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WAR ON CATERPILLARS.

In Washington, D. C., the Park Commissioners are particularly anxious to have the work begun early and prosecuted to a successful termination. One of the most novel ideas suggested is to establish a sort of caterpillar bureau and offer prizes to the boys and girls of the city for the largest number of cocoons collected in a given time. According to a report before the Commissioners of the working of the system in one of the large cities, one little boy, the successful winner of the first prize, collected 35,689 cocoons. He found them for the most part in the tree boxes and under the coppings of porches.—Am. Gardening.



WISCONSIN'S RESOURCES are attracting general attention, and its railroads furnish the means to develop them. The limitless iron ore deposits of the Penokee and Gogebic Iron Ranges provide abundant opportunity for the establishment of Iron Furnaces and general iron working industries. Hardwood timber in great quantities attracts manufacturers of all wood articles, including Furniture, Woodenware, Staves, Headings, Hoops and Veneering; the Granite and Lime Stone quarries are attracting attention, as their quality is unsurpassed for fine building work and strong lime. Numerous Clay, Kaolin and Marl beds furnish the best material for Tile, Brick and Pottery.

All of these materials are located along the line of the **Wisconsin Central**, and any one who desires to locate a manufactory is requested to write us, as we desire to confer with everyone who wants a good location with facilities for reaching markets everywhere.

W. H. KILLEN,
Industrial Commis'r.

C. L. WELLINGTON,
Traffic Manager.

H. F. WHITCOMB,
General Manager.

MILWAUKEE, WISCONSIN.

A GREAT RAILWAY.

The **Chicago, Milwaukee & St. Paul Railway Company** owns and operates 6,169 miles of road.

It operates its own Sleeping Cars and Dining Cars.

It traverses the best portion of the States of Illinois, Wisconsin, Northern Michigan, Iowa, Missouri, Minnesota, South and North Dakota.

Its Sleeping and Dining Car service is first-class in every respect.

It runs vestibuled, steam-heated and electric lighted trains.

It has the absolute block system.

It uses all modern appliances for the comfort and safety of its patrons.

Its train employes are civil and obliging.

It tries to give each passenger "value received" for his money, and

Its General Passenger Agent asks every man, woman and child to buy tickets over the Chicago, Milwaukee & St. Paul Railway—for it is A Great Railway.

GEO. H. HEAFFORD,
Gen. Pass. and Ticket Agent.

The Wisconsin Horticulturist.

VOL. 1.

JUNE, 1896.

NO. 4.

The following officers were elected at the last annual meeting February 8th, 1896:

President—L. G. Kellogg, Ripon.

Vice President—Chas. Hirschinger, Baraboo.

Secretary—A. J. Philips, West Salem.

Treasurer—R. J. Coe, Ft. Atkinson.

Corresponding Secretary—J. L. Herbst, Sparta.

PLANTING NEW TRIAL ORCHARD.

At a meeting of the trial orchard committee the undersigned was chosen to superintend the buying and planting of the experimental orchard. In selecting the different varieties I adopted the plan of buying for the commercial orchard, where about forty trees of a kind were used, ten trees in four different localities and on four different soils, which growing in the same row would show after a term of years the best soil to grow trees for northern Wisconsin or at least Marathon county. This was done in every instance except in case of the Repka, where all had to be bought in same nursery. It will be marked and platted so that all who visit it can readily find where the trees were grown. Another plan was to take the leading varieties of nine kinds. Plant six of each as follows: First, a Virginia crab to be top worked; second, some root grafts, one of which will be left to grow and bear without being transplanted, and third, a tree three years old on its own roots, the same as the grafts, and the cions used for top working. This to be followed the same each year for three or five, when it will show plainly at a glance the best way to grow each variety. This same plan is exemplified in my own orchard in La Crosse county, which all are invited to inspect; and third, something like one hundred and fifty trees are set, one or two of a kind,

mostly donated to test their ability to stand the climate of the forty-fifth parallel. These trees, some seven hundred, were planted, staked, tied and mulched the week in April, commencing the 27th, and being a wet, lowery time was just suited to the work. One thing was noticeable—that trees dug this spring in localities where drought prevailed for one or two years, showed quite a damage to the roots. That it was in the roots was plain, as attested by the fact that some of the hardiest was plain, as attested by the fact that some of the hardiest were injured the same as some of the most tender. The coming year will test them. Where the root was tender it made no difference whether the top was Duchess, Hiberna, Newell or Wealthy, the roots were discolored the same. Five hundred protectors are on the ground to be used soon. The trees are already starting and it promises to be a fine orchard. Will say in main orchard the varieties used were Duchess, Hiberna, McMahan, Northwestern Greening, Wealthy, Newell, Repka, Patton's Greening, Longfield, with a few Peerless, Avista, Okabena, etc.; a few plums, mostly from Minnesota, and one Suddaugh pear tree were planted. The gentleman who owns the land and has charge of the orchard is a thorough worker, and will be pleased to show visitors through the place and invites as many as can to come on Wednesdays, as it will take less time to show all at the same time. We hope to make this orchard an object lesson for not only our own but other northern states, and of great value to all planters who will take pains to visit it and study varieties.

A. J. Philips,
Secretary.

SPRAYING FOR APPLE SCAB.

(Extract from Oct., '95, Bulletin of Del. Agr. Experiment Station.)

Results of Spraying Apple Trees—Upon Their General Condition.

A notable effect of the season's work was the protection which the spraying offered against diseases of the wood and foliage.

The general condition of sprayed trees was better than that of the unsprayed both as to vigor of growth and density of foliage. This favorable condition also persisted later into the season. On October 18th, I found that those apple trees which had received but a single spraying were entirely defoliated, while those treated four and five times were still clothed with leaves. A further good effect was noted in the general condition of the buds on the sprayed trees, seen on October 18th. On the sprayed trees the buds were markedly larger and more vigorous.

On October 14th, Mr. Derby wrote, "The indications are for complete success for the spraying for scab, and, further, the condition of the trees as to next year's fruit buds and 'staying on' of the leaves makes the experiment satisfactory to me, the russeting of the fruit, undoubtedly from the action of the spray, being the only drawback."

General Directions for Spraying Apples.

Regarding the cost of spraying apples, Mr. Derby has estimated it for material and labor at about ten cents per tree for five sprayings.

In spraying apples we would recommend the course pursued by Mr. Derby in this experiment. Use the Bordeaux mixture, (1-2 D) made up as follows:

Copper Sulphate	6 lbs.
Lime	9 lbs.
London purple	4 ozs.
Water	45 gals. (1 bbl.)

For the first application, which should be made as soon as the buds begin to swell, London purple need not be added to the Bordeaux mixture, but for the second, third and fourth application it should be included. The second application is to be made just before the bloom opens, the third when the petals are nearly all shed, the fourth when the fruit is about the size of peas and the fifth about two weeks later.

The profitableness of spraying apples, so far as the control of the scab is concerned, will depend upon the susceptibility of the variety and the likelihood of the appearance of the dis-

ease without treatment. Trees affected as little as either the Early Harvest or the Wine Sap would hardly pay the cost of spraying, so far as this one disease goes.

But upon general principles we firmly believe that it will pay to spray all apple trees with a combined fungicide and insecticide, inasmuch as there are other foes than the scab fungus to be combatted by the treatment. Of these we have the various fruit rots, leaf blight and that very formidable enemy, the codling moth.

Furthermore, there is reason to believe that the general health of the tree will be so greatly improved that this alone will make the spraying of apple orchards a profitable expenditure.

REPORT OF D. C. CONVERSE, FORT ATKINSON.

The past season has been anything but satisfactory to the small fruit grower. Although the early spring was quite favorable for planting and strawberry plants started out with a fair prospect for making a vigorous growth, the late frosts followed by the extremely dry weather and hot winds had a disastrous effect, and in our locality good beds are the exception rather than the rule.

The same might be said of raspberries and blackberries.

As to time of planting, my observations the past season on early and late planted fruits confirm the theory that the earlier the planting can be done the greater will be the degree of success.

The strawberry crop was very light owing, as above, to late frost and dry weather. The berries were, however, in good demand and brought a fair price. Raspberries yielded a fair crop, but not as heavy as was expected from the growth of canes. This was due probably to the unripened condition of the wood in the previous fall. The blackberry crop was a practical failure, and I am fully convinced that unless we are favored with a series of more favorable seasons, some system of irrigation must be devised in order to insure paying crops.

Currants and gooseberries, although injured considerably by

frosts, yielded a fine crop, and I am happy to think that these fine fruits can be as easily grown as any farm crop and with as full an assurance of success.

To the practical, wide-awake fruit grower who can say but that the borer and currant worm are blessings in disguise? To such a one these pests are easily controlled and the careless indifferent grower will have bushes destroyed and no fruit to market.

While in many cases during the past season the fruit grower has barely held his own and has been filled with many discouragements, still it seems to me that there has not been a better time to embark in the business than the present. And to the grower already established only loss will result from shifting to something else.

D. C. Converse presented the following resolution: Recognizing the value to horticulture of the work done by F. W. Loudon, Janesville, therefore be it resolved, that the Wisconsin State Horticultural Society now assembled do hereby instruct the secretary to send greetings to Mr. Loudon. Adopted.

OBSERVATIONS FOR SEASON OF 1895.

J. L. Herbst, Sparta, Wis.

On account of the dry condition in which the small fruits went into winter quarters and the thin stand of strawberry plants to bear fruit the season of 1895, many of the fruit growers' hopes, in Sparta and vicinity, were blasted. But with a favorable spring and plenty of rain and warm days the outlook was much better. Everything was in the best of condition up to the 12th of June.

Plum trees blossomed as they never blossomed before, but heavy frosts killed the blossoms and no plums. New setting of strawberries made growth very rapidly and new plants began

to set the 13th of June—plant beds. First strawberry blossoms the 30th of April, quite a few on the 5th of May, and good share the 11th and 12th. Light frosts at this time but very little damage done. Thermometer fell to 24 degrees the night of the 13th and did the damage. Raspberry and blackberry blossoms hurt in the bud and strawberries considerably damaged.

Some plantations covered with marsh hay did not suffer as much as plantations that were smudged. Smudges did no good when thermometer went 8 degrees below, while covering helped to a considerable extent currants on outside of bushes frozen solid.

Gooseberries were heavily loaded before frosts. Did not suffer as much as other fruits from frost and a good fair crop was secured.

Queen, Red Jacket and Columbus prove all that is said of them. It would be injustice to the plant and originator if we discarded any of the newer varieties of strawberries, from their actions the previous year, and they will have another trial before we do so.

There is a very good outlook at Sparta and vicinity for the ensuing year. With plenty of moisture at the right time, a fine stand of strawberry vines was secured. New growth of raspberry and blackberry cane is as good as ever.

While our plantations went into winter quarters with not as much moisture as we would like, still with plenty of spring rain most of our growers think things will come out all right.

PROTECTION OF EVERGREENS FROM DROUTH.

J. C. Plumb, Milton.

The premature death of so many of our evergreens in lawn and hedges, in southern Wisconsin, is truly alarming. In my home village are many trees which have hitherto flourished and attained their ten to thirty feet, without any show of weakness, but which in the last year have lost their foliage never to return, and the evergreen hedges, miles of which we have planted and furnished in that vicinity, are now many

of them dying out in spots, or show a weakness that preludes death, and I am looking for a larger death rate to show among the evergreen trees than ever, with the coming spring and summer.

With a view to avert further losses in this line I have been looking up the facts, and seeking a remedy. It is plain enough, that the primary cause of this death is the want of rainfall during summer and autumn, as has been the case during the last two years. Copious and seasonable watering would have saved most of them without doubt. But prevention is better than cure. Artificial watering is generally costly and often a difficult process. So we find it best to avoid the cause by conditions of planting and growth. Our annual rainfall is all sufficient for our needs in this direction, if it can be conserved, or reserved, for time of need. In this line we find three ways available, namely: 1st, culture; 2nd, mulching; 3d, protection from robber plants.

The first two methods named we all understand and practice with all successful cultivations, but the last remedy we have failed to appreciate. Our evergreens are being robbed of the last vestige of water in the soil by deciduous trees, of which the white soft maple is most destructive, the butternut and European larch following close. In fact any tree the roots of which feed on the surface will rob the evergreens.

We find the hemlock and balsam fir most sensitive to the robber roots, and the arbor vitae least so; so that under the same conditions the latter is holding its own with little show of weakness from the drouth.

Now since no surface mulch or culture will answer fully in our case, we have found it necessary to cut down, or severely root prune, these deciduous trees where they encroached upon the evergreens. In one case where a beautiful hemlock hedge was showing the first symptoms of death, we took up the intervening plank walk, and cut off the maple roots by digging a two foot trench between the hedge and the trees. Again we have dug a similar trench around single trees to cut off the robber roots. In every case the effect was soon shown by the renewed vigor of our evergreens.

But as this must be repeated every few years, it is a question

why not put in a permanent concrete wall between, or dispense altogether with the fast growing deciduous trees? I am of the opinion that we have too many of these rapid growing maples, and the sooner they are dispensed with the better for our beautiful evergreens.

I have for many years been in the practice of cutting the surface roots of grass and shrubs around our lawn trees by shoving the spade its full depth in a circular cut as far from the base of the tree as its branches project, and the same treatment for the rose bed, or any of the choice plants which are bordered by grass, and in all cases with excellent and immediate effect. Of the miles of evergreen hedges we have planted but few will be left at the end of another series of dry years, unless protection is afforded same from robber roots of more vigorous trees.

Wednesday Afternoon,
Senate Chamber.

REPORT OF COMMITTEE ON OBSERVATION.

Mr. Bonnell, delegate from the local society at Eau Claire, was asked to add to the report of J. F. Case, and said: I did not expect to be a delegate to this convention until last Monday. The man who was elected delegate was taken sick and died, and I was notified on Monday that I was expected to be here to take his place.

I lost my strawberries from the dry weather. The raspberries came out all right but the fruit dried up and the bushes died, so I have but very few left. Currants were a very poor crop, but gooseberries I never saw so fine. I never saw such a crop in my life. Plum trees blossomed out nicely but we got no fruit. We had a frost in June. I account for the loss of the strawberry bed from two causes; first, the dry weather in the summer of '94 which kept them back, then the rains came on in the fall, in September, and they made so great a growth and were so tender, that they froze when the cold weather came on.

Q. What saved your gooseberries from the frost?

Mr. Bonnell—The frost did not affect them at all, but the currants were hurt. I thought the frost hurt them as they seemed to turn color. I told my wife I thought we would lose the crop, but ten days after I noticed them, they seemed to be turned again and were all right.

C. E. Tobey—Did not those gooseberries fall off that had turned?

Mr. Bonnell—Yes, I think they did.

Q. What kind do you raise?

A. Houghton's Seedling and the Agriculturist.

Mr. Bonnell—Mr. Case writes about the Ever-bearing Gladstone. I believe he and I are the only ones that have them. He says he does not break any of the vines in putting them down. I do not think he ever will because they do not grow. They are named after a grand old man, but I am going to dig mine all up and put out cabbage in their place.

R. J. Coe—Cannot we have a report from Sturgeon Bay by Mr. Bingham?

D. E. Bingham—I haven't a written report from there. When you had the frost here we had a snow storm there that lasted from Sunday night to Thursday. Our strawberries were all in full bloom. We had a good crop of strawberries, and we had quite a large crop of apples. The only orchard we have there is Mr. Zettle's. We had a large crop of plums. There were some plum trees four years of age that had one bushel of plums on them.

C. E. Tobey—Isn't it true that the season at Sturgeon Bay is about two weeks later, and perhaps the strawberries were not in full bloom at that time?

D. E. Bingham—Our strawberries were all in full bloom; they were uncovered and it froze so hard that it would hold a man up on the bay. Our strawberries were injured some but we had quite a fine crop after all.

J. C. Plumb—In 1894 I had an immense crop of apples and I predicted that we would not have an average crop of apples last year, and so sparsely was the bloom that we did not spray. I am sorry now that I did not do it because it would have helped us the next season. I ran a cultivator through the

orchard off and on, and I have never seen so large a show of fruit buds, so I am looking for a good crop of apples this year. I do not think the frost, last season, had the least possible effect on my orchard; I do not know why it was so. It killed the strawberries and currants but I did not find that it injured the apples. We are in for a big crop of fruit for 1896.

OBSERVATIONS IN SAUK COUNTY.

Wm. Toole, Baraboo.

I have not written out a report because it seemed to me there was so little to report. The drouths and the severe frosts left us very little. Red raspberries seemed to stand the drouth and the winter better than anything else, and there were some very fine red raspberries raised in our vicinity. Blackberries amounted to almost nothing. Apples were almost a failure. Grapes amounted to a little more than apples, but still were very disappointing. Gooseberries seemed to bear considerably better. Currants amounted to but little. Houghton, Chas. Downing and Switzer gooseberries are the varieties I have. It might have been supposed that strawberries would have done better if it had not been for the dry season, but I do not think they would. I do not think if the weather had been favorable that we would have had anything of a crop because the vines were injured by the freezing and that injured the fruit.

YEARLY REPORT OF EUREKA SOCIETY.

This Society is yet young, hardly three years old, but has reached the stature of societies of the growth of several decades. The idea of our organization was popular from its conception, and having a territory tributary to this place well supplied with material congenial to draw from the interests of whom were in the line of our work, our efforts were assured success from the start.

Our meetings are held the first Saturday of each month in a hall in the village of Eureka, being nearly central with our membership, consequently the general convenience is apparent, which we deem a most desirable thing for the perpetuity of such institutions. The meetings are well attended. Various topics of special import in the line of horticulture, floriculture and agriculture are duly and methodically discussed. In addition we have entertainment committees who provide matter for the society of an interesting and practical nature. Our most prominent workers in the varied lines of entertainment are the lady members. Their efforts are always decidedly well done.

Our sessions the past year were fraught with operations of a character that proved interesting not only to our own members but to the entire community, who attested their appreciation by very largely attending our public demonstrations.

Our last year's work was inaugurated by having in January a Farmers' Institute. We gave much publicity to the matter, and were rewarded with a great attendance of our intelligent and enterprising people. Many came from long distances. Over one-half day was devoted to horticulture.

Although the time was diligently employed in our sessions for the year in discussions of a timely and practical nature, the society early inaugurated a plan to have a "chrysanthemum show" in due season. This idea was further elaborated by adding an exhibit of the flora world as obtainable, and all varieties of the vegetable kingdom. This proved a success in all respects and attributed mainly to organized efforts. Another of the same character is in progress.

The copies of State Horticultural Society's transactions are duly distributed to all members. Supt. Geo. McKerrow, on request, furnished us this winter with 100 volumes Farmers' Bulletin No. 9, which are, like the transactions, greatly appreciated by this community.

One result apparent since our organization is the greater intelligence evinced by our people regarding matters essential in fruit raising, and we are certain we are performing an educational work needful to all localities.

Regarding fruit crops the past year, the early days of spring

were of a propitious character. The snowclad hills and vales of this almost hyperborean region are today not more beautiful in their pure white mantle than was the area here devoted to strawberries, but like the apples of Sodom the gratification consisted in first views. The late frosts destroyed most of the primary bloom and all of the intermediate, and a drought mercilessly pounced upon and wound up the balance. The only strawberry to withstand the griefs of the season was the Glendale.

Of raspberries the Turner and Cuthbert did fairly, but of all the reds the Thwack proved a great success. The Marlboro developed enough vermin to almost cause their extinction. Of all the black raspberries the Nemaha did the best, bringing up the rear in splendid order.

Blackberries proved much of a failure right here where they have always been successfully raised. The gooseberry crop of some varieties was light. The best cropper here was the Whitesmith, the yield of which here was most remarkable. In size the Triumph was prodigious.

Our best crop of fruit of any kind was the currant. The White Grape never were so white and altogether lovely. The Victorias were superb and Fays and Cherry too, but not good croppers. The Versailles and North Starr did fairly well and polished up handsomely, but of all the varieties for profit the big red Dutch takes the lead. Currants were not particularly injured by frost, but a northeast wind of seven days' duration after the berries had formed switched the bushes in a disastrous manner. As it was, there was a larger crop raised than at any time since the fell destroying worms commenced their direful ravages.

As for prices we individually realized more profits from half our usual picking area than the year before, which was accomplished mostly through red raspberries and currants.

At an early day we had plenty of fine orchards of Rochester, N. Y., fruit. Apples, pears, plums and cherries were in abundance, with some peaches. An over glutted market stared the producer in the face, with consequent discouragement. Neglect followed; trees died by thousands and were not replaced by suitable varieties, and now we are using foreign fruit

again as we did forty or fifty years since. Some tender varieties are set out yearly. Of course they succumb about as fast at set. There are very few apple trees in prime condition. Pears, plums and peaches have teetotally disappeared, and none but the fittest variety of cherry survives and they only fruit to disappear into the rapacious crops of the feathered tribes.

Our officers this year are:

President—Dr. T. E. Loope.

Vice President—L. W. Sowles.

Recording Secretary—H. H. G. Bradt.

Treasurer—Mrs. M. E. Penniman.

Executive Committee—C. E. Floyd, P. M. Beaulin, and A. A. Parsons.

Delegate—L. W. Sowles.

H. H. G. BRADT,
Secretary.

REPORT OF OMRO HORTICULTURAL SOCIETY.

The annual meeting of this society was held January 11, 1896. The officers elected for the ensuing year are as follows:

President—S. O. Pingry.

Vice President—L. F. Laiten.

Secretary—Mrs. Jos. D. Treleven.

Treasurer—Mrs. L. Laiten.

Executive Committee—J. L. Fisk, J. V. Bartow, Mrs. F. Barnett, Mrs. R. T. Darrow.

Delegate to state meeting—Mrs. Jos. D. Treleven.

This society has 60 members, and we have very interesting meetings which are held the second Friday of each month.

MRS. JOS D. TRELEVEN,
Secretary.

Omro, Wis.

Platteville, Wis., Horticultural Society of 30 members meets monthly at the residences of the members.

Upon return last summer of our delegate to the State Horticultural Society, we formulated a library of 50 volumes and

subscribed for several papers. At our meetings every member is on duty to prepare information on topic assigned them. This winter we have had the following topics:

Strawberries—1st. Fitting ground and setting. 2nd. Varieties. 3d. Shall we raise or buy our plants? 4th. Young plants, removing bloom and runners. 5. Cost to raise and market. 6th. Picking stands, boxes, etc. 7. Pickers, who, age, how to manage them. 8th. Marketing. 9th. Yield. 10th. Irrigation. 11th. Covering.

Other topics subdivided, such as blackberries, asparagus, fertilizers, implements.

Our present officers are:

N. E. France, president.

A. Hale, vice president.

H. Gilmore, secretary.

Mrs. T. J. Colburn, treasurer.

H. GILMORE,

Secretary.

The Vernon County Horticultural Society met at Dr. Barney's office on Tuesday, January 7, '96. Elected officers and delegates:

President—Dr. F. S. Barney.

Vice President—M. V. B. Richards.

Secretary—J. R. Hall.

Treasurer—N. H. Nelson.

Delegate—F. L. Barney.

Alternate delegate—J. R. Hall.

Number of members, eighteen.

J. R. HALL,

Secretary.

The Calumet County Horticultural Society at its January meeting elected the following officers:

President—E. Schumaker.

Vice President—Merrett Blanchard.

Secretary—G. A. Cressy.

Treasurer—J. S. Dixon.

Delegate to winter meeting of State Society—G. A. Cressy. We have a membership of twenty-four. Hold our meetings during the winter the last Tuesday of each month.

Very little small fruit grown in this vicinity. The apple orchards are generally receiving more care and attention, and more and larger ones are being planted.

The fruit crop last year was almost a total failure. The pear orchard of W. R. Bishop of about four hundred 13-year-old trees which bid fair for a large crop only produced somewhere from twelve to fifteen bushels, owing to the severe weather the 12, 13 and 14 of May. Raspberries, where protected during the winter, yielded about half a crop. Blackberries very little and strawberries scarcely any.

G. A. CRESSY,
Secretary.

Hilbert, Wis.

REPORT OF THE LA CROSSE COUNTY HORTICULTURAL, AGRICULTURAL AND DAIRY ASSOCIATION.

This society held during the past year six all-day sessions, the Town Hall in Campbell being crowded at every meeting. The ladies and young people take great interest. The officers elected for the present year are:

W. J. Dawson, president.

A. G. Moss, secretary.

W. A. Tripp, treasurer.

Executive Committee—W. L. Osborne, John Dawson, E. C. Dixon, Mrs. W. A. Tripp and Mrs. W. J. Showers.

The membership is about fifty.

A. G. MOSS,
Secretary.

La Crosse, Wis.

THE ANNUAL REPORT OF GRAND CHUTE HORTICULTURAL SOCIETY, APPLETON, WIS.

Interest in horticulture is certainly not on the wane in this vicinity, notwithstanding the many discouragements that have

been experienced. Our quarterly meetings are largely attended and the annual meeting held on January 2, 1896, called together a large company.

The snow storm of May 13th, followed by the killing frosts of the 14th and 16th of the same month, caused a period of gloom which will long be remembered. Of course, in common with most localities of the state, and, indeed, with the northwest, immense damage was done to the horticultural industries in this section. The home grown fruit of nearly every kind was very meager during the season, but "Hope on, hope ever," accompanied by corresponding action, is our motto.

We were entertained and instructed by the remarks of our state secretary, Mr. A. J. Philips, who was happily with us at our annual strawberry festival held on the 2nd of July last.

He dwelt largely upon the culture and care of apple orchards and spoke very feelingly to the young people, urging them to prepare by self-improvement to be able to take the place of the aged horticulturists who are rapidly passing away.

While partial failure is written so eligibly upon so many products of the horticulturists, there are notable exceptions. Onions and cabbages produced well and the prices ruled comparatively low. Mr. G. C. Finkle, of Grand Chute, claims to have raised about fifteen tons of cabbage on a little less than an acre of land, and he sold \$240 worth of onions from one acre. In another department we were most happily surprised. At one time the grape yield was thought to be a thing of naught, but at our October meeting at the city residence of Mr. J. P. Buck, of Appleton, the exhibit of this fruit was very fine. There were about fifteen varieties, all of which were tempting to look upon. The Brighton was held most in favor upon test.

Delegates to both state societies are sent and good reports read before our society.

At our last meeting held at Mr. J. Cough's the election of officers resulted in the choice of C. A. Abbott, president; M. B. Johnston, vice president; J. P. Buck, treasurer; Mrs. C. E. Bushnell, secretary.

MRS. C. E. BUSHNELL,

Secretary.

REPORT OF RIPON HORTICULTURAL SOCIETY.

The annual meeting of this society was held January 15, 1896. The society now has a membership of 48. Nearly all horticulturists of this place are growers of small fruits. Our Fruit Growers' Association last season handled eleven thousand dollars worth of berries despite the droughth. People are planting more apples of late years. Duchess of Oldenburg, McMahan and Longfield are the favorites.

Following is a list of officers for 1896:

President—W. T. Innis.

Vice President—B. F. Conant.

Treasurer—E. Woodruff.

Secretary—A. S. Crooker.

Charles Hamilton was selected to represent our society at the annual meeting of the State Horticultural Society.

A. S. CROOKER,

Secretary.

REPORT OF WAUPACA COUNTY HORTICULTURAL SOCIETY.

The Waupaca County Horticultural Society, at its annual meeting January 31st, 1896, elected the following officers:

President—Hon. E. W. Brown.

Vice President—R. F. Taggart.

Secretary—F. A. Harden.

Treasurer—A. Smith.

Executive Committee—J. Jenney, A. V. Balch and Wm. Springer.

F. A. Harden was elected delegate to State Horticultural Society.

We are to have a meeting some time in February at which a program will be rendered, consisting of music, recitations, and papers, each paper to be followed by a discussion. We shall try and have several of these meetings during the year, and hope to receive much benefit from them.

FRED A. HARDEN,

Secretary.

Weyauwega, Wis.

FREMONT HORTICULTURAL SOCIETY.

Fremont, February 11, 1896.

The society met at the house of Paul Scheisser for the election of officers and its annual picnic. The following officers were elected for the coming year:

President—C. F. Eaton.

Vice President—Paul Scheisser.

Secretary—J. Wakefield.

Treasurer—Jacob Steiger.

Executive Committee—A. Randle, Dr. Stanton, John Ratsburg.

Voted to hold a summer meeting during the month of June, the time and place to be fixed by the executive committee.

J. WAKEFIELD,

Secretary.

REPORT OF WOOD COUNTY HORTICULTURAL SOCIETY.

This society was formed in November, 1892, has its regular annual meeting the last Saturday in January each year, and holds regular monthly meetings on the last Saturday of each month except during the busy seasons of harvest.

The number of members in good standing is 32. During the summer of 1894 and 1895 the society conducted a series of potato test experiments. The year 1894 was extremely dry and the test was made on a rich but rather high, quite sandy, tract. In 1895 the varieties of potatoes on which the 1894 test had been made were distributed to the members of the society, and they tested them on different soils with a considerable range of variety of soils and location. Of the 68 varieties tested only six proved superior to our old standard sorts that grew beside them. Notes were taken at different times through the growing and harvesting season upon the growth and appearance of tops, the amount of disease and the weight of crops and its showing of scab, etc. The six varieties making the best showing in order of their productiveness were Sir William, Beauty of Beauties, American Wonder, Suffolk Beauty, New Queen and Polaris. Others that gave

good showings were Maggie Murphy, Green Mountain, Burpee's Superior and Burpee's Extra Early.

At our regular monthly meetings we arrange to have papers prepared and read upon horticultural subjects of interest, and usually have these papers published in our local newspapers. Below I give a list of the few of these papers to show the scope of our work:

Diseases and insects injurious to potatoes.

The new onion culture—two papers.

How to raise turkeys.

What to spray and how to spray them.

Ornamental trees.

Manures, how to prepare and how to use them.

How to make muck soils productive farming lands.

Many others have been read, but the above shows the scope and variety of our work.

Shortly after we organized we began to collect a library. We now have a library of about sixty bound volumes and between six hundred and seven hundred bulletins and reports in pamphlet form. All this has cost us only the postage spent in writing for them. Most of this library is now indexed or catalogued in such a way that it is available for use at all times; scarcely a subject coming up for discussion but that a reference to the library catalogue will show something in the library bearing upon the question. Very often a few minutes' investigation in this library saves a great many dollars in the way of loss of or destroyed crops.

The present officers of this society are:

President—A. S. Robinson, Centralia.

Vice President—Peter Brown, Centralia.

Secretary—Geo. T. Rowland, Grand Rapids.

Treasurer—Mrs. K. Miller, Grand Rapids.

Librarian—B. M. Vaughn, Grand Rapids.

Respectfully,

B. M. VAUGHN,

Secretary Pro Tem.

REPORT OF JANESVILLE HORTICULTURAL SOCIETY.

Dec. 14, 1895.

Meetings have been held with about the same attendance as in former years, the interest neither increasing or decreasing. A public meeting was held in March at the All Souls Church, Janesville, with a large attendance. President Geo. J. Kellogg presided, and the evening was pleasantly passed listening to A. J. Philips, of West Salem, who spoke on "How Can We Increase Our Horticultural Membership?" Mr. Kellogg followed with a few remarks on the same subject. Mrs. E. W. Fisher read a very interesting paper on "What Can the Boys Do in Horticulture?" Other numbers on the program were, "Flowers and How to Grow Them," by Mrs. John Haviland; "Potatoes," L. L. Olds, of Clinton; "Our Roses," Geo. J. Kellogg, Janesville; "Culture of Grapes," J. S. McGowan, Janesville; "Seedling Strawberries," Frank S. Loudon, Janesville. This with good vocal and instrumental music made this one of the best meetings ever held by our society. The officers for 1895 and 1896 are Geo. J. Kellogg, president; J. B. Whiting, treasurer, and E. B. Heimstreet, secretary. Geo. G. Kellogg was appointed a delegate to attend the meeting of the State Society.

E. B. HEIMSTREET,
Secretary.

ORCHARDS IN HARD PLACES.

Geo. J. Kellogg, Janesville.

Mr. President, Ladies and Gentlemen: In recommending the best plan most likely to succeed on low situations and poor orchard soil, I would go back to the foundation and plant four seeds of the most hardy apple or crab known, such as Duchess and Hibernial or Virginia crab, plant these in a well prepared spot where the future orchard tree is to stand, protect by a bit of fence board on the southwest side, and so staked and cultivated that a good growth may be secured; the first fall remove all but two of the most vigorous seedlings, bank up for winter and if the size is sufficient to carry a cion, the following spring

graft two inches below the crown with Duchess, Hiberna, Charlamoff and Virginia crab for those kinds less hardy. If the seedlings are too small at one year then continue the growth another season and graft at two years.

The advantage of grafting the seedling without transplanting is to get the benefit of the whole root and in no other way can the full benefit be obtained; grafting two inches below ground will insure the rooting of the cion; using Virginia crab as a stock upon which at two to three feet to graft, or bud in the limbs, varieties which are less hardy. Such varieties as Duchess, Hiberna, Glass Green and a few others may be grafted at the ground. The grafts should be shaded by a bit of board till large enough to be protected by the lath shield. Graft two seedlings, then remove one later on.

Second plan. Set two root grafts of short roots and long cions where the future orchard tree is to stand, protect the same as before, take up the weakest if both grafts grow, always prune the growing tree when the bud can be removed with the thumb, have one central trunk and side branches at right angles six to twelve inches apart.

Stimulate the tree to early growth but do not cultivate after July, or cause more than a moderate growth of wood each year; after trees come to bearing do not let them overbear, or starve to death, a tree should be fed in proportion to its fruitage. Most old orchards are starved to death. The best fertilizer for fruit is hard wood ashes sowed broadcast at the rate of 100 bushels per acre annually.

I would recommend for hard places only Duchess, Hiberna, Glass Green, Charlamoff, McMahan, Wealthy, Repka Malenka, Longfield and Patton's Greening of apples. and all but the first four top worked on Virginia crab. Whitney, Virginia, Martha and Sweet Russet for crabs.

Apple seed must be planted fresh from the apple in the fall, or if dry, soaked till it is plump, then frozen, mixed with sand and planted in spring.

Third plan. Procure trees of these varieties from the nearest reliable nursery, but never from a traveling agent. Trees not more than four or five feet, properly shape the tops at planting, plant well, thoroughly mulch, and protect then and

there from sunscald and borers by rye straw, marsh hay, brown building paper, or what is better, eight lath woven with copper wire surrounding the tree from the ground to the branches; this will also keep off the mice, rabbits and the whiffletree. Only cause a moderate growth and give such protection as good common sense would dictate, and in time of drouth barrels of water should be given heavy bearing trees in July.

DISCUSSION.

J. C. Plumb—I do not know as I am at all surprised that my friend Kellogg starts off on a new venture, but I do not know what he means by recommending people to do things that are impractical. When he recommends to a farmer to plant a seed, I do not know what he means. The best thing for a farmer to plant is a root graft; who knows when he plants a seed what that seed will be? It may be a crab, too tender for any one in Wisconsin to grow. Plant a root graft in the garden, or in the nursery, wherever you want it, and the third year when that tree is ready to transplant if you dig down you will not find your old root, it has been absorbed. Farmers should buy three-year-old trees. Give the average farmer a hardy root-grafted tree and let him top work it as a farmer. The quicker the farmers get into that system the better it will be for them, and then you will also have trees for hard places. We, in southern Wisconsin, do not know anything about hard places, but the people in Trempealeau valley, Chippewa valley and Black River Falls valley are really in hard places. The hills are the easy places. Our secretary used to bring year after year specimens of Herefordshire Pearmain. We know that is a tender variety, but yet he used to bring them and place them on our tables for exhibition. It may be those trees are all gone now. It is not latitude but it is locality that makes the difference.

Geo. J. Kellogg—I recommend planting the seed because it is "first principles." You plant the seed and you will have the hardy root for all purposes.

B. S. Hoxie—I think Mr. Plumb misunderstood Mr. Kellogg. I think Mr. Kellogg recommends planting the seeds of the

Duchess and seeds from hardy trees. You will remember that Mr. Pfeffer recommended planting the seed where the tree was to stand. I know of farmers that have paid seventy-five cents for trees from tree peddlers, and I do not think the farmers object to the price if they know they are getting something that will stand. Some people come here and advocate things that are not practical. Some come here and advocate setting trees sixteen feet apart for a means of protection; now we know that is not practical.

Mr. Perry—I want to take the part of the tree agent. The farmers want the Fameuse, the Duchess and those varieties, and the tree agent is not to blame that the farmers order those trees. We told our agents not to take orders for the Fameuse, but the farmers ordered them and one of our agents took orders for 200 trees and sent to New York for them. So it seems to me that the thing to do is to educate the farmers to think they do not want those trees.

M. E. Hinkley—It is advised in Iowa, in our meetings, to plant something to shade the trees. We are advised to plant currant bushes. I have not gone far enough to say how far it is practical. A gentleman told me if we would plant seeds and never remove the trees but collar graft them, we could raise tender varieties.

Secretary—I tried protecting with evergreens and I found that instead of a protection they were an injury. I had to cut the evergreens out to save the apples. The lath protection beats them all to pieces.

Chas. G. Patton—I have in mind a gentleman in Minnesota, west of Minneapolis, who has planted the seed of the Leiby and he tells me the seedlings are of a very inferior character. We need to test the varieties before we recommend a trial of which we know but very little of. I have been trying the Shields crab and it has shown a superiority over the Virginia. The Shields is fully as hardy as the Virginia and it takes varieties quite freely so far as I have noticed. I think it should have a good deal of consideration in the direction of top working.

B. S. Hoxie—Would they produce a hardy seedling?

Chas. G. Patton—Yes, they would produce a uniformly

hardy number of seedlings. Whitney's No. 20 has been experimented with enough so we know that it gives us uniformly hardy varieties, and I would use Whitney's No. 20 in preference to the seeds of the Duchess. I would suggest a crab apple for hard places, one originating in your own state, the Sweet Russet.

J. C. Plumb—I wish to correct my friend about the Sweet Russet originating in Wisconsin. I brought the seed from Vermont.

Chas. G. Patton—I should take the common method of using the short root and the long cion. I regard it as impractical for the farmer to plant out the seed where he expects the tree to stand. The Virginia crab in St. Paul and Minneapolis is regarded as very profitable.

G. A. Freeman—What manner of protection would you consider the best for apple trees that stand on a southeast slope? I would like to ask Mr. Dartt if it would be any injury to the trees to nail boards right on the trees, and would you protect any more than two sides, the east and the west?

E. H. S. Dartt—No, it will not injure your trees. Nail the boards right on, if the trees are hardy it will not hurt them and if they are tender they ought to be killed anyway.

Chas. Hirschinger—I have gathered, from different sources, fifty different seedlings from people that thought they were the very best, and of my experience with all that I have tried, that were originated in Wisconsin, there are not hardly a half dozen that are profitable.

You want a long cion and a short root. Have your tree hardy all the way through. A gentleman said here that we ought to pray to the Lord to make our climate easy, but I think we better pray to the Lord to send us something hardy.

J. C. Plumb—I want to convince my friend Hoxie that it is practical to plant trees closely enough so they can protect each other from the mid-winter sun. The lowest mid-winter sun is about 45 degrees. The branches, themselves, afford a partial shade, and the tree that is on the south of it shades the rest of it. The ultimate success of "orchards in hard places" lies in just that principle of shading the trees. I think it is about thick enough to have the trees set forty-five feet apart

east and west, and thickly the other way, sixteen feet apart. Now you may say it don't amount to much, but if you can protect trees and give them immunity from the sun you will succeed with them.

F. L. Barney—I suppose you shade to protect from sun scald, and it seems to me that two sticks set up there sixteen feet apart would not shade each other very much.

N. N. Palmer—I have lost all of my enthusiasm about growing fruit in Wisconsin, but I do not want the bulk of this evidence to go into our report, where the farmers will read it, about one tree shading another. When you shade with lath it is all right. You will kill more trees by shading than you will help, and I hope the farmers will look into this matter thoroughly before they try any such experiments.

Mrs. Treleven—My husband set 120 trees and planted corn between the trees; they all lived except one, and that the borers got in and killed. We think the protection that the corn afforded the trees was beneficial to them.

J. D. Searles—I am glad the sisters will speak in the meeting. I believe that shading the trees even by blackberries between them will be an advantage; the trees shade the blackberries and the blackberries shade the trees; it's a mutual advantage and I hope it will be tried by others.

Chas. Hirschinger—More than twenty years ago I did the same thing, and I soon found that the blackberries, and the red raspberries in particular, used up the tree food and the apples were just twice as small as they would have been if the trees could have had all of the food in the ground to perfect the fruit. The point I want to make is, you will use up all the plant food to the expense of the trees.

N. N. Palmer—With regard to that corn crop—any crop that tends to make you cultivate the soil will surely benefit your trees. I would plant trees thirty feet apart. When I started in I started as a novice. I put out my trees twenty feet apart each way; they did well at first but they soon became too crowded. I would plant potatoes, or something that must be cultivated, but do not plant them too near the trees. I have a peach orchard in Florida. The people there would tell you not to put in any other crop, but cultivate your orchard.

E. H. S. Dartt—I want to talk a little about seedlings and a little about protection. You may plant your seeds and you will get some that are hardy and some that are not hardy. Now if you plant Tetofsky you will get a great many very hardy seedlings, a great many more than if you plant the Duchess. I have wondered if the Tetofsky was not a seedling of the crab. I have at my Station twenty-five seedlings of the seedlings of the Tetofsky.

I think the orchard needs protection and the ground needs protection to keep the sun from drying it out. Shading on the south side of the tree, I believe, has a tendency to prevent the sun scald. If you shade on the south side you give your trees the best possible conditions. If you do not do it there will be a feeble growth on that side and the tree will soon die out on that side, and that is why there will be a larger growth on the north side. Nurserymen will tell you that they always cut out more limbs on the north side than on the south side of their trees. Anything that robs the tree on that side hurts the tree, and so if you have corn in the orchard, it shades the tree and is a benefit to it.

J. D. Searles—I want to say to Brother Hirschinger that there is a great deal of force in what he says about blackberries and other berries taking the plant food from the soil. I believe it does, but can we not put it back again?

J. S. Stickney—Any tree, no matter how hardy, no matter how healthy, the year it is transplanted it is weakened and it is more liable to burn or sunscald. The best thing I know of to protect that tree is rye straw put on the tree just thick enough to protect it.

N. E. France—I have tried blackberries in an orchard. I have now put out a new orchard, and I have taken out the blackberries. I agree with Mr. Hirschinger, it does take the plant food from the soil.

Geo. Jeffrey—I am sorry that Brother Palmer is losing his enthusiasm. I think we ought to keep ours until young men come to take our places. I have been working with seedlings for about twenty years. I have exhibited, and have received premiums on, some of them that will keep until the twentieth of June. I have some seedlings that I know are good; they

have just stood and grown; they have never been protected and they have never had anything the matter with them. This society has never taken any notice of them nor recognized them. I suppose it is because I am not a regular horticulturist.

Mrs. Treleven—I will agree with these gentlemen that putting crops on orchards does take away the richness of the soil, but on our black soil at Omro it is better to do so.

F. H. Chappell—I think we should give our trees plenty of moisture and if we do that we shall never have them burn. Cultivation is good but if you will use sand it is better than all the rest, and they will never burn.

Secretary—I was appointed to visit Mr. Freeborn's orchard and report it to this society. I wrote to Mr. Hatch about it, and he replied, "Wait until another year." I went there and saw the orchard, and I am confident there is some valuable fruit there but I must ask further time. I understood that there was a plat of the ground at Mr. Freeborn's house in Richland Center but I did not go there.

SECRETARY'S NOTES.

NEW APPLES.

I notice in a late catalogue an apple of which I know but little, called the Melon. It is said to be a fine table fruit, and I found it doing very well in the vicinity of Columbus, Wis. One man said he preferred it to Duchess. I consider the Murphy's Blush a very safe apple to plant on the best fruit lands of Dane county. The Windsor also, a native of Dane county, where the old tree has lived many years, is doing well in southern Wisconsin, and keeps well until March. Still one of the growers calls it a fall apple. The Newell receives much praise as being a good tree for light or somewhat sandy soil. I have also seen the Okabena of Minnesota bearing heavy crops on quite sandy land. Several letters have reached me lately asking if I believed that Mr. Andrews, one of our advertisers, has the genuine Peerless trees. I say yes, or I would not buy trees of him for our new trial orchard. The

decision of the district court of Rice county was that Mr. Andrews had as perfect a right to propagate, sell and deal in the Peerless as any other person, and one witness testified that Mr. Andrews had obtained Peerless cions of two different persons. We do not intend in our monthly to take any "ads" from parties whose aim is to mislead or swindle our subscribers, not if we know it. From what I have seen of the Ruth or Wrightman I consider it a hardy tree of winter fruit for the good fruit soil of Waupaca county, and is worthy of trial in other places. Although the Northwestern Greening is condemned by some who have never fruited it, I find that it is gaining friends in this and other states very fast. One orchardist in Rock county has some fine bearing trees and pronounces it better than McMahan for profit. The Virginia crab is being much inquired after as a stock for top working.

The name of F. K. Phoenix & Son, of Delavan, should appear in our list of nurserymen and fruit growers. It was overlooked.

At this writing, June 5th, the growers in different parts of the state are sending items like the following: Strawberries a failure, not a perfect berry. Roots injured by the past season's drought. Black and raspberries entirely killed. Apples dropping and blighting badly, more especially blossoms. Many trees badly root killed when received from nurserymen. A large percentage of small fruit plants bought and planted not starting, owing to damaged roots caused by the previous season's drought. One man writes the worst killing winter for fifty years. No doubt many reports are exaggerated, still the writer has seen enough to convince him that much damage has been done, and that many plants and trees sent out in good faith are worthless and will have to be replaced; owing to the fact that they appeared better than they actually were, great allowance must be made.

We hope that every old member will send one new one for this issue and thereby double our membership.

A. J. PHILIPS,

Secretary.

The Wisconsin Horticulturist.

MRS. VIE H. CAMPBELL, EDITOR.

ROBIN RED BREAST — HAIL TO THEE!

BY WILLIAM HAUGHTON.

[Written for the Wisconsin Horticulturist.]

Robin Red Breast, hail to thee! —
Building in the apple tree;
Blithely flitting to and fro
Where the sunbeams glance and go,—
Pouring from thy burnished throat
Many a wild and thrilling note:
Little architect untaught,
Herald of the days long sought —
Hail! all hail, sweet bird to thee,
Building in the apple tree.

Busy builder on the bough,
Of the summer dreamest thou?—
When around thy cradle nest
Many a crimson pearl will rest,
Leaf and blossom intertwine
Midst those sunlit aisles of thine —
Tinted rose and shadowy green
Blending in a purple sheen —
Ah! sweet builder on the bough,
Of the summer dreamest thou?

Ah! my heart — 't was so with thee,
Building 'neath thine apple tree,—
Oft in hope and oft in fear,
Only trusting God was near,—
Knowing not of coming days
Golden with the summer haze,
Opening flower and ripening fruit,
And the music never mute —
Ah! my heart 't was so with thee
Building 'neath thine apple tree!

AFTERTHOUGHT.

There are shadows cold and gray,
But they melt and pass away;
There are night-falls lone and long,
But they bring the dawn's glad song;
There are crosses, pains, and tears,
But they hallow after years —
When the spirit wings its flight
Up the templed hills of light,—
Then the shadows cold and gray
Into mist will melt away.

OUR FRIENDS, THE BIRDS.

By Jonathan Periam.

The disappearance of our common birds, especially birds of song, is now noticeable to the most casual observer. Fruit growers were originally to blame, because the birds took toll from cherries and other small fruits. Then came the pest of increasing obnoxious insects, until, in self-defense, fruit growers adopted the spraying of poisonous mixtures on trees and plants, and here birds as well as insects suffered, for, driven by hunger, the poisoned insects were devoured, and what few birds were left, disappeared to wilder haunts and to our public parks, where they were protected, and it is the fact that they are increasing in numbers about the residence districts and suburbs of our larger cities.

I live seven miles south of the city hall and county buildings of Chicago, in the heart of a resident district, and song birds are slowly increasing, especially the robin, thrush, blue bird, wren, humming bird, and of course the ubiquitous English sparrow. We have flowers and fruits about our homes—apples, pears, cherries, apricots, plums and peaches. Between the English sparrow and our slowly returning song birds, insects are kept fairly in check. Plums and apricots are out of bloom, and peaches and apples are now, April 24, in full and profuse bloom, and ornamental trees, even Kentucky coffee trees, are in full leaf, and catalpas even are showing green buds. We even protect the English sparrow, for we find that they protect our lawns from the crambus that used to give us much trouble, from the larva eating the roots of the blue grass in summer, turning it brown in spots; the sparrows also keep our elms free of the elm beetle, and in winter eat the eggs and larva of many insects deposited under the weather boarding of houses, cracks in fences, etc., so that even the boys have come to regard him as fully earning his living. Wrens also industriously work in the line of hunting for the eggs of insects, and the two species seem to get along amicably, in fact the wren is fully able to take care of himself and family

against the pugnacious sparrow. With us the sparrow is not a fruit eater. There is plenty of other food, and he has not acquired a taste for fruit. The same is true of the robin. If there are plenty of insects, little damage is done to fruits, and if he has his way over-ripe fruits are eaten in preference. In fruit regions when other food fails the sparrow learns to eat fruit, and one bird learns others the trick.

It has come to this: Each one must decide for himself whether certain birds are useful or inimical, and the grower of small fruits, the orchardist, and the farmer, again must decide for himself, for birds eating small fruits are not inimical to the orchardist, and to the farmer they may be purely beneficial. This the thoughtful man may easily decide. The really worst enemy to the fruit grower is the lazy, shiftless, ignorant man who makes his place a harbor and herding place for obnoxious insects and persistently kills and destroys the nests of singing birds.

The birds considered most inimical to the fruit grower are the robin, the thrush, the catbird, the Baltimore oriole, all of which eat fruit more or less. So does the sparrow tribe, in some localities, and it is laid to his charge that he sometimes destroys the young buds of trees. He does not do so, however, except when driven by extreme hunger. The flicker, crow blackbird, crow, blue jay, and all the hard-billed birds eat more or less grain, but they live principally on animal food, except in winter. The red-headed woodpecker is a voracious fruit eater, but bores industriously for the larva in the trunks and branches of trees. The sapsucker eats the inner bark of trees and the cedar bird destroys many buds. The much maligned crow, the owls, and most hawks are great destroyers of mice and other verminous animals. The purple finch or red linnet eats many fruit buds in the spring.

I have seen the time in the early settlement of Cook county, within what is now the city limits of Chicago, that a constant fusilade of small shot had to be kept up in order to save the crops of small grain from the depredations of the blackbird tribe. The bobolink and other hard billed birds, when the young birds began to flock, did they starve? No, they quietly left the shot gun fields and preyed on the fields of lazier men.

That time has long passed. For the last twenty-five years birds have made no impression on the crops. But at all other times, when birds were plenty and crops but few, I never allowed birds to be killed on my farm, and I never had trouble with insects.

There is one thing that the thoughtful man will always remember, that is: All birds of whatsoever kind, except the pigeon tribe, feed their young exclusively on insects, or animal food. Here lies their chief value. The much abused English sparrow is a most indefatigable hunter of insects at this season, as any one can know by watching them early in the morning when the dew is on the grass, to see them fly away, time after time, with their bills packed with small moths and other insects. They are notoriously beneficial to the farmer, as well as to the horticulturist, but except sparrows, there are not enough small birds left to do much good or harm.

WHERE ARE THE WILD PIGEONS?

In response to an inquiry as to the cause of disappearance of the once abundant wild pigeon, the information is here given that the wholesale butchery of these birds resulted in almost exterminating the species. The market hunters followed the birds to their nesting grounds, where countless thousands of wild pigeons congregated to breed, and a merciless slaughter was indulged in, year after year, until few of the species remain.

The larger portion of the pigeons (old birds and young squabs, indiscriminately) were killed on the roosting grounds, and shipped to the larger cities. A smaller percentage was netted or trapped and sent alive in crates to sportsmen's clubs and associations for trap-shooting purposes. The trap-shooting sportsmen of America are therefore "accessories" in the nefarious work of destroying the wild pigeons of the country, though the greed of the market hunter is mainly responsible for "the deep damnation of their taking off."—Wisconsin Agriculturist.

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—General Agent for the celebrated—

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