The Australian bee bulletin. Vol. 15, no. 8: November 28, 1906

West Maitland, N.S.W.: E. Tipper, November 28, 1906

Registered at the General Post Office Sydney for transmission by post as a Newspaper

THE AUSTRALIAN Bee Bulletin.

A MONTHLY JOURNAL, DEVOTED TO BEE-KEEPING.
Edited and Published by E. TIPPER, West Maitland; Apiary, Willow Tree, N.S.W
Circulated in all the Australian Colonies, New Zealand, & Cape of Good Hope.

VOL. 15. No 8. NOVEMBER 29, 1906. PER COPY, 6D.
Per Annum 5s, booked 6s 6d, in Australasia, outside N.S.W., add 6d. postage

NOTICE.

SHOULD any beekeeper have a doubt of the genuineness of any honey sold in his neighbourhood, send a sample to the Chairman Board of Health, Sydney, who will cause it to be analysed, and take proceedings if necessary.

Printed and Published by E. TIPPER, Proprietor, High Street, West Maitland, N.S.W.

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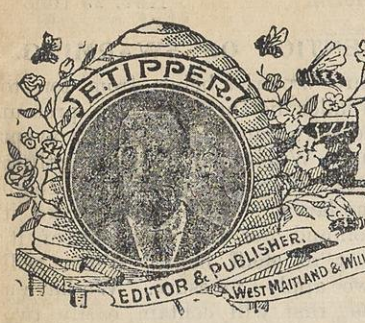

THE AUSTRALIAN BEE BULLETIN

A MONTHLY JOURNAL
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Circulated throughout the Commonwealth of Australia — New Zealand & Cape of Good Hope

MAITLAND, N.S.W.—NOV. 29, 1906.

The following is the list of advertisers in our present issue, all of whom we would recommend our readers to patronise:—

Supply-Dealers.

John Rush, Mentone, Victoria.

Queen Raisers.

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E. T. Penglase, Fernbank P. O., Gippsland, Victoria.

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Sayers, Allport Prop., Ltd., 4 O'Connell Street, Sydney.

In the cold district of York, England, the villagers maintain bees winter better in skeps than in frame hives.

In Cardiff, South Wales, a coal merchant who sends out his coal in buckets, in the return of a cart with baskets empty, found a swarm of bees in one of them.

Denatured alcohol is not an alcoholic drink in the proper sense of the word. It can no more be used as a drink than can gasoline, but it can be used as a fuel, and in other ways.

Cuban honey imported into the United States has a tax of one and a third cents per lb. Some of the U. S. beekeepers say, "With this small tax is it any wonder honey does not produce a higher price.?

A Canadian said at the Ontario convention that he runs his honey directly from the extractor and corks it up, because he finds that it remains liquid much longer than if exposed to the air in a tank.

The following is an advertisement in the "Jamaica Times": – Invest $4.00 in "The Honey Bee." Large profits in beekeeping. We give booklets on beeculture free. Write us for all information on the honey bee. Hooper Bros., Orange Street, Kingston.

A writer in the "Irish Bee Journal" says, sulphur cures paralysis every time. From our own experience, changing queens is the more effective, and don't

get the too yellow queens. An Italian beekeeper feeds his bees with a tonic preparation made of honey mixed with a tea-cup of aromatic herbs, and a small proportion of salicylic acid.

An Isle of Wight beekeeper recently tried to frighten the English beekeepers by telling them bee-paralysis was going to destroy the industry. His intelligent neighbouring beekeepers received the news as a surprise. Paralysis is a disease of warm climates, not a cold one like England. Change the queen, and sprinkle with sulphur, but not on the brood.

Much talk is made in some quarters of superseding queens when they have passed their second year. We find most of our bees see to this matter themselves. We know when such is to be the case by there being only one or two queen cells. It often leads to two queens being in one hive, mother and daughter. We have known such to work together for as long as six months.

Sweet clover is a splendid honey plant, but in most countries a noxious plant. Some say it is the only thing worth planting for honey. A prominent railroad official is said to have stated that sweet clover was worth millions of dollars to the railroad companies. Its deep roots and tendency to grow on banks or side hills, prevents millions of dollars worth of earth from washing away on railroad embankments.

LAYING WORKERS.

We told, in our last, how we had come across a hive containing such, and our mode of treatment. Turn it round, put entrance to the back, and remove its own length to the rear. Then put an empty hive with starters, a frame of uncapped brood, and a queen cell in its place. It worked like a charm. On visiting it a fortnight later, the original hive was entirely destitute of bees; and the new hive had a populous colony, with a beautiful young laying queen.

PREVENTION OF SWARMING.

Our three apiaries being from ten to fourteen miles distance from our present residence, the greatest trouble is to prevent swarming. When therefore visiting them our first care is to cut out all drone comb and drone larvæ. We bag such, take it home, boil and get the wax out of it, bagging it in chaff bags. When well boiled we apply pressure. We have a copper pot, that will contain easily two 60lb. tins of honey; when the bag of drone comb is well boiled, we place top of it, a board, nearly the size of the pot, of hard wood, one inch thick, and with about a dozen augar (¾inch) holes bored in it, place near a tree; put a stout piece of board, upright top of board in pot, and use a pole some 10 or 12 feet long, with weight at end, same as a cheese press. All the wax comes through and settles at the top, the refuse being squeezed in by below board. Our fowls enjoy the same. Again, if we see queen cells are being formed, we remove the hive, put another in its place, with frame from removed one; also containing larvæ. All the field bees from removed hive will go to this one. This reducing number of bees, also lessening of drones, will take away swarming desire. Or if there are many queen cells formed, you can utilize them or destroy them as you think fit.

"THE IRISH BEE JOURNAL."

We acknowledge receipt of *Agricultural Economist* of September, which has the following excellent account of the Rev. J. G. Digges, M.A., editor of the "Irish Bee Journal":

Mr. Digges is an Irishman, who was born in Dublin, and graduated at the famous Trinity College of the "dear, dirty city," taking his B.A., with honours, in 1882, and his M.A. three years subsequently. He is now, and has been for twenty-one years private chaplain at Lough Rynn, the seat of the Earl of Leitrim, and it was in the summer of

1886 that he was seriouly attacked by the bee fever. Happily he has not recovered from that fell disease, or we should never have seen his "Irish Bee Guide" or the "Irish Bee Journal," from whose witty pages one may glean endless valuable information.

It may be interesting to learn the origin of the contagion from Mr. Digges' own lips. He says that "it was in 1886 that I handled my first honey bee, when one morning I found on the verandah of my house a sack containing a swarm that had been left there by the wife of a neighbouring cottager, as a lucky gift 'for his reverence.' I contracted bee fever immediately and violently, but did not in the least know what to do with the lucky gift. I wrote off at once for literature, sent to Walton for a modern hive, joined the Irish Beekeepers' Association, and in 1887 was the proud possessor of three stocks. In that year one stock gave 120 pound sections, and returned a net profit of £4 2s—section honey was then at a fancy price in Ireland. These three stocks, during several years, fed, clothed and educated an orphan girl, paid for her training as a nurse, and eventually assisted her passage to the United States, where, almost as soon as she landed, she married a respectable tradesman, and started nursing on her own account." This brief paragraph is a fair example of the manner of a man. In the forefront there appears the natural vein of humour, but behind is the serious object—the beekeeping which he enjoyed was made to do a great good, for it "fed clothed and educated an orphan girl." Thus the kindly thought of a cottager to an energetic man bore fine fruit.

It has already been said that Mr. Digges is a man of many parts. Let us see, for a moment, what the "Daily Mail" (London) once said or him :—"The Rev. J. G. Digges, of beekeeping fame, is the most bloated pluralist among the clergy, controlling the destinies of six companies of which five are closely connected with beekeeping and agriculture, and the other one a railway." He is a Member of the Council of the Department of Agriculture and Technical Instruction for Ireland, a Director of the Cavan and Leitrim Railway, President of the Mohill Agricultural and Dairy Co., Limited, President of the Irish Beekeepers' Federation, Limited, Trustee and Hon. Secretary of Two Agricultural Banks, an Examiner and Member of the Committee of the Irish Beekeepers' Association, a Member of the Co. Leitrim Committee of Agriculture, Hon. Secretary of the Atheneum Club, and holds office in several other Companies and Societies in Ireland.

One would think that with so many irons in the fire, and all of them kept at white heat, Mr. Digges would have little time left for anything else. But he wanted recreation and sought it in starting and editing the "Irish Bee Journal" the first publication of its kind in Ireland, and later in writing the "Irish Bee Guide." He is full of aspirations, as witness a remark made to me awhile back. "In 1905 Great Britain imported £34,765 worth of honey from abroad. I want Ireland to earn this money."

The latest work from Mr. Digges' pen is a pamphlet upon the industry question, as it concerns the progress of his country. "Fighting Industries and Financing Emigration in Ireland — 1906" (1d., Eason, Dublin) is an indictment of the "passion of prejudice" which has this year pressed disastrously upon an important mining industry in the West, and is an appeal from "class hatred, religious hatred and political hatred" to all lovers of Ireland who would see the country prosperous and free.

May Mr. Digges be spared long to Ireland and the British nation.

BEES CHOICE OF COLORS.

As for the experiments, I made extremely varied ones, and they led always to the same result, namely, that there was no correlation between the presence of a bright color and the bees' search for

sweets. I cite a single example. I placed little squares of different colors on the uniform green background of a field, each square, whether red on a green background, or green on a green background, being at the same distance from the hives. Then I placed the same quantity of syrup or honey in the middle of each square. The bees discovered these various deposits of sweet liquid with unvaried promptitude, and collected in practically the same number upon the different squares, the color having absolutely no influence upon their search. The red on the green background attracted them no more than did the green on the green background, or the syrup on the grass itself in an equal quantity.

The result of all my experiments was as follows: There is no relation between the development of color in flowers and that of nectar in flowers.

Under like conditions the most brilliantly colored flowers are not the ones most frequently visited by the insects.

The visibility of flowers is in no wise proportionate to their adaptation for cross-fertilization.

Insects collect in the greater number wherever the honey is most abundant, the richest in sugar, and the most convenient to get at.—Gaston Bonnier in "La Review."

MOVING BEES.

ELLIOT J. RIEN.

Much has been written about moving bees that I do not know if my experiences would be of much value. However, I give them for what they are worth. I have had a considerable experience in this work, having removed a number of apiaries. On the first occasion I followed the books, a wise thing to do in lieu of experience, but since then I am usually guided by circumstances. On my last remove it was only a few hundred yards from the side of my house to the front, the land at the side being too low. It is said even in last A. B. B. that it is hard to remove them so short a distance without loss, but I did not find it so. I did not prepare the hives at all or touch them. First, I laid out the new site and all the new stands everything ready. Then the first moonlight night, I got a friend to help me, and I carried or wheeled them over on a wheelbarrow to the new place. If the bees got at all lively we smoked the entrance. We removed the 100 colonies in this way in the one night so that when the bees began to stir they had all to start from the new place in the morning. We did not put them in same order as they were, nor anything like it, yet I do not think I lost a cup of bees over the removal. The first day a large number of bees went back to the old sites and gradually a less and less number, I took care to leave no boxes of any description around, so that the bees after vainly flying about would return to the new site, and seemed to pick up their own hives also. I am of opinion bees are not such fools as they are painted. On one occasion I removed an apiary from Wiseman's Ferry to Wyee. They were wheeled down a steep rough hill in a wheelbarrow to the river bank, were then carried on the steamer and taken thus to Hawkesbury, where they were put in the train, thence to Wyee, and brought to my place on a dray, and arrived without any mishap.

All the preparations I made was to close frames together and tack a strip over them, putting wire cloth over this and over entrance. If bees are to be removed short distances, are removed at night, and then when doing so be careful not to alter the appearance of the hive, if it has a bag or brick or anything else on leave it on, for a few days, and alter the appearance of the old place as far as possible, the bees won't make any mistake. I had occasion to remove two hives once in summer, and to build a shed where they stood, hardly a bee came back to the old site. I wrote the foregoing some months ago, since then I have had some further experience along these lines. In October Mr. Butler of Avondale engaged me to

fix up an apiary he had purchased, I found it to consist of 53 hives of bees in an old orchard, scattered along under lee of a fence some two feet apart, so that it was almost impossible to get at them, for they were close to the fence. The first hive was about 40 yards from the honey house, and to get it one must go through a gate. I advised to remove it to an open space around honey house, as it would entail too much labour to work them as they were, besides the inconvenience and difficulty. It will be admitted that this would be a severe test. As bees have plenty of landmarks, I could not remove, and while the first hive was only 40 yards from the new site in the open, the last hive was about 200 yards. It was a bad time of year, when hives were full of bees. I first went through the hives and removed all surplus honey to make them as light as possible. All were two story. I did not interefere with them otherwise.

I then went up, and having plenty of help, and it being a dark night, I had a lantern placed on the peg I intended to place hive on, then an assistant carried another lantern, also the fixings off the top-stones, tins, etc. We then took up the hive just as it was, after smoking outside well, and carried it to the new peg, then put lantern on next peg and so proceeded with each hive. I then cleared all boxes, etc., from under fence In the morning, beyond straightening up the hives on their new stands I did not do anything. I then left for home. A week afterwards there was not a bee returning to old site, and there was no loss of bees. They went back the first day strongly, but one could see a steady stream back to the hives, where the bees seemed to pick up their own home without trouble. Instead of putting a box to trap bees returning to old stand, as mentioned in October issue of A.B.B., I should take care some days before moving to put some plain and distinctive mark on each hive, as a bag on one, bricks on another, tin another, bark another, and so on, and then remove as above.

BEEKEEPING ON THE BORDER.

The following account of beekeeping on the borders between Scotland and England, taken from *The Scotsman*, will, we have no doubt, be read with great interest by many Australian beekeepers:

In the towns and villages of the Borders bee-keeping has long been a favourite hobby with the working man fortunate enough to own a plot of garden ground, and while the number of those who now pursue the interesting and profitable pastime has dwindled within recent years, there are still many craftsmen devoted to the culture of the bee. And perhaps none are more enthusiastic or more skilful than those who dwell in the beautiful valley of the Jed. Forty or fifty years ago, when scores of shoemakers and weavers followed their handicrafts at their own firesides, there was scarcely a garden in Jedburgh, and especially in the old Townhead, without its group of weather-beaten straw skeps standing among thyme and southernwood, sweet-williams, an fragrant stocks. In those days beekeeping was neither so humane in its methods nor so lucrative in its results as it has since become. Then the bees after the summer's ingathering, were suffocated in a shallow pit steaming with the fumes of burning sulphur, or "drummed out" of their hives, in order that their golden stores might be pillaged. With the introduction of the bar-frame, and the handy section crate, there is now no need to sacrifice a single bee, while the productive results are in every way more abundant. In one respect, however, the beekeepers of fifty years ago were more fortunate than their successors. Down to the middle of last century the land in the south of Scotland given over to heather was much more extensive than at the present day, and the plants, being allowed greater freedom to mature, threw a richer foliage. At Jedburgh, for instance, the heather bloom at one time edged the boundaries of the burgh, but with the progress of the plough the inby moors were gradually curtailed, and

though (Swinnie about three miles distant over an old green "track" by Matthew's Wa's and Merlin Dene) is still resorted to by some keepers, chiefly however, on account of its easy approach—in olden days the Townhead men carried their skeps to Swinnie on a hand-barrow or slung on a stout hazel wand—its area has been considerably reduced and frequent firing has marred the strength and beauty of the bloom.

This year, beekeepers have had a remunerative season. The yield of honey has been above the average, and during the hot days of June and July, swarms were so plentiful as to become undesirable. No amount of "eiking" would induce the eager workers to remain in the old hives, and the earliest swarms multiplied so rapidly that "virgins" were not uncommon. The fine weather during the first half of April was largely responsible for the vigorous condition of the stocks, and although May was cold and wet, and the progress made in the preceding month was temporarily arrested, the heavy rainfall, while blasting the hawthorn blossom which the bees take greedily, ensured a luxuriant growth of clover, off which the lively colonies took liberal tribute during the balmy weather of June and July. The clover flowers had hardly faded when the lime trees hung out their yellow blossoms, and summoned the industrious workers to "fresh fields" of labour. In the lower part of the High Street of Jedburgh, where a line of lime trees flourish, the air, on sunny days, was musical with the humming of bees, and it was a most interesting sight to watch the laden worker passing up the public street, just out of the way of the traffic on their homeward flight, being thus favoured with an ample spread of honey and pollen-yielding flowers and blossom, and fine weather in which to work it, good returns of flower and clover honey were harvested. Some keepers took as much as 40 lb off lusty hives which, at 8d per lb. wholesale price this year, gives a satisfactory profit. Most of the stocks, too, were in sound condition "below" when the time for the annual movement to the hills arrived. The promise of a radiant show of heather on the moors around the sources of the Jed and along the slopes of the Cheviots was somewhat damaged by the rainstorms of August, which set in just after the hives had been planted in their autumn quarters—usually in in an old sheep bucht or on the bieldy side of a fir plantation—and hampered the activity of the bees, who had literally to labour between showers until the last ten days of August and the first week of September gave them a splendid opportunity "to build their roofs of gold." And though the heather bloom did not last as long as usual, owing to the excessive heat, the bees did much better than was at one time expected. The yield of heather honey was almost equal to the produce off the clover, and with the quality first-class it is bringing quite 6d. per lb. more than was realised for the clover variety. The beekeeper therefore, with half-a-dozen healthy hives—and many have more—has had no difficulty in clearing a profit of £10, a very welcome addition to the wages of a working man, and this result has been secured at little or no outlay beyond the initial cost of the stocks and the price of a stone or two of sugar in the spring.

Another Anti-Swarming Remedy.

As everybody who has bees has a plan to keep them from swarming, I will tell mine. We have practised it for 3 years, and where we followed it up carefully we have not had a swarm, and have had from 150 to 600 colonies of bees. The plan is this :

Simply keep open brood on the outside of the brood-chamber, and sealed brood in the centre. Work through the yard from 6 to 8 days ; keep all queen-cells cut down. It is my experience that the bees will not swarm if there is open brood in the outside frames. The natural condition of a colony of bees at swarming is all sealed brood outside of the brood-nest

and open brood in the centre. So just change it. Cut down all queen-cells, and I will guarantee no swarming until the open brood is sealed on the outside frames.—*American Bee Journal.*

A SWARM OF B's.

B hopeful, B cheerful, B happy, B kind,
B busy of body, B modest of mind,
B earnest, B truthful, B firm and B fair,
B ut of all miss B havior B sure to B ware.
B think ere you stumble, what may B fall,
B true to yourself, and B faithful to all.
B brave to B ware of the sins that B set,
B sure that one sin will another B get.
B just and B generous, B honest, B wise
B mindful of time, and B certain it flies.
B prudent, B liberal, of order B fond,
B uy less than you need, B fore B uying B yond.
B careful, but yet B the first to B stow,
B temperate B steadfast, to anger B slow,
B thoughtful, B thankful, whatever B tide
B just and B joyful, B cleanly B side.
B pleasant, B patient, B gentle to all,
B best if you can, B humble withal;
B prompt and B dutiful, but still B polite
B reverent, B quiet, B sure and B right,
B calm, B retiring, B ne'er led astray,
B grateful, B cautious of those who B tray
B tender, B loving, B good and B nign—
B loved shalt thou B, and all else shall B thine.—*American Bee Journal.*

A Florida beekeeper writes in *Gleanings*:—My bee-yards are protected from chilly winds by groves of red-oaks, the out-yard being completely hemmed in on all sides. People often ask me whether so much shade is not detrimental to the bees, to which I always have an emphatic no. If my bee-yards were located in the open I should not want any shade at all, as there is always a little breeze to keep the bees cool and combs from melting. But in my case the wind is nearly shut off from all sides, and on a hot day there would be a tendency for bees to loaf and comb to melt, especially if there are frames in the hives filled with full sheets of foundation. I have often noticed that, on a hot day, bees in the shade work better than those standing in the sun. It keeps the bees in the hives a little longer in the morning while if they were not shaded they would fly out before the air in the open is sufficiently warm, then get chilled and die.

I don't like to feed early in the spring. Weak colonies are very loth to send bees out to a feeder in cool weather. Strong colonies may visit a feeder, but I don't care for the stimulating effect of feeding until I am sure of settled warm weather. I have suffered too severely from late freezes coming after ambitious colonies had extended brood rearing beyond their ability to protect it.—W. Z. Hutchinson in "Beekeepers Review."

PRICES OF HONEY.

Melbourne Australasian.—Honey, prime clear garden, 3d to 3¼d; congealed and inferior lots, at lower rates. Beeswax in good demand, 1/2 to 1/3 per lb.

Melbourne Leader. — HONEY. — Prime clear garden samples are selling at from 3d to 3¼d.; second quality from 2d to 2½d. per lb. Beeswax — Prime clear wax is inquired for at 1/3; medium lots, more or less discoloured, selling at from 1/- upwards.

S. M. Herald.—Honey, at present dull, choice extracted 3d to 3¼d, medium 2½d to 3d, inferior 2d per lb. Beeswax.—Demand good, 1/1 to 1/2 per lb.

Maitland Mercury.—Honey, 2d to 2½d. per lb Small tins 2/3 to 2/6.

HONEY.—

From current reports, we anticipate that the new seasons take will start to come forward freely during December. At the moment the market is dull, the top price for choicest quality being 3¼d. Medium lines 2½d to 3d. Dark and strong-flavoured lots from 2d lb.

BEESWAX.—

In splendid demand from 1/1 to 1/2 per lb.

IMPORTS OF HONEY INTO GREAT BRITAIN.

The following figures of above, taken from the "British Bee Journal," should make Australian beekeepers think a bit. The British West Indies, hot tropical countries, seem to have the popular and most honey. Does the temperature and the tropical foliage make the honey better? Evidently it must, the same as the interior box honies of Australia are superior to the coastal raised honey:—

	1904	1905	1891
France ... ... cwt.	1,326	1,240	1,216
United States, Atlantic	2,452	3,624	
United States, Pacific...	1,711	531	8,118
Chili	2,928	5,358	5,099
Other Foreign Countries	1,723	1,564	6,878
	10,140	12,317	21,311
British West Indies ...	10,945	12,661	1,614
Other British Possessions	1,842	2,357	619
Total ...	22,927	27,335	23,544
Value ...	£29,127	34,763	
	25/4.8	25/5 per cwt.	

MEAD.

I wonder how many bee-keepers in this country would have a good stock of mead on hand should some thirsty-looking individual chance to drop in one of these dusty, hot days and order a drink.

And yet, there is no other product of the apiary that will yield one-tenth the profit that will mead. Here are the figures, see for yourself:

One quart honey	.20
Five gallons water	.00
Total	.20
Retail 5 cents a pint, 40 pints	$2.00
Less	.20
Profit on five gallons	$1.80

To make: Put into a clean boiler five gallons soft water. When hot, add one quart pure honey. Boil gently for one and a half hours, skimming often. Empty into earthen vessel and when blood warm pour into a clean cask. The bung should be put in loosely. If the cellar is warm, fermentation will begin in from five to fifteen days. After fourteen days, fermentation, draw off into another cask, leaving the dregs. In the second cask fermentation should be allowed to go on from ten to fourteen days. When the mead is calm, so that nothing more is heard in the cask, close the bung. Allow thirty days for the mead to clear, then draw off into bottles, cork well and pack in sand. It will effervesce in a few days rather strongly.

This is the honey mead of the ancient Germans, who attributed health and great age to its use. It is a delightfully cool and refreshing beverage, and can be used in case of fevers, etc., when wine and beer would be injurious.—*American Beekeeper.*

The Mystery of Lubbock's Sixth Sense.

Lubbock, by a series of experiments with prismatic lights established the fact—a fact that seems to have been overlooked—that bees were sensitive to ultra-violet chemical rays. That is to say bees can see chemical action.

If bees were inside a camera, they could see a sensative plate reacting to its picture, they could see formic acid and salt combining, and they could see the chemical action of a microbe.

What exactly is the use of this function, of course we cannot say. But one can well imagine that it might materially assist them in avoiding disease, and perhaps also in the chemical processes involved in the so called "ripening" of honey. It is certain that bees must be able to distinguish between a dead egg and a living one, and we can see that this would be an easy task, if they could see the chemical nutritive changes going on inside it.

In this connection it may be as well to point out that the bees are conscious of the presence of a queen-larva in a sealed cell, know whether it is alive or dead, and can distinguish it from a larva in an ordinary cell.—Exchange.

QUEEN-REARING.

My queens are procured by saving cells from the best honey gatherers among the brightest golden Italians during the swarming season. They are hatched and mated from two and three-frame nuclei in eight-frame hives placed in pairs so that if one nucleus is removed the returning bees will find a home in the other. If one queen is sold and I do not wish that nucleus to rear another queen, I unite the two in just twenty-four hours from the time the queen was removed, by simply placing the nucleus with the queen on top of the one without a queen, the bottom-board of one and the quilt of the other being removed so that the bees come directly together.

In like manner, if I have a queen whose progeny does not come up to my requirements, either in thrift, color or amiability, I remove her during the warm part of the day and in just twenty-four hours, from that time, the cover and cloth is taken off the queenless hive, and the nucleus containing the queen I wish to introduce, is lifted from its bottom board and gently placed on top. In about four days (no hurry) the upper combs can be taken off, one at a time, and the bees shaken down in front of the hive and the combs given to other nuclei; or, if the honey season is not over, this upper hive may be filled with extracting combs or sheets of foundation and the work goes merrily on, with only a loss of twenty-four hours egg-laying by the one queen and none by the other. There is no worry; only half as much queen hunting; no caging and not the least intimation of a fight. At least that is my experience. I have never lost a queen or seen a "scrap" by this method.—Writer in "American Bee-keeper."

Honey in Green Salads.—Beat up honey with vinegar to taste, pour it over the salad previously provided with oil, mix it lightly through, and it will have an exceedingly fine and pleasant flavour.

The Alexander Plan for Building Up Weak Colonies.

USING BURLAP AT FIRST INSTEAD OF EXCLUDING ZINC TO PREVENT FIGHTING.

My bees are a mixed lot, some of them a clear black. I tried four colonies, putting a piece of new burlap on top of the strong colonies, closing up the entrance of the weak ones, then setting them on the burlap. Part I left closed in 24 hours, and the others 48 hours. As I had been sick all winter, and not very strong I was about a week doing the work, and did not commence it until they had been out of the cellar two weeks. After 24 and 48 hours I removed the burlap, and put in its place the queen-excluder. I couldn't see that the bees fought, and I think it is a big success. One of the weak colonies is nearly full of brood now. Another full colony had no queen. I found one colony with less than a teacupful of bees, with a good looking young queen. I put the burlap on the queenless colony, with the hive containing the few bees and queen on top of the burlap, the bees being shut in the top hive. In 48 hours I took away the burlap and let them go together without queen-excluder. In two days they were carrying in pollen in fine shape.—"Gleanings."

HOW TO MAKE BEES SETTLE AT A CERTAIN PLACE.

The following is a French idea of causing bees to settle at a certain place:—At a distance of fifteen or twenty yards from the hives, preferably in front of them, are planted a few poles. At the top of each one is fixed a settling seat for the bees to alight on. The "settling seat" is made by a handful of dead bees sewed together so as to look like a settled swarm. It is hung to a string passing over a pulley or through a ring so that the "seat" can be easily lowered simply by paying out the string.

Instead of bees a piece of old comb in a bunch of weeds, or something of the kind may be used advantageously. A

queen cage having been used may also be added to advantage. A kind of cover fixed over the " seat " is also considerable help as it gives some shade.

In taking down a swarm from a tree, it is not necessary to shake it down or rake it off in a box or basket. Adjust a bunch of twigs with a piece of comb inside at the end of a pole sufficiently long and bring it close to the swarm. The swarm will soon abandon its place and settle on the comb.

It is said that a limb or pole well rubbed with " melisse" (a plant of the mint family) will attract the bees and induce them to settle on it. The same claim has often been made in favor of lemon juice or lemon bark. The essence of lemon, according to Mr. Donde, of Algeria, is much more efficacious than the juice itself. If the empty hives of an apiary are rubbed with some, the swarms will often go in them instead of going to the woods.

Another receipe is quoted as follows: In a little alcohol put some dead drones or queens or queen cells having hatched. Leave them in about twelve hours. Put a little of the alcohol in water with some honey and spray the places on which you want your swarms to settle.

Bees and Bee Keeping in Japan.

Mr. T. B. Blow, a large supply dealer at Welwyn, England, made a tour of Japan some years ago, visiting a number of bee-keepers. A little later he married a Japanese lady, and settled in Japan. Although having become a bee-keeper in Japan, it seems he had to send to England for honey for his own table. The following extracts from a letter in the British Bee Journal will be of interest to those who desire to know more about Japan:

No sooner did I settle down in this, my adopted country, than the bee-fever was soon on me, and I determined again to keep bees. They are not plentiful in Japan, despite the statistics of the Agricultural Department schedule, the supposed number of colonies which is I should think, greatly over-estimated. Honey is not used in Japan for food, but as medicine. The bees are kept in square boxes of about one cubic foot contents, and cubical in shape. There is a door at back, and the comb honey is cut out whenever available, and is crushed (along with the brood often,) and strained, and in this state sold. Very little wax is obtained, for though wax is used extensively in this country for various purposes, it is vegetable wax, mainly.

Having got a swarm of native bees into a civilized hive with proper appurtenances, he says:

And now the troubles began. The Japanese bees are smaller than the European and they very reluctantly took to the comb foundation; undoubtedly the cells were too large for them to deal with well. Seeing the multitudes of flowers around, one would have expected an amazing yield of honey; for instance, in April and May, one may travel for hundreds of miles and see one blaze of yellow from the mustard and rape flower (the oil-producing plant,) but beyond this there is nothing. Later on the whole country is under rice, which, of course, is useless. But the bees themselves are lazy -- there is some food to be got almost all the year round (for we have no cold, wet winter like that of England,) and the bees certainly do not store much honey, and so, after two years' experience, I conclude that it is cheaper to buy honey than to produce it, and in quality our English honey is vastly superior; so though my bees are still alive and well, I allow them the use of all they gather, or nearly all.

WHAT FOOD ADULTERATION IS.

1. If any substance has been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any inferior or cheaper substance has been substituted, wholly or in part for the article.

3. If any valuable consistent of the article has been wholly or in part abstracted

4. If it is an imitation of, or is sold under the name of another article.

5. If it consists wholly or in part of a diseased or decomposed or putrid or rotten animal or vegetable substance, whether manufactured or not; or in the case of milk or butter, if it is the produce of a diseased animal, or of an animal fed upon unwholesome food.

6. If it contains any added poisonous ingredient which may render such an article injurious to the health of a person consuming it.

7 If its strength or purity falls below the standard, or its constituents are present in quantity not within the limits of variability, fixed by the governor-in-council, as hereinafter provided

8. If it is so coloured or coated or polished or powdered that damage is concealed, or if is made to appear better or of greater value than it really is.

AN ADVANTAGEOUS HIVE.

A French beekeeper has contrived an apparatus, which, after three years trial, he is satisfied " will do away with Autumn and Spring dwindling, besides possessing many other advantages." It is called the Clanstrel Hive.

A detention chamber, running the whole width and height of the brood box but only about three inches deep, takes the place of the ordinary porch. It is constructed in such a manner as not to admit light. For that purpose, the alighting board, revolving on special hinges and mouldings, fulfils the office of door, which, when shut, fits into recesses cut into the sides and roof of the porch, or chamber. Thus a dark ante-chamber, or cloister in formed, which enables one to make an artificial night at any moment, and consequently to confine (under reasonable conditions of temperature) for days and weeks the deceived bees, who do not seem to be aware of the trick played upon them.

By means of two zinc chimneys or aerating tubes, each about two feet long and about one inch in diameter, he creates a draught through the detention chamber, thus keeping the air always fresh and pure. These two chimneys are inserted vertically through corresponding holes in the roof and floor of the ante-chamber. They are also pierced with six or seven circumferential rows of bee-excluding holes, and they should be placed a good ¼ inch from the front wall of the hive, in such a way that the lowest row of holes is just above the floor of the detention-chamber. All this is arranged so as to exclude light. The tubes being outside the hive proper, the holes are never propolised.

WHEN SWARMS CLUSTER TOGETHER.

Sometimes the bee-keeper is thrown into despair by the issuing of several swarms at once, all uniting in one huge cluster. C. W. Dayton gives in " Gleanings" an original plan for managing such cases. He says he *wants the swarms to unite, as it makes the work easier.* The queens will be balled, and that makes it easy to pick out the queens. The cluster is put into a screened cage or hive for 8 or 10 hours, the queens being removed, and he thinks these hours of uneasiness and queenlessness free them of the swarming mania. Then they are allowed to return to their own hives, not in a body, but singly as queenlees bees, each seeking individually its own hive. He says :

With more than one swarm in a cluster it causes matters to be very unsettled. Then when bees from several swarms are caged together it is all the more confusing

in their swarming. The more confusion the better. It abstracts the bees from their own intentions. When first caged they will buzz and bump against the screen for awhile, but finally settle in a compact, quiet cluster, and the queens will remain quiet. Then the bees can be poured out of the box on a smooth space of ground, and the queens picked up and caged in a few moments. When all the queens are secured, set the box down on the ground, open side down, and in an hour or so the bees will cluster in it again. Then put the screen on to confine them until it is time to let them go home, which which should be near night. Wait until the bees find out that they have no queens, hen they will *want to get out* and return to *their own* hive, thinking that their own queen did not issue with them. Open the screen only partially so that they can escape slowly. Do not throw them out in a pile on the ground. They are now dissatisfied with the strange cluster they are about to leave, and they will not go in with another cluster of strange bees unless it is by the confusion of a mass of bees together. They will not cluster "on other hives."

For many the plan will not be feasible, because it will not be easy to tell to which of the different colonies the different queens belong. But to Mr. Dayton this is no objection, for he wants the old queens removed, and later on a young queen or a ripe cell to be given.

Yet even to those who have clipped queens the plan may be of much value at times when two or more swarms without any queen unite. Left to themselves they are likely to make bad work by going in a cluster to the wrong hive. Imprisoned for several hours, and then allowed to escape as queenless bees, a few at a time, they might be expected to return, each bee to its own hive.—*American Bee Journal.*

A swarm of bees is reported to have alighted on a pony's head in England. It does not say how the affair ended.

ANTS.

If they have their nest under the hive or somewhere near, pour gasoline or kerosene upon them. If their nest is inside the hive, it is because there is a warm place there for them where the bees can not get at them. Powdered borax sprinkled in such places helps to make them disagreeable for the ants, but the best way is to have no place for shelter where the bees can not get at the ants to rout them. If quilts are kept over the frames, that suits the ants exactly, but with only a flat cover over, the ants can find no place safe from the attacks of the bees.

FRESH BLOOD IN THE APIARY.

Experienced beekeepers need no advice on this point. Some of the most successful with bees giving satisfactory service have still thought it advisable to get fresh queens from a number of different sources in hopes that something better might be found, or that the intermingling of new blood might infuse at least a little additional vigor. If, out of 6 queens bought, 5 proved inferior, there was no lamentation, provided the sixth proved at least a *little* better than the old stock. There are thousands of bee-keepers going on from year to year with bees not up to the average, and yet never having made the slightest effort toward improvement. The investment of a few dollars, or even a single dollar, would be likely to yield a profit not to be despised.—*American Bee Journal.*

CAPPINGS.

A plan of dealing with weak colonies in spring, such as are known to have healthy young queens, but which, if left to themselves, could not generate enough heat to keep up brood-rearing to any extent, has been advocated of late. Some

who have tried it speak very favourably of it, while others have not been so successful. The method is as follows:— The weak colony is placed over a strong colony with a zinc queen excluder between them. The heat from the strong colony ascending enables the weaker one to carry on brood-rearing to a much greater extent, and it soon becomes strong enough to remove and place on its old stand to work independently— it is a scheme well worth trying. It is said that so long as the queens are kept separate by the excluder the two colonies work amicably together. I would recommend keeding an eye on them for some time, and if any sign of fighting occurred to give them a strong dose of smoke.— Exchange.

M. Phisalin says, that in bees the ova contain small quantities of poison. It required 475 eggs to furnish enough to poison a sparrow. Phisalin tackles the difficulty that the unfertilised poison containing egg gives rise to a drone without poison. To allow of the development of a poisonous female the poison "deteriorates" in the ovum, requires to de supplemented by something furnished by the spermatozoon or by the accessory female glands. Beekeeping is making great headway in the Argentine Republic many persons having important apiaries and carrying on beekeeping on a large scale. M. Adolfo Gomez, at San Miguel, half-an-hour by rail from Buenos Ayres, has an apiary of 180 hives, all except one "Dadant" being of the "Dazenbaker" type.—Exchange.

Some leading apiarists use tin tops for the hives. This is the only thing that will retain the hive's good shape, and will keep out moisture. But it must be placed over some heavy felt paper or other non-conducting material, or the tin would increase the danger from heat to the frail combs when they are loaded with honey.— Exchange.

As the day for swarming draws near, the queen ceases her prolificness, so as to be able to fly and go with the swarm; so that, when the swarming does occur, said queen is scarcely larger than a virgin queen. Nature has so ordained things for two reasons, the first of which is that the queen can fly and go with the swarm, for, if taken from the colony when no such preparation has been made, she can not fly at all, as she is so heavy with eggs. The second reason is that the queen need not be damaged by an over-accumulation of eggs before there is time for the bees to construct comb in the new home for her to deposit her eggs in. For this reason we find that all good queens do not become fully prolific again until about a week has elapsed after the new colony has arrived at its new location. During this week comb has been built very rapidly, especially if honey is coming in plentifully and the swarm was a large one, while (for the reason given above) the queen has not been able to keep up with the workers, the result of which is that the bees commence early in their operations to build store comb, which is always of the drone size of cells. This comb is mainly filled with honey at this time.—*Doolittle in Gleanings.*

Poor bees that have worn themselves out in the flow—wings torn to a point where they could not fly any more, are remorselessly picked up, carried aloft, and dropped. Nature knows no sympathy no gratitude. The rule is, the survival of the fittest. Any bee that can not contribute to the material welfare of the colony, and has no chance of doing so, must be sacrified.—*Gleanings.*

Vagrant Bees in London.—I heard of a swarm in a Southern suburb on May 5, and in the same month saw a number of vagrant swarms in and round London. In the third week of May a stock of bees, kept in a fashionable part of the West End, swarmed, and caused some excitement by clustering on a branch overhanging the street. Then, with regard to honey-gathering. Messrs. Lee, of Highbury, had a sample of this season's extracted honey submitted to them on

May 16, which had been gathered by bees kept in a South-eastern suburb. The source from which this honey was obtained was unmistakable, the flavor of almond being very pronounced, and it had been undoubtedly gathered during the interval of warm weather in April. I saw a rack of finished 1-lb. sections on a hive in a Western suburb in the last week of May; not only so, but I met a bee-keeper from a North-eastern suburb who had some finished 1-lb. sections at the end of the month. With reference to other branches of bee-keeping, I may add that of a number of young queen-bees reared in London during the month of May. These queens were duly mated, and the first was laying on June 1.—*British Bee Journal.*

"Your bees may use lots of propolis, thus causing things to stick. But if this is the case you will have less trouble the next time you open the hives. Where things are badly glued in any hive, it is best, in opening the hive the first time in the spring, to pry all the fixtures loose, then close the hive for an hour or two, when by using care you can open it up, almost without a jar or any disturbance to the bees.—*Exchange.*

It is always best to take an empty hive or a light box of the same size of the hive with you when you go to find queens as it helps very much in the matter, giving you a chance to look the combs over twice, nearly or quite as quickly as you would once, did you have no empty hive or box along in which to set each frame in order, as you take them from the hive.—*Doolittle in Gleanings.*

The Bee Hives of Europe.—According to the American Consular report from Frankfort the total European production of honey is at present estimated to amount to 80,000 tons, at an approximate value of from two to two and a half millions sterling. Germany leads in the production with 1,910,000 bee hives, furnishing 20,000 tons of honey. Spain is next with 1,690,000 hives and 19,000 tons of honey. Austria-Hungary is third with 1,550,000 hives and 18,000 tons of honey.—Exchange.

Of the San Francisco Earthquake disaster a beekeeper writer in the "American Bee Journal" says:—From what I can learn, the Eastern papers exaggerated it. 'Twas bad enough, to be sure, but why lie about it? It seems in the matter of "doing" an earthquake or a fire story, those paper-men have to keep as far from the truth as they do when they are dealing with bee and honey stories. But the 'quake was big, but not bad—not as bad as reported, by a whole lot. I had a letter from an Eastern cousin. She imagined from the paper reports, that we were doomed—that the cities hereabouts were entirely ruined. Why, bless you, the sky-scrapers are all standing, with hardly the loss of a stone; but some of the poorly constructed wood or brick buildings went down, and these mostly on the filled portion of the city. Most of the water front, and some other portions, were filled in. In the '50's and '60's lots of the sand-hills were graded to fill in the bay and boggy places. These portions of the city are consequently unstable. It is not known how many were killed by the earthquake. There may have been several hundred.

The "American Beekeeper" writing of the Victoria system of bee ranges says:—If the provisions of the act are not satisfactory to the bee-keepers, whom, pray, is it intended to satisfy? If there is one thing which will enable the supply men and their satellites to get the plain bee-keepers by the throat it is a statute which will permit the highest bidder or the man with the longest purse to get control by lease or purchase of the best yielding and most accessible bee ranges.

Among The Bees.—They had hives of diverse shapes and sizes in various countries in olden times. Some were of osier, some of bark, some of hollowed trees, and some of square boards "three feet high and a foot broad." Some were

made of earth, and some of rods or wicker work, daubed within and without with cow dung. Pliny records that in his time hives were made of all these materials and of many shapes, but he also states that a Roman Consul had one made of "very clear horn," by means of which bees were observed at work. It is a fact worth noting that a kind of reaping machine was also invented about the same period, so they must have been go-ahead times, both in agriculture and apiculture. Certain hives now used in savage countries are of tiles, rounded and shaped roughly, with a door at the end for taking out the honey; and in India at the present time one of the same shape is kept within the dwelling, built in sections so that the inner part may be withdrawn, and the honey appropriated without disturbing the bees. It is a curious fact that, notwithstanding the many important attempts for nearly two hundred years to evolve something which would oust the old straw skep, that practically, bee-keeping was carried on just about a century ago much the same as it was prosecuted in the most primitive times when the first dawn exchange began to appear in the form of bee-literature. Nay, so tardy were the newer modes in making any headway, that it may be said that bee-keeping was carried on then, and in many places till quite recently, in a less enlightened way than it was two thousand years ago in some of the more enlightened countries of the world.—D. M. M., in *British Bee Journal.*

An American writer says:—When the bees get the combs of honey all sealed and properly ripened they retire from the supers, only enough bees remaining to keep guard over the honey, and then the main force of bees begins to cluster out at the entrance. I tell from outside indications when they are ready to extract. When the combs are completely finished in capping and ripening the bees are very easily shaken off, so that no brush is necessary.—Exchange.

The "Irish Bee Journal" has the following:—A Marvellous Bee.—"From twenty-six hives 11cwt. 17lbs. of honey has been taken by Mr. Norman, of Harpley Mills, Norfolk, one hive yielding 143 bottles, all worked by one bee."—*Daily paper.* If this one bee is not a "fertile worker," she is worth her weight in gold. She should be carefully watched, and upon her death (if she ever dies,) she should be stuffed, and exhibited in the British Museum that succeeding generations of mankind may behold and marvel.

A Cement Hive Stand.—Imagine a little pig trough as long as the hive is wide, V-shaped, and as deep as you want the stand block. Now fill this with good, stiff mortar, one part best cement, and two parts sharp sand. A few strokes of the trowel and it is ready to dry. When dry it looks like the letter A, and the bearing surface is very small—no rot. Three galvanized wires might be laid in the mortar a little ways from each of the three edges, then they would be *never breakable.*— *Beekeepers Review.*

A colony is always from one to two pounds lighter in the morning than in the evening, caused, I suppose, from the evaporation of the nectar during the night. Then, after the bees go out to work, and are in full flight, the weight drops to another two or three pounds. If the yield is good, the scales will begin to balance again about noon.—W. Z. Hutchison in "Beekeeper's Review."

What we need is a co-operation of *honey-producers* only. Supply manufacturers and dealers, also editors of bee journals, should be carefully excluded. Their interests do not run parallel with ours. How unreasonable, how unbusiness like, to organize a bee-keepers' association with supply dealers and editors to dominate their business.—*Beekeepers Review.*

The bees at Brazil hang their honeycombs at the end of slender twigs, at the very summit of the trees, beyond the reach of monkeys.

The "Irish Bee Journal" says:—The season of 1905 was a good one generally through Ireland for honey. But it is feared that the three previous bad seasons were responsible for a considerable diminution of interest in beekeeping, and that strong stocks, ready to make the most of the warm, dry summer, were not as numerous as they should have been.

Of the present year's honey crop in the United States, "Gleanings" says:—Indications are still rather unfavorable for Texas and Colorado. The conditions a hundred miles each side of the Mississippi have not been favorable—too much drouth and cold; Missouri and Nebraska however, send in all kinds of reports—good, bad, and indifferent. Indiana, Illinois, and Iowa have been having too much drouth and cold; but recent rains make it possible for portions of those States to do better than was at first expected. The entire Eastern States, especially the southeast, send in generally favorable reports, although a number of bee-keepers from all these coast States have reported no crop and no prospect of any.

Abram Whistler, a farmer, living near Newburg, New York, was hauling a hive of bees to his home when a sudden jolt of the wagon knocked the top off the hive. The hundreds of bees thus released attacked Whistler and stung him so severely that he died shortly after.—*Extracted.*

All experiments and books teach that a young bee will be more than 12 days old before she becomes a field-bee. Now there are some, like Mr. Getaz, who are of the opinion that under some pressing circumstances a young bee may go to the field at a younger age. Baron Berlepsch made an experiment in the year 1865; he formed a colony of young bees only. As soon as the oldest bees were 8 days old they held a play-spell. At a date when no bee could be older than 11 days, all honey and pollen was taken from the colony, to force the bees into the field; but no bee gathered anything, and the other day the colony was in a starving condition. This proves that no bee younger than 12 days can gather pollen or nectar even under most pressing circumstances. Quite different is the fact that older bees if necessary, can nurse the larvæ.—"*American Bee Journal*"

Not every one estimates pollen at its true value. Honey is carefully saved, but many a comb of pollen is allowed to be spoiled without compunction, and yet weight for weight it is doubtful if the honey is worth any more than the pollen—possibly not so much. In early spring if a colony is without pollen, not a young bee can be reared till a stock of pollen is secured.—Exchange.

A recent performance by Prof. H. A. Surface and assistants, in Capitol Park, Harrisburg, Pa., U. S. A. The professor had given out in the papers the previous day that he would on the following day take a swarm of bees out of a squirrel-box in one of the park trees at a given time. Accordingly, barehanded, with nothing over his face, and armed with only a smoker, he ascended the tree by means of a ladder, smoked the bees, then knocked the box loose. This he then let down with a rope, to the amusement of crowds of people aggregating something like 800 who had come to witness the wonderful stunt. After Prof. Surface had ascended to the ground he pried the box open, scooping out the bees by the handful, to the great amazement of the onlookers. The bees were successfully placed in a modern hive and removed. During the whole performance Prof. Surface received no stings except those self-inflicted for the amusement of the crowd.

A colony of bees seems to be capable of holding almost any degree of temperature it desires, simply through a crust of bees which often does not at any point touch the hive. How this is done I do not know. But I *do* know that a handful of bees, less than 1000 by count, kept the temperature where their brood was,

between two combs, at 93 degrees, when the mercury outside stood at from only 18 to 26 degrees above zero during a cold spell in April. And I have known (many times when experimenting) of good work being done in the sections, fixed as above when it was so cool that not a bee would be seen anywhere from or in the upper super, except the crust between the tops of the sections in the super below.—*Doolittle in Gleanings.*

STARTERS EVERY TIME.—An equal number of swarms were hived on full sheets of foundation and of starters only. In experiments made year after year, after weighing both surplus and brood combs at the end of the season, the evidence has been in favour of empty frames *every time.* Swarms hived on drawn comb have always shown a loss so great that it is folly to repeat.—*Exchange.*

EXIT SWARMING.—Natural swarming, with its uncertainties, anxieties, and vexatious losses, is destined eventually to become a thing of the past. Methods of controlling increase, preventing it altogether, or doing the work artificially, will reach such perfection that swarming will be eliminated.—*Exchange.*

It must not be left out of consideration that a 10-frame hive is much safer for the bees than the smaller hive. Given the same care that will pass muster with a 10-frame hive, and there will be a lot of colonies starve every winter in the smaller ones. There must be extra combs of honey to give some colonies each fall, where 8 frame hives are kept, and again in spring some colonies will starve if left to themselves. Not that bees in larger hives are always safe from starvation, but they are safe as compared with those in smaller hives.—*Exchange.*

A flock of chickens was enclosed in a bee-yard by Mr. Hillebrand (*Leipz. Bztg.*) and they learned to stand at the hive entrances and snap up the drones as they came out, but never a worker would they touch. He thinks it was because of the sharp smell of formic acid in the workers. But do chickens go much by smell? Is it instinct, or what is it, that teaches the chickens to pick up the big clumsy bees without any sting?—Extracted.

Mr. Simmins in "American Bee Journal' says:—It appears to be a law that queens which produce very gentle bees are not worth much for honey-producing qualities. Cross either Carniolan or Italian with the black bee and they store three or four times the quantity of honey, though better stingers one will not desire.

At the present time, in Pretoria, South Africa, honey in 1lb. sections is retailed in shops at from 2s. to 2s. 6d. per section, shallow frames 5s. 6d. each, and liquid honey in quart bottles 2s. to 2s 6d. Extracted.

The "British Bee Journal" says:—We find in all directions that the number of persons taking more than a passing interest in the pursuit, beekeeping is rapidly increasing, and, if we are favoured with a bee season of the good old-fashioned kind, the industry will receive an impetus the like of which has not been seen for a long time.

The "Canadian Bee Journal" says:—Mr. R. Smith takes as a morning nip a couple of teaspoonfuls of honey in a cup of hot water before breakfast. We have tried it (says Mr. Craig) on his recommendation and have found it excellent as an appetiser. It is sedative, and for children in this way, it is also slightly aperient in effect better than patent medicine.

California this past season obtained about one-third of a crop of honey, nearly all from wild alfalfa, a mountain plant. The honey is a very poor grade, dark and illflavored.—Extracted.

H. Schmidt says in Leipz. Bztg. that Germany imports yearly about five million pounds of honey (extracted) at about ten cents per pound. To produce this amount of honey would require the keeping of 250,000 colonies of bees at an average of 20 pounds per hive. His

opinion is that Germany is already so well stocked up with bees that it would be impractical to increase the number by 200,000 not taking into consideration that the German bee-keepers would not be willing to sell their own product at such a low figure, in fact, could not do so profitably. He concludes that the only method to drive the Brazilian, Cuban and California honey out of the market would be to place a prohibitory tariff upon this product, which is not likely to be done. *American Beekeeper.*

WEATHER INFLUENCE.

BY W. ABRAM.

It seems that in various districts where the bees wintered splendid and made excellent progress in spring, they are now more backward than in September. This condition troubles some beekeepers and they ask me for advice.

In my opinion, it is not altogether a surprise if we take the radical changes of the weather of late into consideration, which suddenly varied from one extreme to another, even more so than last season. It is not a matter of pollen or honey, therefore we must look for the cause elsewhere (as we cannot direct the bees what to gather, and what not,) and the weather influence gives that solution. Thereby the secretion is influenced and accordingly the progress of the bees, be that for good or evil. Sudden changes from one extreme to another, as has happened, nonplusses the bees and they suffer the penalty of an early death, many dying outside the hive, so that actually very few dead ones are found in the hive, but at the same time the number of active bees become reduced and the hive gets weaker. They bred to the utmost, then a spell of winter weather comes on top of that. Can this have any other but bad results? And if these changes follow one another in succession, there is every chance of a disease resulting, when the loss of bees is enormous, and strong stocks may dwindle to very small lots in a short time, or be lost altogether. This latter, however, will hardly be the case at present, so long as honey is not wanting for food and the queen is all right, because the bees have had an opportunity to rear an abundance of brood, and young bees are continuously hatching to take the place of disappearing ones, so that the main drawback is a check in swarms, and weak instead of strong stocks. Had these unfavourable conditions obtained much earlier in the season, there might have been enormous loss. The effect will not be equal in all parts, they never are, and thus, what is bad for some is good for others who are unaffected, as they will be able to secure an early honey crop, and get for it a good price. A good prolific queen that produces as good working strain of bees, is the first essential to quickly overcome the trouble. Should the queen get affected, as sometimes happens, then replace her with another bred this season, but unaffected, and she will soon fill the hive with bees, and the bees will fill the hive with honey, to make the beekeeper smile.

PURITY OF BEES.

In the August issue, Henry Alley states that the Italians were hybrids and that now they breed bees of better markings than those imported from Italy. As far as the markings go that may be so, but as for quality they cannot beat Italy. I have had queens from America, Italy and Germany, and for colour and quality combined, the queens from Germany surpassed those from America, but for general good qualities those from Italy are the best. I am no new chum at queen rearing and noting qualities, and the above is my careful observation. I have a liking for beauty myself, but beauty is after all only skin deep, whereas characteristics are lasting. In queen trade one has to supply what the customer requires, and not infrequently a nice marked queen will give better satisfaction than a darker one, but experienced beekeepers prefer a good breeder irrespective of markings, if pure and of an industrious

strain. Thus I keep various strains, and as I had the yellow strain to perfection, I imported the darker strain from Italy, with the result that I now have three different strains—the yellow, the dark, and a medium. The latter being obtained by mating of queens from imported with yellow drones. They are very docile and excellent workers. All three are pure.

TRUE PHILOSOPHY.

GOOD-NIGHT.

(From the French of L'Abbe de Lattaignant. 1757.)

Soon will my age be four-score years,
'Tis time to put off hopes and fears,
And to give up the fight.
I take my leave with cheerful mind,
Calmly put earthly things behind.
Good-night, my friends, good-night.

And on the eve I must go hence
I shall depart without pretence
Of seeing Heaven's light,
But trust to Him whose guidance led
Me through the days and years now fled.
Good-night, my friends, good night.

I've tasted of earth's pleasures all,
And though their memory comes at call,
It gives me no delight.
All things seem dull, my one desire
Is gently, wisely to retire.
Good-night, my friends, good-night.

No dead man has returned to tell
What strange things in that world befell
Beyond earth's power and might.
Humanity is left in doubt,
No light shines from within, without.
Good-night, my friends, good-night.

Philosophers and sages say
That nought is lost, even in decay.
Therefore, put fear to flight.
Such doctrine is both just and good;
Accept it, then, in happy mood.
Good-night, my friends, good-night.

Some do pretend to visions clear
Of mysteries that still appear
Too vast for human sight.
Alike they baffle master-mind
And ignorant, unlettered hind
Good-night, my friends, good-night.

HONEY-DEW.

Mr. C. P. Dadant, sends the following to "Gleanings":—

In an article which I sent you, I mention the fact that the bees were harvesting a sweet substance from the acorns on some of the oaks. I have since mailed you several twigs showing a good size drop of "honey" on some of the acorns. This substance has been produced so freely on one tree that a number of drops of it have fallen to the sidewalk, and the bees are now busy on this tree from early morning till night.

None of the so-called honey-dew can properly be called by that name, for the reason that it does not settle like dew from the atmosphere. In most cases, the sweet substance gathered by bees is produced by aphides or plant-lice, which eject it from their bodies, when it falls in the form of a very fine spray. This is the most common form of honey-dew.

In the present instance, however, there is no insect or louse of any kind, and the exudation from the oaks comes during a cold night following a warm day. This exudation is most profuse on the acorns, but the use of a magnifying glass reveals it also on the stem below and above the acorn. This is evidently the product called "miellee," by Bonnier. The most plausible explanation that can be given of this phenomenon is that the cold of night shrinks the tender shoots of fresh growth and that the sap which is ascending becomes unable to extend to the leaves on account of the contraction of the tissues, and exudes through the pores of the wood by channels called "nectariferious tissues. We have often seen the bees working on the acorns during cool summer days, but have never seen the sweet exudation in so large a quantity as in this instance. The liquid is very sticky, and has a slight twinge of bitterness with the very plain taste of oak-bark.

For years discussions have taken place as to whether honey-dew was a real product of plants or whether it came through plant-lice. This instance proves that

both views are correct, according to the circumstances. The aphides' production is much more common than the sap exudation.

DAIRYING.

This year there has been a good spring, suitable rains falling, giving the natural grasses a fair show, and cattle and sheep are doing well in consequence. Fat cattle realise good prices at the various central markets, perhaps the bettering of foreign markets has to do with this. There is a steady rise in the price of dairy cattle. Wheat crops in our district are showing rust in many cases. There is heavy rain at time of writing, which gives anxiety as to whether it will increase the rust or no. We have seen some good crops cut down for hay, but with the shearing now on there seems a scarcity of labour, every farmer's son being busy, and much cut down hay will be spoilt, through the rain now falling, and no hands to gather it in.

Several sheep farmers in our neighbourhood are going in for Wolsely sheep shearing with engines to work them of various construction. The best and most simple we have seen as yet has been the Hercules Oil Engine. Steam engines, requiring fire-wood and water, to us gives too much trouble.

A number of Victorian farmers having applied to the Government for financial assistance in the construction of silos, an additional sum of £1000 has been set apart for that purpose. The money has to be repaid within three years.

ADVANTAGES OF COMBINATION.

The French peasant farmer, apart from his practice of growing a large proportion of his own food, by his system of combination or by his individual skill turns out enormous quantities of particular kinds of food. Some time ago I stayed with the Mayor of a village, himself the owner of a butter factory. In the early morning milk was brought to this factory by two hundred little cow-keepers living hard by, and representing two hundred homes. The butter produced was of the finest and received the brand of a make which I have known to realise 2s 1d per lb in Paris, under the hammer in the wholesale market. In another case when visiting a Norman parish I found a small farmer, by the exercise of great cleanliness and skill, realising 2s 8d per lb in the best season. In such cases as these, the skimmed milk is allowed to coagulate, and the curd is applied to calves, which are fed for veal for Parisian consumption—a practice long ignored in this country.—Extracted.

We are told the Cooper sheep dip is a preventative from attack by the Maggot Fly.

KEEP YOUR COWS CLEAN.

It's strange that so many men, who are supposed to be good dairymen, fail to realise what damage dirt does to milk, remarks a writer. "Why, I can take it out with the strainer," is a reply that is far too common, and which shows ignorance of true conditions.

The changes in milk, such as souring and production of bad flavours and odors, are due to bacteria. These are conveyed to the milk in dirt of one kind or another—dust in the air, dirt dropping from the cow's sides and udder, dirt from the milker's hands, or unclean milking utensils. These bacteria, once in the milk, cannot be separated by straining; you might as well mix salt with dirt, put it in milk, and expect to remove salt by straining. The bacteria pass through the strainer with the milk, and rapidly multiply. Bacteria carried in on manure and dirt from the cow's sides and udder are very undesirable, for most of them are putrefactive, and do much damage to the

milk by developing bad flavours, which pass to the butter through the cream. Remember that the dirt does not do the damage, dirt can be removed by a strainer. It is the germs carried in by dirt that gives the trouble, and no amount of straining will remedy this. Keep your cows clean, and keep down dust when milking is in progress. Above all, never allow one who has been about a sick person—in such diseases as are commonly called contagious—have anything to do with the cows or milk. Disease is transmitted far too easily in this way.—"Garden and Field."

GENTLE TREATMENT AT MILKING.

The fact cannot be too strongly or too frequently insisted upon that the milk yield of cows is increased by careful and kindly treatment at milking. Not only should there be kindness, but intelligence, for we all know that the suckling of young is a function on the part of the dam that calls forth the kindliest of feelings. Therefore, the part of the milker is to get the cow into that mental state as nearly as possible.—Extracted.

FARMYARD MANURE AND ITS VALUE.

The attention given to the conservation of farmyard manure in France is one of the striking things noted in his travels by an agricultural correspondent.

In the yard near the stock buildings on one of the farms visited, he writes, is a brick enclosure in constructed cement, on the inner side. Beneath this, and in the centre, is a large tank, into which the urine from the different buildings is conveyed by drainage. The tank is covered by an iron grille, above which the manure is stacked, the heap having vertical sides, and being built from day to day with every care. Above is a roof to keep off the rain, while in the very centre of the heap, and rising from the tank, is a pump. In the natural order of things the manure is wheeled from stable, piggery, and cattle shed onto the heap, and carefully spread, so that each form of manure is well mixed, and the quality of the heap equalised as far as possible. From time to time the urine within the tank is pumped over the heap, and in this way, although some loss may occur by volatization, the heap is kept from fermenting too rapidly, while the liquid is largely absorbed.

Commenting upon the almost universal attention given to the saving of farmyard manure in France, this corr spondent thus refers to its exceptional value :

"The value of this manure does not consist alone in the proportion of fertilising matter which it contains. Farmyard, unlike artificial manures, possesses two values, the one fertilising, the other mechanical. The mechanical condition of a loamy soil is known to be such that crops can be grown upon it with greater ease and success, while it absorbs less labour than a heavy soil. Many clays have great crop growing capacity, but only in proportion to the labour and the farmyard manure bestowed upon them. The fine mechanical condition of a loam is chiefly owing to the high percentage of organic matter which it contains. Add the same quantity of organic matter to a clay, and its crop-growing value is at once improved, and improved to a considerable extent It is for this reason that this manure, which is chiefly composed of organic matter, is of great importance to heavy lands. Clay soils are almost useless until they have been pulverised, but even then their value is little until they have been well and repeatedly dressed with farmyard manure which prevents excessive tenacity, permits the entrance of air and water, adds warmth, and generally conduces to the crop-bearing capacity of the soil. As the straw and other organic matter in the manure slowly decomposes the fertility it contains is liberated; while during the decomposition heat is evolved, and heat is of great importance to plant life.

What has been said applies equally to the lighter soils, for just as farmyard manure reduces the tenacity and heavy condition of clays, so it conduces to the homogenciey of the lighter soils, which are too lightly furnished with decomposing material.—"Martin's Home & Farm."

Water as a Swarming Discourager.

Dr. Miller says:—When a hive starts to swarm squirt a powerful and undivided stream of water into the entrance. Do it *relentlessly*, with nozzle pressed to the entrance, till most of those inside are wet. It doesn't seem to do much harm; but seeing (as he says) they'll be at it again next day, the occasions are few when it is worth while.—Extracted.

YES HE DO.

How doth the little busy bee
Improve each shining hour?
He crawls beneath your undershirt
And stings with all his power.

CORRESPONDENCE.

E. G., Gowangardie South, Violet Town Victoria:—Beekeeping seems an unfortunate business for me. Last year I had all my bees except six hives washed away by a river flood, but I increased them to 16, and had some surplus. I put them on to high ground that has not been flooded for at least 30 years, and satisfied myself, with the thought that they were safe this year, but in my absence, a terrible flood came down the river, and swept them all away except one, and that one was much damaged. I was priding myself on a very successful wintering, not having lost a single hive, and were all on the point of swarming, so I will have to set my wits about me to start again, as I am not a bit discouraged, having a love for the little insect. I have already captured 3 wild swarms, and am eagerly watching for more. Hoping your prospects for coming season are good. Always glad to get your paper.

W. Abram. Beecroft;—The honey flow here is pretty good, and for once I got a quantity of orange blossom honey, while now iron bark is in bloom.

W. S. Spring Creek.,—This year with the bees will be much better than last year, generally it has been a much better for everything on the farm. We find the *Australian Bee Bulletin* a very useful paper, and though times are very hard we will not be without it, not while we have bees. Wishing you every success.

Bees Swarm on a Train.

The railway officials on a Victorian line experienced a 'busy' time one day lately. A swarm of bees had settled under one of the trucks at Boisdale, and as soon as the train moved away from the station the insects lodged in the guard's van, where they kept the occupants active. The shunting hands at the various stations were attacked, and on arrival of the train at Moe, Guard Leitch essayed to remove the swarm, but he returned badly beaten, and when the train moved on the bees were still aboard.

Do Bees Sting Queens?

When a queen dies in a ball is she stung, suffocated, or starved? Suffocation seems hardly possible; and if it were, would not the bees in the centre of the ball be also suffocated? The bees in the centre of the hissing mass are crowded so compactly that it would seem a physical impossibility for them to sting. Besides, if they wanted to sting the queen why shouldn't they do so at first, instead of wasting hours? It is well known that if the ball be dropped, even after the queen has been balled an hour or more, she will escape unhurt. But if you forcibly pull the ball apart, the queen is likely to be stung. Blow 'hot' smoke on the ball, and the queen is sure to be stung.

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———:o:———

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