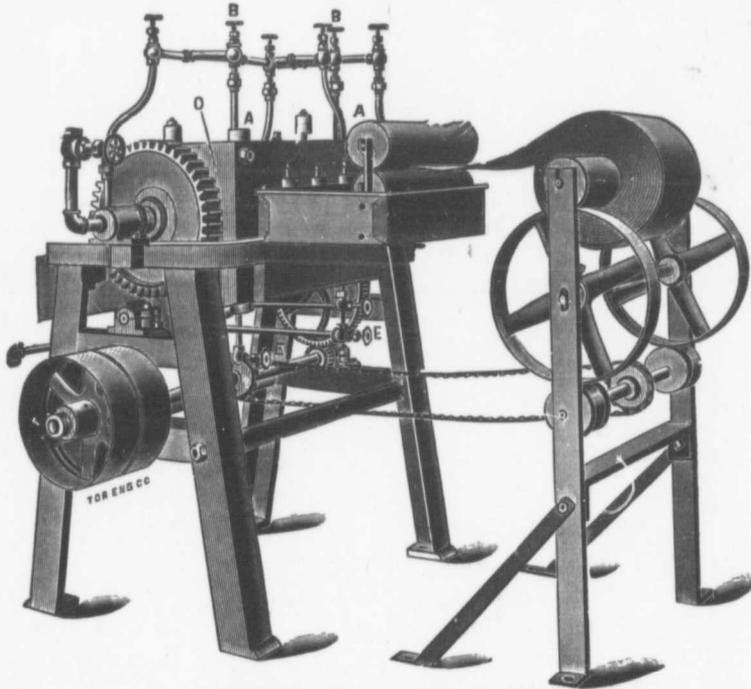


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The Canadian Bee Journal

BRANTFORD, CANADA

**The
Canadian Bee Journal**

Devoted to the Interests of Bee-Keepers

JAS. J. HURLEY, Editor

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The Canadian Bee Journal

Brantford

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JAS. J. HUF

Vol. 19, No. 11.

Quarantine M

Inspector Chalmer's reports on the issue have given rise to discussion amongst Canadian beekeepers far and wide, the feeling being that something more needs to be done that soon, to protect our colonies from the devastating attacks of the Foul Brood. Inspector Chalmer has for some years advocated the system of isolation and static treatment of diseased colonies of bees by competent persons, and in the last month, he suggested that the bees in a certain date be inspected and should be inspected and colonies shipped to the quarantine for treatment or destruction. Another method of quarantine we would like to draw the attention of our readers. In Massachusetts, on the discovery of the Foul Brood in an apiary, a written statement of the defect shall be given by the owner or person in consequence may not be moved from the premises until release is given in written notice. Although quarantine cannot be carried out in the case of bees, yet a measure should prove very valuable in the case of disease within bounds. It is this method still more appears to us that an embargo should be placed upon every colony in the areas. Such a measure is somewhat arbitrary to some, but would prove to be very

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The Canadian Bee Journal

PUBLISHED MONTHLY

JAS. J. HURLEY, EDITOR, BRANTFORD, ONTARIO, CANADA

W. WHITE, ASSISTANT EDITOR.

Vol. 19, No. 11.

NOVEMBER, 1911

Whole No. 561

Quarantine Methods

Inspector Chalmer's remarks in our last issue have given rise to not a little discussion amongst Canadian bee-keepers. Far and wide, the feeling exists that something more needs to be done, and that soon, to protect our industry from the devastating attacks of foul brood. Mr Chalmer has for some years been an advocate of isolation stations where diseased colonies of bees could be treated by competent persons, and in his article last month, he suggested that on a certain date the bees in any infected area should be inspected and the diseased colonies shipped to the quarantine station for treatment or destruction. There is another method of quarantining to which we would like to draw the attention of our readers. In Massachusetts one section of the Foul Brood law enacts that on the discovery of the disease in any apiary, a written statement to that effect shall be given by the Inspector to the owner or person in charge, who in consequence may not be allowed to remove any of the bees or appliances from the premises until released by a further written notice. Although a complete quarantine cannot be carried out in the case of bees, yet a measure of this sort should prove very valuable in keeping the disease within bounds. But to render this method still more effectual, it appears to us that an embargo should be placed upon every colony within infected areas. Such a measure might appear somewhat arbitrary to some and perhaps would prove to be very inconvenient to

others. Yet, on the whole, when we consider the magnitude of the interests at stake, we are forced to the conclusion that some such scheme must be carried out in Canada before we can hope satisfactorily to deal with the scourge. The British Columbia Foul Brood Act provides for the quarantining of imported colonies of bees at the point of entrance into the Province, for a period of not more than nine months, and for their destruction should they be found diseased.

The whole matter was discussed at a recent meeting of the Brant County (Ontario) bee-keepers, at which it was resolved that the subject of quarantining should be placed before the proper authorities, with a view to legislation being enacted along the lines suggested.

Doubtless the question will be deliberated upon at the forthcoming convention at Toronto.

Index

* * *

Italians v. Blacks

Much has recently appeared in the bee papers on the subject of the comparative immunity of the various races of bees to disease, and we note that Mr. Byer reports the receipt by him of letters from bee-keepers of experience who protest against the claim that Italians are more immune to foul brood than are other races of bees. Our own experience in England convinces us that the native blacks of that country are more capable of withstanding the attacks of disease than the alien Italians. Yet we would

Journal
Canada

strongly urge Canadian bee-keepers to keep to the race of bees that appears to be best adapted to the climate of the country, and to keep that race as pure as possible. On this continent, at least in those districts with which we are acquainted, the black bee appears to be in the minority, and appears to be fast disappearing as a pure race. A very large proportion of the so-called "blacks" are merely crosses, showing great variation of character, ranging all the way from the very lowest to the highest bee-type.

* * *

Congratulations

On the 24th September last, Mr. and Mrs. A. I. Root celebrated the 50th anniversary of their wedding, and on behalf of the readers of the Canadian Bee Journal we beg to tender them our hearty congratulations and very best wishes.

* * *

New Contributors

Our readers are introduced this month to two new contributors, viz.: Mr. Geo. Keen, editor of the "Canadian Co-operator," and honorary secretary to the Co-operative Union of Canada, and Mr. F. L. Sladen, F. E. S., the well-known English queen breeder, of Ripple Court Apiary, Dover.

* * *

Mr. Geo. Keen

Mr. Keen is well known in Co-operative circles both on this side of the Atlantic and in Britain. He is perhaps the best Canadian authority on the subject he discusses in our columns this month, and we esteem ourselves extremely fortunate in having secured so timely a contribution from his fluent pen. We believe that we are correct in stating that he has been successful in obtaining a pledge from the new government at Ottawa to enact legislation ensuring to Co-operative bodies a measure of protection which at present they do not possess.

Mr. Keen regards the everyday business of life from a very high view-point

and urges us to conduct our affairs in a manner worthy of the best traditions of mankind. He tells us that co-operation is based on brotherhood, and forces us to realize that no justice is real unless it recognizes this principle as fundamental. Bee-keepers are endeavoring among themselves to organize their industry and to place it upon a modern and civilized footing. Let them not then forget that in this twentieth century the cut-throat and robber methods of old times should be cast aside and newer, saner, and more civilized ways of conducting their business adopted. The history of Co-operation is made up of failures as well as successes, but we may state it to be an indisputable fact that in almost every case failure is attributable to lack of appreciation or of understanding of the basic principles of Co-operation.

* * *

Mr. F. W. L. Sladen, F.E.S.

We referred briefly to Mr. Sladen in our last issue. A few additional remarks respecting our contributor will interest our readers. Born in 1876, he is the son of Lieut.-Colonel J. Sladen, R.A. and his mother, Lady Sarah Sladen, is a daughter of the Earl of Cavan. He commenced bee-keeping at the age of thirteen and soon after he began to study wild bees, especially the bumble-bee. Two or three years later he produced a work entitled "The Humble-Bee" written from actual investigation which, according to Mr. Cowan, the editor of the British Bee Journal, showed an acquaintance with the subject far beyond his years. In 1896-7 he visited India to study the honey-bees of that country. He found *Apis dorsata* and *A. florea* useless for domestication, but brought home alive a queen of the Himalaya honey-bee. On his return he decided to take up bee-keeping as his calling, and went in for honey production on a large scale. Close observation, with a study of the laws of heredity and the work of breeders of

other animals as well as to the conclusion that the bee selected for the purpose in the English climate is superior to the Italian and the Italian bee. The progress of producing and maintaining a pure breed in England, when obtainable, Mr. Sladen is in aid of a distinctive cross-breeding his hybrid can Goldens, and the progress introduced under the Goldens. Mr. Sladen's progress in bee breeding is essential.

In 1901 he discovered Nassanoff's organ, a me at the base of the sixth

WOMAN

Among bee-keepers the bond of brotherhood than other class of people—a true of spirit which makes it sure to meet another bee. week I was glad to add names to my list—the Galwood. They were good over to the Institute me was speaking, and afterwards very pleasant chat, of course. It was a very great regret did not permit me to accept invitation to visit them.

What funny popular ideas about bees! At the meeting asked me if people near to keep bees. She had her man with a few bees was bed out by the bees below man with many. I was a her that only weak, worthless were in danger of being robbed

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other animals as well as plants, led him to the conclusion that a distinct breed of bee selected for the production of honey in the English climate should be far superior to the Italian for crossing with the Italian bee. The great difficulty of producing and maintaining such a breed in England, where isolation is unobtainable, Mr. Sladen overcame by the aid of a distinctive color, obtained by cross-breeding his hybrids with American Goldens, and the new variety was introduced under the name of British Goldens. Mr. Sladen believes that for progress in bee breeding purity of stock is essential.

In 1901 he discovered the function of Nassanoff's organ, a membrane situated at the base of the sixth dorsal segment of

the worker bee. Mr. Sladen found that the bee, in her joy at finding herself unexpectedly in the vicinity of her home, exposes the membrane and emits from it a pungent odor, which attracts other bees searching for the hive, thus saving much loss of bee-life.

His book on "Queen-Rearing in England" was published in 1905 having previously appeared in serial form in the British Bee Journal. A German edition translated by Pastor Strauli, appeared recently. The foregoing particulars, quoted from the British Bee Journal, furnish evidence that whatever our contributor has to say upon the subject of bee-keeping is worthy of our readers' best attention.

WOMAN'S DEPARTMENT

CONDUCTED BY

Miss Ethel Robson, Ilderton, Ont.

Among bee-keepers there is a greater bond of brotherhood than among any other class of people—a true freemasonry of spirit which makes it always a pleasure to meet another bee-keeper. Last week I was glad to add some more names to my list—the Galbraiths of Kerwood. They were good enough to come over to the Institute meeting where I was speaking, and afterwards we had a very pleasant chat, of course, about bees. It was a very great regret that time did not permit me to accept their warm invitation to visit them.

What funny popular ideas do exist about bees! At the meeting one lady asked me if people near together ought to keep bees. She had heard that the man with a few bees was apt to be robbed out by the bees belonging to the man with many. I was able to assure her that only weak, worthless colonies were in danger of being robbed. Perhaps

there is more danger of the man with bees as a side line having weak colonies.

Re-queening.

This discussion we have been having about requeening is one of the most val-



Taking in Honey

uable we have had in the Journal for a long time, especially valuable, as we are

getting the ideas and methods of our most practical men. Friend Balmer's method, if it is as successful as he says, appeals to me as the one requiring the least amount of work, and therefore the best; for experience has taught me to concur heartily in Brother Hand's conclusion, that manipulation is only another name for work. The great weakness of Mr. Chrysler's method lies in the danger of overlooking queen-cells. Mr. Balmer's plan, as he says, eliminates this. Of course it does not seem so scientific to cut a hole in the centre of your comb, but provided results are secured this is a mere detail. Mr. Balmer did not tell us just what proportion of the queens raised by this method got safely mated and laying, nor what plan he pursues with those colonies which lose their young queens.

Something More Needed.

Mr. Chalmers' question regarding our efforts to eradicate foul brood is pertinent. Is the object of inspection eradication? It can hardly be, for the veriest tyro at bee-keeping would tell you that present methods are futile, and that the



Looking for a Queen

best they can do is to restrain in some small measure the ravages of the disease. And it is by no means the fault of the inspectors. The system is radically wrong. It is little better than a "con-

science salve." Studying bee-keepers is more to the point than teaching methods of treatment. A large percentage of bee-keepers simply cannot be trusted to clean up thoroughly after foul brood. If foul brood is the menace it is declared to be



Examining Queen Cells

This hive has been left in its winter case.

it behooves bee-keepers to awaken to the danger and not wait until after the horse is stolen before they lock the door. If the government cannot afford to spend more money, then some method ought to be devised by bee-keepers to raise more, and in view of the danger from diseased bees, would not a special tax be justified? At any rate it is time for thoroughness.

Miss Margaret Davis Field gives us a sympathetic effort to present the wonder and enchantment of the bees. It is an old, old story to bee-keepers, but after all the new things do not please us half so much as a new light on the old. The new awakens our wonder, amazement, and delight, but it is the old that stirs the heart.

A TALE OF THE BEES

By Miss M. Davis Field

(Part One)

A fairy tale, child dear? Well listen then, for my story is different from those that begin with "once upon a time." I

am going to tell you of one of bees, in the Kingdom of Bees.

Now you know that there are thousands of bees in the Kingdom, and the life is not all the same, although some are in the hives and others in the hollow places that makes a snug

Many thousands of them are together in their homes. In cold weather they keep the heat in the body of the

Now these bees, child, the queen, one beautiful and larger than the rest, and mother of the hive.

Sometimes, when we see the queens with their wings and wonderful jewels, and houses, they seem to live in a land of enchantment. Perhaps we have a wee little over the border and I am afraid too. But I am afraid we should find life like that of a bee. Hers seems most as she appears to be so busy but in truth she is the busy bees. The worker of wax, and in them she sometimes thirty-five visits to the flowers. She lays eggs in the cradle, bringing her food as she loves their queen and of course should she die, or the hive, you could hear in a pitiful tone over her. And then there are drones, who gather not an appetites. To these have sting. Now I told you that bees love their queen, but for drones it is different, for when it is cold, and Jack Frost flowers, the bees see in time over, then notice t

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Queen Cells

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OF THE BEES

I. Davis Field

Part One)

...child dear? Well listen
...is different from those
...once upon a time." 1

am going to tell you of the life in a col-
ony of bees, in the Kingdom of Insects.

Now you know there are thousands
and thousands of bee colonies in this
kingdom, and the life in each is the same
although some are in hives built by men,
and others in hollow trees or any other
place that makes a snug dwelling.

Many thousands of individual bees live
together in their homes, and here in the
cold weather they keep warm, because of
the heat in the body of each.

Now these bees, child dear, have a
queen, one beautiful bee that is larger
than the rest, and mother of all the bees
in the hive.

Sometimes, when we think of our kings
and queens with their beautiful clothes
and wonderful jewels, of their servants
and houses, they seem to us like dwell-
ers in a land of enchantment, and per-
haps we have a wee little desire to step
over the border and be dwellers there
too. But I am afraid that if we could
we should find life like that of the queen
bee. Hers seems most wonderful, ruler
as she appears to be of all in the hive,
but in truth she is the busiest of all the
busy bees. The workers make cradles of
of wax, and in them she lays the eggs—
sometimes thirty-five hundred a day.
Think of it! She has no resting time,
no daily flights through the sunshine, no
visits to the flowers. She just lives and
lays eggs in the cradles and the bees
bring her food as she works. The bees
love their queen and often embrace her,
and should she die, or be removed from
the hive, you could hear them mourning
in a pitiful tone over her loss.

And then there are drones, the lazy glut-
tons, who gather not and yet have great
appetites. To these have been given no
sting. Now I told you just now how the
bees love their queen, but with the
drones it is different, for when the winds
blow cold, and Jack Frost pinches the
flowers, the bees seeing their harvest-
time over, then notice the great amount

of honey eaten by the drones, and sting
them or gnaw at the roots of their wings
to prevent them returning, and drive
them from the hive.

'Tis bed-time, child dear, but you may
listen one minute longer while I say a
few words of the worker-bees. As in
our Kingdom of People, so in the King-
dom of Insects, the majority are workers.
Their work is to build the wax cradles,
to feed the young bees, to care for the
queen and to gather the honey—honey
they never will live to eat.

Think of these little bees, buzzing
from flower to flower, laden with honey,
returning to the hive, leaving it and
then hurrying to the field again.
Working, working, working until the
lacy wings are so notched and worn
that the bees cannot fly home, and they
die in the field. The queen may live
several years, but a bee in the busy sum-
mer lives about thirty-five days, then
perishes, after gathering honey that it
never will eat; but having lived a busy
life among the light and the flowers, serv-
ing its queen, and the family, filling its
little place in the world.

Part Two.

Another tale, from the Kingdom of
Insects? Well, listen, then, while I tell
of a queen, who came near being only
a worker.

Now you know that the worker bees
make cradles of wax, for the eggs of the
queen bee. A few of these cradles are
large, and hang downwards and in them
the bees put special food, called royal
jelly. Now, from an egg in the cradle
hatches always a queen bee, but from
an egg in a small one, comes only a
worker bee.

Here is where my story begins, for on
a day when the queen had left eggs in
the cradles for workers, a man came
along and, opening a hive, took some of
these away. Then he made a cradle of
wax like the cradle of a queen bee, into
it putting royal jelly, stolen from a real

queen's cradle. Then very carefully he placed in the new cradle one of these tiny eggs, and took it to the hive, where it hatched into a pearly white larva, and then into a beautiful queen bee, with yellow bands. Now, out of her cradle walked the queen bee, into a wire cage, a prisoner, but the bees fed her until the next morning, when the man came and carried her away, but only to another hive, into which he slipped the cage containing her. And why, child dear, do you suppose he kept her a prisoner? Well, these bees needed a queen, but she did not smell like themselves, and so they would have made themselves into a ball about her, and squeezed her to death, but in the cage she was safe. Still they never permit a queen to starve, so they fed her for a couple of days, until they had forgotten that she was not their own. Then came the man again, who released her, and she was indeed a queen, ruling over her own colony of bees, in the Kingdom of Insects.

THE BEE FOR THE BREEDER.

Indexed By F. W. L. Sladen

(Fellow of the Entomological Society, of London.)

Of late years little has been heard of *Apis dorsata* and of the different Asiatic and African varieties of *A. mellifica* as possible superiors to, or improvers of, our breeds of bees, and, quite rightly, our attention has been paid to the improvement of European races and the varieties that have already been obtained from them. Under the name of races, are included many local varieties, all closely related to one another, and merging into one another. As far as appearance is concerned, the only important variation noticeable in all these varieties is in the extent that the black and golden colours displace one another in the integument (or skin) of the abdomen and on the

Part Three.

One more tale only. This, too, will be of a queen, of a queen and a few workers.

In an apiary in far Italy, a man was working among his bees, when into a cage he slipped a queen bee, with bright yellow bands, and with her he put a few workers.

Over the sea at Ilderton, Ontario, lived a lady, who wanted this queen bee, so the man, carefully wrapping the cage, in which he had also placed candy made of honey and sugar, mailed it to her.

'Twas a long and tiresome journey. The bees fed the queen, and themselves for awhile, but gradually the food supply lessened until, fearing a famine, they themselves stopped eating.

When the cage arrived, it was opened, and there was the candy, little more than half eaten; the queen bee alive and active; the others all dead, their lives needlessly sacrificed, but such is the love of the worker for the queen bee.

scutellum, i.e., the little crescent-shaped area on the back of the thorax; although two minor variations may be mentioned in passing:—(1) the presence or absence of a well-defined band of short white hair on each segment of the abdomen; and (2) size.

Now this matter of black and yellow skin is really very important, not only to the breeder of fancy stock, but to the honey producer. For, co-related or bound up with each colour are a number of characters, as yet very imperfectly understood, that have an important bearing upon honey production, prolificness, disease-resisting and other qualities. This is a conclusion that has been clearly arrived at in the systematic breeding work that has been carried on for some years under my direction in Ripple Court Apiary, near Dover, England. The relationship between colour and other

qualities has also been of other animals by r

The pure black color England, France, Gerri speaking in northern a but here and there in stance, in the Island c

The pure golden color the scutellum and abo in the queens, and w black at the tip of th workers is, in a state nowhere in Europe, varieties having a gold band on three or four ments of the abdomen the Swiss and Italian eastern Europe, and it the pure golden variety ated by queen breeders stated that pure golden smaller size, occur in

The black bee is an er, especially in cool weather. The golden b than the black, but is though if the weather equally industrious. But bee is as prolific as under certain conditions ferred to below, is much industrious in all weath

Here, however, my tions must stop, and r by the truism that all goldens are not alike. I speak of the despised A (which Mr. Ashmead o tional Museum has told introduced by monks synonymous with the b in Britain find suits our again British Goldens shaken from their con from the clinging Itali Goldens.

When we come to co ates, their qualities, as m vary still more widely

Three.

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queen and a few work-

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qualities has also been proved in the case
of other animals by many investigators.

The pure black coloration is found in
England, France, Germany and generally
speaking in northern and western Europe,
but here and there in the south, for in-
stance, in the Island of Malta.

The pure golden coloration, i.e., with
the scutellum and abdomen pure golden
in the queens, and with only a little
black at the tip of the abdomen in the
workers is, in a state of nature, found
nowhere in Europe, but intermediate
varieties having a golden and a black
band on three or four of the basal seg-
ments of the abdomen are to be found in
the Swiss and Italian Alps and in south-
eastern Europe, and it is from these that
the pure golden variety has been separ-
ated by queen breeders. It may be
stated that pure golden bees, but of a
smaller size, occur in Asia and Africa.

The black bee is an industrious work-
er, especially in cool and changeable
weather. The golden bee is more prolific
than the black, but is not so hardy, al-
though if the weather is warm she is
equally industrious. But the intermediate
bee is as prolific as the golden, and,
under certain conditions, which are re-
ferred to below, is much more hardy and
industrious in all weather than either.

Here, however, my rough generalisa-
tions must stop, and must be qualified
by the truism that all blacks and all
goldens are not alike. It is a mistake to
speak of the despised American black bee
(which Mr. Ashmead of the U. S. Na-
tional Museum has told me was probably
introduced by monks from Spain) as
synonymous with the black bee that we
in Britain find suits our climate so well;
again British Goldens that are easily
shaken from their combs are different
from the clinging Italian-like American
Goldens.

When we come to consider intermedi-
ates, their qualities, as might be expected,
vary still more widely than those of

blacks or goldens. And now we arrive
at a point that is of great importance to
the breeder for improvement. The con-
sensus of opinion all over the world,
questioned only in countries that are
liable to have much cold, windy and
damp weather during the honey-flow,
such as Britain, Holland, Belgium and
Switzerland, is that the best bee for busi-
ness—for filling supers quickly, for multi-
plying fast, for disease-resisting and for
wintering well is the intermediate, or the
bee that in Europe is known as the
Italian, and in America as the three-
banded Italian (though some may be
four-banded) the bee that has spread over
the world from the Alps of Switzerland,
and Italy, and is still to be found there
unchanged.

It is true that varieties of the Italian
bee occurring in certain districts of
the Alps are superior to those occurring
in others. But this question of the super-
iority of one local variety over another
has been pretty thoroughly investigated
and is not at the present time of nearly
such great importance to those who are
looking for a superior breed of bees as
another one, largely overlooked, and cer-
tainly not investigated as it deserves. I
refer to crossing.

Here in England, Italians are little
thought of; they are considered to be
poor honey-gatherers and to use honey
for breeding which they should be stor-
ing. And yet, very often, one hears of
record yields from "Italians," exceeding
those from the best blacks, even in the
most inclement seasons. What is the ex-
planation of this? In every case that I
have been able to investigate the "Ital-
ians" that have done so well have not
been pure Italians, but have been cross-
breds between Italians and blacks, in the
greater number the progeny of an Italian
queen mated by a black drone. These
bees have yellow bands like pure Italians,
and are, therefore, confused with them.

Again, British Golden queens, when

mated by black drones, produce a remarkably vigorous and profitable bee. These half-breds are somewhat yellower than pure Italians, and are distinctly larger either than these or than British Goldens; they are hardier, and more industrious than native black bees or Italians, building up faster during our long cold spring, and are even proving themselves superior to the cross between Italians and blacks.

Is it not true, too, that some of the best breeders in the New World are rearing golden queens and mating them to drones of the leather-coloured variety?

All this points to the conclusion that by crossing, a more profitable bee than the pure Italian may be obtained. But the crossing must not be promiscuous. The greatest care is needed in breeding pure stock from which to obtain the half-breds.

I am a firm believer in goldens for crossing. Of course, there are good, bad and indifferent goldens. In my opinion the most valuable work a queen breeder can engage upon is to improve pure golden stock. A golden queen that produces any intermediates at all amongst her golden young is of very little value for testing as a breeder, because the inherent vigour of the golden stock is largely masked by the vigour that has been acquired by crossing, and this cannot be reproduced with certainty in the next generation, although, as the honey producer knows, good hybrids produce on the average good hybrids.

Ripple Court Apiary, Dover, Eng.

SHORT COURSE AT O. A. C.

The Ontario Agricultural College, Guelph, has arranged for a Short Course in Apiculture, to be held January 9-20, 1912. Persons interested in this Course should write for program to Morley Pettit, Guelph, Ont.

LINE BREEDING VERSUS MISCELLANEOUS SELECTION

By J. E. Hand.

Indexed

On page 296, Mr. Jos. Gray takes exception to a statement of mine in an article in the September number of the C.B.J. that certain queens were mated to their half brothers. Perhaps I should concede the point without further argument, especially since the closer the relationship, the more likelihood of transmitting inherent tendencies. It is not my intention, however, to misrepresent by claiming a relationship that cannot well be established genealogically, and after the few remarks that I feel called upon to offer in reply to the argument advanced by Mr. Gray, I will leave the reader to decide whether, or not, the queens in question were mated to their half brothers, as stated in the article mentioned. In discussing a subject of vital importance we should not blindly pin our faith to the occult philosophy of fake scientists, and therefore, it is not my purpose to accept, or to advance any theory not based on observation, or supported by evidence of a tangible nature.

Parthenogenesis—What Is It?

Admitting that the blood of the male is transmitted to the second generation by the power of parthenogenesis, we should not overlook the fact that this peculiar power is vested in the queen and not in the drone; therefore, the word "sire" of which Mr. Gray makes free use, is a misnomer when used in connection with an object that is solely indebted to his mother for his earthly existence. Furthermore, if, as stated by Mr. Gray, the drone is not a product of his mother, then the word "parthenogenesis" as applied to the drone is also a misnomer, and a direct contradiction to the Dzierzon theory as expounded by my worthy critic. Surely, the word "parthenogenesis" (virgin development), would convey the idea

that the drone is the development, independent from male sex. Gray can reconcile the contradictory terms.

The Proof of It

Again, the theory is mated by her mating the male issue of a queen, observation, or supposed evidence, and is discredited by American authority maintaining to modern quack proof of the pudding is in the eating. I am persuaded that the breeders of any reputation wish to mate their queens from a mismated queen, so mated would produce workers that would produce stock, she would be produced as a breeder of queen power to transmit uniformly for the slightest contamination blood will unerringly occasionally cropping progeny. For this reason will unerringly duplicate their queen progeny as easily produced except system of line breeding.

Quality vs. Quantity

The value of a breeder's power to transmit uniformly of a highly desirable quality I would rather have such a mother, than fifty among a hundred with various characteristics that could be mated with any degree. Mr. Gray is able to produce by miscellaneous selection be more pleased to know such knowledge would have than any amount of argument.

Was She a F

Veiled insinuation can be considered as legitimate argument.

VERSUS GENEALOGICAL SELECTION

E. Hand.

Mr. Jos. Gray takes exception of mine in an arduous number of the queens were mated to drones. Perhaps I should not have argued without further argument the closer the relationship the more the likelihood of transmission. It is not my intention to misrepresent by a statement that cannot well be taken literally, and after that I feel called upon to present the argument advanced. It will leave the reader to decide for or not, the queens in question are not to their half brother as the article mentioned. I am object of vital importance to the study of the physiology of fake scientists, not my purpose to accept any theory not based on evidence.

What Is It?

The blood of the male in the second generation by parthenogenesis, we should not expect that this peculiar to the queen and not in the drone, the word "sire" of which makes free use, is a word used in connection with a male solely indebted to his existence. Furthered by Mr. Gray, the fact of his mother, then "parthenogenesis" as applied to a misnomer, and a word to the Dzierzon theory by my worthy critic. "parthenogenesis" (virginity) would convey the idea

that the drone is the product of virgin development, independent of any stimulus from male sex cells. Perhaps Mr. Gray can reconcile these seemingly contradictory terms.

The Proof of the Pudding

Again, the theory that the blood of a queen mated by her mating, is not based on the male issue of a queen is not contaminated by observation, or supported by tangible evidence, and is discredited by the best American authority upon subjects pertaining to modern queen culture. The proof of the pudding is in the eating, and I am persuaded that there are few queen-breeders of any reputation who would wish to mate their queens with drones from a mismated queen; while a queen so mated would undoubtedly produce workers that would pass for pure-bred stock, she would be practically worthless as a breeder of queens, from lack of power to transmit uniform characteristics, for the slightest contamination in the blood will unerringly manifest itself by occasionally cropping out in her queen progeny. For this reason, queens that will unerringly duplicate themselves in their queen progeny are scarce, and not easily produced except by a judicious system of line breeding.

Quality vs. Quantity

The value of a breeder is measured by her power to transmit inherent tendencies of a highly desirable character; personally I would rather have a queen from such a mother, than from a selection among a hundred with as many different characteristics that could not be transmitted with any degree of certainty. If Mr. Gray is able to produce such queens by miscellaneous selection no one would be more pleased to know it than myself; such knowledge would have more weight than any amount of argument.

Was She a Freak?

Veiled insinuation can hardly be reckoned as legitimate argument, and some

would perhaps take exception to the insinuation by Mr. Gray that a queen who is unable to duplicate herself in her queen must have the knowledge and will is a freak. A closer scrutiny, and a more mature deliberation should convince even the most sceptical that such a thing is practically impossible, except by line breeding.

An Appeal to Reason

The statement by Mr. Gray, "that the queen must have the knowledge and will-power to lay her male eggs in drone cells and her female eggs in worker cells, is vague, and savors of the theory of two kinds of eggs, a theory that is neither based on observation, nor supported by evidence of a tangible nature."

It is generally conceded that only males are produced parthenogenetically, and the fact that eggs of a virgin queen or laying worker will produce only drones, is tangible evidence that all eggs within the ovaries of female bees will produce drones, and drones only, unless they undergo the process of fertilization. This theory is further strengthened by the fact that after the supply of spermatozoa received in mating is exhausted, old queens occasionally continue to lay eggs that produce only drones; this theory is in perfect harmony with the Dzierzon theory that unfertilized eggs produce drones.

Just how the act of fertilizing the egg is accomplished is not easily determined, nor is the knowledge necessary to complete the chain of circumstantial evidence. Evidence of a tangible nature, however, is not wanting to show that the size and shape of the cell perform an important office in deciding the sex of the egg deposited therein. I have never known a worker brood to be reared in drone cells except when the mouth of the cells were contracted to about the size of worker cells, neither have I ever known a queen to lay an egg in a queen-cell unless the mouth of the cell was con-

tracted in like manner. While this is not conclusive evidence that the shape and size of the cell decides the sex of the egg, it points strongly in that direction, and in the absence of a more reasonable theory should be accepted.

If the above deductions are correct there remains but few more links to complete the chain of circumstantial evidence.

The same impulse that guides the acts of the bird, compelling her to construct her nest of the proper shape and material forces the queen to lay eggs in drone cells when drones are needed and in queen cells when queens are needed, and parthenogenesis aided by the size and shape of the cells completes the wonderful work of nature, independent of any will power of the queen. She is simply a machine fashioned by a Master Hand to fulfil the demands of nature, and could not do differently if she willed.

From the above deductions the following inferences may be drawn. First, while the blood of the male is transmitted to the second generation by the power of parthenogenesis, there is a slight contamination by the fertilization of the queen. Second, the drone is without a sire in the fullest sense of the word, since he is the product of virgin development. Finally, the drone is the product of his mother, by and through the power of parthenogenesis.

Birmingham, O.

THE QUARANTINE METHOD IN MASSACHUSETTS.

By Dr. Burton N. Gates.

[An address delivered at the annual convention of the National Bee-Keepers' Association, Minneapolis.]

I had planned in my remarks, which are to come a little later, to outline our whole system; we have four inspectors "on the road" in the State of Massachusetts, and as we are not able to cover

the entire State in one year, we are working from the centres; we begin at the centre and work out until we come to the limit of the disease apparently on one side, and then work along until we come to the limit on the other side, and in that way we are able to clean up certain areas, and those cleaned last year have this year proven almost entirely free from disease; the work which was done early in this season has proven very satisfactory at the present time.

We have one feature, probably, which is not found in other States, and which I had intended to speak of later, namely, the quarantine method. Our law reads that upon the discovery of the disease in an apiary a written statement to that effect shall be given to the owner or person in charge; that statement is in the form of a quarantine, and the owner is not allowed to remove any of the bees, or any of the appliances, from the premises until released by a second certificate or written notice. This has often proven very valuable, as you may readily see. Sometimes bee-keepers club together and keep a number of colonies of bees on the same premises. Well, if we found the disease on the true owner of those premises and quarantined him, the owners of the other bees might readily remove their colonies to some distant point of the State, and it would be difficult to follow them and they would carry the disease.

The quarantine measure might at first seem to be a little harsh, and I know very frequently bee-keepers say it is a little rough treatment, but it takes only a word or two to explain to them the reason for the action. No man is inclined to thank you to say to him that he has vicious intentions; we explain to him that this is not intended to be a very serious matter, and is not intended to prevent him from selling honey; it is intended for the man who is viciously inclined who would willingly sell diseased

colonies; we explain sure he is honest and not care to do any they will not mind words of explanation right light, and I n have a great deal mo not for this method. is out of quarantine i keep watch of his ap there is no re-appear

Another matter pr sachusetts, which is t for which I have been is the placing of an on shipments of bees i law reads that colonie States must be certif ease; those bees fro no disease occurs ca without a certifica cipient of such bees State Inspector that h examine them.

I have been surpris large number of shipm from Illinois, and M Hampshire, Vermont, I necticut, and from Ne already been able to t diseased shipments by there is a little bit of with that measure; or three of the inclined to favor but they were keen "suppose you do supp what is to hinder it fr from adjacent States?" in reply to say but th in, and we knew unles measure or law to prev of diseased bees from A law would not pass, so that clause. The cla written to better advan other State undertakes hope it may re-write t far it has worked out t advantage.

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colonies; we explain to him that we are sure he is honest and upright and would not care to do any such thing, and that they will not mind a quarantine; a few words of explanation brings him in the right light, and I must say we would have a great deal more trouble if it were not for this method. As a rule, a man is out of quarantine in a few weeks; we keep watch of his apiary to see that there is no re-appearance of the disease.

Another matter practised in Massachusetts, which is to me unique, and for which I have been harshly criticised, is the placing of an embargo, so-called, on shipments of bees into the State. Our law reads that colonies transported from States must be certified free from disease; those bees from States where no disease occurs can come through without a certificate, but the recipient of such bees must notify the State Inspector that he may be able to examine them.

I have been surprised that out of a large number of shipments coming way from Illinois, and Maine, and New Hampshire, Vermont, Rhode Island, Connecticut, and from New York, we have already been able to trace a great many diseased shipments by that method. there is a little bit of history connected with that measure; last winter two or three of the legislators were inclined to favor our proposition, but they were keen enough to say: "suppose you do suppress the disease, what is to hinder it from coming in from adjacent States?" We had nothing in reply to say but that it might come in, and we knew unless we put in a measure or law to prevent the shipment of diseased bees from Massachusetts, the law would not pass, so we had to accept that clause. The clause could be re-written to better advantage, and if any other State undertakes that measure I hope it may re-write the clause, but so far it has worked out to our decided advantage.

NOTES FROM MANITOBA

Cellar Wintering

By B. Brewster

A couple of years ago I had the pleasure of reading some old files of bee papers for the early eighties, when the Rev. Clark contended for semi-hibernation, and when cellar wintering was a moot question with bee-keepers of the first rank. And now, when you ask me for my experience in this direction, I must disclaim any credit for my success in cellar wintering, thanks to our bee journals, text books, and the experiments and observations of such men as Miller, Doolittle, etc., and I avoided many troubles a beginner would otherwise encounter.

I will first give you a case or two that came under my notice of "How not to do it." Mr. S. complained that his bees always began to spot the hives in February, the result being that he had to put them out too soon, and before there was anything for them to get; and consequently the bees lost heavily from spring dwindling. One day he invited me into his cellar to see his bees. The first thing that caught my eye was a lot of hives badly and irregularly stacked, with strips of lumber nailed from the hives to the joists of the ceiling. As he was the proud possessor of a family of eight lusty boys and girls I did not wonder at his bees wintering badly. The other case was even worse. Here the cellar was more or less damp in summer and pieces of plank were laid on the floor to walk on. On the end of one of these planks eight colonies of bees were stacked and the other end of the plank came to the foot of the stairs. The floor was uneven and every time any one came in to the cellar for vegetables or preserves they gave the poor bees a "teeter." This man complained that his cellar was too cold, but seeing that his potatoes were

sprouted, I put it down to the oscillating plank. But there is more than one factor that goes to produce that state of quiescence which spells success in the wintering of bees, and whilst temperature cuts quite a figure under certain conditions, the writer has proved that bees will come out alright even with as great a variation as from 35 to 60 degrees Fahr., other conditions being right.

One of our incubator manufacturers says "Don't put an incubator where you would not like to live for three weeks yourself." I would not go so far with bees as to say "Do not put bees where you would not like to live for five or six months," but I will say "Do not put bees where you could not spend the sleeping hours without serious injury to health." My cellar is under my house and one half is always filled with vegetables. It is perfectly dry, being in a sand bank. The walls stand up as good to-day as when dug over twenty years ago. The space allotted for bees is 7 feet by 14 feet by 7 feet high, and in this space I wintered last year 60 colonies, the temperature running, after the outside entrance was closed, from 45 to 60 degrees. When I found the temperature getting up I adopted the same plan that I had practised a couple of years before for the opposite extreme of temperature (from 38 to 32 degrees) which was to open the cellar door last thing at night and allow the air to change with that in the house, but with the difference that for the high temperature the fires were allowed to go down, whilst for the low a moderate fire was kept all night. My hives are Jones and dovetailed Langstroth, with three-eighth inch entrances to both. All covers are removed and quilts loosened some days before putting away. The stands for hives consist of 6 or 7 inch tamarack logs, slightly embedded in the floor, the front log being one inch lower than the back. Care is taken that the hives are at least 5 inches from the wall, both in

the back row and also at the ends. Two pieces of 2 by 4 in. are put between each row to allow for free circulation of air over quilts. Last winter my bees were in the cellar from November 5th to April 22nd, a period of 24 weeks and in spite of high temperatures only two colonies died, and those from starvation to my shame. The wide-awake bee-keeper sees that his bees have enough stores beyond a peradventure.

What a temptation it is in the spring, when the snow has gone, the sun is shining brightly and a warm south wind blowing to take the little things out, regardless of whether there is anything for them to get or not. But don't do it! However bad they are wintering they can stand a few days more, and a sudden drop of the mercury has no terrors for you, and you chuckle to yourself when you remember they are safe in the cellar. I have seventy-five colonies to put down this year, and no light ones. This is after extracting 4500 lbs from 47, all that I had after doubling up nine that were queenless or superseding in fruit bloom.

Now, Mr. Editor, I must compliment you on that September number, it's a dandy. Wishing you continued success.

Green Ridge, Man.

INTRODUCING QUEENS—SOME GERMAN METHODS.

By Jacob Haberer

J Wilhelm Maursmunster in *Elsass-Lothringischer Bienenzeitung* describes how he introduces queens by the "flouring" method. The colony to be re-queened is opened quickly and the old queen taken out and killed. The bees are shaken off the combs into an empty hive, or into the same hive, the combs being set aside. Next, the now queenless bees are thoroughly well dusted with flour. In a like manner, the bees and queen of the nuc-

leus are shaken off and added with the colony to be re-queened. The old combs are now replaced by the latter closed. In the writer introduced nine queens last summer, and in the evening loss, and other bee-keepers had recommended this procedure as the same satisfactory result that by dusting them with flour to lose sight and scent, and in the sequence, able to distinguish the queen from the one the one before. A modification of this is—instead of shaking the bees into the hive, to shake them from the entrance, thus to travel that distance to the

The Muncher Bienenzeitung following methods of introducing queens:

1. With a little bunch of paper, upon which has been put a little turpentine, touch the queen lightly, and put her into the hive. In one or two days may let the queen run her.

2. The pipe-cover wire is used. The queen is caged on the wire. There are some empty cells filled with honey under the cover. The queen is selected for the cage she is put at the front of the hive. A few days and towards evening, re-

3. Take out a comb with the bees; pour a tablespoonful of honey over the bees, daubing the queen with honey, and give her to the

4. Part of the hive is covered by means of an outer cover at the sides and bottom. The queen is put in as well as the entrance in a portion partitioned off by strips of wood. A few days previously in the comb was filled with a mixture of flour and honey scrapings. Put the queen in the comb with her accompanying her in the comb divided off. The bees will

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QUEENS—SOME GER- METHODS.

b Haberer

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leus are shaken off and floured, and unit-
ed with the colony to be re-queened. The
combs are now replaced in the hive, and
the latter closed. In this manner the
writer introduced nine queens in one
evening last summer, without a single
loss, and other bee-keepers to whom he
had recommended this plan have reported
the same satisfactory results. It appears
that by dusting them with flour, the bees
lose sight and scent, and are not, in con-
sequence, able to distinguish the strange
queen from the one they had with them
before. A modification of this method
is—instead of shaking the bees direct-
ly into the hive, to shake them a few feet
from the entrance, thus making them
travel that distance to the hive.

The Munchener Bienenzeitung gives the
following methods of introducing:—

1. With a little bunch of cotton bat-
ting, upon which has been dropped a
little turpentine, touch the queen to be in-
troduced lightly, and put the batting in
the hive. In one or two minutes you
may let the queen run in without dan-
ger.

2. The pipe-cover wire basket method.
The queen is caged on a comb so that
there are some empty cells and also cells
filled with honey under it. The spot
selected for the cage should be towards
the front of the hive. After three days,
and towards evening, release the queen.

3. Take out a comb well covered with
bees; pour a tablespoonful of honey over
the bees, daubing the queen also with
honey, and give her to the colony.

4. Part of the hive is partitioned off
by means of an outer comb, the spaces
at the sides and bottom of the comb
as well as the entrance in the front of the
portion partitioned off, being filled with
strips of wood. A few holes are made
previously in the comb with a pencil and
filled with a mixture of honey and wax
scrapings. Put the queen and the bees
accompanying her in the part thus
divided off. The bees will eat through

the holes and will accept the queen.
This plan has been followed by Herr
Wickler of Hersbruck for thirty years.

[Mr. Haberer intimates to us that he
is still in search of an infallible method
of introducing queens. Every method
fails him now and then. We wish we
could help him in his search, but we are
afraid we cannot. Ed.]

A BEE'S ELEGY.

Charlotte Becker.

Blow softly, vagrant breezes,
And, thrush, for grief be still—
A thirsty little pagan
Of life has drunk his fill.

No more will he discover
The lily's fragrant art,
Nor quaff the brimming nectar
From any rose's heart.

No more will he companion
The merry wilding things
That hold through rain and sunshine
Their lyric revellings.

Yet free and gay and careless
This spirit of content,
Perhaps knew more of gladness
Than lives more provident.

And who shall dare to whisper
His days were spent in vain?
Since bird and breeze and blossom
All wish him back again?
—American Magazine.

C. Loehnert, of Bruno, reports an un-
favourable season in Saskatchewan, the
weather having proved cool and wet.
After July, not a pound of surplus was
obtained, and our esteemed correspon-
dent experienced much difficulty in queen-
rearing. Of twenty young queens, fifteen
were lost or failed to mate. The average
surplus obtained by Friend Loehnert
ranged somewhere between 50 and 75
pounds.

THE CO-OPERATIVE PRINCIPLE

By Geo. Keen

[Hon. Sec. Co-operative Union of Canada, Editor of the "Canadian Co-operator"]

It has frequently been the subject of remark that while European nations, some of them undemocratic in their political constitution, have in recent years made great strides in the Co-operative and Democratic organisation of commerce, industry and finance, Canada and the United States have made very little progress in the same direction, notwithstanding the greater need suggested by the oligarchic control of trade by the "big interests."

It is a national weakness with us to offer excuses for undesirable conditions, instead of adopting the more practical course of frankly and unreservedly recognizing their existence and working out remedies for their relief. We live in an atmosphere of national self-conceit and self-elation, natural alike in all young nations as in young children. While the writer does not advocate the cultivation of a pessimistic spirit in the treatment of public questions, it is manifestly unwise to live in a fool's paradise.

As to co-operative production and distribution, it is frequently urged that the reason why we are so far behind other nations is that our farmers and working-men are "too prosperous" and that they do not feel under the necessity of effecting economies in the transit of wealth from the producer to the consumer, yet the fact is that in Britain it is the thrifty, intelligent and prosperous artisan who supports the Co-operative movement. One of the greatest problems the British Co-operative leaders are at the present moment endeavoring to solve is how the blessings of Co-operative effort may be put within the reach of the poorest section of the community.

The real cause of the lack of Co-operative progress has been a misconception on the part of our people who have sought to practise it, of what the Co-operative movement really stands for. They infer that the secret of the phenomenal success in Great Britain is the method under which British co-operators conduct their enterprises, namely the allocation of a flat rate of interest to capital and the division of profits in proportion to the value of the purchases made by each member in the case of a distributive business, on the raw material supplied by farmers, etc. to Co-operative factories, and on the value of labor done as disclosed by their weekly wages in the case of workers in labor co-partnership undertakings. That, however, is not the Co-operative principle. It is the economic method whereby the principle is carried into effect. The fundamental principle is based on brotherhood and is manifested in a desire on the part of the adherents of the Co-operative Movement, to establish harmony in industry by conciliating the conflicting interests of the capitalist, the worker and the consumer by the equitable division among them of the fund commonly known as profit, and to produce justice in our social and economic relations with each other, as well as the inevitable corollary, a more cultured and better type, morally and intellectually, of manhood.

It is the devoted attachment to and sustained enthusiasm for this great moral principle, of which the economic method above defined is but one application, which causes thousands of men and women in other countries to spend their spare time unselfishly in the development of co-operative methods of business, and is the secret of their dogged perseverance, notwithstanding what may appear insuperable difficulties, their renewed attempts in case of failure and of the ultimate success which self-sacrificing perseverance generally brings in its train.

November, 1911

Acceptance only of method, as a rule, is of personal interest of proprietors in the welfare Society, the degenerate democratic machinery rules into a managerial eventually failure or tistic ownership.

It was, therefore, with personal satisfaction the writer's article in a recent Canadian Bee Journal attracted aspiration for general basis of successful co-product of the honey industry would seem to demand unusual in these days exploitation of other namely, the love of the keeper for its own sake natural desire to reap for the labor involved. should make the cultivation known as the "Co-operative the honey industry and successful organisation of the co-operative sale of the purchase of supplies of accomplishment.

Brantford, Ont.

ANNUAL CONVENT O.B.K.A.

As has already been in columns, the annual convention of the O. B. K. A. will be held at the County Council Chamber, 100 Queen Street East, Toronto, from Friday, November 15, 1911, to Saturday, November 16, 1911. The bee-keeper who possibly deavours to attend this affair of the clans." Ladies, welcome at all the sessions hereto is the program of **Wednesday Afternoon, 7:30 p.m.**—Minutes, J. W. Hooper, Secretary; President's

of the lack of Co-operation a misconception on the part of people who have sought what the Co-operative stands for. They infer the phenomenal success is the method under which operators conduct their business by the allocation of a part of the cost to capital and the profit in proportion to the purchases made by each case of a distributive material supplied by Co-operative factories, the use of labor done as weekly wages in the labor co-partnership at, however, is not the principle. It is the economy by the principle is carried. The fundamental principle of brotherhood and its reliance on the part of the Co-operative Movement, only in industry by conflicting interests of the worker and the consumer division among them of what is known as profit, and its place in our social and economic life with each other, as well as its corollary, a more cultured type, morally and intellectually.

and the attachment to and the desire for this great moral principle through the economic method but one application, thousands of men and women in all countries to spend their money wisely in the development of methods of business, and their dogged perseverance, that may appear insupportable but their renewed attempts and of the ultimate success in its train.

Acceptance only of the economic method, as a rule, is followed by a lack of personal interest by the individual proprietors in the welfare of a Co-operative Society, the degeneration of the democratic machinery provided by its rules into a managerial autocracy, and eventually failure or transfer to capitalistic ownership.

It was, therefore, with considerable personal satisfaction the writer read an editorial article in a recent issue of the Canadian Bee Journal attributing to a moral aspiration for general betterment the true basis of successful co-operation. The conduct of the honey industry, by its nature, would seem to demand personal qualities unusual in these days of profit-hunting exploitation of other people's labour, namely, the love of the calling of a bee-keeper for its own sake, apart from the natural desire to reap an adequate reward for the labor involved. Those qualities should make the cultivation of what is known as the "Co-operative spirit" in the honey industry and the consequent successful organization of a Society for the co-operative sale of the product and the purchase of supplies, relatively easy of accomplishment.

Brantford, Ont.

ANNUAL CONVENTION OF THE O.B.K.A.

As has already been announced in these columns, the annual convention of the O. B. K. A. will be held at the York County Council Chambers, 57 Adelaide Street East, Toronto, from Wednesday to Friday, November 15, 16 and 17. Every bee-keeper who possibly can should endeavor to attend this annual "gathering of the clans." Ladies, especially, are welcome at all the sessions. Appended hereto is the program of the Convention.

Wednesday Afternoon, Nov. 15th, 2 p.m.—Minutes, J. W. Hodgetts, Toronto, Secretary; President's Address, W. J.

Craig, Brantford, Ont.; Reply, Denis Nolan, Newton Robinson, Ont., 1st Vice-President; County Associations and Their Work, Morley Pettit, O. A. College, Guelph, Ont., Provincial Apiarist; The Co-operative Purchase of Supplies, Robt. Thompson, St. Catharines, Ont., Manager St. Catharines Cold Storage Co.

Wednesday Evening, 8 p.m.—Address of Welcome; Co-operation, George Keen, Brantford, Ont., Hon. Sec. Co-operative Union of Canada; Diseases of Bees and Their Treatment (illustrated with lantern views), E. F. Phillips, Ph.D., Washington, D.C., in charge of apiculture for U. S. Department of Agriculture.

Thursday Morning, Nov. 16th, 9.30 a.m.—Experiences With European Foul Brood, (a) in the Ottawa Valley, F. E. Millen, O. A. College, Guelph, Ont.; (b) in the Niagara District, Jas. Armstrong, Cheapside, Ont.; (c) in the Trent Valley, Warrington Scott, Wooler, Ont.; The Inspection of Apiaries in Ontario, Morley Pettit.

Thursday Afternoon, 2 p.m.—Beeswax from the Bee to the Foundation Mill, W. J. Craig, Brantford, Ont.; Methods of Organizing Beekeepers, E. B. Tyrrell, Detroit, Mich., Sec. National Beekeepers' Association; Educational Methods in Agriculture, C. C. James, Toronto, Deputy Minister of Agriculture for Ontario; Election of Officers; Reports of Directors, Treasurer, Honey Crop Committee, Representatives of Exhibitions.

Thursday Evening, 8 p.m.—The Behaviour of the Bee (popular lecture illustrated with lantern views) E. F. Phillips, Ph. D.

Friday Morning, 9.30 a.m.—The Pleasures of Beekeeping, Miss Ethel Robson, Ilderton, Ont., Secretary Middlesex County Association; My Experience With the Treatment of European Foul Brood in New York, C. Stewart, Johnstown, N.Y., one of the four apiary inspectors of New York State; Discussion of Disease Problems, Dr. E. F. Phillips.

The convention is held during the week of the Ontario Horticultural Exhibition. Persons attending this exhibition can secure single fare return rates as follows: Where the single fare does not exceed \$2.50 a return ticket can be secured for the single fare, plus 25 cents for an additional coupon. These tickets are good going November 13 to 18, and returning to the 20th. Those who live outside the \$2.50 limit, or who wish to go earlier or return later can secure a single fare return ticket by purchasing a single fare ticket and securing a **Standard Railway Certificate**. This arrangement is good going from November 11th to 15th, and returning to the 22nd. This Railway Certificate must be endorsed by the Secretary at the Exhibition, and must be changed for a railway ticket for the return trip at a cost of 25 cents.

Hotel Accommodation.

Members of the Association will find plenty of accommodation in Toronto during the week of the show. As some of the most enjoyable moments of a convention are spent in conversations between the sessions, it is desirable for beekeepers to stay at the same hotels as much as possible. The hotels usually patronized are the Palmer House and the Albion Hotel.

THE BRITISH HONEY HARVEST

A Hint to the Wise

In striking contrast to the reports received from the British Isles during the past two or three years, the news comes to hand that the honey harvest this season is of unprecedented bulk and of the highest quality. In some parts of the kingdom especially, great yields have been taken, and honey is said to have become a drug on the market. According to the English "Daily Mail," the bee-keepers of Devonshire who have been taking unparalleled amounts of honey from

their hives, are experiencing difficulty in selling sections even at the low price of 14 cents. The average English bee-keeper possesses but few colonies, and once more the old difficulty of marketing a fine crop in the absence of efficient organization amongst bee-keepers, presents itself. A firm of large honey buyers in London, in a communication to the Irish Bee Journal, writes as follows:

Dear Sir,—We have been inundated with offers of honey from English bee-keepers, and evidently there is a much finer and larger crop than was anticipated. The scare of the bee disease seems to have been a veritable cry of "wolf." The marketing of honey is, as you say, a matter of considerable difficulty, and our experience is not encouraging. There is an immense demand waiting to be developed but the trouble of dealing with so many small growers, few of whom are business people, makes it much easier to push New Zealand and Jamaica honey, of nearly equal quality, at two-thirds the price. We find there is no uniformity in the producers' ideas of value, and instead of the seller fixing the price we have to lose time in making bids, which, however reasonable, are scornfully refused. If the various societies could agree on fixing a standard price for the season, it would be of great service to us, who are trying to cultivate the honey trade on larger and bolder lines than it has yet been done."

The situation thus described has its lessons for Canadian bee-keepers. Here we possess a most efficient Honey Crop Committee, performing a very useful work on behalf of bee-keepers, and an institution of which Ontario bee-keepers have every season to be proud. The next step must be to enlarge the functions of this Honey Crop Committee, or better still, to bring into being a thoroughly business-like Co-operative Association of Canadian bee-keepers, capable of coping with all sorts of conditions, whether normal or otherwise. Let us not wait for the bum-

per crop—it may, and will, come next season—ers be up and doing. November convention Toronto, stand out in the dian bee-keeping as the ted a rational Co-amongst the bee-keeper

TO WHAT EXTENT BROOD REGULATIONS AFFECT AGRICULTURE

Dear Sir,—^{Indexed} During the latter part I discovered in one of my appearance of foul brood different nature from previously seen of the disease only a short time previous ton, was apparently in dition, and exceptionally Now, it seems doomed to truction.

In accordance with our lations, I at once notified inspector, Mr. Chalmers, awaited his official smile. Imagine my surprise when of a letter I learned the Mr. Chalmers had been inspect any more apiaries. However, to the credit of he expressed his personal furnished me in his letter information as to how to ac-

But what about my pledging myself to be a nature, I felt like defying regulations henceforth. inspection of the bees, I them. Though I confess a faint hope of succeeding with the treatment, and be able to state that the perfect condition. I might attention was first attracted peculiar behaviour of the the hive.

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TO WHAT EXTENT DO OUR FOUL BROOD REGULATIONS BENEFIT AGRICULTURE?

Dear Sir—

During the latter part of the season
 I discovered in one of my colonies every
 appearance of foul brood, though of a
 different nature from what I had pre-
 viously seen of the disease. This colony
 only a short time previous to my inspec-
 tion, was apparently in a healthy con-
 dition, and exceptionally strong in bees.
 Now, it seems doomed to immediate des-
 truction.

In accordance with our foul brood regu-
 lations, I at once notified our esteemed
 inspector, Mr. Chalmers, and anxiously
 awaited his official smile and appearance.
 Imagine my surprise when upon receipt
 of a letter I learned the intelligence that
 Mr. Chalmers had been instructed not to
 inspect any more apiaries this season.
 However, to the credit of our inspector,
 he expressed his personal regret and
 furnished me in his letter with full in-
 formation as to how to act.

But what about my bees? Acknow-
 ledging myself to be a novice in apicul-
 ture, I felt like defying our foul brood
 regulations henceforth. After a further
 inspection of the bees, I decided to treat
 them. Though I confess it was with but
 a faint hope of succeeding, I proceeded
 with the treatment, and I am happy to
 be able to state that the bees are now in
 perfect condition. I might say that my
 attention was first attracted by the
 peculiar behaviour of the bees outside of
 the hive.

But there is another side to my story.
 Before my discovery of the disease, I
 was contemplating moving my bees to
 a new location. Imagine myself a shift-
 less, careless beekeeper, similar to many
 that are among us; and what might in
 such a case have been the result in mov-
 ing the bees? In view of the foregoing
 I may be allowed to ask, "To what ex-
 tent do our foul brood laws as at present
 administered safeguard the interests of
 bee-keepers?"

J. W. HONDERICH,
 Milverton, Ont.

An Explanation.

Dear Sir:—

Your October number of the Journal
 is to hand, and I am rather amused at
 the statement which Mr. Haberer makes
 in reference to Mr. Schrank's inability to
 attend the Bee Demonstration in Huron
 County. Without stating who is to
 blame, I may give you a fuller statement
 of the facts in the case. Notices of
 those meetings were sent out from this
 office ten days before the dates on which
 they were to be held. As I heard noth-
 ing from Mr. Schrank until I had a com-
 plaint from one of the beekeepers that
 he had not attended the meeting some
 weeks afterwards, I wrote to Mr.
 Schrank to know what the trouble was.
 He replied that he only went to the
 postoffice once a week, and had failed
 to get the notice from the postoffice in
 time.

MORLEY PETTIT.
 Guelph, Ont.

DEATH OF MRS. W. J. BROWN

Just as we go to press we learn of the
 heavy bereavement that has befallen Mr.
 W. J. Brown of Chard, Ontario, in the
 death of his wife under exceptionally
 sad circumstances. Mr. Wm. McEvoy in
 writing us pays tribute to the many ster-
 ling qualities of the deceased lady. Our
 deepest sympathies go out to the mem-
 bers of the sorrowing family in the time
 of their trouble.



IVY RANCH, NEAR PHOENIX, ARIZONA

The bee industry in the Salt River Valley is a very profitable one, as the climatic conditions are perfect and the clover and alfalfa fields, as well as the wild mesquite, afford good feed for the bees.

REVIEW

An Index

AMERICAN BEE

With our model Foul our infallible cures, w us asking ourselves wh yet been exterminated The fact that in spite measures, we have fail tially failed, to stamp furnished bee-keepers arguments against gov ference in such matters. in discussing the subject asks by way of suggest that we have small-pox of vaccination and qu which is so rigidly call tion for the express pur it out?" He further the absence of a quaran enforced, we should hav this dread disease, as we deaths. And so with fou he has not the remotest ever be exterminated in he yet believes that with strictly enforced, there certain than that the rav well as other bee-ailmen greatly and very profit check.

In fact, though we hav getting fairly good laws tion of bee-keeping, only steps have been taken. very much to be learned matters of correctly diagn cessfully treating the ailmen Thus, although we are on mencement of our task, right road. "There is much by practical bee-keeper Bohrer, "as but very few tical experience in treatin

REVIEWS AND COMMENTS

An Index to the Best in Periodical Apicultural Literature

AMERICAN BEE JOURNAL.

With our model Foul Brood Laws, and our infallible cures, we are many of us asking ourselves why disease has not yet been exterminated from our apiaries. The fact that in spite of our state-aided measures, we have failed, or have partially failed, to stamp out the pest, has furnished bee-keepers in England with arguments against governmental interference in such matters. Dr. G. Bohrer, in discussing the subject in the A. B. J., asks by way of suggestion: "Why is it that we have small-pox in the presence of vaccination and quarantine work, which is so rigidly called into requisition for the express purpose of stamping it out?" He further remarks that in the absence of a quarantine law rigidly enforced, we should have much more of this dread disease, as well as many more deaths. And so with foul brood. Whilst he has not the remotest idea that it will ever be exterminated in North America, he yet believes that with a strong law, strictly enforced, there is nothing more certain than that the ravages of this, as well as other bee-ailments, can be very greatly and very profitably held in check.

In fact, though we have succeeded in getting fairly good laws for the protection of bee-keeping, only the initiatory steps have been taken. "There is yet very much to be learned in regard to the matters of correctly diagnosing and successfully treating the ailments of bees." Thus, although we are only at the commencement of our task, we are on the right road. "There is much to be learned by practical bee-keepers," says Dr. Bohrer, "as but very few have had practical experience in treating foul brood,

and the same is true concerning the matter of diagnosing the disease. I wish to state here that in treating foul brood, especially of the American type, no sort of slipshod work is admissible; such, for instance, as using supers from infected colonies that are partly filled with comb and honey, or comb without any honey." The writer insists, and correctly, that it is the safest plan to remove every vestige of comb, wax or foundation from the hive of an infected colony and melt or burn it. His method of treatment is as follows:—

Close the hive of a diseased colony at night, when all the bees are in, and remove it a mile or more away from the piry and treat them, and after 48 hours give them full sheets of comb foundation, and return them to their old stand in the apiary. In case the colony is a weak one, better destroy it, and burn the honey and combs, as already recommended, in most cases, for I can not be led to underrate the amount of harm that may and often does, come to an apiary in trying to practice economy by saving infected honey and comb filled with it.

Mr. G. M. Doolittle discusses in an article entitled, "Mangled Section Comb Honey," the causes that lead to the bracing of comb in sections to the separators. "First and greatest to bring on this trouble lies in not having the hive stand level." The levelling should be done using the spirit level, and he suggests the employment of concrete stands for comb-honey producing colonies.

Another trouble arises from the starters often being put in the sections in a slipshod way; so that they partly pull off, or fall down, from the weight of the bees before they become thoroughly attached to the top of the sections. Where full sheets are employed, these



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very profitable one,
alfalfa fields, as well

are sometimes placed in the sections in such a way that the edges are left so near to the separators that the bees fasten them to the nearest point. Another mistake arises from the giving of the rack of sections to the colony whilst the latter is yet too weak to fill the super or too early in the season before enough nectar is forthcoming for wax secretion. At such times the bees often "amuse" themselves by biting away the foundation, leaving great holes in the remaining sheets, which later become twisted and consequently produce badly shaped combs.

AUSTRALASIAN BEE-KEEPER

The outstanding feature in the issue of the Australasian Bee-keeper just to hand is an exceedingly interesting paper on "Nectaries," by A. D. Hardy, F.L.S., Botanical Officer of the States Forests Department of Victoria. The author ventures that nectar is more important than pollen to the bee farmer, on the ground that artificial food can be substituted during a famine of pollen, and the writer would like to know a satisfactory substitute for pollen.

"It is probable that pollen came into existence earlier in the history of plants than nectar, as we believe that the earliest formed plants, other than the bacteria and some very simple algae, were spore-bearing, wholly-submerged, aquatic forms, and these had no flowers, nor need of nectar. The pollen grain is a spore—a little spore, while the seed of the plant is a great spore in the now recognized two phases of the life of flowering plants. But nectaries are not only restricted to flowering plants. All those plants the pollen of which is distributed wholly by the wind (grasses, etc.) and cunningly contrived mechanical arrangements (as in the explosive flowers) produce no nectar, which is absent also in very many plants the flowers of which are known as "pollen flowers," e. g., "poppy," *Papaver*. It has been suggested by a specialist in this department of botany that nectaries as organs of excretion were produced by insects, and the idea is acceptable to many, including

myself. We know of the response to stimulus of other kinds. The intermittent pressure of a boot on certain parts will produce corns. The smell of a lemon or savoury foods at times causes a flow of saliva, etc. Therefore, it is quite within the bounds of probability that insects in search of tender parts of plants found them not in the bark of the stem, nor in the leaves protected by cuticle, but in the newly opened flowers, and there probed or gnawed at the juicy tissue. Just as a flow of sap towards a wound in the bark of many acacias, etc., will continue for a considerable period, so the sugary juice would flow to make good the loss caused by the insects feeding. And this repeated frequently would, through countless generations, become a habit, till at last, as have nectaries present in the unopened flower-bud, though not producing nectar until necessary.

"Now, honey glands or nectaries, as we have already noted, are restricted to those flowers that are resorted to by animals (self-fertilized flowers, such as some violets, have no nectar) and these are variously classified. Flowers favored by certain animal visitors are spoken of as "loving those animals, and we have groups known as "bird-loving," "bat-loving," "snail-loving," "insect-loving," etc. And of the insect-loving flowers we have such as "butterfly- and moth-loving," "fly-loving," "bee-loving" flowers."

The author then describes some of the intricate arrangements of flowers and their adaptation to the nectar gathering insects, as the bee. He furthermore assumes that "sometimes the honey bee, attracted by the smell of nectar issuing from the wound made in the corolla by the humble bee, partakes of the treasure in a 'take-freely-what-the-Gods-offer' spirit, acquiring the habit from which it is but a step to the practice of biting a hole in an uninjured flower; and so the honey bee, too, becomes occasionally a thief, or, rather, since there is no concealment of the deed, a highway robber!"

Three types of flowers are then considered, one having the nectar exposed, another having the nectar concealed in a receptacle, and the third with the nectar

protected by special means otherwise open tube, in the *Cobea scandens*, etc. in some detail.

The writer closes with accepted rules, barring c

"Pollen flowers are generally of star-shape, or, in some cases, "radically symmetrical" to visitors.

"Nectar flowers are generally specialised, and with the nectar concealed by projections, spines, hairs, etc., or in some cases, not star-shaped, but may be of various shapes, and are generally only in one directionally symmetrical). Such flowers; snapdragons (*Antirrhinum*), larkspur (*Delphinium*), etc.

"Reddish, blue and yellow are preferred by bees, hoverflies, which are highly attracted," writes Knuth, who is the world's greatest authority on the subject; but we have a large group of bee-loving flowers of which the great bulk have pale yellow flowers; greenish (*E. cornuta*), crimson, scarlet, pink, marginata, *E. calophylla* (sometimes)."

This author would seem to think it is the "smell of the color of the flowers" which attracts the insects, quoting from Knuth, "Insects are attracted from a considerable distance by smell. A flower which attracts them near they finally settle, the marks, serve to point to the nectar."

"We may note that flowers which are often white, and most conspicuous in the garden, are usually strong agreeable, of such flowers are attracted insects, for experimenters have watched the insects hesitate to flowers though they seem somewhat when they arrived there. In some cases of mutilation, flowers are unattractive (if the mutilation is the removal of the stripes, spots, etc.), at least

v of the response to kinds. The intermittent t on certain parts will e smell of a lemon or times causes a flow of fore, it is quite within bability that insects in parts of plants found bark of the stem, nor ected by cuticle, but in flowers, and there l at the juicy tissue sap towards a wound any acacias, etc., will onsiderable period, so would flow to make sed by the insects feed- repeated frequently unless generations, be l at last, as have nec- the unopened flower- producing nectar until

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protected by special modifications of the otherwise open tube, as, for instance, in the *Cobea scandens*, which is considered in some detail.

The writer closes with some generally accepted rules, barring certain exceptions.

"Pollen flowers are generally of circular or star-shape, or, in other words, "radically symmetrical" and well open to visitors.

"Nectar flowers are more highly specialised, and with the nectar generally concealed by projections, stamen filaments, hairs, etc., or in spurs. They are not star-shaped, but may be cut in equal portions only in one direction (bi-laterally symmetrical). Such are pea-shaped flowers; snapdragons (*Antirrhinum*), larkspur (*Delphinium*), fox-glove (*Digitalis*), etc.

"Reddish, blue and violet flowers are preferred by bees, hoverflies and butterflies, which are highly specialised visitors," writes Knuth, who is probably the world's greatest authority on flower pollination; but we have a powerful apiphilous or bee-loving group in our Eucalypts, of which the great bulk of the species have pale yellow flowers, though a few are greenish (*E. cornuta*) and a few are crimson, scarlet, pink, etc., e. g., (*E. marginata*, *E. calophylla*, *E. sideroxylon* (sometimes)."

This author would seem to accept that it is the "smell of the nectar and the color of the flowers" which attract insects, quoting from Knuth's "acceptable law," which is in general as follows:—"Insects are attracted from a considerable distance by smell. On nearer approach (one or two yards) the color of flowers attracts them nearer, and, when they finally settle, the lines and other marks, serve to point the way to the nectar."

"We may note that flowers visited by moths are often white, and, therefore, most conspicuous in the gloom in addition to the usually strong scent, not very agreeable, of such flowers. But by binding insects, for experimental purposes, experts have watched them flying without hesitation to flowers at a distance, though they seem somewhat bewildered when they arrived there. And in the case of mutilation, flowers often proved unattractive (if the mutilation consisted of the removal of the guide marks, stripes, spots, etc), at closer quarters to

insects that had been attracted to them from a considerable distance. In such cases where the mutilation of the flowers exposed the glistening nectaries the removal of the colored guides was no obstacle, as the insects approached without hesitation."

BEE-KEEPERS' REVIEW.

Mr. Tyrrell has four good articles in the October "Review," dealing with various phases of wintering. Ralph Benton in a well thought out paper on "Essentials in Outdoor Wintering," describes what experiment and his own experience under widely varying conditions of climate and place have taught him to be the fundamental principles and essential truth of the matter. In the first place he holds that the bee can stand almost any amount of cold for varying periods of time, provided other conditions are favorable, and he argues that this is to be expected from an insect which is so nearly related to the hibernating wasps, solitary bees and the bumble bees. Whilst, however, individual hive bees can withstand a comparatively long exposure to cold, yet they are unable to regain activity without external warmth, such as that supplied by the semi-torpid winter cluster. "It is this fact," Mr. Benton remarks, "which makes the problem of wintering bees in the open air a hopeful one; and the provision of a goodly and compact cluster of comparatively young and vigorous bees in each colony constitutes the first essential of successful wintering out of doors." By means of a series of curves, the author graphically represents the conditions of life in colonies under various conditions, and the reader is made to realize how late breeding carries a colony past the critical period in late winter and early spring, when so many unfortunate stocks come to an untimely end through dwindling. To keep bees breeding through the autumn months, stimulative feeding is advised in cases where there is nothing coming in from natural sources, and

protection must be given to the colonies to prevent a loss of heat during the cool nights. The amount of protection given to the bees determines in a large measure the amount of stores consumed by the colony during the winter months. "If adequate protection be given the colony, bees will winter successfully on about what they actually need for consumption, or about 12 to 15 lbs. of honey. With less protection more honey is consumed, and the result is that twenty to thirty pounds are required for wintering."

Mr. Benton advocates as the best form of protection several inches of continuous and moisture-transmitting packing about and close to the cluster. The top packing should be connected with free ventilation with the outside, permitting the outward passage of the moisture arising from the cluster below. Again, absolute quietness should be maintained, and there must not be any unnecessary disturbance or jarring in extremely cold weather.

Mathilde Candler in a second article tells us that she considers the queens of weak colonies too valuable an asset to lose, as lost they would be if their colonies were united with others in the fall. She prefers to endeavour to save the weak colonies by wintering them on top of strong neighboring colonies.

BRITISH BEE JOURNAL.

We are very glad to learn that the "Isle of Wight" disease, which has been so prevalent and has occasioned such great losses in Britain during the past two or three years, is fast disappearing. Although some districts are not yet quite free from the disease, it is satisfactory to know that there has been very little of it this season. "There can be very little doubt," says Mr. Cowan, "but that the inclement seasons we have had during the last few years have been responsible for a good deal of this disease."

The English Board of Agriculture have been investigating this disease for some

time, and the B. B. J. prints a note on the subject, giving the results of the recent findings of the scientists engaged upon the work. Instead of *bacillus pestiformis apis* being the infective agent the experiments indicate that *Nosema apis* is the cause of the Isle of Wight disease. Infection by this latter organism has been artificially produced in various ways: (a) by feeding with spores; (b) by feeding with candy on which infected bees had fed; (c) by mixing naturally infected excrement with the food; (d) by confinement in a box in which infected bees had travelled; and (e) by contact with dead infected bees.

Samuel Simmins, one of the best known of English queen breeders, and a keeper of long standing, thinks that wintering upon natural stores—especially if these are of inferior quality and contain much pollen—encourages disease. In his article entitled "Sugar Feeding and Disease," he expresses that opinion and adds: Thus we may get dysentery, although infectious paralysis is not usually accompanied by that complaint, except as a result of confinement. Contrary to general opinion, the trouble appears to be constipation, with paralysis, both probably resulting from fever.

"Because of the very fine weather there are now thousands of colonies which will stand in poor plight for wintering, simply because the combs are choked with those natural stores some of our friends consider to be desirable; and where there is any sign of the so-called new malady the excessive store of pollen will seriously discount the chances of successful wintering. There is, of course, yet time to make such preparation as would avoid disaster, but few will do other than let, what they consider, well alone.

Of course, during the busy season workers and virgin queens, to say nothing of drones, will have access to nothing but natural food, especially pollen; but in wintering there are certain advantages in supplying a pure sugar syrup, free

from pollen and known disease germs; a conclusion always sure of with honey.

Mr. J. C. Bee Mason, who is engaged upon the records of bee-life. He is the biographer of the bee. He has seen his animated photographic screen marvel at the production that must have been expected. It was, we are told, at a recent convention of the beekeepers when Mr. Mason exhibited his films, that doubts were cast upon the member of the audience who had been present. Of a second series of Mr. Herrod writes as follows: The picture starts by showing the larvæ changing from the perfect bee through the capping and then see the nurse bees feeding the young, also the queen reared from her attendants. Next comes the queen, together with the collecting nectar and pollen flowers; that is a marvel as the tongue and legs work very distinctly. Then we see the bees prepare for swarming, engaged in building queen cells, the princesses. The swarming we see it cluster. Going to a new hive, we see the prince and surplus ones killed and put in a new hive. As a finale comes the drones. Mr. Mason was congratulated on a fine production.

GLEANINGS

In our September issue Mr. Byer recounted his experiences on the occasion of his journey to a distant county for October 15th he hunted the 75 black queen occasion. Everybody knew it is, even under the circumstances to "spot" and in Mr. Byer's case

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Mr. J. C. Bee Mason is a photographer who is engaged upon obtaining bioscopic records of bee-life. He is the pictorial biographer of the bee. Those who have seen his animated photographs upon the screen marvel at the patience and skill that must have been expended upon their production. It was, we believe, at a recent convention of the B. B. K. A. when Mr. Mason exhibited some of his films, that doubts were expressed by a member of the audience as to their genuineness. Of a second series just produced, Mr. Herrod writes as follows:—"The picture starts by showing the egg and larvæ changing from day to day until we have the perfect bee, eating its way through the capping and emerging. We then see the nurse bees attending to the young, also the queen receiving attention from her attendants. Comb building comes next, together with the bee busy collecting nectar and pollen from the flowers; that is a marvellous production, as the tongue and legs can be seen at work very distinctly. The bees then prepare for swarming, being busily engaged in building queen cells and feeding the princesses. The swarm issues and we see it cluster. Going back to the hive, we see the princess emerge, the surplus ones killed and pitched from the hive. As a finale comes the slaughter of the drones. Mr. Mason is to be congratulated on a fine production."

GLEANINGS

In our September issue Mr. J. L. Byer recounted his requeening experiences on the occasion of his recent journey to a distant outyard. In Gleanings for October 15th he relates how he hunted the 75 black queens on the same occasion. Everybody knows how difficult it is, even under the most favorable circumstances to "spot" a black queen, and in Mr. Byer's case the task was

undertaken at a time when no honey was coming in, and robbing would follow upon the slightest provocation. Mr. Byer is a man of great resource, and we relate in his own words his method of procedure:

After considerable thinking, the following plan was decided upon, and it worked so well that in future operations of the kind I shall probably follow the same method. In a shallow extracting-super two combs were nailed fast in the centre; over this was placed an excluder; and on top of this again, a full-depth super (same size as the hive-bodies) was fastened. The tent was placed over the particular hive to be operated upon, and the super or supers thus prepared were placed to the left in front of the hive. Then I crawled under the tent with the smoker and proceeded to business. After a puff of smoke had been blown in the entrance a block was placed over it to prevent the bees from stampeding out of the hive in front, for kneeling there I did not care to have too many bees going up my trousers, and then again, the queen was apt to run out as well as the rest of the bees. After opening the hive the front comb was lifted out, and after a hasty look over it it was placed in the prepared super in front of the hive. This process was continued until all the combs were out of the hive, unless, of course, the queen was found on the combs, which was not very frequent, I am sorry to say. As a rule, as soon as the combs were out I would, on looking amongst the host of running bees on the bottom and sides of the hive, find the queen in a few seconds; and by actual count, out of every ten colonies I found six queens on the bottom boards, three on the combs and one on the zinc between the two supers after shaking the bees off the combs before returning them to the hives, which was of course, necessary only when the queen was not found on the combs nor in the hive. The fact that the frames were bad to handle no doubt explains why so many of the queens ran off the combs.

Naturally the question will be asked as to how many queens would be missed; and just here I might say that no one was more surprised than I at the good luck experienced. In going through the

first 75 colonies, 73 queens were found, and next morning I found a dead queen in front of one of the two missed, so that, in reality, only one queen was missed out of the lot. Then again, no doubt many will think the process followed was a laborious one, and very slow at that. By actual timing five queens an hour could be found—indeed, were found at that rate whenever we went at the work.

One morning the weather was dull and cloudy and not a bee flying; and as the robbers were bad, even when working under a tent during sunshine, I went at finding queens under circumstances which only those who have been similarly engaged can understand. From seven in the morning until a little after ten, sixteen strong colonies were examined, and every queen found. It is needless to remind one that with the tent to carry around, and with all the inconveniences of working under it, our movements were much hindered; and there can be no question but that, in a time with no robbing and plenty of honey coming in, much better time could be made.

FOUL BROOD DISINFECTION

Dear Sir:—

I am glad to see that in his second letter Mr. W. B. Bray has dropped his nom de plume of "A New Zealand Reader," which, by the way, was a very thin disguise. Mr. Bray admits having made one grave mistake that he could not dispute, but his letter was a series of mistakes all through. But the greatest mistake of all was his ever writing such a letter on a subject he has had no actual experience in, and writing so dogmatically. As Mr. Bray's last contains no information whatever to uphold his contention, it would be unprofitable to encroach further upon your space. Thanking you, I am, etc.,

I. HOPKINS.

Auckland, N. Z.

"MORE HONEY THAN STING"

By Jean S. Walker

An angry wasp and a busy bee
Met once on a clover head.
The bee at his work hummed merrily,
While the wasp with anger said:
"Why is it that mortals, one and all,
Act kindlier far by you?
I use my sting if they're in my way,
But that is my rightful due.
You do the same, yet they use you well,
But askance at me they look."
Then the wasp waxed wroth and waved
his wings.
Till the head of clover shook.
The bee worked on. When for flight prepared,
It hovered aloft on wing.
Then paused a moment, and archly said:
"I give more honey than sting."

—Canada Monthly.

"Honey-dew is a viscid saccharine exudation which is often noticed in summer on the leaves and stems of plants. It is usually, but not always, associated with aphides and other insects which feed on the juices of plants, and its flow is ascribed by some to their punctures; but the rupture of the tissues from any other cause, such as the state of the weather, seems also to produce it, and very warm dry weather seems to be necessary for the production in the sap of excess of sugar, and this is pressed out."—Dr. W. Brown in the "Australasian Bee-Keeper."

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nd a busy bee
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—Canada Monthly.

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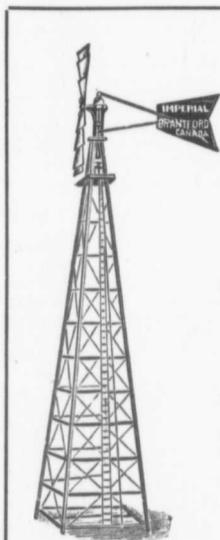
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