds showing pink,*but after cluster separates	Petals mostly fallen	10 to 14 days later	9 weeks later usually about Aug. 10.	Plow under dead leaves
APPLE (Special Sprays)		Scale insects (if Oyster hsell or San Jose are present)	Lime-sulfur, 1 gal. to each 8 gal. water, or a miscible oil—	Before growth starts				Do not use this spray unless needed. It is sometimes effective against hatching aphids also.
		Aphids (plant lice)	Add ½ pint (¾ pint for cherries) 40% nicotine sulfate to each 50 gal. in regular spray program when necessary	As necessary				
CHERRY and PLUM Regular Annual program	Shot-hole or leaf-spot	Slugs, curculio, etc. (For aphids, see apple)	Lime-sulfur 5 quarts, and arsenate of lead powder 1 lb. to 50 gal. water	Just after the petals fall	10 cays later		After cherry picking if necessary	Plow under dead leaves

*In spraying apples (badly scabbing varieties) greater protection against scab may be secured by including one or two additional early lime-sulphur spray as follows: a "green-tip" spray when the buds first show green tips then a "pre-pink" when the first three or four leaves have separated from the fruit buds and at about the time the leading bud shows the first trace of pink. This is known as the "pre-pink" spray. Additional information will be furnished upon application.

Note—Bordeaux mixture may, if desired, be substituted for lime sulfur in any apple scab spray but it may russet the fruit. From one to eight gallons of dilute spray material will be used per tree, depending on the size.

WARNING: NEVER SPRAY TREES IN BLOSSOM

SMALL FRUIT SCHEDULE

Plant	Disease	Insect	Spray	Time of Application				
				1st	2nd	3rd	4th	Remarks
STRAWBERRY	Leaf-spot	Leafrollers and slugs	Arsenate of lead powder 3 lbs. in Bordeaux mixture	When leaves appear	After petals fall if necessary			
CURRANT and GOOSEBERRY		Currant worms	Arsenate of lead powder 1½ to 50	When leaves are well open	As necessary			
		Aphids (plant lice)	40% nicotine sulfate 1-800	As necessary				
RASPBERRY BLACKBERRY	Anthracnose		Lime-sulfur	As leaf buds are opening, lime-sulfur, 1-10	About a week befor the blossoms open, lime-sulfur 1-40			Two sprayings necessary if infection is heavy

ANSWERED

The other day we were asked by a resident of Wisconsin what we think about fruit growing in Wisconsin after coming from Illinois, a fruit growing state, and after traveling in other fruit growing states. The answer is being given here so that it cannot be embellished by others in the process of transmittal.

The most striking thing about the fruit growers in this state is that, as a whole, they apparently do not have the *desire* to make the state better for fruit growing. They are individualistic in their attitude toward production for market, and as a result there is a deplorable lack of unity and understanding between the sections of the state which is obstructing constructive measures. On the surface of the thing it appears to be local selfishness that causes this condition, but we hope to find that it is a state of mind produced by a too short time at being in the game.

Fruit growing is a business and a complicated one. Growers in other fruit growing states have found that it pays them to bury the hatchet of sectional strife, and to combine for better products and better sales just as the hardware men, the drygoods men and any other sales or manufacturing branch of industry has done. This combination is not necessarily an actual legal combine for the sake of doing business, but it is the result of a *desire* to help each other. If other sections of the country can do this, certainly it can be done in Wisconsin where there is not enough intra-state competition to ruffle the market.

The growers in Wisconsin need to grow up to their business. Realize that by helping to better the condition of each other that you are helping yourself. Realize that the man who puts a low grade product on the market "to slicker the public" is a cheat—to himself, to the public, and to his fellow growers. Realize that the competition is not among ourselves, but is with the good will of the buying public.

We have seen in other states that the grower who tries his best to produce good fruit and tries to help his fellow growers to produce good fruit is the man who succeeds financially and who has the highest respect paid him by the people with whom he has contact. The growers in Wisconsin need to get out of their shell, need to get a state-wide conception of the industry of which they are a part, instead of remaining sewed up in the pocket of local selfishness and personal conceit.

It is always hard to play a game unless you know the rules which govern it. It is useless to be a fruit grower unless you are willing to play the game. Help yourself and help other growers to put out the best product possible. Gain the confidence of the buyers by making your package and the contents standard. Get the *desire* to make the best of the game and you can come up to the standards of other states with small and scattered growing areas.

If you need any proof that such things *are* being done, try packing the family flivver and taking a trip through any established fruit region and then keep your eyes and your ears open. Fruit growing is a gamble as is any sort of farming, but you needn't increase the odds by having to gamble with yourselves.

J. S. POTTER.

Go through your orchard at least twice a week during the growing season and get acquainted with the trees. It's a poor manager that doesn't know what is going on in his factory.

Good fruit don't grow without help. Help it.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

GARDEN WEEK IN MILWAUKEE

There are several home missionaries in Milwaukee,—that spread the gospel of the satisfaction to be found in a flower garden, and each year sees an advance in the number of participants in the benefits. All remember what great stress was placed upon the vegetable garden during the World War, and the same folks that promoted that interest are now at work boosting the flower garden in Milwaukee. Milwaukee has been called "The Garden Spot of the West" principally because it is a city of homes, owned by people who are interested in their beautification. Four years ago a committee met to see what could be done in observing national garden week. They organized themselves into a permanent committee with the writer as chairman, and put over a varied program during the week. Ever since then they have been carrying on this missionary work, with visible results in making Milwaukee "The Garden Spot of the West".

1926 was no exception, and the program was carried out from April 18th to 24th. Sunday the 18th, several pastors addressed their congregations on the topic of "Thank God for a Garden". A Girl Scout from Troop 56 told over the radio how she earned her garden merit badge. Monday, the 19th, was landscape gardening and native flower day. Mrs. Wm. Finger, president of the local chapter of the Wild Flower Preservation Society of America, gave a plea for the preservation of our native flora. At the garden commission offices in the City Hall, it was perennial day, and many were sold. Tuesday, the 20th, a home vegetable garden was urged via radio by the County Farmer, Mr. E. C. Thompson. It was "swapping day" at the garden commission office, when excess slips or plants were traded and many given away free. Bulbs were the feature of the day's selling there. Wednesday the 21st was flower garden day and Mrs. C. E. Strong spoke over the radio on "Annuals". It was yellow rose day at the City Hall and many kinds of these were sold. Thursday the 22nd, was the day of the school children, and Mrs. H. F. Godeke president of the Parent-Teachers association of the city spoke on "What a garden means in a child's life", by radio. Registration for gardens among school children was carried on in the public schools. It was the regular rose day at the city hall. Friday was forestry day, and the city forester, Otto Spidel, told "What trees mean to a city" over the radio. There was memorial tree planting in the city parks by selected school pupils. Home owners were invited to get free labels for trees on their lots or in front of their place from the city forester's office. Trees were given to such graduating classes from the eighth grade as wanted to plant a memorial tree. It was climbing rose day in the sales at the city hall. Saturday, the 24th, was children's day again and a little Miss Mehner told about her garden last year over the radio. The Boy Scouts planted trees at their camps and the Girl Scouts planted rose bushes at 28 school grounds, both using their impressive planting ceremonies. It was vegetable seed sale day at the City Hall.

Ten thousand booklets upon the home culture of the plants sold at the City Hall were given out free, so that the purchasers would have a good chance for success with their purchases. Proper credit has never been given Mrs. Wm. C. Kroening, in charge of the Garden Commission, and this is the place to do it. An ardent flower enthusiast, she has served for ten years, without pay, often investing as much as $7,500 of her own money, and getting it back without profit in the sale of the seeds, bulbs and rose bushes. The commission exists to interest the poor people of the city, and those half-hearted individuals who will take a chance at a low price, and afterwards become enthusiasts. One lady, who had contemplated suicide, got started with flowers and now reports to Mrs. Kroening that her interest in flowers and life is overpowering, and that happiness is hers. One man, started with a dozen gladiolus, and now grows 6,000. One man had success with three roses and now has a half acre of them. Many elderly people have started into flower growing and have taken a new lease on life. The commission exists only to get them started. One thing is sold on one day only during garden week, and those that want more are referred to the regular channels for buying. They are likewise advised that the best seed or plant they can buy is the cheapest. Mrs. Kroening is on the job throughout the growing season, and it is the joy of her life, to offer her rich personal experience in growing to any inquirers. The city that can find her equal in this altruistic work is indeed fortunate.

Huron H. Smith.

WILLIAM CURRIE

William Currie, 69, 306 27th Street, president of Currie Bros. Seed and Flower Store, first seedsman and one of the first florists of the middle west, died in the Mt. Sinai Milwaukee hospital Friday, April 9th, after a week's illness. He was born in Girvin, Scotland, near Ayr, the birthplace of Robert Burns. He was raised on the Auchendrane estate of Sir Peter Coates, on the banks of the Doon, where his father was gardener, and schooled in the famous Academy of Ayr. He served his seedsman apprenticeship on the estate of the Earl of Eglington. In 1875, he came to Milwaukee to join his brother James, and later was joined by his brother Adam. James Currie, who died in 1923, then superintend-

ent of Forest Home Cemetery and member of the park board, took a prominent part in arranging the park system of Milwaukee. The Currie establishment began at 27th and State streets with greenhouses. In 1877, they opened a store at 451 Milwaukee St., moving two years later to 108 Wisconsin St. In 1914 they opened the present store at 384 East Water street. Mr. Currie made many trips to Scotland and entertained many Scottish visitors to Milwaukee, including Sir Harry Lauder. He was one of the 37 honorary 33rd degree Scottish Rite Masons in Wisconsin.

Mr. Currie is survived by his wife, Sarah Harper Currie; three daughters, Mrs. Theo. E. Marshall, of Berlin, Wis.; Mrs. B. F. Wyeth, Cambridge, Mass.; and Mrs. A. W. Bollenbeck, Brooklyn, N. Y.; one son, Roy J. Currie, Secretary-Treasurer of the business; two sisters, Misses Mary and Jessie Currie, and a brother, Adam Currie, of the A. Currie Co., seedsman and florist, at 130 Wisconsin street. Interment was at Forest Home Cemetery Monday afternoon, April 12th.

Huron H. Smith.

MILWAUKEE COUNTY HORTICULTURAL SOCIETY

Sunday afternoon, April 11th, in the Trustees Room of the Milwaukee Public Museum, a job that has needed doing for a long time, was consummated. A local horticultural society, to be hereafter known as the Milwaukee County Horticultural Society, was organized, a constitution adopted and officers elected. These officers are President, Huron H. Smith; Vice-president, Louis J. Potter; Secretary-Treasurer, Miss Martha Krienitz. The society started with twenty charter members, but hereby serves notice that they expect to grow, and plans were discussed towards that end. At present, they are organized separately from the State Society, but when they reach a sufficient size, expect to affiliate with the State Society.

Their plans include fortnightly flower shows at the museum, of amateur flowers and it was the sense of the meeting that the first show will be near the middle of May, at which Iris will be the main attraction backed with other spring flowers, if spring should ever deign to reach Wisconsin. They plan also to have motorcades during the season to see the flower gardens of members who specialize upon some groups of flowers. Their regular monthly meetings are scheduled for the second Sunday afternoon of each month, in the Trustees Room of the Public Museum, and the next meeting will be May 9th at 3 p. m.. They have decided to accept the offer of the Museum to hold their fortnightly exhibits in the Museum annex, and to invite the public to these showings.

At this meeting, the members assembled were given a stereopticon viewing of a series of 60 new tutochrome slides of flowers made by the department of botany. Mrs. C. E. Strong, of West Allis, Frederic Cranefield, of Madison, and Louis J. Potter, a noted rosarian of this city were speakers. Mr. Potter nominated the best roses of each kind for this region. For white roses he placed in order of importance: Frau Karl Droschki, Madame Jules Bouche, and Kaiserin Augusta Victoria. For variegated color he designated: Ophelia, Mme. Butterfly, Los Angeles, and Willomere. For reds he stipulated: Red Radiance, (Gude strain), Gruss an Teplitz, Laurent Carle and General MacArthur. For Yellow roses, he named: Duchess of Wellington, Mrs. Aaron Ward, Claudius Pernet. For Pinks, he chose: Mrs. Henry Morse, Radiance, Mrs. Henry C. Eagan, and Mrs. Chas. Bell. He suggested the use of Ragged Robin for budding stock instead of the Japanese multiflora stock, as it carried the growth on for more than one season. He advised against the use of own-root roses, choosing rather grafted stock or better still, budded stock.

Milwaukee has thousands of interested amateurs and the new society will doubtless attract many of these who will want to swap and get acquainted generally. Dues set at 50c a year and remittances should be made to Miss Martha Krienitz, 7418 National Ave., West Allis, Wis., the secretary-treasurer.

Huron H. Smith.

FRED RENTSCHLER'S NEW FLOWER STORE

The finest flower store in the country was opened April 14, 1926, at Madison, Wisconsin. It was an entirely new building at 228-230 State Street, representing an investment of $150,000, and the proprietor can be justly proud of this culmination of his 31 years in the flower business there. Fred Rentschler has done well in our university town, and several of his florist friends came over from Milwaukee, Chicago, Racine, Kenosha, Janesville, and Watertown to see him on opening day. Fred started out to give every visitor on opening day a flower, and 7,000 roses only lasted until noon. Carnations, sweet peas, snapdragons, calendulas and anything he could cut at his greenhouses soon followed the roses until more than 25,000 had been given away by evening.

The new store is a three-story building, with 46 feet frontage on West Johnson street and 46 feet on State street. The State street store shows only two stories however, because he has made a very high ceilinged front entrance,—17 feet. The interior is beautiful with mirrors on both walls and the central posts. An ice box for display graces the

right-hand wall, 18 feet long, 10 feet high and 5 feet deep. A Lipman ten ton ice machine is used for refrigeration. A very completely appointed basement work room underlays the whole store, which runs back 100 feet.

APPLE VARIETIES

Somebody has evidently taken our BIG FIVE to heart. We have received several letters on the subject, some commending and some condemning.

The letter which was the most violent on the subject came from a man who is evidently not a commercial grower, but who has his opinion nevertheless. He informs us that "the Horticultural Society could have made a better guess in its sleep" when we put the Wolf River and the Northwestern Greening in our list for the growers who intend to compete on the big markets.

This same gentleman suggests that we should put in the place of these two varieties the following: Red and Golden Delicious, Jonathan, and King David. What if we do. By the time some one who accepts our recommendation has his planting in bearing he is going to find himself in competition with three separate and distinct regions which make those varieties a specialty. Can we grow Delicious, Jonathan, and King David in competition with the already developed regions? We think not.

And a little more on the subject of competing with growers of storage apples. We quote from the U. S. D. A. Market News Service of March 16: "APPLE MARKET WEAK—Apple prices normally should advance between January 1 and the spring months to cover the increased cost of storage and other expenses. This year, however, the F. O. B. prices actually have been declining."

Of course if we care to increase the odds in the game we can afford to add varieties and plunge into heavy competition.

Don't blame the women of the country for their buying habits. They have been following the lines of least resistance, buying what was displayed by the grocer or the fruit man.—Agnes Carroll Hayward.

Spray right—grow right—and you'll sell right.

In these days of denatured foods, fruit stands out as one of the few foods that has not been robbed of its health-giving properties.—Agnes Carroll Hayward.

No advertiser who has nation-wide distribution of his product should overlook Main Street and its tremendous possibilities.—Agnes Carroll Hayward.

If you haven't burned your brush pile made at pruning time, do it at once. Several diseases thrive in just such piles of brush.

If your interest does not continue until your fruit reaches the ultimate consumer with both quality and price to his liking your consumer will buy something else.—Agnes Carroll Hayward.

This is a BETTER FRUIT year. Help yourself by helping others by growing better fruit.

START NOW

Now is the time to start raising better fruit. If spraying hasn't already started it soon will, and if you wait until the middle of the summer to start the ball rolling for creating something better in your orchard you might just as well stop work right now at the beginning.

We can't control weather conditions that might disfigure the fruit, but we can do our best to put the spray on in such a way that the insects and diseases will have a hard fight to gain a foot-hold in our orchards.

Make up the sprays with care; too little of one ingredient may make a lot of difference, and too much may injure the tree. It is not the amount of *spray* that you put onto a tree that does the work, it is the *thoroughness* of application. That's an old story, but since it's true it will bear retelling. Keep the gun or cane moving all the time and do it in such a way that every part of the tree has a coat of the spray. If the fruit set is light don't be lax—because the disease or insect will thrive and propagate just the same.

If your planting is too small to support a power outfit and if there is no spray ring in your neighborhood, you can accomplish things by getting a barrel-pump outfit. There's a way.

Let's raise *better fruit* this year.

If you don't know how to spray ask us.

Pacific Northwestern Trip of the American Pomological Society

The American Pomological Society will make a tour of the fruit districts in the Pacific Northwest, starting from Chicago about June 20th. This trip will take about fifteen days and will include stops in the following interesting fruit districts.

Boise or Payette. From Boise or Payette the party will visit the famous Jonathan and Rome Beauty districts of southwestern Idaho. This will be an opportunity to see an extensive apple district which is noted for the high color of its fruit.

Hood River. Hood River is the heaviest producer of Yellow Newton and Spitzenburg apples in the Northwest. The Valley is noted for its scenic beauty as well as its high quality apples. From Hood River the trip to Portland will be made over the famous Columbia Highway, one of America's most beautiful drives.

Portland and Willamette Valley. From Portland we will visit both the east and west sides of the Willamette Valley. This section is noted for its production of Italian prunes and English walnuts. There are also extensive plantings of pears, loganberries and other small fruits.

Puget Sound. In the Puget Sound territory there will be an opportunity to visit Seattle, Tacoma and Puyllup. At Puyllup we will have a joint meeting with pomologists, entomologists and pathologists of the Northwest. Puyllup is noted for its heavy production of raspberries and other small fruits, and also is becoming one of the most important centers of bulb production in the United States.

Yakima. The Yakima district is not only famous for its apple production but also for the production of pears, prunes, peaches, apricots and cherries.

Wenatchee. In Wenatchee we will visit the most concentrated and specialized apple district in the world.

Advantages of the trip. On this trip you will be associated with the leading fruit growers of the Eastern and Central states. In the Northwest you will have an opportunity to become acquainted with the men who have built up the western apple industry, which now makes up 46 per cent of the commercial apple crop. There will be an opportunity not only to become acquainted with local problems and orchard practices, but also to visit and get first hand information on some of the largest canneries, evaporators, cold storages and packing houses of the country. On the return trip we will visit one of the national parks.

Low cost of the trip. By making this trip while summer rates are available, and by chartering Pullman cars, we are able to get a very low transportation rate, and also will eliminate the necessity of hotel expenses. Growers' and shippers' organizations and chambers of commerce of the Northwest are nationally noted for their hospitality, and have already signified a willingness to co-operate in this trip by furnishing automobile transportation through the fruit districts to be visited. The actual necessary expenses of the trip need not exceed $200 or $225 from Chicago and return.

For additional information write to the Chairman of Committee on Arrangements.

R. W. REES,
Chairman, Committee on Arrangements,
256 N. Y. C. Station,
Rochester, N. Y.

Here is a splendid opportunity to see the Far West fruit regions. At least one hundred Wisconsin people should go. You need not be a professional fruit grower to be eligible, you need not be a fruit grower at all, but you must be a member of the American Pomological Society. The fee for Annual Membership is One Dollar. Send fee for membership to this office and if interested in the trip write Mr. Rees.

FREDERIC CRANEFIELD,
119 East Washington Avenue
Madison, Wisconsin.

Member Executive Committee,
American Pomological Society.

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PHILADELPHUS

IRIS IN ROCK COUNTY

ANNA LIVINGSTON, Beloit

I am very happy at any time to tell what I know about this etheral and most beautiful of flowers. There has been a great amount of stuff written about the iris in recent years. It has been overdone, underdone, a good deal very badly done. So I wish to state I know what I am writing about. I grow in my garden over two hundred varieties, some of them very rare and expensive, and flatter myself by thinking it the most choice collection in southern Wisconsin. I was also the only charter member of the A. I. S. in the state. There will be nothing technical however.

The iris season opens with the purple pumilas. These all look alike, but in reality some bloom much earlier than others. One brought many years ago from N. Y. blooms for me with the crocuses. Other dwarfs follow. Pale blue, yellow, white, bi-colors. Most of them are very fragrant and some have several buds to the stalk. As I write I look out of my window at a long bed of them and rejoice that God has been so good to me. The yellow ones are as gay as my Emperor daffodils that are about to say "good-by."

After the dwarfs, come the intermediates. Mrs. Allen Gray, a pink is said to bloom also in the autumn but it has not done so here. Gertrude (a Peterson variety) is a fine clear blue, distinctive in foliage also and one of the best varieties I have. Dorothea is a large mottled very pale blue, lovely for cutting, but should never be set with anything but white. Walhalla and Prince Victor are good bi-colors. I think white and blue Florentina are practically intermediates. I insist on having a large planting of each of these for landscape work. Their only fault is short season.

The tall bearded iris follow and furnish a succession of bloom sometimes to July 4. What shall I say of these? Now when my garden is all aglow with cottage and Darwin tulips, carpeted with violets and phlox canadense, fragrant with wind-tossed lilacs of many kinds and banked with honeysuckles that make me faint with their sweetness and grace, I cannot believe that anything can surpass it; but I know the day is close at hand when I shall forget them all. The pansies will go unpicked, the roses will be eaten by worms, while the mistress of the garden spends afternoon and morn in the iris beds. The faded blooms must be removed twice a day to keep them in full bloom and beauty until the end of the season. *I also do most of my dividing and transplanting at this time as then I can tell what I have and where it is.* Except for new varieties I abhor tags and despise rows. I also dig in bone-meal, lime, sulphur, some wood ashes (carefully handled) as I work. Many visitors come to admire, to buy, to learn. Iris are so exquisite it is a joy to work with them.

A CORNER OF MRS. LIVINGSTON'S GARDEN

Queen of May I still consider my best pink. I always plant with it the old pale blue Celeste for contrast. Her Majesty is brighter but has more penciling in the falls. Farr's Cecile Minturn is a beautiful clear pink and Windam is a favorite of mine. For Rose Unique I do not care except that it blooms early and for a considerable period, I think its color atrocious. If you must have it plant it alone backed by shrubs. Quaker lady is still Farr's best I think, though I have a long list.

I could not do without Sherwin Wright, Flauescens, Pallida Dalmatica, Tineae, Parisana, Lord of June, Ed Michel, Perfection, Loveley, Twilight, Kochii, Archeveque, Lohengrin, mostly inexpensive varieties.

The irises formerly had no enemies. Now increasing vigilance against the iris borer is the price you pay. Rot causes little trouble unless they are too wet. Every plant that looks sick must be examined. It is rather a sickening job to extract and kill these fat pink worms from the rhizomes. Sometimes they can be detected in the leaf but one can never be assured that one has found them all.

Other iris that flourish here are Tectorum, the roof iris of Japan. Cristata, delicate creeping thing, native to the Carolinas, dichtoma afternoon or evening bloomer, Siberias, orientalis in blue and white, yellow water flags, graminea the grass iris, longepetala, some (for me) unnamed species. The real Japanese Iris I have as yet been unable to establish.

My latest bloomers are Lord Gray, and the old time variety of our grand-mothers gardens, Pres. Thiers. The latter has the fragrance of a wild lady-slipper.

If you grow no other, plant Rhine Nixe. It stands among the others separate and distinct like a new-washed soul.

Don't let the borers frighten you. Remember:

"For every plant under the sun
There is a bug, or there is none.
If there be one try and find it,
If there be none, never mind it."

By all means plant all the iris you can afford and come and see mine.

A VACATION SUGGESTION

Quite unexpectedly and much to my surprise the long-hoped for vacation trip seemed to have become possible. Our objectives were, our National Capital and New York City. I can stop but a brief time at each place, but hope to set some of you who have not visited these cities, to thinking about doing so soon. Do it now, this very summer.

Washington is a very dignified, peaceful city impressing one with the thought that it would be a pleasant place to live. I will merely enumerate the important points of interest. First the Capitol; the architecturally wonderful Congressional Library building; the White House; the Washington monument and the Lincoln memorial.

Everybody who goes to Washington goes, of course, to the National Cemetery at Arlington, where now is found the indescribably beautiful memorial to the fallen heroes of the World War.

The house in which Lincoln died, now containing innumerable relics of our martyred president, is of great interest. Right across the street the building which was then Ford's Theatre, still stands. And then a trip on the Potomac to Mount Vernon, Washington's home and burial place. It seemed like two hundred in the shade that day, but it is surprising how little one minds the heat or any other discomfort when vacationing. Mount Vernon must be seen in order to be appreciated. I sat on the sixty foot veranda overlooking the Potomac and imagined myself mistress of the Mansion. It was worth while even to imagine it.

And then New York! It is wonderful but I am glad I need not live there. Broadway on Sunday evening! The crowd so dense that a fairy could walk for blocks on the heads of the people without fear of falling through. Fifth Avenue, Tiffany's,—I must confess that it had never occurred to me that one could pay one hundred and fifty dollars for one dinner plate.

A boat trip around Manhattan Island is most enjoyable, as well as a trip up the majestic Hudson to Poughkeepsie is indeed a pleasure. Coney Island,—all I can say is you must go and see, it baffles description. All these places are on every tourist's schedule and are incomparable, but to me the most wonderful of all is New York Harbor. Standing on Brooklyn Bridge and looking over the harbor with the Statue of Liberty in the distance is a sight I will never forget. As I stood there, I could in my mind's eye see the great transports steaming out, carrying our brave boys to France each to do his bit in the great struggle. When those boys came back, how the first glimpse of that symbol of our country must have thrilled them; and when later those other boys who gave their all were brought back, surely the Goddess of Liberty must have murmured a silent benediction: "well done thou good and faithful servant."

MRS. F. CRANEFIELD.

—(Written for May Wisconsin Horticulture. Editor.)

"THEY KNOW, THESE THINGS OF NATURE"

EUGENIA C. GILLETTE

A spotted Sandpiper came tripping up the front walk this morning in the pouring rain, calling its poignantly sweet "Wet feet! Wet feet!",—which fact seemed too apparent really to need protesting! It went sociably tilting about for a time under the sheltering roof of the front stoop.

A Magnolia Warbler and a Blackpoll cheerfully hunted gnats up the face of the stone wall, in a sheltered corner above the large buds of the Clara Butt Tulips.

An Oven Bird called insistently and peered in, inquisitively, from the nearest twig of the roof-tree Maple on the other side of the house.

A Goldfinch sang ecstatically in the little Linden by the lane "Singing in the Rain",—seeming quite oblivious of the dour dark downpour.

Two flaming Orioles were busy among the apple blossoms, and a pair of Wrens scouting about in the old grape vines.

Everywhere birds, who seemed to know what to do, and were doing it!

Yesterday I was wondering if the Astilbes and Musk Mallows in the border had survived the winter. Today, like magic they are up,—quite a large and imposing showing.

The ferns are pushing up small fuzzy fiddle-heads, and the edges of the borders are carpeted thick with infinitesimal green and purple seedlings of Petunia and Ambrosia —self-sown, and wintering safely under the mulch.

A fire on the hearth is needful for comfort indoors, yet the blossoming Violets, Hepaticas, Dutchman's Breeches and Bloodroots, make a spot of joyous beauty in the outer chill, and the hidden beauties of the Wild Ginger are as perfectly wrought as though not practically "born to blush unseen".

The perpetual but ever new wonder of this universal response to the call of the sun, even when its shine is hidden by a thick gray wet blanket of cloud, brings up in memory a page of a juvenile painting book, that became the property of a certain small girl who had recently learned to read. This page had a border of Tulips, Daffodils and Harebells, in outline for coloring, and within the frame, in Old English letters, this slightly transposed admonition from Job, "Speak to the earth, and it shall teach thee: and the fowls of the air, and they shall tell thee: Who knoweth not in all these that the hand of the Lord hath wrought this? In whose hand is the soul of every living thing, and the breath of all mankind."

(Continued on page 155)

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

MEMORIAL DAY

"Life is too short for any bitter feeling,
Time is the best avenger—while we wait.
The years speed by and on their wings bear healing.
Life is too short for anything like hate.
This solemn truth the low mounds seem revealing
That thick and fast about our feet are stealing.
Life is too short."
"Author Unknown."

If the services on Memorial Day, the flowers with which we have covered the last resting places of those gone before, have not taught us the truth of the above lines, if we are not kinder, more forgiving, less resentful, less prone to feel others faults are more serious than our own — then there is something wrong with our conception of the meaning of Memorial Day and why we observe this day. How can we expect "Peace on earth, good will to men," to be the motto of nations, when we as individuals do not so live every day, with those with whom we come in contact.

Our boys *died,* so the world might be a safer place to live in. Can we not live so the world will be sweeter and better, because we *have* lived?

Who is to Blame?

I have "read" and "*read*" of the beauty of the newer French Lilacs, then thought "There could be nothing sweeter or prettier than the old fashioned lilacs, I'm satisfied with those I have." Last week a flower loving neighbor invited me to go out to "Moyles" and see the lilacs. I went—and have "*wailed*" ever since over all the years that have gone by when I, too, might have had such lovely lilacs blooming in my yard and enjoyed every moment of their beauty and sweetness. *Positively,* there ought to be something done about leaving flower lovers in ignorance of such beauty. I'm not quite certain whether we ought to *fine* the negligent nurserymen, or hustle around a bit more ourselves and see that more flower shows are given. What do the rest of you folks think? (Remarks invited.) An armful of the lovely blossoms surely convinced the neighborhood that there were lilacs—and lilacs.

More Extracts from the Garden Book

"June 1st. This is a Red Letter Day, out in the cold frame there are seven wee Tennifolium Lilies, started from seed last summer, this morning I discovered that one is bravely sending up a tiny flower stalk."

Attention all ye who have difficulty in wintering Hollyhocks. I have discovered a place where they will live without fail, in the Asparagus bed. I do not want them there—I even hoe the tops off—yet they bob up serenely—evidently Hollyhocks are temperamental like some folks—also contrary.

Incarvillea (Hardy Gloxinia) are really living up to their name. They came through the winter—three of them—without any covering. Evidently they are firmly established after three years.

Persistence wins, sometimes, at any rate I have succeeded in keeping Iberis (Hardy Candytuft) alive the past winter, it is blooming beautifully. A light covering of cornstalks seems to have been just what was needed by way of protection.

Cheiranthus Allonii (Siberian Wallflower) is a decided addition to the garden. Very effective with its heads of brilliant orange flowers from May until frost. It will bloom the first year from seed if sown early. The catalogues class it as a biennial, but with a slight protection it has proven a real perennial with me, grows about 12 inches high.

Erysimum Perofskiannum (Fairy wallflower) is an annual, similar in blossom and color, growing about 18 inches high, very easily grown. Sow right out in open ground in sunny position.

Once in a while (when *we* grumble about the high prices asked for certain plants) we ought to try raising these same plants from seed. After months and months of patient care we realize the *why* of the price.

PAULOWNIA IMPERALIS

Dear Madame:

I have your letter of May 7th and a clipping referring to Paulownia Imperalis, called princess tree, and asking where you can get trees.

The paulownia is not, strictly speaking, a tree in Wisconsin and is not hardy here. It may make a growth of several feet in a season but will kill to the ground in winter. The roots rarely survive for more than three or four years. I have never known a paulownia to blossom in Wisconsin. In Washington, D. C. and further south it lives over winter.

Given a good start in spring it will be well worth growing for its tropical-like foliage. The writer of the article you enclosed covered too much territory.

At least 95% of your product (fruit) is bought by the woman in the home. Then it is pretty good common sense to aim the gun (advertising) in that direction, isn't it?—Agnes Carroll Hayward.

THE TOURIST PROBLEM

By S. B. Fracker.

(Read at Annual Convention at Eau Claire.)

The human race has always felt a "wanderlust", a desire to explore distant places, an ambition to look on unfamiliar scenes. America was settled by those who believed that "somewhere else" offered more happiness than home, and were not afraid of the journey to distant lands. Every boatload of immigrants for two hundred years has consisted of those hardy and ambitious Europeans from each village who would rather risk the unknown than suffer familiar hardships and poorly recompensed toil.

It is not therefore, strange, that as soon as the development of the automobile enabled the gratification of such desires, all of us, descendents of either early or recent pioneers, should take advantage of the opportunity. The horizon of every family has been enlarged, and instead of being confined to an area within six miles of home, our range is limited now only by convenience and our own sweet will.

The tourist traffic, increasing by leaps and bounds, has brought many problems reaching into every field of activity. They have to do with highways, camp grounds, sanitation, police protection, and hotel facilities. The problem to be given consideration today depends on one of the finest traits of human nature, the love of trees and plants.

Arbor day has fostered the idea of planting trees and shrubs on the home premises, and nursery agents and advertising keep this in the public mind. When, therefore, tourists find attractive evergreens growing in great profusion, they feel that nothing is simpler than digging up a few and taking them home.

When the transplanting of forest-grown trees and shrubs was confined to the locality in which they grew and employed for the adornment of the settlers' homestead, the practice was fostered and encouraged by the horticultural society and all state agencies. With the coming of tourist traffic, the situation changed completely and dangers, damage, and destruction took the place of the advancement of aesthetic adornment and the love of nature.

In three features, transporting trees by tourists differs from the former arbor day practice or the purchase of nursery-grown plants. First, the trees in question are almost uniformly stolen. The land on which they grow is all either private or state property and each tree no matter how small has a potential timber value. Stealing ten dollars from the safe of a metropolitan bank may be compared with digging up ten spruce or pine trees from a lumber company's holdings; there are many more left but, multiplied sufficiently, the loss is very real.

Second, the trees or shrubs hardly ever survive the trip. Tourists are usually unacquainted with transplanting methods and it is questionable whether one percent of the plants dug in August and carried on a running board for several days survive the experience.

Third, insect pests and plant diseases now of limited distribution, are introduced into new localities. This is the only phase of the matter in which the department of agriculture is officially interested. The reason the other features are mentioned is because the action of the department might have been modified if the public were receiving any measurable benefit from the tourist traffic in trees; that is if the trees were legitimately obtained and would grow and thrive in their new location.

Now, a word about the "hazards". Many think of an insect pest or a plant disease as a sort of "act of God", a plague appearing from some mysterious source and adding just so much to our usual troubles. As a matter of fact, however, insects, fungi, and bacteria are definite organisms, either plants or animals, and occur only in those localities into which they have been brought or have migrated. The Russian varieties of apple were brought into Sauk county from an outside source no less surely than was the codling moth. Tobacco does not grow in Iowa because no one has planted it there, just as the Mediterranean fruit fly does not occur in the United States because it has not been brought in and established.

About a generation ago several European countries imported some Asiatic pine trees and previously had brought in the American white pine. The Asiatic trees brought with them a fungus parasite which did them some damage but not a great deal. Exposed to the same infection for the first time in the world's history, the American white pine, proved very susceptible, for the disease caused the death of the exposed trees after a period of from three years to a dozen or more after the parasite had entered the needles and made its insiduous way down the twig and branch.

Shortly after that, the United States, finding the supply of young white pine in nurseries temporarily insufficient, imported several million from Germany to fill the need. Among the imported shipments one lot was planted about 1910 on the bank of the St. Croix river and distributed, from there to several nearby points in Wisconsin and Minnesota. Some of these trees from Germany were, unknown to the purchaser, infected with the parasitic fungus from Asia, now known as the white pine blister rust, and before they succumbed, threw off enough spores to cause the permanent establishment of the disease.

Under ordinary conditions and with a limited amount of control work, the spread of blister rust is slow and a limited amount of control work can delay its distribution throughout the pine-growing areas and to the ornamental white pines of the cities in this and neighboring states half a century or more. On the other hand, tourists in a single year could establish it thruout the Lake States by moving from the woods to their homes such white pines as struck their fancy. Even tho ninety-nine percent of all

the transplanted trees died and were burned before spring, seven hundred thousand tourists could make the other one percent a most effective distributing agent.

We never know how much more damage an insect or disease may do in a new locality or on a new host; just as Blister rust is probably injurious on the pines of Asia, but is certainly not disastrous. Wisconsin just now seems to be the favored host area for the insect pests of two other evergreens. The pine tussock moth has never been found of economic importance except in the jack pine of the Bayfield-Burnett county area where there have been destructive outbreaks in 1908 and 1923. Introduced, without its natural enemies, into an evergreen-growing nursery and thence into the southern yellow pine areas or the Pacific coast states, it might easily prove as destructive as its near relative, the gipsy moth.

A similar statement could be made regarding the hemlock spanworm, now destroying the hemlocks of Peninsula State Park in Door county. The species doing the damage has never been reported injurious elsewhere altho a closely related form killed many trees at Vancouver a dozen years ago. In Door county it is harmful enough having killed some twenty acres of hemlock this past summer, but scattered in the egg stage on young trees, the potential danger is incalculable.

These remarks are offered in explanation of the signs you have seen along the highways this past summer. The latter are 3x4 feet in size and as near like the official sign boards as possible. They were prepared by the Highway Commission from plans made in the Department of Agriculture and about one-third of the signs were erected by the Commission, the remainder by Mr. Chambers and Mr. Ninman, of this office. There are fifty of these sign boards located at a strategic points along the highways. They read as follows:

TRANSPORTING
TREES AND PLANTS
Prohibited by Law
Inspection required to Prevent
Spread
of Insect Pests and Plant Diseases.
State Department of Agriculture,
State Capitol,
MADISON—WISCONSIN

Prior to putting up these wooden signboards paper and cardboard posters had been distributed throughout the camp grounds, post offices and resort hotels of the tourist sections during the previous three years. Through the courtesy of the Conservation Commission, conservation wardens or game wardens were all deputized by the department to call tourists' attention to the law on the subject and in 1922 the wardens stopped over 650 tourists. In spite of three thousand or more posters having been put up where tourists would be likely to see them, most of them claimed ignorance of the law.

The results of the wooden signs near the highways have been very much better. During August and September I covered about three thousand miles of the highways myself in connection with nursery inspection and other activities and only saw four tourists carrying trees. One of these had just entered from Minnesota and was perfectly willing to comply with Wisconsin regulations as soon as he found out what they were. More tourist cars carrying trees were seen in a short two-hour trip into an adjoining state than were seen in the entire two months in Wisconsin.

The results have not been perfect, of course. We understand that there was considerable moving of trees from Door county and a considerable number of tourists carrying trees and shrubs along the east border of the state. Even here, however, conditions were far different from those of three years ago when traffic of this kind threatened to scatter such plant diseases and insect pests as we have throughout the entire area from which tourists come. To some extent, in following this plan, Wisconsin is largely protecting and administering the regulations of neighboring states. For example, Illinois prohibits the importation of white pine from any part of Wisconsin owing to the presence of the white pine blister rust in some sections of this state. It is constantly necessary therefore to send back or destroy white pine offered for inspection and shipment to Chicago and its suburbs.

It should be brought out and emphasized that the department is not interfering with or preventing the moving of healthy trees and shrubs where no damage is likely to result and where the owner is sufficiently interested in the trees to take any pains. Inspection is offered at the Madison office without charge and without delay. In 1922 the conservation wardens were stopping large numbers of tourists with trees. They gave each one the choice between sending the bundle to Madison for inspection or destroying them. Ninety-nine per cent preferred the latter course rather than taking the trouble of undergoing the small expense of shipping them to the office. This is a strong indication that the actuating motive in most cases is not so much a real desire for the trees as a belief on the part of the tourist that he is getting something for nothing.

An unexpected development of these attempts to inform the traveling public regarding the danger of moving possibly infected trees has been the discovery of formerly unlisted men in various parts of the state who make a business of digging up trees in their own localities and transplanting them to city lots. Such work is in a sense a branch of the nursery business. Practically all such landscape men have particular locations from which they secure trees. These locations are considered nurseries and the trees inspected where they stand.

I can, therefore, assure the members of the State Horticultural Society that if they wish to secure for themselves or to ship to other cities or states healthy trees and plants dug up with the owner's consent they can make the necessary arrangements without any serious

difficulties. Either of two plans may be followed. If the plants are to be shipped they should be sent by express prepaid to the State Entomologist, Capitol Annex, Madison, Wisconsin. A letter should be sent at the same time, supplying tags or giving the address to which they are to be forwarded. They will then be sent on express collect to destination. If there are any white pine trees in a bundle going to a state which has a quarantine against white pine from Wisconsin, the trees, if few in number, will be destroyed or, if there is a large bundle, will be sent back. The same plan is followed with shrubbery infested with scale insects; or evergreens with various kinds of insect pests. If the owner desires to have all the condemned trees and shrubs returned that plan is followed, of course. If, on the other hand, you desire to move trees locally for yourself or your friends, pick out the locations from which you expect to get them early the previous summer and such inspection will be made without charge while the nursery inspectors are making their rounds.

In its efforts to limit the tourist's destructiveness to trees and plants the department has received support from many sources. Those who are interested in the conservation of natural resources, Friends of Our Native Landscape, officers of the Horticultural Society, and many others have realized that the conditions of four years ago could not continue. Newspaper comment has been almost uniformly favorable.

It is entirely possible to provide for the legitimate transplanting of healthy trees and plants and at the same time protect the state against wanton destructiveness at one end, and the introduction of new insect pests and plant diseases at the other. The department's plans have been directed toward such a solution of "the tourist problem".

The greater the consumption of fruit the better the health of the nation.—Agnes Carroll Hayward.

COLD HASTENS GERMINATION

Cold storage control in the germination of seeds may mean savings of millions of dollars to nurserymen, horticulturists and foresters, according to Dr. William Crocker, director of the Boyce Thompson Institute for Plant Research.

At the meeting of the American Association of Ice and Refrigeration at Washington, D. C., Dr. Crocker, pointed out the need for cold storage control in the germination of seeds. Many seeds that nurserymen, horticulturists and foresters have found it costly and difficult to germinate, especially hybrid seeds produced at a great expenditure of time and money, have been killed because they were not kept at a constant low temperature.

Studies at the Institute show that the seeds of the rose or apple families, stored at forty-one degrees, F., produced seedlings, while those held at other temperatures failed to grow. Apple seeds held at 41 degrees for seventy-five days germinated, while those held even at fifty did not. Such facts have been worked out for thirty different genera of plants and many more varieties and species.

This knowledge means millions saved to the industries interested. But to regulate the temperature closely enough to produce the best effects, controlled cold storage conditions are necessary, especially for seeds needing a long period of treatment and a narrow range of temperature. The extra expense involved seems warranted since such great losses are involved. One western nurseryman who had 750,000 Norway maple seedlings, reduced by a late freeze to only 120,000 plants, said that it cost him thousands, and he now keeps half of such seeds in cold storage to make the time of generation suit the planting time.

Another scientist who had been for years hybridizing peaches producing seeds at great expense, has discovered through the Institute's studies that he was losing nearly all of them because they were held at freezing temperatures. The resulting increased production, at decreased loss of time and money, should make cold-storage control of germinating temperatures profitable, even with some added expense.

Another practical industrial contact of this laboratory research work on plants is made by the Institute's studies conducted by Dr. F. E. Denny, in hastening the sprouting of potatoes by chemical treatment. If the two months' rest period that potatoes take after harvesting can be shortened, Maine seed potatoes can be ready for early Bermuda planting.

This fact interests not only the growers and planters, since the northern grown potatoes may be produced nearly disease-free, but also the railroads which will transport them to new and distant markets in the south. The best results have been obtained with potassium or sodium thiocyanate and ethylene chlorhydrin.

—Boyce Thompson Institute Bulletin.

WE DO NOT AGREE

In the last issue of the Minnesota Society's magazine we find that their Committee on Fruit List starts their lists of recommendations with the following:

"1. That the Wolf River be dropped from the list on account of its very low quality."

The Wolf River apple may be the Holstein of the apple varieties, and have size and quantity and little else, but for an all around good baking apple we feel that it can't be beaten. The growers with whom we have talked concerning this variety don't seem to feel that it's a waste of time to grow it, either.

The restaurants demand it when possible. Housewives like it. Wisconsin Grows It. We are not going to erase it from our list of the Big Five Varieties for Commercial purposes in Wisconsin.

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A STEP FARTHER

A month ago we ran an editorial under the caption "Answered", which caused quite a storm of commendation and condemnation. Which was just what the editorial was intended to do. It was intended to get opinions from the growers of Wisconsin from whom we have been unable to get opinions by the usual method of asking direct questions.

A careful reading of that editorial will disclose that no charge was made against the growers except disinterest in cooperation, either between themselves and institutions which they themselves have created, or among the entirety of themselves. It is true that we have efficient cooperative institutions that are making great headway in defeating poor packing and inferior products. We need more of them. We need some method by which every grower in the state can become familiar with what his market wants. We need an established communication among the various sections of the state so that we shall not cut each other's throats in the process of marketing. We need to unite to sell superior fruit grown in Wisconsin instead of allowing inferior fruit, either imported or Wisconsin grown, to crowd us out of our own market.

DO NOT FORGET

That Oshkosh is Having the Summer Meeting This Year and That it is to be Held on August 11th and 12th. A Pleasant Auto Trip From Any Part of the State and a Good Chance to Meet Your Horticultural Friends.

The remedy is right at hand if we may believe our Michigan friends and the few in Wisconsin who have dared to offer an opinion. We have a Department of Markets which has proved to the satisfaction of some districts that it is an efficient organization staffed with executives who know quite a little bit about marketing and who have proved their worth. The State Horticultural Society can help up to a certain point but beyond that it can not go, i. e., it will advertise Wisconsin fruit and attempt to better the quality by educational devices—but it cannot sell the fruit.

Let's go a step farther than we ever have before. Let's face the fact that unless we make use of our specially formed departments that we were foolish in asking for their institution. Let's face the fact that it is true that we humans are essentially individualists, but that when we come to a point where it is hard going that we always like to have a crowd in the same boat to help with the oars. Let's realize that we can help each other immensely by the simple process of establishing that "neighborhood spirit", which is the original form of cooperation, throughout the whole state.

If you happen to be in Madison some time come in and talk it over. The office of this Society is in Room 233 of the Washington Building, which is just a little way up East Washington Avenue from the Capitol. We know that you will bring something of interest to us and we hope that we can give something of interest to you.

J. S. P.

OSHKOSH MEETS

The Oshkosh Horticultural Society held its June meeting on the seventh of the month. The meeting was preceded by a supper and a chance to talk and get acquainted.

The meeting was devoted to making plans for the flower shows to be held this season, and the spirit of service was admirable as shown by the way the members responded to the requests of the committee.

J. S. Potter, assistant secretary of the State Society, talked informally on cooperation within the Society.

MADISON FLOWER SHOW

Thousands of peony blooms and a good collection of iris and other spring flowers made up the exhibit at the first Annual Peony Show of the Madison Horticultural Society and Garden Club. The exhibit was staged for three days, June 18, 19 and 20, and the number of spectators indicated that the public was interested and would appreciate the next two shows which will follow later in the season. W. J. Moyle of Union Grove judged the exhibits.

ABOUT PICKING WILD FLOWERS

The Wild Flowers Prevention Society of America has compiled lists of wild flowers, some of which may be picked if abundant, others which should not be picked if the species named are to be preserved. The lists follow:

SPRING FLOWERS

Bloodroot *(Sanguinaria canadensis)*. Picking the leaves destroys the plant.

Blue-eyed-Mary *(Collinsia verna)*. An annual which depends upon seed production to persist.

Columbine *(Aquilegia canadensis)*. Picking the flowers carefully will not injure the plants, but when pulled carelessly the plants are uprooted.

Dragonroot *(Arisaema dracontium)*. Related to Jack-in-the-pulpit. Becoming rare.

Ferns:

American Maidenhair (Adiantum). Generally destroyed by thoughtless persons who pull the plants when gathering leaves.

Climbing Fern *(Lygodium palmatum)*. Rare. There is a New England law against collecting this fern.

Walking Fern *(Camptosorus rhizophyllus)*. Found on rocky ledges. Difficult to transplant. Useless to pick but of great charm to see.

Gerardia, False-foxglove. Some species, being annual, depend upon seed production to persist. They are generally parasitic on roots of other plants. Almost eradicated.

Ginseng *(Panax quinquefolia)*. For supposed medicinal properties.

Goldeye-grass *(Hypoxis hirsuta)*. Becoming rare.

Groundnut *(Apios tuberosa)*. Roots are edible. One of the surviving native plants with edible roots. Use reason in digging them so that they shall not be exterminated.

Hepatica, often called Liverwort *(Hepatica triloba* and *H. acutiloba)*. Picking flowers does little harm except to prevent seeding. Don't pick where scarce.

Iris, Crested, *(Iris cristata)*. Being exterminated in Ohio. Buy plants.

Jack-in-the-pulpit *(Arisaema triphyllum)*. Picking the leaves destroys the plants.

Marsh-marigold *(Caltha palustris)*. The drainage of swamps has eliminated proper conditions for

Merrybells, Bellwort. *(Uvularia)*. Removing the stems results in poor growth for another year.

Orchids:

Ladies-tresses *(Spiranthes)*.

Purple Fringed Orchid *(Habenaria fimbriata)*.

Showy Orchis (*Orchis spectabile)*.

Moccasinflower *(Cypripedium acaule)*.

Ladyslipper Orchid (various *(Cypripediums)*.

Pitcherplant, Saddleplant. *(Sarracenia purpurea)*. Rare. Unusual.

Puttyroot *(Aplectrum hyemale)*.

Rosegentian *(Sabatia)*. Member of Gentian family, therefore must produce seed. Grows in either sun or shade. A biennial.

Shootingstar *(Dodecatheon meadia)*. Grows in either sun or shade.

Toothwort, Crinkleroot *(Dentaria diphylla)*. May be picked if abundant.

Solomonseal, False *(Smilacina racemosa)*.

Trailing-arbutus *(Epigaea repens)*. Becoming rare. Frequently, when flowers are picked, the whole plant is pulled up. Cutting a few sprays with a knife or shears will not injure the plant, but everyone should do his best to preserve this gem. It does not generally transplant no matter how carefully it is treated. Dealers grow the plants from seed and sell them in pots.

Trillium. Picking these flowers destroys the roots because the leaves are also taken.

Troutlily, Dogtooth-Violet or Yellow Adderstongue *(Erythronium americanum)*. It requires six or seven years for these to grow from seed. Although abundant they should be picked sparingly.

Twayblade *(Liparis lilifolia)*. Rare, Plants are ruined if leaves are cut. One of the orchids.

Twinleaf *(Jeffersonia diphylla)*. An interesting and handsome flower. Pick but few.

Violet, Birdsfoot *(Viola pedata)*. Becoming rare.

Summer Flowers

Cardinalflower *(Lobelia cardinalis)*. These charming flowers are never too plentiful. Let us have more of them. Pick a few, but no more.

Indianpipe *(Monotropa uniflora)*. This is a strange colorless plant which is not valuable for cutting as it turns black.

Meadowbeauty *(Rhexia virginica)*. These dainty flowers wilt upon picking. Good in boggy places.

Shineleaf *(Pyrola elliptica.)*

Autumn Flowers

Gentians *(Gentiana andrewsi, G. crinita, G. quinqueflora)*. These are rare flowers which depend for their life upon seed production.

Winter Plants

Collect sparingly the following: Partridgeberry *(Mitchella)*, Winterberry *(Ilex verticillata)*.

May Be Picked If Abundant in Your Neighborhood

In Spring or Early Summer

Baneberry *(Actaea)*.
Bearded-tongue *(Pentstemon)*.
Bellflower *(Campanula)*.
Butterflyweed *(Asclepias tuberosa)*.
Coralberry or Indian-currant *(Symphoricarpos vulgaris)*.
Dutchmans-breeches *(Dicentra cucullaria)*. Take care not to pull the plants.
Geranium or Cranesbill *(Geranium* maculatum).
Honeysuckle, Coral *(Lonicera sempervirens)*.
Jersey-tea *(Ceanothus americanus)*.
Lilies *(Lilium)*. Cut the stems short so that a good quantity of leaves remain.
Lobelia, Great *(Lobelia syphilitica)*.
Lupines *(Lupines)*.
Mayapple *(Podophyllum peltatum)*.
Roses, Wild *(Rosa)*.
Shadblow *(Amelanchier canadensis)*.
Snowberry *(Symphoricarpos racemosus)*.
Springbeauty *(Claytonia virginica)*.
Turtlehead *(Chelone glabra)*.
Violets *(Viola)*.
Windflower *(Anemone)*.

In Autumn

Bayberry *(Myrica)*.
Ferns. Don't uproot the plants in picking the fronds.
Sea-lavender *(Limonium)*.

May Be Picked in Large Quantities

In Summer

Alfalfa *(Medicago sativa)*.
Balm *(Mellisa afficinalis)*.
Bedstraw *(Galium)*.
Beeblam *(Monarda)*.
Black-eyed-susan *(Rudbeckia)*.
Bouncing-bet *(Saponaria)*.
Buttercup *(Ranunculus)*.
Buttonbush *(Cephalanthus)*.
Camomile *(Anthemis)*.
Celandine *(Chelidonium)*.
Dandelion *(Taraxacum officinale)*.
Daylily *(Hemerocallis fulva)*.
Elder *(Sambucus)*.
Evening primrose *(Oenothera)*.
Ground-ivy *(Nepeta hederacea)*.
Groundselbush *(Baccharis halimifolia)*.
Hawkweed *(Hieracum)*.
Hawthorn *(Crataegus)*.
Houndstongue *(Cynoglossum)*.
Honeysuckle *(Lonicera)*.
Jerusalem-artichoke *(Helianthus)*.
Meadowsweet *(Filipendula)*.
Mint *(Mentha)*.
Mullein *(Verbascum)*.
Mustard *(Brassica)*.
Queen Anne's Lace or Wild Carrot *(Daucus carota)*.
Selfheal *(Prunella)*.

(Continued on page 156)

HORTICULTURAL TROUBLES

Edited by E. L. Chambers, Assistant State Entomologist

TRAPPING THE CODLING MOTH

Ever since the codling moth, an insect native of southeastern Europe, became established in this country the fruit growers have been looking for a cheap and efficient means of control. They are still looking for it, and are compelled to wage a hard fought battle annually in the meantime to keep their industry in existence. The market demands worm free apples and is willing to pay a premium for them. With the assistance of the entomologists, the growers have laid out a more or less complicated but effective program of spray attack which under suitable weather conditions will enable them to accomplish this end. As a rule the codling moth can be fairly well controlled in Wisconsin by two or three sprays. The first is usually applied just as soon as the majority of the petals have fallen. A second application is made about three weeks later and a third, nine or ten weeks after the petals have fallen. The spray material in each case is the same, and consists of five quarts of lime-sulphur solution and one pound of arsenate of lead in fifty gallons of water. There are however still quite a few factors which limit the effectiveness of this means of control that have not as yet been overcome, for besides being complicated enough to require considerable knowledge and experience upon the part of the grower the present program involves quite an expense in labor and materials.

In orchards having a large range of varieties and where the blossoming period is consequently spread out over quite a number of days, complications arise. It is then impossible to select the most desired stage for the calyx spray in each case without spraying almost continuously and jumping around all over the orchard to do it, and results therefore have not been as good as would be desired.

Again, during a rainy spell the spraying is frequently of necessity delayed several days and the warm rains hasten the development of the blossoms to such an extent as to make it impossible to fill the calyx cups with the prescribed arsenate of lead poison before they close. The spray then is only partially effective and large numbers of the developing fruits are entered by the young worms which hatch from the eggs laid by the moth on the adjoining leaves. Because of the absence of the necessary poison spray covering they are able to eat through the calyx end unharmed.

In Colorado and other states where this pest occurs in much larger numbers the growers find it necessary to spray almost continuously all season to produce a marketable product free from "stings" and worms. On account of this unusually heavy attack the orchardists are not fully satisfied with the results they are getting and so supplementary control measures are being investigated.

For a long time it has been known that the adult moths were attracted by vinegar but it was not until a few years ago that this weakness of the pest was taken advantage of and Colorado entomologists designed a trap for it. The traps used by them were simply quart tin cans and glass jars partially filled with a liquid bait and suspended in the tree. The bait consisted of various dilutions of vinegar or freshly fermented apple juice. The moths are attracted by the odor of the mixture and in seeking it usually fall in and drown.

In their recent report, Messrs. J. H. Newton and W. P. Yetter, who carried on this investigation, mentioned one grower who had put out some 900 glass jars filled with a 25% vinegar solution and had caught approximately 18,000 moths of the first brood. This solution however failed to catch any of the second brood. In their experimental work these investigators found that freshly fermented apple juice would attract moths of the second brood as well. The most effective bait solution they used was made by cutting into quarters approximately one box of apples and adding it to 4½ gallons of water. This mixture was then allowed to boil for an hour. The resulting liquid was then drawn off and about 1½ pounds of granulated sugar added. In 24 hours, 1½ yeast cakes or several rotten apples were added to the solution to start fermentation and then it was ready for use.

Since the recent propaganda and agitation in England regarding the so called danger of arsenical poisoning from eating sprayed apples which is being promoted by the English growers who it seems would like to eliminate the competition of American and other imported apple crops, the New Zealand fruit growers have become interested in the possibilities of the moth traps. The English growers have been able to get quite satisfactory control of the codling moth with only the early arsenical sprays, and are thus in position to effectively picture to the consumer the danger in a coating of this poison applied during the late sprays needed in America and New Zealand. It has been established by both English and American chemists that even if all of the poison usually applied to the fruit would stick and the apples were consumed peeling and all it would take nearly a barrel at a meal to constitute a sufficient dose to cause serious illness.

At any rate the New Zealand fruit growers who are using the same spray materials and spray schedules as are used by our growers are preparing to "cash in" on the scare, if possible. If they can get their traps operating satisfactorily to supplement the early sprays and eliminate the late sprays they believe they can create a demand for their fruit at a premium by packing it in paper

wrappers stamped "free from poisonous sprays" and thus capture the English market.

The preliminary tests made by one of their entomologists and reported in a recent number of the New Zealand Fruit Grower show that in one experiment 305 moths were caught of which 218 were females. The report assumes that each female would have laid its 150 eggs and thus approximately 32,000 stings were eliminated. They seem quite enthusiastic over the method and expect to give it a trial on a larger scale. If this American method will give sufficient relief to make it worth while in New Zealand it is surely worth giving a trial in Wisconsin. Try it.

E. L. CHAMBERS.

Stake and tie the delphiniums as soon as the flower shoot gets a start.

The growing of fruit is at once a science, a profession, and a business.—Agnes Carroll Hayward.

If all the advertisements concerning health foods were taken seriously, can you imagine what the average American table would look like?—Agnes Carroll Hayward.

ASTER ROOT LICE

The most recent work on the control of aster root lice, about which you asked a few days ago, has been carried on at the Ohio State. The results are published in their bulletin 387.

Two different species occur on aster roots, a bluish one, the corn root-aphis, and one which is white in color, the white aster root louse. Both are injurious, the latter at times becoming a destructive pest.

Many of the materials tested in control experiments, including calcium cyanide, carbolineum, carbon disulfide, corrosive sublimate, sulfur, paradichlorobenzene, and tobacco dusts, proved either ineffective or injured or killed the asters; although some of them have been recommended by gardeners in the past.

Dr. Cutright, the author of the Ohio bulletin mentioned, reached the conclusion that no one measure could be relied upon to control these aphids, and makes the following recommendations:

"1. Keep the plants in good condition by cultivation, fertilization, and watering.

"2. Avoid planting asters on ground that has recently grown such plants as wild asters, goldenrod, or any general mixture of weeds. Such plants are frequently infested and the ants simply transfer the aphids to the aster roots.

"3. If a large planting of asters is to be made, plow the ground and cultivate it frequently for some time before planting.

"4. If plants become infested, pull away a small amount of earth from the roots and pour about them from a pint to a quart of nicotine sulphate solution.

"Nicotine sulphate of a strength of 1 teaspoonful to a gallon of very soapy water was used. The earth was pulled away from the base of the infested plant and from 1 pint to 1 quart of this solution poured about the roots. Numerous aphids were killed by this treatment but applications had to be repeated several times during the season to secure the best results. We have never seen plants that were injured by this treatment. At present this is one of the most practical methods of control for use in small plantings of asters. The first application should be made when aphids or damage is first noted."

While the solution of nicotine sulfate here recommended seems very dilute, the efficiency is due in part to the amount of soap used, about two-thirds of an ounce to a gallon.

S. B. FRACKER,
State Entomologist.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

GARDEN FLOWER SHOW

Garden flower lovers had their first inning at a flower show that was staged in the Public Museum Annex Sunday to Tuesday, June 13 to 15. It was the first activity of the newly organized Milwaukee County Horticultural Society, and they found the woods were full of garden fans. The attendance was not so great numerically, 5,000 Sunday, 2,000 Monday and 1,000 Tuesday, but the analysis of the visitors assayed nearly 100 per cent. Very few got started around the tables, without whipping out paper and pencil and copying names. Scarcely anyone gave it a hasty look and then left.

It was advertised as an Iris show and true to name there were sixty varieties of Iris exhibited in full bloom. Of the 150 vases all but 74 were filled with Iris. Other perennials and annuals were shown because they happened to be in bloom at the same time. A very fine lot of the sprays of Bridal Wreath and English Hawthorn and new French lilacs caused a good deal of comment. Even some of the wild flowers that are cultivated hereabouts, found their way to the show, such as wild geranium, Yellow Lady's Slipper, and wild columbine. Mrs. C. E. Strong had a fine vase of the native columbine, mixed with the cultivated kinds and some that she had hybridized with the wild ones. Thus this flower show could claim one exhibit that no other in this country could have. In the lily family, blossoms were shown of the Orange Lily and Lemon Lily both species of Hemerocallis, three vases of Darwin Tulips, Star-of-Bethlehem and Lilies of the Valley. One of the rarer perennials shown was a Scotch Verbascum or Mullein, something like our Butterfly Mullein. Polemoniums were at their best then and some shown. Snow in Summer, Saxatile allyssum, Siberian Wallflower, the new Cheiranthus allionii, (both so wondrously fragrant), three varieties of the red paeonies, the new Briarcliff rose, bleeding hearts, snowballs, centaureas, and sweet rockets galore all had their place.

The season has been so backward here that it was a matter of wonderment to most visitors to see so many things in bloom at this date. Of course, the show attracted many new members for the society. Many people said to the writer,—"This is fine,—we can understand this kind of flowers, and everybody can enjoy and raise them". Everybody is eager for the next one, and it will probably take place in two weeks time as a paeony show. Even the florists were interested and came to the show, and one of them sent quite a large selection of his outdoor perennials. The shows are always free and open to everybody in the city and state to exhibit. About June 27th if anybody in the state reading this wants to send in any flower, it will be happily exhibited. For downright happiness, nothing could be better than attending the monthly session of the new society on the second Sunday afternoon of every month. They start at three o'clock in the afternoon, and the janitor has to throw them out at closing time. They go down the stone steps in about another hour babbling of the superiority of Madame Chereau over Madame Paquette, or the hardiness of the Remontant strain of roses. Give us an amateur every time when it comes to getting interested in flowers.

The first show was a mighty swapping ground and it is safe to say that more new friends were made during that show than in the past six months. We can see an assured place in the horizon of Milwaukee for the new Horticultural society.

H. H. S.

POSSIBILITIES FOR SOUTH-EAST WISCONSIN

With an enormous city growing to a more enormous size each year at the doorstep of Wisconsin, there is no doubt that soon the growers of Wisconsin will be called upon to grow the "salad" as well as the milk, the strawberries as well as the cream, for the inhabitants of this great city.

Year by year Chicago is stretching its streets and boulevards into the outlying regions. Year by year the gaps between the suburban towns are being closed, until soon there will be an immense congregation of humanity whose business is within the heart of the great city, and who must be fed. Slowly, but certainly, the lands fit for growing small fruits and truck crops in the vicinity of Chicago are being used for the building of stark apartment houses, and acres of bungalows are growing where there was agriculture. Slowly but surely the land is being taken away from its use for the production of food and is being used for homes.

Southeast Wisconsin; Racine, Kenosha, and eastern Walworth Counties; can become the center for the production of fresh fruits and vegetables for this mass of humanity, because its soil is more adapted to that purpose than any other comparable vicinity. The transportation problem has been solved by the years of supplying fresh milk to this city. It is not hard to see that part of Wisconsin is the most important food center for Chicago.

To the South of Chicago lies the stretches of level corn land, already settled as an industry, and with a soil not as adaptable for the purpose of small fruits and vegetables as is our Wisconsin land. To the West of Chicago stretches miles and miles of suburban towns, golf clubs, plotted subdivisions, and lands unsuitable for the purpose which we are discussing.

To the North of Chicago lies the famous North-Shore settlements, stretching in almost a solid mass to Milwaukee, and year by year forcing out to the West.

To the East is the unproductive

sand dunes country and more towns and cities needing food, and all entirely accessible to a Wisconsin market.

High quality vegetables grown in the deep alluvial soils of our Southeast would find ready buyers. Fresh picked small fruits will find little competition in the same commodity which has undergone the dusty, dirty journey from a more distant market.

With millions of people to feed daily, with thousands of transients needing food from the large hotels, with an ever increasing demand for suitable soil for the production of fruits and vegetables, it seems that the solution to the problem will be forced on our Southeast farmers. And the one who sees the possibility first and who has the land and desire to grow a profitable cash crop will be the one who reaps the most profit.

There are great possibilities for Southeast Wisconsin. It's worth thinking about.

LETTERS AND ANSWERS

We are continually in receipt of questions from members all of which are answered by personal letter. We are glad to get such letters and wish there were more. We have not always published these questions and answers but in the future will aim to do so using the copy of our letters just as written to the member. This may not be first class newspaper style but the effect will be the same.

Apples in Racine County

A Racine County member asks about planting an apple orchard in Racine County. By way of explanation; Racine County is divided into two parts, about two thirds level, rather low land, deep black alluvial soil, the remainder ridge land.

ANSWER: We are fairly familiar with the situation you describe and feel that apples and cherries ought to do well on the higher lands. We advise strongly against planting fruit trees on the lower land. These level lands are ideal for small fruits, musk melons, but not for orchards.

In regard to varieties (apples) we are still riding our old hobby, fall and early winter apples and few varieties. Plant Wealthy, Fameuse, McIntosh, Northwestern Greening and Wolf River, the Big Five.

There is this to be said, however, about the southeastern corner of Wisconsin: You can grow successfully there almost any known variety of apple. But why grow kinds that compete with every other apple section of the country.

We are well satisfied that there is no other crop that will yield as big returns as apples. And there is no other crop that demands more in good culture and constant attention to produce paying crops.

The dairy cow has so completely overshadowed everything else in Wisconsin that few people know or believe that we can grow apples.

Chicago will be in your front yard in just a few years and with concrete roads all you will need to do is to grow good fruit; people will come to your orchard and take it away from you at good prices.

Where not to Plant an Orchard

C. R. You say you have a piece of land too rough to plant and you are thinking of planting an orchard on it. Don't do it. It will be a losing proposition. The best of land is none too good for an orchard. The day of sod orchards on side hills is past. Raising apples is now a highly specialized business and only those who cultivate, prune properly and spray succeed. Land too rough to plow is too rough for hauling spraying machinery.

Select level land, well drained, plant the right varieties, do the things we have named and you will succeed. There is no other crop you can plant that will yield as good returns as fruit. You ask if Delicious will prove hardy. It will no doubt prove hardy but will it be as profitable in Wisconsin as Wealthy, Snow, McIntosh and Northwestern Greening? I doubt it.

The Eldorado is the standard blackberry for this state.

The Downing Gooseberry is as yet unbeaten.

About Blackberries in Bayfield County

The Eldorado is considered the best blackberry for any section of Wisconsin. It is as hardy as any and will yield better than any of the older kinds such as Ancient Briton, etc.

If you have light soil and southern exposure you may find blackberries fairly profitable in the vicinity of Port Wing, otherwise we cannot advise heavy planting. The blackberry requires a longer season for ripening than the raspberry. The fruit that ripens in the cool weather, late in the season often lacks quality.

A SURE CURE FOR FIRE-BLIGHT

I notice in the February 1926 issue of Wisconsin Horticulture an editorial headed "AT LAST". This editorial quotes a paragraph from the Sturgeon Bay News of December 21st to the effect that the Door County Fruit Growers Union was making a special effort to clean up the fire blight in Door County. To the list of varieties of apples mentioned in this paragraph from the Sturgeon Bay News, I would add the Wealthy as being as bad as any offender as far as fire blight is concerned. However, I am convinced that I have at last found, in my orchard at Fish Creek, Wisconsin, an effective remedy for fire blight and that is to pull up the trees, and, from my experience, I believe that this is the only real cure for fire blight thus far found when once established in an orchard. Following this remedy, I have pulled up at least 1500 fifteen year old Wealthy apple trees during the last two years. Most of these trees were so bad that cutting out the blight would have left them mere skeletons and five years would

(Continued on page 155)

PLANTS FOR SHADY PLACES

It is seldom that the home maker has a perfect location for his garden. It is almost inevitable that there should be certain sections of the garden plot which are shaded much of the day by buildings or by trees. What to plant in partial shade becomes therefore an important question. A very satisfactory answer is given by the Minnesota Horticultural Society in its monthly publication as follows:

The most useful low growing shrubs suitable for planting on the shady side of the house are Japanese Barberry, Alpine Currant, Indian Currant, and Snowberry.

Shrubs of medium size suitable for shade are dwarf Juneberry, Ash-Leaf Spirea, Sweet Pepper Bush, Snowball Hydrangea, and Golden Flowering Currant. The well known bridal wreath spirea is also very suitable for this purpose. The sweet-scented shrub is also good, but not generally hardy here. The Sweet Pepper Bush mentioned above succeeds as a rule only in well-protected places.

For tall growing shrubs a wider selection is available. Probably the most desirable shrubs for planting in shade are the High-Bush Cranberry, the Wayfaring Tree (Viburnum lantana) which has broad white flowers in June with very attractive foliage and the arrow wood (Viburnum dentatum) which flowers in June and has handsome, glossy greeen foliage. The native Burning Bush or Wahoo, with brilliant crimson fruit and scarlet foliage in the fall, is another very showy shrub which may sometimes be used to advantage around the house. Other good shrubs for shade are the Siberian Dogwood, the Yellow-Twigged Dogwood, Morrow's Honeysuckle, Cut-Leaf Elder and Red-Berried Elder.

In rather dense shade or where under-planting in woodland is desired, our best ornamental shrubs are the native Burning Bush (Euonymous atropurpurea) common Elder, Ninebark Spirea, Maple-leaved Viburnum, High-Bush Cranberry, and any of the Dogwoods. The alternate leaved Dogwood (Cornus alternifolia) is a rather tall native shrub found in moist locations, usually along stream, and is very excellent for moist, shady positions. For grouping around the base of large trees nothing is better than the Ash-leaf Spirea, Golden Flowering Currant, and our native Black Currant (Ribes floridum).

The ability of trees to withstand shade is of much less importance to the landscape gardener. The Ironwood and Mountain Maple (Acer spicatum) are two small trees which will tolerate a considerable amount of shade. When planting young trees under other trees it is well to remember that trees with heavy foliage, like the Maple, will grow in a greater degree of shade than will trees with less dense foliage like the Populars and the Willows. With respect to the Evergreen trees it is of interest to note that the Balsam Fir will stand more shade than any of the other varieties commonly planted in this region.

Perennials for planting in the shade belong to rather different groups. There are plants which prefer shade, comprising those not well adapted for planting in full sunlight. The most valuable perennials of this group are the Monkshoods, the Snakeroots, Lily of the Valley, Bleeding Heart, Moccasin Flower, Solomon's Seal, Bloodroot, Trillium, and nearly all species of ferns. Solomon's Seal is particularly good for dry, sandy situations. For a trailing plant for ground cover the Periwinkle (Vinca minor) is effective. By using both early and late flowering species of Monkshoods, Snakeroots, and Bleeding Heart, a longer period of bloom will be secured. The first Monkshood to bloom is Aconitum napelluh in August, later varieties continuing until October. The tall Snakeroot (Cimicifuga, racemosa) blooms in July and August, followed by the low growing Jaapnese Snakeroof in August and September. The everblooming Bleeding Heart (Dicentra formosa) flowers from May to August.

In the second group are perennials which seem to succeed equally well in partial shade or in full sunlight, except that in some instances intense sunlight will burn the blossoms. The tallest growing perennials in this group are the Astilbes, the tall Plantain Lily (Funkia subcordata), Foxglove, most of the day Lilies, (Hemerocallis spicata-, Lobelia cardinalis, the Herbaceous Spireas, Thalictrum dipterocarpum, the best of the meadow rues, and many of the Ferns.

Plants for Sunny Places (Use Good Garden Soil)

Anemonella *(Rue-anemone) (Anemonella thalictroides).*
Asters, Wild.
Blue-eyed-grass *(Sisyrinchium).*
Bluets *(Houstonia caerulea).* The plants readily self sow.
Butterflyweed *(Asclepias tuberosa).*
Cardinalflower *(Lobelia cardinalis).*
Cranesbill *(Geranium maculatum).*
Culvers-physic *(Veronica virginica)*
Goldenrod *(Solidago).*
Helenflower *(Helenium autumnale).*
Phlox, Blue *(Phlox divaricata).*
Phlox, Moss *(Phlox subulata).*
Rosemallow *(Hibiscus moscheutos).*
Senna, Wild *(Cassia marilandica).*
Speedwell, Common *(Veronica officinalis).* Makes a good ground cover.
Spurge, Flowering *(Euphorbia corollata).*

Plants for Wet Places

Arrowhead *(Sagittaria latifolia).*
Boneset *(Eupatorium perfoliatum).*
Cardinalflower *(Lobelia cardinalis).*
Ferns (See list on page ( )
Dragonhead, False *(Physostegia virginiana).*
Flag, Blue *(Iris versicolor).*
Forget-me-not *(Myosotis palustris).*
Joe-pye-weed *(Eupatorium purpureum.)*
Loosestrife, Purple *(Lythrum Salicaria).*
Marsh-marigold *(Caltha palustris).*
Meadowbeauty *(Rhexia virginica).*
Milkweed, Swamp *(Asclepias incarnata).*
Monkeyflower *(Mimulus ringens).*
Rosemallow *(Hibiscus moscheutos).*
Turtlehead *(Chelone glabra).*

Shrubs for Wet Places

Blueberry, Highbush *(Vaccinium corymbosum).*
Buttonbush *(Cephalanthus occidentalis).*

Cinquefoil, Shrubby *(potentilla fruticosa).*
Hardhack *(Spirea tomentosa).*
Meadow Spirea *(Spirea latifolia).*
Pussy Willow *(Salix discolor).*
Spicebush *(Benzoin aestivale).*
Summersweet *(Clethra alnifolia).*
Winterberry *(Ilex verticillata).*

Plants for Shady but Moderately Moist Places

The following wild flowers should only be planted if you have a good soil composed of loam and a liberal amount of leaf mould. During dry summers these sorts will benefit by abundant watering:

Baneberry *(Actaea rubra* and *alba).*
Bloodroot *(Sanguinaria canadense).*
Bluebells (Ohio name) *(Polemonium reptans).*
Bluebells, Virginia *(Mertensia virginica).*
Bluet *(Houstonia caerulea).*
Blue-eyed-grass *(Sisyrinchium angustifolium).*
Columbine *(Aquilegia canadensis).*
Gentian, Closed or Bottle *(Gentiana andrewsi).*
Ginger, Wild *(Asarum canadense).*
Gentian, Fringed *(Gentiana crinita).*
Hepatica *(Hepatica triloba* and *H. acutiloba.*
Harebell *(Campanula rotundifolia).*
Hobblebush *(Viburnum cassinoides).*
Jack-in-the-pulpit *(Arisaema triphyllum).*
Mayapple *(Podophyllum peltatum).*
Meadowrue *(Thalictrum).*
Partridgeberry *(Mitchella repens).*
Shootingstar *(Dodecatheon meadia).*
Solomonseal *(Polygonatum biflorum).*
Trillium *(Trillium various).*
Troutlily called Dogtooth-violet *(Erythronium americanum).*
Violets *(Viola).*
Viburnum, Mapleleaf *(Viburnum acerifolium).*

A SURE CURE FOR FIRE-BLIGHT

(Continued from page 153)

have been required to make real trees out of them with the prospect that the same thing would happen again. The space occupied in my orchard by these ill-mannered Wealthy trees will, at the end of five years, contain a young cherry orchard, from which there is at least some hope of a financial return. The present is dark, but the future of my orchard has a much brighter outlook by the use of nerve and a tractor with cable attachments.

I wish that this letter might start a discussion on the advisability of planting the Wealthy apple for commercial purposess, as I notice the February issue of Wisconsin Horticulture still advises.

Yours, very truly,
F. L. BLACKINTON.

(To cure a dog of sheep-killing: Cut off his tail—close behind his ears. —Editor.)

"THEY KNOW THESE THINGS OF NATURE"

(Continued from page 143)

That page was never colored. It seemed too wonderful for little blundering fingers. But it stands out in memory, where the others have faded and gone.

They know, these things of nature: it must be a kind of knowing.

Then why should mankind know less, or lay hold on less of joy?

—(Written for May Wisconsin Horticulture. Editor.)

Have you given your flower garden a good start?

A good seed bed makes a good start for the seeds.

ABOUT PICKING WILD FLOWERS

(Continued from page 149)

St. Johnswort *(Hypericum).*
Sweetfern *(Comptonia).*
Tansy *(Tanacetum vulgare).*
Todflax *(Lindria).*
Trumpetcreeper *(Bignonia).*
Verbenas, Wild *(Verbena).*

In Fall

Asters *(Aster).*
Bittersweet *(Celastrus scandens).*
Boneset *(Eupatorium perfoliatum).*
Compassplant *(Silphium lacinatum).*
Coldenrod *(Solidago).*
Grasses.
Joe-pye-weed *(Eupatorium purpureum).*
Loosestrife, Purple *(Lythrum salicaria).*
Sunflowers *(Helianthus).*
Thistles *(Cirsium* and *Cnicus).*
Yarrow *(Achillea millefolium).*

MEDIUMS TO BE USED IN THE "MORE FRUIT MORE HEALTH" CAMPAIGN

MEDIUMS TO BE USED IN THE "MORE FRUIT MORE HEALTH" CAMPAIGN

The Radio:—Because it reaches millions. Something new is needed every day, or night, on the radio. We have it.

Motion Pictures:—Johnny Appleseed has been a long time dead but his soul goes marching on. One reel.

Service Clubs:—Serve Rotarians, Kiwanians and all the others with a juicy Wealthy, Snow or McIntosh once in a while. Maybe the taste will linger.

Hotels:—Ditto.

Dining Cars serving meals in Wisconsin, Ditto.

(Note: If all the apples shown at all the fairs, conventions and expositions in Wisconsin during the past year could have been used for these three purposes there would have been enough and some left over. See, handle, smell and *taste.* It's the taste that lingers.)

These are a few of the plans now under way.

Give your moral support to the movement by taking out membership in the A. P. S. the national organization of fruit growers. Send One Dollar to this office. 233 Washington Bldg., Madison.

Due to forsythia blooming before the foliage appears it should be planted in masses rather than in a mixed group of shrubbery.

DEMOCRAT PRINTING COMPANY
MADISON, WISCONSIN

WISCONSIN HORTICULTURE

Vol. XVI Madison, Wisconsin, July, 1926 No. 11

SUMMER MEETING

OUT OF DARKNESS INTO LIGHT

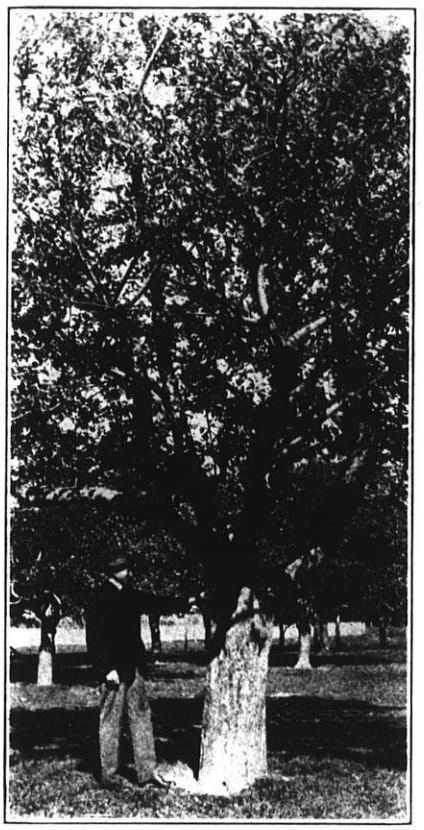
The plight in which the fruit growers of Wisconsin found themselves twenty years ago may be likened in some measure to that of the Hebrews who wandered from their own land to Egypt and there were made servants and bond-slaves to the Pharoahs.

Fruit growing in Wisconsin had emerged from the home (farm) orchards and town lot berry patches to the beginnings of a real industry with hopes of finding a place in the sun when dairying swept over the state and the fruit grower had to fight for his life ever since.

Here the parallel, if any existed, almost ends for there was no Moses to lead the fruit growers although there have been and are many lesser prophets. Not the least of these is Peter Charles Swartz of Waukesha. He is known to many of our readers especially to those who have attended Farmers' Institutes during the past five or six years. I had heard about the Swartz Bros., and their corn and alfalfa farms (Cornfalfa Farms) and about Peter Charles in particular. I learned also that he was doing something in apples as a side line. I made inquiries and the replies were not wholly encouraging to further investigation.

"Yes, Swartz has some old apple trees and has made quite a success in bringing them back." "He is somewhat reticent, says little but does much." So after he had been talking alfalfa and how to grow it for several years I invited him to our convention in Madison.

After listening for ten minutes, I listened most intensely. Here was something new, here was a man who spoke in the language of common men devoid of scientific terms or statistics; "See here old apple tree, you aren't paying your board." "If you were a boarder cow I could sell you but my grandfather put you here and your body is wood and not beef." "What will I do about you," that and much more. From one pocket he drew a wormy and crooked apple—"Now we didn't spray the old tree that bore this apple and you see what we got"—handing out at the same time a neat little frame showing scabby foliage so that we could see what scab did to the leaves while the bugs were at work on the



Peter C. Swartz standing by a Tolman Sweet apple tree, set out over seventy years ago by his Grandfather, which produced over thirty bushels in 1924 and looks like another such crop in 1926.

apple on the old tree that didn't get the combined spray of arsenate of lead and lime sulphur that would have checked both. Then from another pocket a clean, smooth skinned apple that made your mouth water—"here is one from an old tree that was sprayed, and here are some of the leaves."—clean leaves. The balance of his story was along the same lines.

Somewhat later rumors drifted in that Mr. Swartz had planted 40 acres of apples, but as we later learned, not carelessly as many do who read "farm" papers published for city people, rush out, plant an orchard today and begin tomorrow to figure profits, in fact spend most of their time in figuring. Peter Charles Swartz figured in a different way. He learned what to do and how to do it before he planted a tree. He talked with Moore and Roberts, with Bingham and with everyone who had knowledge about fruit. Roberts went down to see about the old trees and advise about the new ones. And so it came about that we have a new figure in Wisconsin horticulture.

The artist who painted the great canvas that mounts above the speaker's desk in the Assembly Chamber of our State Capitol portrayed the Indian, the frontiersman and the farmer but forgot our state emblem, the badger. So later he drew the badger.

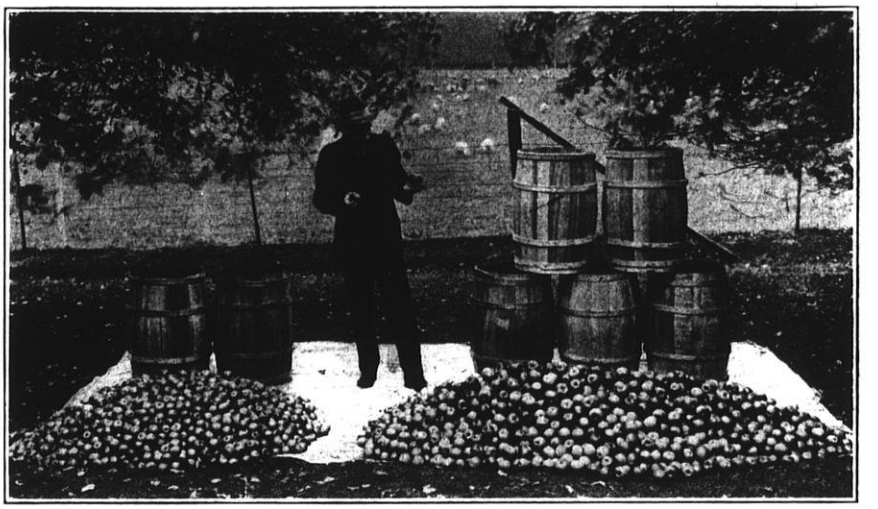
I have often wondered what is the mission of this paper. I think it is mainly to present a picture of horticulture in our state, a panorama perhaps. A portion only is complete,—Plumb, Stickney, Philips, Kellog, Goff, Toole, Bingham, Grant, Hauser, W. A. Toole; these and many more are already on the canvas and now from time to time new faces appear. So today there comes into the picture a new figure, a prophet but one unlike the prophets of old, fierce zealots who tortured the flesh as well as the spirit, calling on Jehovah, not so much to save their own people as to destroy their enemies; but a strong man with the modesty that is found always with men who have brushed aside the cobwebs spun by shallow thinkers to hide their ignorance; one who peered into the future and there saw

OSHKOSH, WISCONSIN

broad fields, fertile but beset, with thorns and boulders. The weak, the faint hearted would have dropped back into the old, old beaten paths but Peter Charles Swartz was unafraid.

No, this is *not* an obituary although it may sound like one in spots, just an attempt to paint into the panorama of horticulture of our state the picture of a man who belongs there. He will talk but does not like to write. A few, just a few people, not over a hundred, or at most two hundred, heard him at Eau Claire and went away enthused, pleased and fired with a desire to make life better for themselves and those who follow them. When I called on him to write this message so that it might reach thousands more he protested that he was no writer. Upon persuasion he wrote me a friendly letter. Here it is. Read it and you will be repaid even as one is repaid for reading through the monotony of the introduction to any novel by Sir Walter Scott.

F. C.



This picture shows what spraying does on Willow Twig apple trees, which is a variety subject to bad infections of scab and other fungus diseases. The sprayed tree cost less than a dollar to spray four times and produced five barrels of apples. The other tree of the same variety but unsprayed produced two barrels of apples, and not one apple perfect. All were scabby, knotty, and wormy. There are the same number of apples in each pile. Spraying shows that by keeping everything off the apples grow large and perfect and have quality and flavor. Both trees had the same pruning and fertilizer treatment. Does it pay to spray? We'll leave that to you to answer!

Part of the 1924 crop. Mr. and Mrs. Peter C. Swartz and son viewing trees which yielded 25 bushels to the tree in 1924. They are heavily loaded for the 1926 season.

CORNFALFA FARMS

Waukesha, Wis.

June 21, 1926.

Dear Mr. Cranefield:

In 1842 Grandfather bought 40 acres from the Government for $50.00, or $1.25 an acre, on which the home buildings of Cornfalfa Farms now stand. History fits in well in checking back on what has been done all these years on some of this soil. Indians claimed it, then the Government claimed it, and when Grandfather bought it he got everything that nature had put on it ages before which was timber of the finest Oak, Hickory, Maple, Elm, and Basswood. Cooperation among farmers was already started in 1842 for, although Grandfather was a stranger, the neighbors helped him to cut down timber and build a log house and barn.

Clearing land of brush and timber was the beginning of farming. Over seventy years ago Grandfather got interested in some way,

AUGUST 11th & 12th 1926

The site of the young orchard in 1921. One year whips were set out in April 1921. Note the excellent condition of the site before planting.

—I doubt through a fool nursery agent because they came later,—and set out some apple trees. And today we still have six of those apple trees, evidence of his thoughtfulness and toil, and, furthermore, in 1924 they averaged nearly thirty bushels of apples to the tree. Three are Tolman Sweets, and each tree gave us, his grandchildren, nearly fifty dollars, the price that he gave for the forty acres. They are loaded again this year.

Certainly we prize those trees and his thoughtfulness that he used over seventy years ago. Cleared acres, a dug well, and these apple trees are the only living monuments left of his toil. Were it not for Grandmother, ninety nine chances out of a hundred there would be none of these monuments to show for his toil, so it was she who meshed all the cogwheels correctly.

Over thirty years ago Father started about 200 apple trees. What gave him the notion we do not know. What we do know is that when they came into bearing he had many varieties he never ordered and we don't know some of the names today.

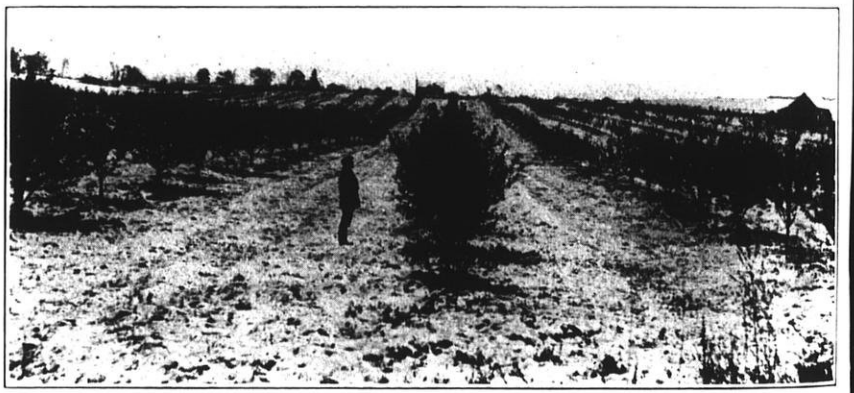
Tree agents sold everybody, and some nurseries were careless and filled all orders. People bought everything and new and better varieties were always coming out which made sales easier,—mighty good healthy selling stunts for nurseries. Those are tricks,—and the farmer's trick was to put the best fruit on top of the container. Such tomfoolery has passed.

Today people know good varieties by looking at the trees and the apples.

Then we got into the alfalfa game,—growing alfalfa and studying it from A to Z, carrying out demonstrations, etc., on a large scale.

One year a row of twelve Duchess trees of Father's gave us $200.00 worth of apples and these trees occupied about 1/5 of an acre, while our alfalfa averaged $120.00 an acre that year. This was an eye opener. We then got interested in horticulture and the Horticultural Society and the Horticultural Department of the College, and in the pruning, spraying, and fertilizing of these old trees. Demonstrations proved that apple trees responded wonderfully to good care, pruning, spraying, and fertilizing and paid large returns for such care.

Seven years ago losing several thousand dollars in a get rich quick scheme was another eye opener and we then said, "now if we have any money we will spend



Forty acres of young apple trees four years after planting on the above site. The trees all made a vigorous sturdy growth.

Peter C. and Jason S. Swartz viewing a tree in the young orchard which produced a bushel of apples in 1925.

it where we can see it and that will be right on Cornfalfa Farms''; so in 1921 we started 40 acres in young orchard which came from scenes of living monuments and eye openers.

The County Agent has helped greatly in many ways. It was he who told us that we had 36 varieties in the two old orchards and 28 is all we can name. That is far too many varieties to have yet there are 5000 varieties known.

One hundred seventy-five trees in the old orchard and only fifty trees of good varieties that you and I and everybody likes to eat. What does that mean? It means this—that we have 125 trees of varieties that nobody likes to eat. They are clean and free from worms and scab and cost the same to prune and spray and fertilize as new varieties. That's why so many complain that there's no market for apples. In our new young orchard we have only a few varieties, and all are good tried out varieties,—the kinds you, I and everybody likes to eat and cook. And the varieties grow well in Wisconsin like the McIntosh, Wealthy and Snow and a few other varieties. Wisconsin soil and climate give these apples size and flavor that beats any shipped in apples.

Our young trees in the new orchard were just one year old trees or whips, and many people laughed and some said those Swartz Bros. will be gray haired old men before they see any apples. If we live to be a hundred years old, it's easy done to set out a one year old apple tree in Wisconsin when you're 95 years old and get drunk on the cider at 100 years old, squeezed from the apples grown on this one year old tree. Many of our one year old trees set out in 1921 will have a bushel of apples this year. (1926).

Living near Milwaukee,—and it works out in other large cities—, we know that there are thousands of boys and girls going to school that have no apples to eat and will not have any to eat because apples are a sort of a luxury, too high for their fathers and mothers to buy. That eats deep into me when I think of the time I went to school and ate two or three apples and my dinner besides. Were all the shade trees in Milwaukee apple trees not an apple would get ripe because these boys and girls and

Sonny Peter Lewis Swartz and a four year old tree.

older people would knock them down and eat them green. An apple a day ripe keeps the doctor away is true and no fruit is so relished from the youngest child to the oldest person as an apple of a good Wisconsin variety.

This is a great age to live in for to get cooperation and information on apple problems in Wisconsin. Three sources on which to draw are the County Agent, State Horticultural Society, and the Horticultural Department of the College at Madison. The day is here when every apple tree grower should get in touch with some of these sources, which means cooperation in working out the present day apple and fruit problems of all kinds in Wisconsin, and in the future leave living monuments of our toils.

PETER C. SWARTZ.

OSHKOSH FLOWER SHOW

The Oshkosh Horticultural Society held the most successful flower show in the history of that society on June 23rd and 24th. This show was the seventh annual flower show held, and the success of it showed that next time a much larger space will be necessary for the next one.

Mrs. John Kuebler and Mrs. Henry Barber were in charge of the arrangements, and made the exhibit one of great value to everyone. There was no attempt made to commercialize the venture and it proved to be very instructive to the visitors.

The blooms were beautiful-multicolored and of wonderful size. Most of the blooms were contributed by members of the society but a few displays were made by non-members.

Oshkosh is showing us what can be attained in flower shows. There is no doubt but what people enjoy the exhibits and profit greatly by seeing them. Every local Horticultural Society and Garden Club should attempt to make at least one showing of blooms each year. The State Society is encouraging this movement in several vicinities this year, and it will probably become a major project in the future.

The summer meeting will please you; both instruction and entertainment are afforded.

Make reservations early at Hotel Athearn as the tourist season lasts through August.

FINE PROGRAM---GOOD TIME

WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

PERSISTENCE

"April 15, 1925—One of the special ambitions of this season of the Milwaukee City and County Garden Commission is encouraging the growing of garden roses. The Commission is therefore conducting a school rose growing contest and offers to each school of the city one hardy, two year old Dorothy Perkins Rose Bush. This bush is to be placed under the care of some member of the sixth or seventh grades of the school to be selected as the principal sees fit. The plant is to become the property of such representatives."

Early in July, 1926, a committee will visit each bush to ascertain which has made the best growth and shows the best care. The following prizes will be awarded the best plants, redeemable in garden plants and shrubs next spring.

First prize, $5.00; second prize, $4.00; third prize, $3.00; fourth prize, $2.00; fifth prize, $1.00.

Since the Dorothy Perkins rose needs a trellis upon which to climb, a supplementary contest in building trellises will be conducted. The prizes are the same as those listed above and will be awarded to the makers of the most substantial and most artistic trellises. The trellis for the school's rose is to be made by a member of the school. These trellises will be judged simultaneously with the rose bushes. It is suggested that each school have its own trellis building contest, and select the trellis for the school's rose.

The persistent efforts of the Garden Commission are being shown in Milwaukee's streets and back yard gardens. They are bearing flowers instead of fruits, especially roses, in a few years this city will be entitled to call herself a city of roses, for street after street displays exquisite climbing roses in red, pink or white grown on trellises or arbors, while the sweet-scented Rugosas bank porches or form dividing hedges. So decided we, the judges, in this contest—after four days of searching up and down the many streets, for the prize winning roses.

We also decided that back yards were interesting—you were never quite sure just what you would see. We found some of the best cared for roses in back yards where it was plainly to be seen that the "contest rose" was the first plant on shrub grown there. Some of the prettiest back yard gardens in the dingiest streets. Sometimes these gardens comprised only a few feet where the boy or girl earnestly tried to grow a prize winning rosebush with no help or even interest shown by other members of the family. Many of these gardens were wonderfully pleasing. In other places the child was helped and encouraged in his love for flowers. One small Italian boy had a garden not more than 6 by 10 feet surrounded by a high wire fence—the gate heavily chained and padlocked. As the owner was not at home, we were obliged to peer through the heavy meshes of the fence—while the children of the neighborhood explained how fond this boy was of his garden and that this fence had been erected by his father—so no one could molest it in the absence of its owner. We saw many back yard gardens that were neat and well cared for and many that were artistic as well. It was a pleasure to see native shrubs such as the Thornapple, Sumas, Elderberry, Dogwood and Wild Rose used, they present a pleasing contrast to the prim clipped barberry and privet hedges. They denote individuality. We were glad to see that all of the wild things gathered on automobile trips were not wasted—there were many shaded bits of ground between tall houses, where ferns, trilliums, violets and shooting stars grew—sometimes even a native orchid. They were carefully tended, the ground had evidently been also brought from the woods and they were kept moist. When we finished our work of judging the roses and trellises, we were sure that there is a growing tendency in Milwaukee to beautify home grounds—and an interest in flowers that was not thought of a few years ago.

One Milwaukee business man says he drives through the alleys—because some of the back yards are so pretty. Surely a Garden Commission is a paying proposition for any city. May their tribe increase.

THE CHILD IN THE GARDEN: THE TOYSHOP SUPREME

EUGENIA C. GILLETTE

The first plant I ever OWNED was an old-fashioned yellow briar rose. It stood in the center of a small diamond shaped bed, outlined with pieces of flagstone, set on edge, and the outline filled in with Iris.

It was GIVEN to me. It was MINE. And no owner of a mine of hard, cold, lifeless GOLD ever felt half so rich.

I was " 'thust a tiny litto' girl" then,—that was more years ago than it would be considered quite polite to credit me with!

But when the roly poly toddling baby boy from next door came over to help himself to MY GOLD,—and then ran to me, with quivering dimpled chin, and big round tears, crying "Pins! Take 'em out", and showing me a tiny, but slowly

RESERVE HOTEL ROOMS NOW

enlarging fluid garnet drop on his little chubby finger, the rush of love, and pity for that baby-hurt, and the wish to shield him from thorns, and to share the joy of my golden roses, was an outstanding early manifestation of a flair for flowers and children, that has been dominant throughout the years.

Flowers and children! How naturally they sound together! How naturally they belong together!

"Fair are the flowers and the children, but their subtle suggestion is fairer;
Rare is the roseburst of dawn, but the secret that clasps it is rarer;
Sweet the exultance of song, but the strain that precedes it is sweeter;
And never was poem yet writ, but the meaning outmastered the metre."

And what joys for a child in a garden! And what toys!

Almost as soon as NOW, we can be pulling apart a violet blossom, to surprise the funny little man, who sits taking a foot-bath in the nectar in the spur,—maybe preparing those hidden feet of his to twinkle in a sweet fairy dance, when the moon comes out!

And the "Gardeners' Garters" or Ribbon Grass is already growing long in readiness to provide innumerable yards of sashes, for the gay Hollyhock ladies, with silken vari-colored flounces, and pale green velvet capes, who will soon put all the "buyed dollies" on the shelf. A green grape, impaled on a pin, makes a most acceptable head, and a phlox blossom makes a lovely hat for it,—and a larkspur, a most bewitching bonnet.

Sometimes the child chooses a not-too-large daisy, trimming all but two of its rays of half-length, and makes a "Grandma-in-her-cap" head of it, with the two long rays for cap strings, and the features marked on the disc with ink. To be sure, an unsympathetic onlooker MIGHT think the complexion a rather jaundiced one, but to the less prejudiced vision of the child, the daisy grandma is lovely and beloved.

Any of these lucent ladies may be carrying a nasturtium-leaf parasol, or a lupin-leaf fan, or a bleeding-heart blossom purse, or some such "accessory" from the most exclusive Ladies' wear Shop to be found in the garden.

Always a bifurcated carrot is hailed with the greatest delight, for a policeman!

Why a policeman, I'm sure I don't know. One would hardly seem a necessary attendant at these thoroughly genteel afternoon teas and promenades in the garden.

The involucre of a large mallow, strung on a thread is an irresistable spider to play Miss Muffet with!

Little fingers can win response to the plea, in "Songs of Seven",

"O Columbine, Open your folded wrapper,
Where two twin turtledoves dwell!

by carefully pulling off one of the nectaries, so the others show better,—and there are the "Two twins", their heads, the ends of the spurs, and the soft pigeon curves of throat and breast well carried out,—the sepals serving for wings, and the pointed summits of the petals the very good tails.

The Dove in the Chariot is a new toy for this garden, that we have WISCONSIN HORTICULTURE to thank for. We eagerly await the blossoming of the Monkshood that we may discover it here.

Then there is the Live-forever, or Sedum. It seems a strange thing that not everybody knows how to take one of its succulent leaves, pinch it gently between forefinger and thumb until the two surfaces will separate, and then blow it up into a "Frog's mouth".

Or as an old rhyme says,

"Little Polly, always clever,
Takes a leaf of Live-forever:
Before you know it, you see her blow it,—
A gossamer sack with a velvet back."

And Oh what glee, when one of the children catches the Flower of an Hour awake! And what wonderful lanterns its inflated calyxes make for the garden dollies' garden parties!

Oh, there are endless toys in the garden! Dolls in the corn patch, dolls in the squash patch, and a cushion for Goldilocks to sit on, and

"Sew a fine seam,
And dine upon strawberries, sugar and cream,"

made of a Turban squash, or Scalloped Pattypan.

A Crookneck Squash, in a Dolly's gown, makes surprisingly good cuddling! And the tiny long-silked ears of corn are quite appealing babies,—though for babies OUT of gardens, those long skirts may no longer be the mode.

And the flowers,—just flowers, are so companionable. Always the pansies,—little "Three faces under a bonnet", are PEOPLE, and how many times little knees plump down on the path, and little cheeks lean down to the earth, "Just to love the 'Baby-Blue-Eyes,!"

Well, *this* gardener will have to keep on learning, until they can have roses and lilies for familiars in this garden, that I see!

Not much gained by cutting back hybrid remontant roses like Druschki, Paul Neyron, Laing and others, after blooming. It's often done in the expectation of fall bloom. More is lost than gained by this forcing process.

Delphiniums *may* be cut to the ground after the summer bloom has passed and you *may* get a second crop in the fall, but the plants will be weakened unless extraordinary care is given, watering and feeding. Why do it? Enjoy each flower in its season, surely there are enough kinds to go around.

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THE SUMMER MEETING

Every year in July we tell our members about the good time they may expect at the summer meeting and every year in August or September we tell about the good time we had. The only remarkable thing about this is that it's always true. The Board of Managers made a good guess last year, everybody who went to Bayfield was satisfied. We know we have made a good selection this year because we have held several summer meetings in Oshkosh and every time we went away pleased; in fact each succeeding visit added to the pleasure. So now we go again with the most complete assurance that the meeting will be profitable,—and pleasant.

Oshkosh is the center of an extensive market gardening industry. Small fruits are also grown, usually far in excess of local demand so that car lots are shipped. The first real horticultural extension work in the state was undertaken on the Rasmussen orchard near Oshkosh and the hundreds of small orchards throughout the county that twenty years ago showed marked indications of going the way all uncared for farm orchards go are now in most cases producing profitable crops. All these things and many more are available to visitors. Take one or take all.

DO NOT FORGET

That Oshkosh is Having the Summer Meeting This Year and That it is to be Held on August 11th and 12th. A Pleasant Auto Trip From Any Part of the State and a Good Chance to Meet Your Horticultural Friends.

That much for fruit: Flowers are abundantly grown both commercially and by amateurs.

Do not forget nor overlook the dozens of men and women of Oshkosh and vicinity who have helped make horticulture in this state. They will be there and it's your job to pump them dry of information. Try it.

Now the summer meeting will not be merely a visiting or sightseeing trip for there will be two sessions, forenoon and afternoon when some topic of interest to everyone will be discussed.

Names of speakers cannot be announced at this time and only a provisional statement of the subjects to be presented but you may be assured that your favorite subject will be on the program; if it is not there will be a copacious question box always open.

Following are some of things that will be talked about, most of them old but ever new. All this is for the first day, Wednesday, August 11. On the second day we do as the Oshkosh people please and they aim to please.

Peonies—because fall is the best time to plant them and fall is coming soon.

Trees—because many cities will soon lose their shade trees unless something is done, and soon. The automobile is killing trees both in city and country.

Roses—because the rose is the most beautiful of flowers and may be grown wherever there is a foot of ground.

Raspberry Diseases—because our fields are devastated by disease and we want to know what to do.

Two more topics can be handled, one in the forenoon and one in the afternoon; we are open to suggestions.

The following letter written by Mrs. Nellie S. Gates, Secretary of the Oshkosh Society, following a conference of the local committee, tells the rest of the story.

Mr. Frederic Cranefield, Sec'y.,
Madison, Wisconsin.

My dear Mr. Cranefield:

Our local committee met and made plans for the summer meeting of the state society to be held here on August 11–12. We have tried to work out a pleasant out of door schedule, leaving you to fill in the program for the gathering.

Our plan is as follows: Wednesday at 9 in the morning leave the hotel for the Rasmussen farm where the morning session will be held. Return to town for the luncheon hour. At 1:30 drive to the Roe gardens for the afternoon program. This will probably close in time for those who care to do so to visit other gardens in the vicinity. At 6 the guests will meet at the Nelson farm for the corn roast.

The former boat ride was so successful that we want to repeat it on the second day of the session. This will necessitate leaving the dock for the river trip about 9 A. M., and includes dinner at Winneconne and the return about 4.

You see we have trusted to the weather man for his co-operation

in these plans and as he is usually accommodating we expect he will send us a special variety of his best and most glorious.

Most truly,
NELLY S. GATES,
Sec'y. O. H. Soc.

There are two things in that letter that are of great significance but known only to the initiated. One is the corn roast at W. Nelson's and the other the boat trip. To describe them here would dull your enjoyment. It is enough to say that both are *different* and that the boat ride will *not* be on Lake Winnebago but through pastures and cornfields.

If you don't come you lose. Attendance limited strictly to Wisconsin, Michigan, Minnesota, Illinois and Iowa. Neither age, membership or general disposition a bar.

CLAIMS DESTRUCTION OF PUBLIC TREES IS A CRIME

How much is a tree worth? An individual would answer this question according to his appreciation, but a municipality wil appraise its trees in a direct ratio with its public opinion. Court decisions have rendered interesting verdicts as to the value of trees. Here are some examples.

In Olean, N. Y., a plaintiff was awarded $150 for two maples destroyed by gas. These trees were not on the plaintiff's property, but the claim was made that their destruction damaged him because they had given him "life-long easement." A citizen of Merchantville, N. Y., was awarded $1500 in 1911 for the destruction of four shade trees. In Kansas City in 1920, a telephone company paid $200 for causing the destruction of a six-inch poplar, by pruning the top out. A state law in Massachusetts provides a fine of not less than $5.00 nor more than $150 for injury or destruction of individual trees.

In the East many cities take inventory of their trees. Hartford, Conn., values her trees on Washington street at $27,500 for 271 trees. This is an average of $138.41 each. Newton, Mass., has estimated her 12,577 trees at $1,516,602 or $120.50 each. Springfield, Mass., has more trees in proportion to population, than any other American city and they are valued at $100 each. Ann Arbor, Mich., has placed a similar value on her trees.

How much is a tree worth in Ladysmith? A few years ago an ice company, which is now obsolete, destroyed scores of white birch, maple and other trees on City Park property. The following winter nearly a half acre of birch, ash, maple and elm saplings were cut from park property for pole wood. In neither case was public opinion concerned enough to raise a protest. The annual mutilation or destruction of fine trees in Ladysmith is a practice so fixed in our routine that one is more apt to be condemned than commended for protesting.

You can destroy a sapling poplar in Kansas City for $200. In Hartford the pastime can be indulged in at $138.41 per. Newton, Mass., permits the indulgence at the slightly lower rate of $120.50 each, while Springfield and Ann Arbor appeal to the middle class with a flat rate of $100 each. But certainly there is no city that offers greater encouragement for this outdoor sport than Ladysmith. We do not offer a bounty on trees, but neither do we offer them any protection.

How much is a tree worth in Ladysmith?

E. M. DAHLBERG,
City Forester.
Ladysmith, Wis.

Oshkosh, August 11th–12th. All roads lead to Oshkosh and all are good roads.

Lilies may, should be, transplanted immediately after the blossoming period is past. Their rest period is very brief. This refers to Regale, Henryii, Auratum, and our old friend Tiger.

JETSAM

This column has been very well received.

The editor bases this opinion on the fact that no one has said anything about it one way or the other. That leaves him free to form his own opinion, stated above.

Contributions were asked for but until very recently none were received; then came a batch from an unexpected source. Here are a few of them:

SHE WENT SLUMMING

A young woman of Philadelphia, having read of slumming in London, determined to visit Philadelphia's own slum district. As a preliminary she supplied herself with a number of tracts; Boarding a Seventh street car, she got off at Bainbridge, and to the first man she saw she very politely handed one of the tracts. He took it good-naturedly, and, after glancing at it, returned it with the smiling remark that he was a married man. Greatly mystified by this expression, she looked at the tract and saw that it was entitled, "Abide With Me!" She took the next car home.

A young curate in England was once asked to take a class of girls of about fifteen or sixteen, which had formerly been taken by a lady.

After a time the young clergyman consented, but insisted upon being properly introduced to the class. Accordingly, the next Sunday the superintendent took him to the girls for this purpose, and addressing them, said:

"Young ladies, I wish to introduce to you the Rev. Mr. Chirp, who will in future be your teacher. I should like you to tell him what your former teacher did, so that he can go on in the same way."

Immediately a demure young miss of sixteen arose and said:

"The first thing teacher did was to kiss us all round."

TRIFLED HIS TIME

A clergyman was examining a boy in a Sunday school class with regard to John the Baptist. The boy's knowledge of the prophet was very scant.

At last the clergyman said, "Surely you can tell me what he did?"

"He didn't do nothin'", said the boy. "He was a preacher."—Tid Bits.

HONEST PRAISE

Up in Michigan, where they grow, the Detroit News, has this to say in favor of the Ben Davis apple—that no one ever yet got hit in the eye with the juice.

Old Gentleman (to old woman—selling apples)—No, no, my good woman—very nice, but you mustn't tempt me.

Apple Woman—Who's a-tempting yer? D'yer think this is the Garden of Eden?

Now these selections prove, at least to the satisfaction of the editor, that the thrice blessed sense of humor if encouraged will stay with us always, not alone in youth but prove a comfort and a fount of joy even in advancing years, for if you please these were sent us by the Rev. L. H. Brown of whom we have spoken before. Eighty-three years has not dulled his appreciation of wit as a rest cure for the soul.

THE FLORIST'S PAGE

Edited by Huron H. Smith, Curator of Botany
Public Museum, Milwaukee, Wis.

THE PERENNIAL SHOW

HURON H. SMITH

The second garden show of the Milwaukee County Horticultural Society was staged in the Museum Annex at Milwaukee, July 11th and 12th. It proved quite as popular as the first show and the garden lovers among the public found there were still many varieties to learn. In fact, it was necessary to put out a pile of paper slips to accommodate all that wanted to jot down the names of varieties. A few more exhibitors found their way to the show this time, through explicit directions in the Milwaukee Journal, Thursday before the show, and the show resulted in the acquiring of about twenty new members. Many people spoke their appreciation to the members of the society, who spent a great deal of time on the floor, and some influential citizens who saw it, took pains to write in to the Museum commending the service the Horticultural Society was doing for the public.

During the show for an hour from 3 to four Sunday afternoon, the regular monthly meeting of the society was held in the Trustees Room with the best attendance thus far, and many new ideas were spread on the minutes of the meeting. The society voted to try to get a week-day evening for their regular meetings. Members voted for each to invite friends, and it was decided to acquire some sort of an identification button for members to use when on the floor at the shows. It was decided to hold the next show on Sunday August 15th, and make the general title of it a Gladiolus Show. Every show held, although titled, is open to every flower in season. The shows are now set up from noon Saturday to 7:30 p. m., and a special artist is present to correctly label every exhibit.

We expect to be brief this time, and to omit exhibitors names, because the flowers themselves were the thing. The writer analyzed all exhibits at the close of the show and spent some considerable time in tabulating them in a readable form, so that State Horticultural members could get an idea of the perennials in bloom in mid-July in Milwaukee, and the Milwaukee people might know exactly what they saw. So instead of the usual exhibitors list we append this roll call of midsummer perennials shown July 12th:

ROLL CALL AT THE PERENNIAL SHOW

ARUM FAMILY *(Araceae):* Spotted Calla *(Zantedeschia albo-maculata).*
BEAN FAMILY *(Legumibosae).*
- Everlasting Pea *(Lathyrus latifolius).*
- Sweet Pea *(Lathyrus odoratus).*

BELLFLOWER FAMILY *(Campanulaceae).*
- Canterbury Bells *(Campanula medium).*
- Peach-leaved Bellflower *(Campanula persicifolia).*

BORAGE FAMILY *(Boraginaceae).*
- Bugloss *(Anchusa azurea).*

COMPOSITE FAMILY *(Compositae).*
- Rosy Milfoil *(Achillea millefolium rosea).*
- Sneezewort *(Achillea ptarmica).*
- Golden Marguerite *(Anthemis tinctoria).*
- Old Woman *(Artemisia stelleriana).*
- Pot Marigold *(Calendula officinalis).*
- Sweet Sultan *(Centaurea moschati).*
- Cornflower *(Centaurea cyanus).*
- Ox-eye Daisy *(Chrysanthemum leucanthemum).*
- Feverfew *(Chrysanthemum parthenium).*
- Shasta Daisy *(Chrysanthemum maximum x C. uliginosum).*
- Frilled Daisy *(Chrysantheum maximum x. C. uliginosum).*
- Hairy Coreopsis *(Coreopsis pubescens).*
- Gaillardia *(Gaillardia aristata).*
- Pitcher's Sunflower *(Heliopsis helianthoides pitcheriana).*
- Rudbeckia *(Rudbeckia maxima).*

CROWFOOT FAMILY *(Ranunculaceae).*
- Columbine *(Aquilegia canadensis var.).*
- Jackman Clematis *(Clematis jackmani).*
- Winter Clematis *(Clematis henryi).*
- Ground Clematis *(Clematis recta).*
- Delphinium *(Gold Medal Hybrids) (Delphinium formosum).*
- Paeonies *(Paeonia albiflora).*
  - Festiva maxima Marie Lemoine, 2 seedlings, 6 unnamed.
- Meadow Rue *(Thalictrum minus).*
- Chinese Meadow Rue *(Thalictrum aquilegifolium).*

EVENING PRIMROSE FAMILY *(Onagraceae).*
- Fireweed or Rose Bay *(Epilobium angustifolium).*
- Evening Primrose *(Oenothera biennis grandiflora).*

PIGWORT FAMILY *(Scrophulariaceae).*
- Large Snapdragon *(Antirrhinum majus).*
- Hairy Foxglove *(Digitalis lanata).*
- Foxglove *(Digitalis purpurea).*
- Macedonian Toadflax *(Linaria macedonica).*
- Torrey Pentstemon *(Pentstemon torreyi).*
- Small Pentstemon *(Pentstemon smallii).*
- Purple Mullein *(Verbascum phoenicium).*
- Yellow Mullein *(Verbascum thaspiforme).*
- Woolly Speedwell *(Veronica incana).*
- Bastard Speedwell *(Veronica spuria).*

FUMITORY FAMILY *(Fumariaceae).*
- Fringed Bleeding Heart *(Dicentra eximia).*

GRASS FAMILY *(Graminae).*
- Ribbon Grass *(Phalaris arundinacea picta).*

LILY FAMILY *(Liliaceae).*
- California Poppy *(Calochortus luteus).*
- Ismene Lily *(Hymenocallis calathina).*
- Thunberg's Lily *(Lilium elegans).*
- Coral Lily *(Lilium tenuifolium).*

LOOSESTRIFE FAMILY *(Lythraceae).*
- Rosy Loosestrife *(Lythrum salicaria roseum).*

MADDER FAMILY *(Rubiaceae).*
- Misty Woodruff *(Asperula hexaphylla).*

MALLOW FAMILY *(Malvaceae).*
- Musk Mallow *(Malva moschata).*
- Rose Mallow *(Hibiscus moscheutos).*

MUSTARD FAMILY *(Cruciferae).*
- Golden-tuft *(Alyssum saxatile).*
- Siberian Wall-flower *(Cheiranthus allioni).*
- Candy-tuft *(Iberis gibraltarica).*

PHLOX FAMILY *(Polemoniaceae).*
- Miss Lingard Phlox *(Phlox glaberrima suffruticosa).*

Phlox decussata *(P. maculata x P. paniculata).*

PINK FAMILY *(Caryophyllaceae).*
Sweet William *(Dianthus barbatus).*
Maiden Pink *(Dianthus deltoides).*
Carnation *(Dianthus caryophyllus).*
Pheasant Eye *(Dianthus plumarius).*
Babys' Breath *(Gypsophila paniculata).*
Maltese or Jerusalem Cross *(Lychnis chalcedonica).*
Mullein Pink *(Lychnis coronaria).*
Sweet William Catchfly *(Silene compacta).*
Tunica *(Tunica saxifraga).*

POPPY FAMILY *(Papaveraceae).*
Tulip Poppy *(Papaver glaucum).*

PRIMROSE FAMILY *(Primulaceae).*
Creeping Jenny *(Lysimachia nummularia).*

ROSE FAMILY *(Rosuceae).*
Dropwort *(Filipendula hexapetala).*
Billiard Spiraea *(Spiraea billiardi).*
CLIMBING ROSES: Baby Rambler, Crimson Rambler, Dorothy Perkins, Excelsa; Flower of Fairfield Rambler, F. J. Grootendorst, Hiawatha, Imperial, Tausendschön, and wild rose.
OTHER ROSES. Hort. Abbreviations. American Beauty, H. P. Lady Ashtown, H. T.; Mrs. Chas. Bell, H. T.; Mme. Jules Bouche, H. T.; Mme. Butterfly, H. T.; Columbia, H. T.; Silver Columbia, H. T.; Mrs. Calvin Coolidge, H. T.; Anne de Diesbach, H. P.; Zephirine Drouhin, H. Bour.; Frau Karl Druschki, H. P.; Ecarlate, H. T.; Mrs. Wm. C. Egan, Per. H. T.; Hardy Garden Roses; Von Hotzdorf, H T.; Killarney, H. T.; Pink Killarney, H. T.; Double White Killarney, H. T.; Killarney H. P.; Senateur Mascuraud, H. T.; Jonkheer J. L. Mock, H. T.; Mabel Morse, H. P.; Ophelia, H. T.; Golden Ophelia, H. T.; Yellow Ophelia, H. T.; Mme. Plantier, H. Ben.; Radiance, H. T.; Pink Radiance, H. T.; Sunburst, H. T.; Mme. Caroline Testout, H. T.; Mrs. A. Ward, H. T.; and Mrs. A. Ward pink H. T.

SAXIFRAGE FAMILY *(Saxifragaceae).*
Pride of Rochester Deutzia *(Deutzia scabra var.).*
Coral Bells *(Heuchera sanguinea).*

SPIDERWORT FAMILY *(Commelinaceae).*
Reflex Spiderwort *(Tradescantia reflexa).*

STONECROP FAMILY *(Crassulaceae).*
Goldmoss *(Sedum acre).*

TEASEL FAMILY *(Dipsaceae).*
Mourning Bride *(Scabiosa cancasica).*

TROPAEOLUM FAMILY *(Tropaeolaceae).*
Nasturtium *(Tropaeolum majus).*

VALERIAN FAMILY *(Valerianaceae).*
Jupiter's Beard *(Centranthus ruber).*

VIOLET FAMILY *(Violaceae).*
Horned Violet *(Viola cornuta).*

Go farther north on your vacation trip if you like but stop for two days at Oshkosh.

The Hotel Athearn will be headquarters.

WASH AWAY IVY POISON

Thorough washing soon after exposure to poison ivy reduces the danger of injury, says the United States Department of Agriculture. The poison usually requires some time to penetrate into the tender layers of the skin, and until such penetration has taken place much or all of it can be removed.

Make a thick lather and wash several times, with thorough rinsing and frequent changes of hot water, using ordinary alkaline kitchen soap. Running water is preferable for this purpose. If a basin is used, the water should be changed frequently. Even after inflammation has developed, thorough washing should be tried in order to remove from exposed surfaces of the skin all traces of the poison that can still be reached.

For the inflammation, simple remedies, such as local applications of solutions of cooking soda or of Epsom salts, one or two heaping teaspoons to a cup of water, are helpful. Fluid extract of grindelia, diluted with 4 to 8 parts of water, is often used. Solutions of this kind may be applied with light bandage or clean cloths. Such cloths must be kept moist and discarded frequently in order to avoid infection. When the inflammation is extensive or severe it is best to consult a physician. U. S. D. A.

Transplant Iris in July, if convenient to do so; not too deep, just barely cover the "tubers", rhizomes and water freely.

THE MILLENNIUM APPROACHES

In early spring of this year the editor received a letter from a prominent Wisconsin dairyman. We challenge you to identify him under this cognomen. The number of prominent dairymen in Wisconsin is legion.

It was not remarkable that a dairyman should write to this office, many do, but when this particular dairyman stated he had a fine young orchard and asked advice the situation at once assumed a remarkable aspect. We cannot publish the letter without permission of the writer but just in order to show where the heart of the editor lies we publish a part of our reply:

"I shall now die content. One of the great ambitions of my life has been gratified. I have attracted the interest of one of the leaders in the dairy industry in Wisconsin. There was great rejoicing in our horticultural camp when Peter Chas. Swartz joined our ranks. The only trouble we have with Peter Chas. now is to dissuade him from telling people the *whole* truth about the profits in growing apples in Wisconsin, lest his word should be questioned when, as everybody knows, he is a most truthful man."

"As you say you have a growing orchard we must enlist you too. I think if I should ever see you selling apples my cup of happiness would be filled to overflowing."

"Now lest you think I am too frivolous, I ask you to take what follows as the truth, as I see it."

"After thirty-five years in the horticultural field I am willing to stand by the statements in my former letter and go even further; that there is no other line of agriculture that will yield greater profits today in Wisconsin than the growing of good fruit. I want to emphasize the word *good,* we have too much of the other kind now, especially in apples largely offered for sale by dairymen who have old neglected orchards."

"Long live the Cow! Far be it for me to decry her greatness. Dairying has brought great wealth to Wisconsin, or has it? It has also, I believe, driven more young men from the farm to become taxi drivers, editors or even college professors than all else combined."

"For ten years I sat at the feet of one of the greatest of teachers and the most profound thinker the College of Agriculture of Wisconsin has ever known, E. S. Goff. With my own eyes I saw the paltry sums intended for his department filched from him to be spent on dairying. Henry could cripple Goff's experiments but he couldn't cripple his spirit and on the foundations laid by him has been built a substantial fruit industry."

"I said in the beginning that one of my great ambitions has now been realized. There is another but I doubt its fulfillment. Twenty-five years ago W. A. Henry, then Dean of the College of Agriculture, assured me solemnly that, 'Wisconsin is not a fruit state.' 'It's all right to tell the farmers to raise fruit for their own use but not for market.' This is my ambition; to lead W. A. Henry into any one of the cherry orchards in Door County or in the Kickapoo and bump his head, gently, yet firmly, into a Richmond cherry tree or a McIntosh apple tree loaded with fruit and then ask him, How about it, Dean? Verily, brother, the tale is not half told but perhaps the balance were better left untold."

P. S.—You ask if horse manure is O. K. for fruit trees,—yes,—but why not cow manure?

PRENTICE, PRICE, PROMISING

A cheerful, optomistic member who lives in Prentice, Price County, which is not very far north, writes about flowers and gardens: To the Editor:

A little horticultural news from Prentice, Wisconsin. Prentice is not much of a city, although it has 588 bona fide residents.

We have no fruit trees of any kind inside the village limits that I know, (I do not say that about the county of Price, because there are small orchards in the county.) All sorts of small fruit grows well here.

Flowers and shrubbery are grown here as much as in any of these colder counties of Northern Wisconsin. Flowers top the list, but only a few of the most common hardy, peonies and a few others, in the perennial class, are grown. In the annual class we have many and all, with a very few exceptions, are first planted in the house and later transplanted. Dahlias top the list and 'glads' come second. Every home owner seems to have some flowers of some kind, but we could have a lot more, and I am sure we will some day. Shrubbery is not so well represented, but the lilac is king of such sorts.

We are equal with the rest of the state in gardens. Last year we had as good a vegetable garden as we ever had including time we lived at Oshkosh.

Price County and Prentice especially is up and coming.

ERICK C. LAGER.

We believe that Mr. Lager, like so many others who have moved a day's journey north in Wisconsin, lacks faith. They go with the preconceived idea that it is far North and consequently only the hardiest of plants will survive. This is true in some measure of tree fruits but not of flowers and shrubs. With but very few exceptions flowering shrubs that thrive in Madison or Beloit will live and grow at Princeton, Bayfield, Ladysmith, Tomahawk and in lesser degree in Ashland and Superior. In the last two places the 'Superior red clay loam" must first be disintegrated and civilized.

So far as herbaceous perennials are concerned, phlox, delphinium, iris, campanula and dozens of others, may be grown even finer than in the extreme southern part of the state where the summer drought may always be depended upon.

The period between "frost and frost" is shorter in the north than in Kenosha County or southern Rock County but so far as flowering plants are concerned this is of slight importance. The flowering period may be shortened in the fall but it is apt to be more luxuriant while it lasts. More care is necessary in the northern localities to

avoid shade and shelter. Set the plants in the open where spring can get at them when it comes.

There are a few species, mostly shrubs, that are not quite as likely to give complete satisfaction in Price County but there are quite as many in the "higher brackets" that the southern states have to do without.

We do not offer these remarks in criticism of Mr. Lager's letter but for the purpose of inspiring confidence. I may add that choice and beautiful roses may be grown as far north as you please to go in Wisconsin,—if you know how.

NOW OUR TROUBLES ARE ALL OVER

The following letter arrived recently and we referred it to Professor J. G. Moore. We dare not print his answer here. We then sent it to Dr. Fracker saying that if true it was very important there would seem to be no further need of entomologists. "Has there ever been, in your opinion?" was all we got out of him. So we concluded to spread the news entirely ignoring the science sharps.

Secretary of the Gardeners' and Greenhouse Growers' Association,

Madison, Wisconsin.
Dear Sir:

I will be pleased to help you and your growers to get rid of the bugs, worms and plant diseases in their greenhouses and gardens. If you will send me a list of names of some of your best growers I will send them a formula showing how and what to mix in order to clean all diseases from their soils and beds.

I can furnish you with the names of plenty of good growers who have cleaned their houses up in fine shape from bugs and plant diseases.

Hoping to hear from you in due time on this matter and thanking you in advance for your interest, I am

Very truly yours,

Wonders, it seems, will never cease! Bugs, worms and plant diseases avaunt! Just dust, or do we inject, a snifter of this remarkable cure-all under their tails and every bug and plant disease will die of laughter. On second thought plant diseases may not have tails although, again, on further thought, we have heard sad tales about some of them.

TAXATION OF ORCHARDS

The following reference to Wisconsin laws governing taxation of orchards will prove of interest to our orchard owners. The letter is reproduced in its entirety so as to show that it is not an "opinion" by the Attorney General but merely a reference to the law.

THE STATE OF WISCONSIN
OFFICE OF ATTORNEY GENERAL
MADISON

December 2, 1925.

Mr. Frederic Cranefield, Sec'y.,
Wisconsin State Horticultural Society,
Madison, Wisconsin.

Dear Sir:

I have for acknowledgment your letter of November 28th asking for a reference to the Wisconsin law governing orchard taxation.

The taxation of orchards comes under the general regulations relating to taxation It is the duty of the assessor to value the property and it is assessed in the same manner as other property.

There is one provision contained in sec. 7011 (12) relating to exemptions, which may be of interest to you: The following shall be exempt from taxes."

"Sec. 70.11 (12) (a) The tools of a mechanic kept and used in his trade and farm, orchard and garden, machinery implements and tools, actually used in the operation of any farm, orchard or garden."

Very truly yours,
HERMAN L. EKERN,
Attorney General.

MADISON FLOWER SHOW

For the first time in 52 years, the revived Madison Horticultural Society and Garden Club staged a flower show. The mass of blooms occupied a vacant store room thirty feet wide and one hundred and sixty feet long. The show window was decorated in a clever way which called attention to the exhibit inside.

Thirty-three exhibitors were listed on the judge's book who were responsible for 300 exhibits and there were two complimentary showings of peony blooms. The Peonies, Iris, and miscellaneous spring flowers were placed on long tables which allowed the visitors to view all sides of the specimens. Most of the varieties were labelled and many people made lists of varieties which they wish to obtain for their gardens.

The attendance was greater than anticipated. A continual stream of people flowed through the room for the two days and a half. Most of them were there to see the flowers. Others came because of curiosity and stayed to learn something of the beauty which was in evidence. Those who came to stay but a moment found it hard to leave the room which was suffused with the odor of thousands of blossoms and filled with delicately blended colors.

There will be two more shows occurring a little later in the season at which seasonal blooms will be exhibited. The policy of giving trophies and premium ribbons instead of cash prizes met with the approval of the exhibitors and will be continued in the future.

"In the special program at the Ashland Station there will be shown exhibits of spring wheat that is rust proof."—*News Item.*

This is interesting news. Supt. Delwiche evidently has faith in scientific research.

SUGGESTIONS FOR THE CONTROL OF ASTER YELLOWS

By Dr. L. O. Kunkel, Yonkers, N. Y.

So far as is known the aster yellows disease is spread by one insect only, CICADULA SEX-NOTATA, the grey aster leafhopper. The insect lives over the winter in the egg stage. The yellows disease does not pass from parent to offspring through the egg. The first generation of insects that appear in the spring are free from infection and can not spread yellows. The disease is not transmitted through aster seeds. We have, therefore, each spring disease-free aster seedling plants and disease-free carrier insects.

The disease-free leafhoppers get the yellows virus by feeding on biennial and perennial host plants. Several weeds belonging to the genera sonchus, erigeron and Chrysanthemum are some of the wild plants in which yellows most often passes the winter and in which it first appears in the spring. Aster leafhoppers after feeding on such plants become disease carriers and retain the virus as long as they live. The number of leafhoppers that feed on these wild weeds must be relatively small. They transmit the disease early in the spring to a few annuals, such as the cultivated aster, the ragweed (ambrosia artemisiaefolia), and the daisy flea bane (erigeron annuus). Large numbers of young leafhoppers hatch from the eggs deposited in these diseased annuals. They feed on the diseased plants, become virus carriers, and when adult, spread yellows far and wide. There is evidence that the leafhoppers do not range in large numbers over distances of more than a mile under ordinary conditions of food supply. Severe cases of aster yellows are local and occur where large numbers of insects have been reared on diseased plants.

The most promising means of control that can be suggested at present are eradication of weed hosts in the vicinity of aster plantings, destruction of all aster plants as soon as they are observed to show yellows, and spraying or dusting aster beds with nicotine or other suitable sprays or dusts. Asters grown in plots surrounded by cultivated fields are less subject to severe infection than asters grown in the vicinity of pastures, meadows, waste lands, or other weedy places. Aster beds near buildings are somewhat less subject to disease than plantings in the open, because the aster leafhopper is a wild insect and avoids buildings.

SAVE YOUR THUMB

A member, who through force of circumstances spends the winter within the city's prison bounds, but the summer in her garden, sends us a few words now and then, words cheering and bright as the morning sun. We are seldom permitted to print her letters but we take a chance on this one:

Dear Mr. Editor:

Since writing you yesterday I have sat up at night to read Wisconsin Horticulture, and enjoyed it all the sandman allowed—shall hope to finish it at once.

I have a "bright idea"—want it?—had it thrust upon me, by accident,—cut the end of my business thumb on a bit of broken glass in the garden soil, when transplanting—stuck on some adhesive tape, ("heaths of tape", one of the tinies called it), to keep the dirt out—found that the wear and tear it saved on my cuticle was wonderful and surprising and ridiculous. Henceforth I armor plate my thumb with adhesive tape whenever I have any considerable number of small plants to set out, —meaning any number of clodlets to crumble in my hand. I can't do it in gloves, as soon think of bathing the baby in gloves! But this thumb protection business turns me into a "horny handed ton of soil",—no—son of toil—and I no longer feel like carrying my thumb in my mouth after putting out my seedlings. You're welcome—go and do likewise!

Now I hope I'm "tooral looral" till Thanksgiving — (When you were a little girl, did they use to have "elocution" and the big children "declaim", and do you remember that humorous one about the speaker who got his tongue twisted on "truly rural" and after many vain attempts spat it out as aforesaid?

G. E.

No the editor was never a little girl but he recalls distinctly a hotel breakfast and demanding that he be served with an order of shredded "beet whiskits". Can you beet that? And it wasn't so very long ago either.

MORE LIGHT, MORE CARBON DIOXID, MORE GROWTH

Over half of the scientific associations gathered at Kansas City under the auspices of the American Association for the Advancement of Science in convention December 28th to January 1st, are directly concerned with the fundamental facts that promote, protect and assist agriculture. One forward-looking report made today by John M. Arthur, John D. Guthrie, and James E. Webster, of the Boyce Thompson Institute of Plant Research at Yonkers, New York, dealt with the comparison of plants grown under different conditions of light and carbondioxid. Lantern slides illustrated the different effects produced in growth, flowering and naturing seed. The chemical composition of the plants so grown was also given.

Some outstanding results reported, of importance practically, as well as of scientific interest in establishing laws of plant growth, included these: (1) Spring wheat, barley, and oats headed in four months when grown in the green house with 6 hours of additional light from a gantry crane (carrying 48 1,000 watt lamps) and additional carbondioxid (10 times as much as the air). The control plants headed a month later. Plants getting extra light but no carbon dioxid were shorter and gave less of both grain and straw than did those getting both extra light and gas.

(2) Red clover also getting 6 hours extra light and ten times the amount of carbondioxid gas in the air, flowered in 38 days after planting the seed, and plants two feet high were produced in two months from seed. In ordinary agricultural practice this would take two years growth.

(3) In the constant light rooms, maintained under rigid control at the Boyce Thompson Institute, it was conclusively proved that the tomato dies under continuous artificial illumination, grows slowly on a nineteen hour day, but on a seventeen hour day it will fruit.

Salvia under the same treatment (continuous artificial light 25 1,000 watt lamps and extra carbondioxid) would not flower on more than 12 hours a day of light. Nasturtiums grew and flowered best on six hours of extra light and extra carbondioxid in the greenhouse. Effects produced on radishes, eggplant, aster, soybean, and other plants were shown by lantern slides.

The analyses of the plants showed that increased carbondioxid and more light, up to eighteen hours, gives plants with less nitrogen and more starch, sugar and fibre, than was found in control plants grown under ordinary daylight and with the usual carbondioxid of the air.

Such results may be of practical value in guiding the adaption of crops to the conditions of season and locality, and in modifying greenhouse practices, and do establish the fundamental laws of plant life. Already, in Germany, carbondioxid, as a waste from nearby factory boilers, has been advantageously used in the sugar beet and potato fields.

Why do so many people become insane? No one knows but we are convinced that the scarlet geranium is a contributing factor in many cases. Picture a boiling day in midsummer; someone whose nerves have been upset turns the corner and meets a bed or border of a hundred more or less bright red geraniums blazing in the sunlight. Do you wonder that people go and jump in the lake? After being compelled to gaze on masses of red geraniums and salvia for years my sympathies are all with the bull. As a boy on the farm I marveled at the phenomonon of a bull getting into a rage over a red shirt. I am now certain, his ancestors lived in some tropical country where red geraniums grew wild.

CABBAGE WORM CONTROLLED BY LEAD ARSENATE

The common cabbage worm, the most destructive insect enemy of cabbage and related crops, is best controlled by spraying with lead arsenate or calcium arsenate says the United States Department of Agriculture. This pest is a velvety green caterpillar about 1¼ inches in length, and is the larva of a white butterfly well known to most farmers.

Early in the season the worm attacks the cabbage, riddling the outer leaves as they form, frequently feeding within the immature heads, which are rendered unfit for food. Sometimes it cuts out the "bud" from the young plant, thus preventing development of the head.

Arsenic poisons may be applied in dust form rather than as a spray by mixing the powder with hydrated or air-slaked lime, land plaster, dusting sulphur or cheap, light, finely pulverized material which will adhere to the cabbage leaves. Although dusts are more easily and quickly applied than sprays, they do not always distribute the poison as evenly, and, unless the dusting is done when the plants are wet, they do not stick as well.

Farmers' Bulletin 1461–F, containing a description of the common cabbage worm together with information bage worm together with information relative to control measures, necessary materials and equipment, may be obtained free, while the supply lasts, from the United States Department of Agriculture, Washington, D. C.

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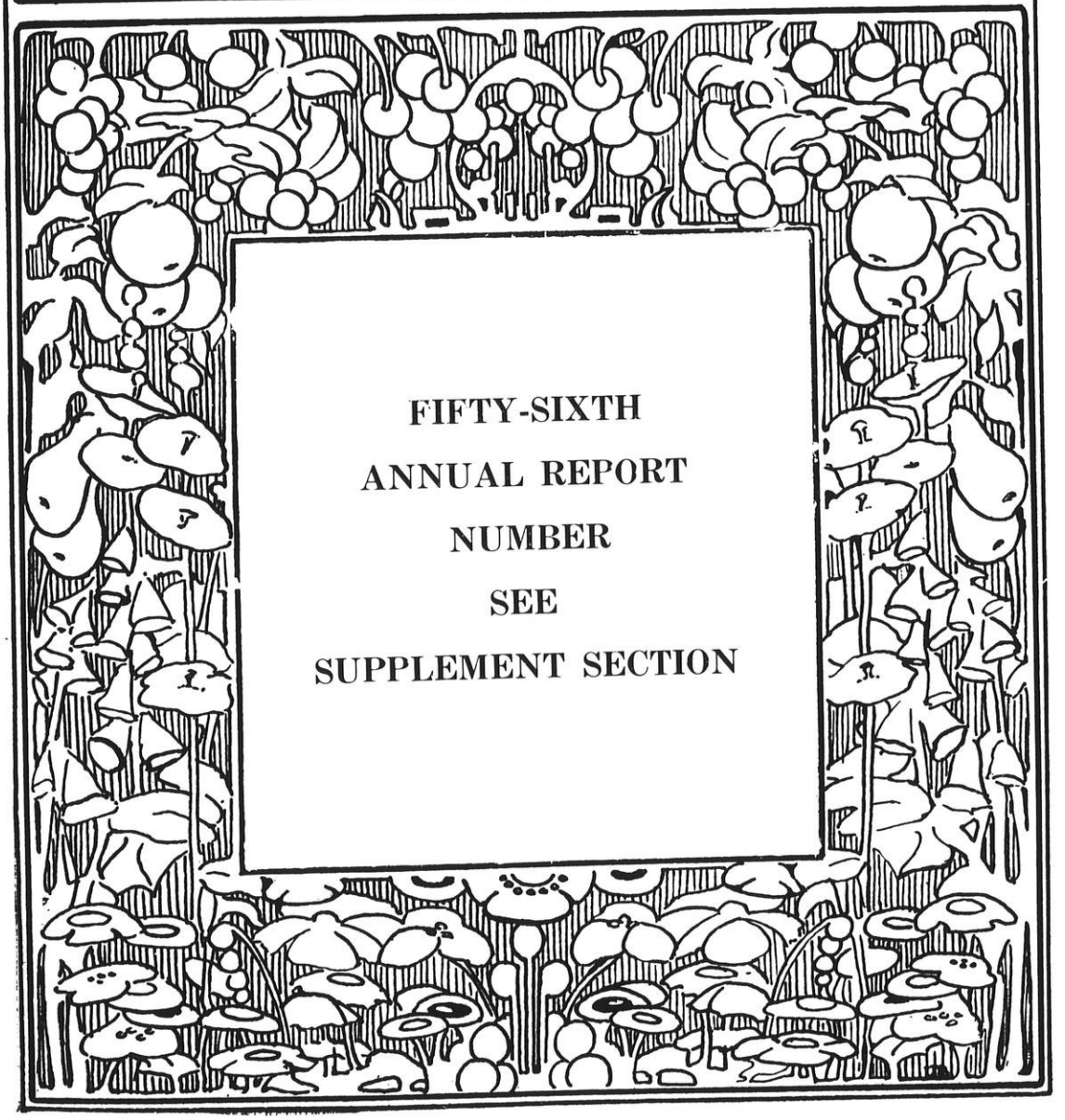

SCOUTING THROUGH THE COLLEGE FRUIT PLANTATION

E. R. McINTYRE

Old-times will recall when Messrs. Goff, Sandstein, Cranefield, and Moore planted the apple orchard on the shores of Lake Mendota, north of the Soils Building on the college grounds; and many more who will not confess it now will remember divers times they have been caught with the goods in silent forays upon the aforesaid plantation. This is all a part of Madison history which seldom gets the light of day.

Just below this old orchard and encroaching upon its noble boundaries have been erected the mighty walls of the student dormitory wherein Prof. Meiklejohn and Pres. Frank hope to renew the glories of ancient Greece in a noteworthy test to be made upon the youth of 1927.

This experiment in mental training and pedagogical environment will supplant the erstwhile experiments with crabs, peaches, pears, and apples which have occupied this northern slope ever since the days of the famous toboggan slide. The orchard and the small fruit plantation had to give way in good grace to the dormitories. Perhaps not entirely, for a few gnarled trees bearing marks of crude student violence in amateur pruning attempts will remain close to the cloister wherein the young men from Athens, Marathon county, and Sparta, Monroe county, will fancy themselves disciples of Plato and Aristotle.

The New Trial Orchard

Forced out by the Tree of Knowledge, the newer Garden of Eden for horticulturists has been moved out near Black Hawk point, in the general direction of the suburb known as Shorewood. Here Profs. Moore and Roberts have staked out one more claim in the face of advancing civilization, and on 12 acres of gently rolling land the enterprising but sadly harassed horticulturists of the University of Wisconsin have set up what they hope will be a newer and better vine and fig tree.

Livestock Versus Fruit

There is plenty of room on the campus, close in, for hog pens and cattle yards, but horticulturists are regarded as lovers of the wild and pioneers in a general sense. Hence we find the new orchard far removed from the haunts of roving animals and the ken of small boys. Students who go out there for practice work will not be required to take physical exercise, we presume, as part of their course. It is nearly two miles from the College of Agriculture.

Wisconsin thinks first in terms of herds and flocks, and the horticultural element has learned to accept this as customary—even in the face of the frequent demand for diversified agriculture.

Twelve Acres of Hope

With Prof. Roberts as guide and mentor, a visit was paid this summer to the new Garden of Eden. On the 12 acres there will be instructional portions, others for breeding trial varieties, and still another section for research work. Late and slight bearing trees will be observed in still another nook. With the exception of one small knoll, the tract is well located and provides a good orchard site.

As cover crops, comparisons will be made there between legumes on the one hand and shorter season crops, such as oats and buckwheat, on the other hand. The effect of variable amounts of pruning or height of head at planting is also being studied. They will experiment with Delicious and Northwestern Greening to see if they cannot overcome the irregular branching habits they possess and keep better and more open heads on them.

Planting is proceeding on the filler rectangle system, and the filler trees will be used mostly for the light and heavy pruning tests. The rectangular planting dimensions used are 28 feet by 17 feet. One common fault in farm orchards is too close planting.

Some plums and cherries will be set out and tested on this site, although for the most part it will be an apple plantation.

The Elysian Fields Closer In

Closer in, not more than a mile at most from the old orchard of midnight memories, lies the department's new outpost of small fruit, a place that in time may be known as the Elysian fields to the Wisconsin Greek colony who will inhabit the dormitories. The only trouble encountered on this flat piece of silt loam is its lack of drainage, which has resulted in killing out some of the choicest ambitions of the intrepid explorers. Prof. Ed. Jones took a couple of steps over the area this summer and has designs upon it for a lateral attack—unless Prof. Franz Aust should make a fountain there to suit his landscape ardor.

Many Seedlings and Few Weedlings

In a remarkably well kept plantation, considering shortage of help even at the U. W., are the seedlings and specimens of treasured vines and bushes belonging to the horticultural department. Criticism has been made about the headway in Minnesota and the laxity of Wisconsin in fruit breeding and testing work, and a visit to this spot will convince anyone that the staff is trying to overcome handicaps and lack of support on the part of fruit growers themselves. They are making a good trial attempt and in the absence of entire state farms like those of Excelsior and Zumbrota, Minnesota, Wisconsin investigators are doing a good piece of work.

Varieties From Many Regions

Apple seedlings include Joyce and Melba and others from Canada, the Orenco from Oregon, Minnehaha, Haralson, Folwell, Erickson red and the Wedge from Minnesota; the Red Spy, Early McIntosh, Astracan, Courtland, McCann and Milton from New York; and the Starking and Golden Delicious from Missouri. Promising Wisconsin seedlings will also be tried.

There are fully 40 varieties of strawberries and 10 varieties of red raspberries under observation now. The reds include Herbert, King,

Cuthbert, Latham, Perfection, June. Erskine Park and Victory. Canadian kinds will be tried. Latham is rather late, large in size of berry and vigorous and hardy of plant. King is early and hardy, and the Cuthbert is medium early but suffers from mosaic disease somewhat. Herbert is a quality berry. For early yield, King or St. Regis is recommended by many, and for rather late but very high yield, the Latham is a winner.

Anthracnose Bothers Some

Crown gall and anthracnose disease are bad on black raspberries. The latter is so common that blacks are hard to grow in Wisconsin, especially on low lands. The sores or blemishes of the disease are found on the canes which bear the season's fruit, and this cuts the crop.

Diluted lime sulphur mixtures with gelatin dissolved in hot water are applied when the leaves are very small. This has given almost perfect control at Madison, providing it is not too strong to burn the foliage and if two or three sprays are put on during the season.

Red raspberries are almost a sure crop in Wisconsin and there is nothing much in evidence to injure or check their growth.

Along the Strawberry Rows

Going along the strawberry rows, some of the varieties were noted. There are 30 plants in the rows, and the rows are set out four feet apart.

The Duluth variety is from Minnesota. The Mastadon, Progressive and Peerless everbearing are on trial. There are the old reliable Dunlap, and the Wolf variety which is something like it. From Illinois come the Sionelli and Lucky Boy and the Black Beauty from Michigan, and Beacon from New York. There are the Glen Mary and the well known Candy; the Aroma of high quality but medium yield; the everbearing Champion, and the J. H. Cooks and the Gibson, two good sorts.

New Jersey folks like big things, for we have Early Jersey Giants in strawberries as well as poultry. Other varieties on trial are the St. Martin, Marvel, Edward Wilson, Chesapeake, Delicious, Big Lute, Paul Jones, Bushel Basket, Magic Gen, and All Season. When the boys get done testing out these varieties they will have enough recommendations to flood the market.

From this time on, the Wisconsin slogan should be "eat more everything" and the grower will provide the best there is to satisfy the hungry ones.

Grapes Galore For Somebody's Store

Forty varieties of grapes—count them—in one vineyard on Mendota's banks must give way to the Pythagorians and their laurel crowned tutors. A few feeble reminders of those vanished Concords hang on ambitious trellises in the new plantation. With these vestiges of a glory that is gone must the race be run. Selected work on pruning and spraying tests will be done on the Agawan, Brighton, Concord, Delaware, Diamond, Niagara, the Worden, and Moore's (not Prof.'s) Early. Thus far it has been found that Bordeaux mixture will check grape mildew to the queen's taste, and there is yet some hope in Dane county.

Research Work Under Difficulties

In the absence of any horticultural lobby, Prof. Roberts is obliged to continue a sort of jumping process in research work, keeping outside of the sacred groves of Hellas as much as possible. In all seriousness, the studies which he has made in recent years have shed much light on the fruiting habits of orchards, and he has nearly finished a study on the relation between composition of tree tissues and growth under different plant food treatments which is destined to be of national importance. His work will be of great benefit to nurserymen and commercial growers. His achievements are his chief reward.

But Wisconsin took its first lessons in horticulture from peddlers of wonderberries and everbearing apples, and it has been slow in recovering from its illness. What few real prophets we have had among us have not received the encouragement that the Minnesota people have given to their fruit breeders, and if there is any complaint put it in your mail box.

HARDY PEARS

C. V. Porter

In your valued magazine I see little about Pears. In my orchard I have eighteen varieties of new hardy pears of promise. These are young yet but in a few years I hope to have a good test orchard. I am following the work done by Rev. Katzner of Minnesota, Mr. David Lait of N. Ontario, Canada, and the Minnesota fruit breeding farms and the fruit breeding farm at Charles City, Iowa. The hardiest pear is Patten No. 5, which is claimed to be as hardy as the Duchess apple. Eighty miles northwest of Minneapolis nine small trees bore twelve bushel this past summer. Patten No. 5 is a small pear of good flavor but very gritty. The best Patterns are No. 1206, a good sized pear of good quality with some grit and a small pear No. 1203 of excellent quality. These pears are both hardy but not as hardy as No. 5.

The S. Dakota pear by Prof. Hansen No. 38 is very hardy and of fair quality and good size.

Mendel of Minnesota is a good quality pear, good size and seems hardy.

Minnesota No. 1 is a pear of fine quality and size but lacking in blight resistance and only fairly hardy.

Minnesota No. 3 bore two bushels of fair pears this last summer. It seems hardy and blight resistant.

The pear outstanding is Taits No. 2, as tried so far. A small pear of fine quality, very hardy and blight resistant. This is one of Mr. Tait's seedlings from the Warner pear.

A number of the above pears are especially promising. They are all new and the next few years will prove their worth. Most of

(Continued on page 180)

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WHY DO WE SO?

Wisconsin Fruit Growers ship apples to Chicago, carloads and carloads. From Sturgeon Bay, Chippewa Falls, Gays Mills and other points, then later Rhinelander and Portage and Lancaster buy these apples from Chicago wholesalers and they are shipped back.

This may not happen as often as it did a few years ago but it happens. This is poor business and shows something is lacking. But where shall we begin? The car lot grower who would now go out to sell his apples to the retail trade might well, at the present time, be considered a mental case; it can't be done, now. The average retail man, your local grocer, doesn't even know that there are any apples grown in Wisconsin, that is any good apples. Neither for that matter does the consumer. For instance a Madison man dropped into the office today and the conversation drifted, easily, to apples. "Last fall I bought," said he, "a bushel of apples from somebody who had rented storeroom at the corner of ———— and ———— streets, western apples; that furnished the text for this sermon. The apple she bought were grown in Trempealeau County, Wisconsin. Western apples! But it is merely additional proof that somebody must undertake the job of convincing people that there are "Good Apples Wisconsin Grown." Then, perhaps, the carlot growers will get orders for carloads of "Good Wisconsin Apples" from retailers or even wholesalers. This will not happen this year or next but it is sure to come if the right kind of an educational campaign is carried on.

The State Horticultural Society has undertaken the job of selling Wisconsin apples to Wisconsin people. Up to this time it has been a case of "let George do it" so "George" in the person of Mr. J. S. Potter of the Secretary's office is doing it.

Posters will be widely distributed. It is Mr. Potter's hope that the housewives will see these when shopping and "Ask For Good Apples, Wisconsin Grown." If the storekeeper hears the call often enough he may look about for Good Apples Wisconsin Grown and buy them instead of buying bulk Jonathan, Washington and Idaho bushels as he did last year. Peter Charles Swartz is right when he says, "Create the appetite."

Now many hundreds, perhaps thousands of dollars have been spent by the State Horticultural Society in former years in attempts to advertise Wisconsin apples at fairs and expositions but mainly in the attempt to get people to plant more trees. In that we have succeeded. Now the job is to sell the apples from these orchards to our own people. It can't be done to the best advantage at the State Fair. For one thing the dates are too early, apples are not ripe; and people unfortunately do not attend fairs to be educated but to be entertained. The man with the patent potato peeler will attract a bigger crowd anytime than a show of apples.

Fruit exhibited at state and county fairs furnish a spectacle without which the fairs would be sadly incomplete but as means for education are ineffective.

It is to the women that we should direct our attention, the ones who buy fruit for the home; and always remember there are other fruits than apples. So the Horticultural Society, as always, will take the first steps in the move to educate consumers that there are really "Good Apples Wisconsin Grown."

The women must help if this movement is to succeed by asking for Good Wisconsin Apples. It will be helpful to them. The growers ought to help by contributing fruit for demonstration purposes and money if needed. Five hundred dollars and five hundred bushels of apples used this year in demonstration and advertising would go farther toward creating a market for Wisconsin apples in Wisconsin than long winded arguments and theoretical discussions. So if everybody will boost a little we may, some of us, live to see the day when Good Wisconsin apples will be sold in every grocery and fruit stand in Wisconsin.

CHERRY JAM

The newspapers have featured each year the wonderful cherry blossoms that cover Door County in the spring time and it is news when five thousand pickers migrate to the cherry regions to help pick the crop—but behind the things that furnish the papers with copy is another story.

Sometime, if you can, go into Door County at the beginning of the cherry harvest, as we did. Door County was a changed place from end to end. Thousands of people had come in to aid in the great task of harvesting a crop within a comparatively short time. In the larger orchards well regulated and efficient camp service had been established with bunk houses, dining rooms, recreation grounds, camp directors, recreation directors, and all. The camps were peopled with pickers from far and wide. School teachers, shop girls, school girls, making their vacation both profitable and healthful. Boys of every sort, from the cities, from neighboring farming communities. And men. There were about five thousand pickers drawn to Door County this year by the large crop of fine cherries.

And soon after the influx of pickers the crates of fresh fruit started to the loading platform, where they were shipped to the markets by freight and express, every crate bearing the label of the particular Door County brand under which it was packed. But few people who are buying the cherries realize the stupendous undertaking necessary to supply them with the fruit.

Day after day the cherry grower has had to contend with the vagaries of the weather. This year it was a hail storm that caused a great loss to some growers. A bad wind storm at just the wrong time will ruin the chances of a marketable crop. The cherry grower must not only be efficient in the mechanics of raisng the fruit—spraying, cultivating, and pruning—but he must also be an executive who must be able to house, feed, and keep his pickers interested in their job until the last crate has been packed and the last container has gone into the canning factory. He must have the utmost efficiency in order to successfully harvest his crop.

The cherry harvest is comparable with, but more spectacular than the rush and industry of the great southern peach orchards. After seeing Door County operate from one end of the peninsula to the other we feel that the growers form a most courageous order.

IF YOU USE APPLES

Before many more days there will be a large number of bushels of apples offered for sale here in Wisconsin. Not all of these apples will be fit for sale or consumption. Not all of them will have been grown here in Wisconsin. But there will be bushel after bushel of good Wisconsin fruit offered for sale in the same store that also offers Illinois and Arkansas Jonathans. Western fancy box apples, and Michigan marbles. If you use apples, ask for good apples Wisconsin grown.

And too, there will be much Wisconsin grown fruit that should never have left the orchard, and do not buy that fruit. There is plenty of really first class fruit put out by Wisconsin orchards that will give you better satisfaction. Our conversations with orchardists show that this state is a very poor market for home produced fruit. This is as much the fault of the grower as it is the fault of the consumer. Maybe more so because the growers have never made a combined, an efficient effort, so far as we are able to find out, to bring their product before the consumer and keep it there. It takes eternal hammering to advertise any product.

The consumer is at fault, too. He, but it is mostly she, will take what the grocer gives her, and pay what the grocer asks. If the consumer will get the habit of asking for good apples Wisconsin grown, and if the Wisconsin grower will take enough pride in his product to label it—no matter how—as being Wisconsin grown there will be a start toward consuming Wisconsin fruit in Wisconsin.

You will be reminded often in the next few months that it is wise to ask for Good Apples Wisconsin Grown.

A SHORT CUT IN TESTING SEEDS

Rapid methods of testing seeds so that their vitality may be determined within a few hours have been discovered by the investigators of the Boyce Thompson Institute for Plant Research at Yonkers, New York. The practical importance of these discoveries in controlling and hastening seed germination has, nurserymen maintain, more than justified Colonel Thompson's great endowment of the Institute.

Hybrid rose seeds which in the past have been watched and tended for five or six years can now by keeping them at a constant low temperature, be tested in six months.

Live seeds soaked in water at a temperature of 126 degrees will produce foaming when placed in peroxide of hydrogen; an equal weight of dead seed will not, or the activity will be greatly decreased. An injury to seed, whether produced by age, heat, or freezing, may be detected by this test. The important point is the soaking in the hot water; without this seeds of low vitality may make almost as good a showing as the best ones.

Wheat seeds after harvest become dormant, and when tested give misleading results as they wake up in dry storage and when planted give unexpected growth. To get around this, seeds are dried and kept at a lower temperature than formerly, and then the germination tests give practical, true results. Drying seed corn, especially after a wet harvest, ensures quicker and better germination of the seed. Points like this mean enormous increases in production of food and money returns to the farmer, when applied to a three billion dollar crop like corn.

Such important hard-coated seeds as peas, beans, clover and alfalfa may give nearly a hundred percent return instead of only 15

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WOMEN'S AUXILIARY PAGE

EDITED BY MRS. C. E. STRONG

PERHAPS IT'S TRUE AND PERHAPS IT ISN'T

I've been reading in several magazines about the care of Delphiniums—and some of the writers are urging us not to cut down the old stocks saying they were injured by so doing. Maybe so, but I have been cutting down my plants every year for at least eight years, and they grow up bravely every summer to the regular six to eight feet, with wonderful heads or spikes of bloom. I rather pride myself on my collection of choice plants with their wonderfully large individual blossoms and exquisite colors. The reason I cut my plants down is because the rot would usually take some of the plants every fall—and those were usually the choicest ones. I started cutting the plants down shortly after they were through blooming and have lost but very few plants in the eight years.

To me Delphinium blooms are always welcome—in season or out. I never seem to have enough of these lovely flowers, and am always raising a few more plants from seed. Whenever I hear of some particularly fine strain I try them out, and sometimes try a few seeds gathered from my own plants.

I would like to have some one else give their experience on cutting down Delphinium plants—whether they have found it harmful or not.

THESE LIKE SUNLIGHT

There was a dry sunny spot in my garden on which it seemed almost impossible to grow flowers, yet I particularly wanted some there. Finally I tried some of the Sedums, added a few more, then a few of the hardy Alyssums, Saxatile and Rostratum, then a native Cactus, scattered a few seeds of Bartonia and that spot has been interesting and gay all summer.

IDLE BEAKS FIND MISCHIEF

They used to tell us when I was a child that "Satan finds some mischief still for idle hands to do." I thought of the old saying as I watched the birds this morning. They have raised their families and are seemingly carefree, so blackbirds, brown thrush, robins, yellow hammers, red headed woodpeckers, all congregate in the mulberry trees and eat—then to the water for a drink and to bathe—then for mischief. They chase each other around like a lot of children—try to duck one another in the tiny pool—pick off the blossoms one after another as fast as you could snip with a scissors. Two or three will take hold of a small plant and pull, seemingly trying to pull it up by the roots. They will pick at the strings put up for the Morning Glory vines, and presently joined forces once more, this time intent on the destruction of every plant around the little pool. That wasn't funny to me, so I chased them away, to their very evident surprise. "Why, they hadn't been doing a thing; what on earth could be the matter with that old woman, anyway." Twice they came back to see if I really meant it, and when I plainly showed that I did they left the plants alone.

Yesterday a great big baby yellow hammer who insisted on following his parents around begging for "eats" was treated quite meanly, so he thought. Tired of his begging, also tired of his incessant yells for food, Ma Yellow Hammer brought a nice fat mulberry to him. Just as he reached for it, she quickly ate it herself, and the father repeated the performance immediately. The young bird seemingly was stunned. He sat dejectedly there on the rose trellis for a half hour or more, while the old birds ate mulberries tauntingly before his eyes. Finally he straightened up, pressed his feathers and flew to the tree where he helped himself—much to my pleasure—for his hungry yells had been anything but pleasant.

"I'M GLAD I'M HERE. ARE YOU?

The air was so sweet this morning. I was seized suddenly by an analytical bent and a great desire to determine what the government requirements would demand to have published on the label.

So I started on my daily morning saunter to the rural post box,—a few rods down Hathaway Lane, a turn to the left, and some further rods along Evergreen Lane,—I made explicit inquiry of my nose.

Stepping through the door, my whole being was flooded with that sweetest sweet of the white honeysuckle vine, in the midst of which is hidden the home of the friendly little Scotch-cap Chippy. And the first step on the path sent up a bitter pungent whiff from a bruised yarrow, combined with the heavy sweet of the pink peony that plays gatepost where no gate is.

Iris breath came straggling down the breeze, and the first faint hint of the largess of the Linden overhead,—such a busy place, in a few days more, when the bee begins to transmute its sweets.

An industrial whiff from the gasoline engine in the nearby barn but served as foil, as, at the turn, engulfing billows of wild grapes aroma stayed my goings.

Is there a more exquisite fragrance upon the earth?

Reluctantly leaving that lure, I met on the left the resinous incense of sweet balsam fir, and on the right a sea of new mown hay.

In my early school days the little school girls doted on perfume bottles to hold water for slate washing and the favorites seemed to be "Hoyt's German Cologne", and "New Mown Hay". Does anybody remember?

Nose and eyes simultaneously detect the lavender Bergamont, or Horse-mint beside the wheel tracks,—then comes a true horsey whiff from a warm, patient, wise-eyed bay, drawing a hay rake just over the fence.

And here is another sweet, with a slight almond suggestion, floating

from a belated choke-cherry at the end of the lane,—and here we are at the mail box! And I hope some of this complex sweetness will penetrate the outgoing mail! I know no more now, how to label the sweet morning air, though my nose has led me to many of its component factors,—but I no longer want to analyze it, and thought turns to the institution of the rural mail box, and I feel like singing a little thanksgiving for it perched there on its post.

It lures me into the loveliness of morning, when many times I would think myself too busy to leave the house, if the postman rang daily at the front door.

This particular little arch-roofed, white painted metal house, —the whole side serving for door-plate,—besides its service to my household, at the present time is base of operations for a pair of wrens.

Entering by the letter slot, they have carried in endless wren-cords of wren--wood, with which they have built up in the rear left hand corner, a regular Cotopaxi cone, reaching very nearly to the roof. The "crater"—lined with horse-hair and fluff of some sort—cob-web? Or cottony scale? is a darling little cup of a nest,—and there they hold forth, tolerating our use of the front portion for its legitimate purposes.

I hope a little wren-influence will permeate and sublimate this!

We prize all our bird neighbors, and value their friendliness.

A pair of mourning doves reared a small family in the end of the eave spout, just outside one of the windows in the children's room, and a pair of wrens (not the postal ones) reared a large and voluble family in the wee rustic house put up for them on the wild grape and bittersweet trellis, and "the tykes" delighted to declaim to them the old English folk rhyme

"Coo-oo, coo-oo,
It's as much as a pigeon can do
To maintain two;
But the little wren can maintain ten
And bring them all up like gentlemen."

A robin builds yearly on a beam of the "lookout" over the front stoop, and the family mainly uses another door for several weeks each spring!

An oriole hammock, full of Cry-babies, swings over the lane, near the children's swing.

A catbird has a nest in the choke-cherry thicket that screens the compost heap, and goldfinches in the tangle of raspberry canes along the fence line.

The Queen Anne cottage, high in the air, houses many families of purple martins and all join in the "Grand Uproar" at break of day.

Well, what is all this rambling about, anyway?

Perhaps these few words would tell it; "I'm glad I'm here."

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these are growing and fruiting in Rev. Katzner's orchard and with Mr. Lait. Several have passed through 40 below zero weather without injury and are very blight resistant. Most of these pears are being taken up by nursery men and are for sale.

Some of these are crosses with the Siberian pear. This pear grows in a section with a minimum temperature of—45 to 50°F. It seems reasonable to believe that before many years pears will be grown successfully in the orchards of our northern section.

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percent, if it is known that a thorough cracking of the seed in thrashing is necessary to allow the moisture to reach the embryo. Otherwise they will germinate a few at a time and some may not come along for fifty years.

These three points: Speeding up of germination by constant low temperature; quick and accurate testing of seed vitality; and proper treatment of hard-coated seeds to ensure a high percentage of germination—these alone, it is pointed out mean increased production, much needed to keep pace with increasing population; increased monetary return to the farmer or nurseryman; and, quick confident planting, instead of a blind and futile sowing in the dark.

What varieties of tulips are you planting this fall?

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