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# Cleanings in Bee Culture



VOL. XLII. AUG. 1, 1914, NO. 15.



# POLLYANNA THE GLAD BOOK

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By ELEANOR H. PORTER, author of  
"Miss Billy" and "Miss Billy's Decision,"

and "Gleanings in Bee Culture," one  
year, Both for \$1.50

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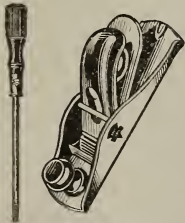
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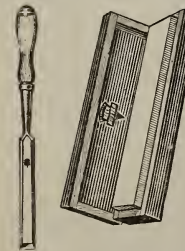
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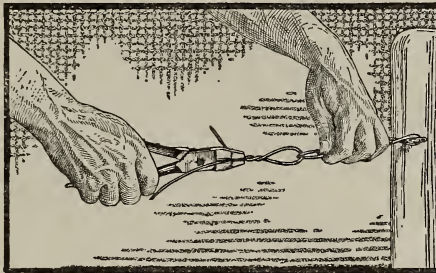
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## HONEY MARKETS

The prices listed below are intended to represent, as nearly as possible, the average market prices at which honey and beeswax are selling at the time of the report in the city mentioned. Unless otherwise stated, this is the price at which sales are being made by commission merchants or by producers direct to the retail merchants. When sales are made by commission merchants the usual commission (from five to ten per cent), cartage, and freight will be deducted; and in addition there is often a charge for storage by the commission merchant. When sales are made by the producer direct to the retailer, commission and storage and other charges are eliminated. Sales made to wholesale houses are usually about ten per cent less than those to retail merchants.

### NATIONAL BEEKEEPERS' ASSOCIATION GRADING-RULES Adopted at Cincinnati, Feb. 13, 1913

Sections of comb honey are to be graded: First, as to finish; second, as to color of honey; and third, as to weight. The sections of honey in any given case are to be so nearly alike in these three respects that any section shall be representative of the contents of the case.

#### I. FINISH.

1. *Extra Fancy.*—Sections to be evenly filled, comb firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side.

2. *Fancy.*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white, and not more than six unsealed cells on either side exclusive of the outside row.

3. *No. 1.*—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain, comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row.

4. *No. 2.*—Comb not projecting beyond the box, attached to the sides not less than two-thirds of the way around, and not more than 60 unsealed cells exclusive of the row adjacent to the box.

#### II. COLOR.

On the basis of color of the honey, comb honey is to be classified as: first, white; second, light amber; third, amber; and fourth, dark.

#### III. WEIGHT.

1. *Heavy.*—No section designated as heavy to weigh less than fourteen ounces.

2. *Medium.*—No section designated as medium to weigh less than twelve ounces.

3. *Light.*—No section designated as light to weigh less than ten ounces.

In describing honey, three words or symbols are to be used, the first being descriptive of the finish, the second of color, and the third of weight. As for example: Fancy, white, heavy (F-W-H); No. 1, amber, medium (1-A-M), etc. In this way any of the possible combinations of finish, color, and weight can be briefly described.

## CULL HONEY.

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with comb projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched-up sections; sections weighing less than ten ounces.

HONEY-GRADING RULES ADOPTED BY THE COLORADO

### STATE BEEKEEPERS' ASSOCIATION, DECEMBER 13, 1911.

**FANCY WHITE.**—Sections to be well filled, comb firmly attached to all sides and evenly capped except the outside row next to the wood. Honey, combs, and cappings white, and not projecting beyond the wood; wood to be well cleaned; no sections in this grade to weigh less than 13½ ounces.

**No. 1.**—Sections to be well filled, combs firmly attached on all sides and evenly capped, except the outside row next to the wood. Honey white or very slightly off color. Combs not projecting beyond the wood; wood to be well cleaned; no section in this grade to weigh less than 13½ ounces.

**CHOICE.**—Sections to be well filled; combs firmly attached; not projecting beyond the wood, and entirely capped, except the outside row next to the wood. Honey, comb, and cappings from white to amber, but not dark; wood to be well cleaned; no section in this grade to weigh less than 12 ounces.

**No. 2.**—This grade is composed of sections that are entirely capped, except row next to wood, weighing from ten to twelve ounces or more, also of such sections that weigh 12 ounces or more, and have not more than 50 uncapped cells all together which must be filled. Combs and cappings from white to amber in color, but not dark; wood to be well cleaned.

**EXTRACTED HONEY.**—Must be thoroughly ripened, weigh 12 pounds per gallon. It must be well strained, and packed in new cans. It is classed as white, light amber, and amber.

**STRAINED HONEY.**—This is honey obtained from combs by all other means except the centrifugal extractors, and is classed as white, light amber, amber, and dark; it must be thoroughly ripened and well strained. It may be put up in cans that previously have contained honey.

**ST. LOUIS.**—Our honey market is still very quiet and dull. Some Southern extracted, and also comb honey, has been arriving lately, but prices have not been well established. We are quoting to-day Southern extracted strained, light amber, in barrels, 5 to 6; in cans, 5½ to 6½; dark honey ½ to 1 ct. less; fancy white clover in combs 14 to 15; amber, 10 to 12; broken and leaky, 7 to 8. By the case, fancy clover, \$3.00 to \$3.25; light amber, \$2.25 to \$2.50; dark and inferior, \$2.00. Beeswax lower, and now quotable at 33 for prime; impure and inferior, less.

R. HARTMAN PRODUCE CO.

St. Louis, July 20.

Honey reports continued on page 5.

## Shipping-Cases....Special Deal

SINGLE-DECK, 24-section, 2-inch glass shipping-cases; special price. Write us.

Ship us your old comb and cappings. It means more wax and more money for you.

We buy honey for cash. Write us what you have to sell.

## THE FRED W. MUTH COMPANY

204 Walnut Street "The Busy Bee Men" Cincinnati, Ohio

# SPECIAL DELIVERY

During this month we shall double our usual efforts in points of delivery and service. We carry nothing but the Root make, which insures the best quality of every thing. We sell at factory prices, thereby insuring a uniform rate to every one. The saving on transportation charges from Cincinnati to points south of us will mean quite an item to beekeepers in this territory. We are so located that we can make immediate shipment of any order the day it is received.

## 64-page Catalog

Our 1914 catalog contains double the pages of former editions and requires extra postage. It is filled from cover to cover with complete lists of goods in every line to meet every requirement of beekeepers. If you haven't received a copy when you read this, be sure to ask for one. It will save you money.

## Shipping Cases

To sell your crop to the best advantage it must be well put up in attractive style. We have shipping cases that answer every requirement of looks and utility. Small producers who sell their crops locally will be interested in the cartons in which comb honey is put up to sell to the fancy customers at top-notch prices. We have honey-cans, too, in cases for those who produce extracted honey. In fact, there isn't any thing we don't have that the beekeeper needs, either to produce his crop or help to sell it.

---

**C. H. W. Weber & Co.**

2146 Central Avenue

Cincinnati, Ohio



# Gleanings in Bee Culture

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Editor

A. I. ROOT

Editor Home Dept.

H. H. ROOT

Ass't Editor

J. T. CALVERT

Business Mgr.

Department Editors:—Dr. C. C. Miller, J. E. Crane, Louis H. Scholl, G. M. Doolittle, Wesley Foster, J. L. Byer, P. C. Chadwick.

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**BOSTON.**—We quote fancy and No. 1 white comb honey at 15 to 16; fancy white extracted honey in 60-lb. cans, 11. Beeswax, 30.  
Boston, July 17. **BLAKE-LEE CO.**

**LIVERPOOL.**—The market for Chilian beeswax is steady; 22 bags have been sold at \$41.28 to \$43.74 per cwt.; 84 bags have arrived per Maple Branch. The Chilian honey market is slow, 248 barrels per Maple Branch are sold afloat at \$4.56 per cwt.  
Liverpool, July 8. **TAYLOR & CO.**

**ZANESVILLE.**—There is little change in the honey situation since last report. With some slight improvement in general business conditions there should be a little better demand. We quote best grades of white-clover comb at 16 to 18 in a jobbing way, 17 to 20 wholesale. Western honey would rule a cent or so less. White extracted in 60-pound cans, 9 to 10. Dealers are being paid for beeswax 32 to 33 cash, 34 to 35 in exchange for supplies.  
Zanesville, July 16. **E. W. PEIRCE.**

**INDIANAPOLIS.**—Crop in Indiana is generally short. Some comb honey is being offered from southern States, but at present no prices are established on new crop. Considerable comb honey is being carried over from last season, but market is almost bare of extracted honey. Beeswax is in good demand, and producers are being paid 32 cents in cash, and a slight advance where goods are taken in exchange.  
Indianapolis, July 30. **WALTER S. POWDER..**

**CHICAGO.**—A little of the honey harvest of 1914 is on the market; but it is meeting with very little demand, and prices are not at all firm. Sales are being made at from 14 to 15 for the best grades of white comb honey in the 1-lb. sections with the ambers at from 1 to 3 cts. per lb. less. Extracted ranges from 7 to 9 for the white grades, and from 6 to 8 for the amber, all according to flavor and other qualities. Beeswax continues to sell upon arrival at 35 if of good color and free from sediment or adulteration of any kind.  
Chicago, July 20. **R. A. BURNETT & Co.**

**KANSAS CITY.**—There is no change to note in our honey market. No new comb is coming in, and our market is well supplied with extracted honey. Weather is still hot, consequently no demand to speak of for extracted. We think the first shipments of honey will sell as follows: We quote No. 1 white comb honey, 24-section cases, \$3.25 to \$3.50; No. 2 ditto, \$2.75 to \$3.00; No. 1 amber, \$3.00 to \$3.25; No. 2 ditto, \$2.75 to \$3.00; extracted white honey, per lb, 7½ to 8; extracted amber, 7 to 7½; beeswax, 25 to 30.  
Kansas City, July 15. **C. C. CLEMONS PRODUCE CO.**

**NEW YORK.**—There is practically nothing new to report. Some new-crop comb honey is arriving from the South, and fancy stock is selling at 16; lower grades, 12 to 14, all according to quality. We still have a lot of last year's stock on hand, all off grades, more or less candied, for which there is absolutely no sale at any reasonable price. As to extracted, the market is quiet, and no prices have been established as yet for new crop, or California, Western, or Eastern honey; in fact, there is none in the market as yet, excepting from the South, which finds fairly good sale at former quotations. Beeswax is more plentiful, and in less demand. Prices range from 34 to 36.  
New York, July 17. **HILDRETH & SEGELKEN.**

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**The SAVINGS**  
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**THE A. I. ROOT CO., Medina, Ohio.**

## KIND WORDS.

I could not think of missing father Root's Home papers as long as I can dig up one dollar.  
Auburn, N. Y., July 20. **J. J. WOODALL.**

LIVING 25 YEARS INSTEAD OF 10.

May the good Lord grant you 25 years of good health and happiness, and not only ten, as you ask on page 522, July 1, 1914.  
Tarrytown, N. Y., July 22. **JOSEPH HAFNER.**

You certainly are entitled to commendation for promptness in filling recent order for queens. Order was mailed after 6 P. M., July 8; queens received 11 A. M., July 18. Less than ten days from here to Medina and back is "going some." All arrived in elegant shape, not even a single worker dead in the cages.  
Portland, Ore., July 20. **PORTLAND SEED CO.**

A KIND WORD ABOUT THE BEES AND SOMETHING ELSE.

*Mr. A. I. Root.*—The bees arrived in perfect condition July 17 at our station (temperature 92 in the shade), and I got them July 18, as we are eight miles from a station.

I am a very busy woman, else I would try to tell you how much pleased we are with your useful life, and the cheer it adds to our life as we meet it in GLEANINGS. We are doing all we can to introduce our friends and neighbors to you through your writings and the work you have done in regard to bees.

Your life is helping my boy.  
The bees are doing well in their new hive. This is the third day in the hive.

**MRS. G. W. ROBINSON.**  
Meredith, N. H., July 21.

[With the extremely warm weather we have been having this summer—probably hotter than for several years past—I felt sure there would be trouble about shipping bees by the pound. As Ernest has explained, the particular difficulty is to have the water-bottle just right, and we are still experimenting. When I showed the above letter to a member of our firm who has had considerable to do with this branch of our business he said the reports did not all read like this, especially during a hot summer. The above refers to a single pound of bees. It has been suggested that when the weather is up in the 90's we had better use larger cages than are required at ordinary temperature.—A. I. R.]

# Gleanings in Bee Culture

DEVOTED TO HONEY, BEES, AND HOME INTERESTS

Established 1873

CIRCULATION 35,000

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A. L. BOYDEN, Advertising Manager

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For catalog and inquiries write at once : : :

## Emile Bondonneau

Root's General Agent for Eastern Europe and Colonies

154 Ave. Emile Zola, Paris 15 (France)

# Eleventh-hour Needs

Notwithstanding the heaviest demand for supplies ever experienced here, we believe that, with very few exceptions, our customers have been served in a prompt and satisfactory manner.

As it is not always possible to anticipate one's exact requirements, something—hives, supers, sections, or foundation—may be needed at almost the last minute. These rush orders we can now fill with the utmost despatch. Then there are the seasonable goods—bee-escapes, shipping-cases, extractors, tin cans, glass jars, labels, etc., any of which we can furnish on short notice. It will be to your interest to look carefully through our illustrated catalog, which will be mailed you on request.

### FLOODED STOCK

There still remain a few odds and ends of flood-damaged goods. As long as they last, any of the following will be sold at just one-half the catalog price of new goods. Cash must accompany remittance, and right is reserved to make any reasonable substitution.

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Danz. brood-frames,  
Daisy, Root, and Parker foundation-fasteners.  
Spur and tracing-wheel imbedders,  
Miller and division-board feeders, set up,  
Carlin foundation-cutters, tin,  
Porter bee-escapes. Tinned wire.  
Bingham Engine and Little Wonder smokers.  
Manum swarm-catchers and poles.

## E. W. Peirce, Zanesville, O.

Airdome Bldg., South Sixth St.

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# Gleanings in Bee Culture

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## EDITORIALS

### Our Cover Picture

THE view shown on our cover for this issue calls to mind the story of the hilly farm where the ground was so steep that one looking up the chimney could see the cows in the meadow outside. There are no cows in the meadow in this instance; but the view certainly bears no resemblance to a prairie. The picture shows a part of D. M. Bryant's apiary at Ethelfels, Va.

### Edition of Annual Report in Iowa - Exhausted

MR. FRANK C. PELETT, State Inspector of apiaries for Iowa, has advised us that there are only a few copies left of his annual report, and that he can no longer supply requests outside the State except to libraries. Quite a large edition was printed, which was expected to last possibly for two years; but there has been such a demand for them that they are already nearly gone in less than six months.

### Sending Goods by Parcel Post

THE following letter from a subscriber will explain:

In GLEANINGS for July 1st editorials, Limitations of Parcels Post, you say it should be understood that many things can be sent cheaper by express than by mail. I think when a customer orders goods by parcel post, that it should be sent that way if possible, regardless of cost, as your customers often live on rural routes several miles from express office, which would mean a delay by not knowing when goods arrived at express office as well as the good part of a day's journey to and from the depot to obtain goods after notice of arrival of same, while by parcel post they would be delivered same day or the day following, which often means dollars to the busy beekeeper.

Filion, Mich., July 11.

DAVID RUNNING.

In the editorial referred to, if we did not make it clear at the time we wish to make it so now, that no dealer will take on himself the liberty of sending goods by express if there is no express office where the customer lives. But the chief trouble complained of was that customers would demand that a 50-lbs. weight be sent by parcel post when clearly the limitations of parcel post forbid

it. If a customer will ask his postmaster before ordering goods he will be told what can and cannot be done.

### Nearly Lost his Life in Taking a Swarm from a Tree

A STORY has been running through a number of eastern papers telling of a thrilling experience which Milton Robb, of Coleville, Pa., had in attempting to get a swarm of bees that had clustered on a limb of a tree. Mr. Robb had gone up the tree intending to saw off the limb and allow the branch to drop to the ground below where a hive had been prepared. Miscalculating the weight of the limb and bees he was nearly killed by the limb sagging down, throwing the bees all over him before he could get out of the way. As it was some time before his brother could get help to rescue the man from his perilous position the result of the undertaking came very near being serious.

In sawing off a limb on which a swarm is hanging, a cut should be made with the saw on the under side of the limb perhaps a fifth or a quarter of the way through; then, after sawing on the upper side, if the limb breaks off it will fall and not swing in toward the tree.

### Outdoor Feeding at our Home and Basswood Apiaries; Objections to Outdoor Feeding

SINCE our honey-flow at Medina was over we have had some difficulty in raising queens at Medina and vicinity. The extremely hot weather has so parched the ground that there seems to be nothing bearing nectar in reach of our yards except the one located in the swamp near Akren, as spoken of elsewhere. It has been almost impossible to get into our hives to do any thing. The last flow we had was basswood; and when that stopped the bees were crazy to steal, beg, or borrow. Queen-rearing operations were brought almost to a standstill. We supplied the boys with large cages to set over the hives while they were working. But that did not



stop the pilfering. Finally we started up our outdoor feeders, when, presto! the ugly disposition of the bees as well as the robbing stopped instanter.

For the benefit of those who may have forgotten about feeding outdoors, we may state that only sweetened water is used for the purpose. That is to say, we mix sugar and water in the proportion of ten parts of water to one of sugar. This is placed in the trough feeders of the Simplicity or Alexander type. For 50 to 100 colonies there should not be less than 12 of such feeders. In other words, the feeding area must be scattered over considerable area to prevent the bees from crowding each other.

The strength of the sweetened water will depend somewhat on weather conditions. Sometimes a ten-to-one solution is a little too strong, causing the bees to rush at it too hard. In that case we have used a strength of twelve to one. At other times eight to one is too weak, and the bees will hardly touch it.

If one cannot obtain the ordinary trough feeders he can use a series of shallow dishes, pouring about an inch or so of syrup into each one of these receptacles. Then throw in a few handfuls of straw or dry grass so the bees will not drown in the mixture. The advantage of the trough feeders is that the bees do not meet the obstruction of the straw against their wings in the attempt to fly, thus prematurely wearing out their wings. The objection to the straw may be overcome by using wooden floats made of several slats nailed together.

There will be no need of practicing outdoor feeding except in cases where hives must necessarily be opened. In the production of extracted honey it may sometimes be necessary. In some cases, when one is extracting after the general honey-flow, he may find it an advantage to practice outdoor feeding during the time the hives are being opened. In such a case he should use honey as a sweetening agent rather than sugar, otherwise he will get sugar in his honey—enough so it might cause Uncle Sam to class it as adulterated.

Feeding in the hives is far to be preferred except to prevent robbing. Outdoor feeding causes the bees to wear themselves out unnecessarily, since the flight back and forth to outdoor feeders, the jostling and rubbing themselves against each other in their struggles to get at the sweet, causes them to wear out their wings. The feeding in the hives produces no such effect.

Again, it sometimes happens that one finds his entire yard is on the verge of starvation. When he discovers that this is the

case he can feed at once by feeding outdoors. Later he can practice the in-hive plan, which we decidedly recommend.

The outdoor feeding has the further objection that other bees in the neighborhood, including those of other beekeepers, are fed at your expense.

### **Migratory Beekeeping in and about Medina and Akron, O.; Bee-forage at Swamps in the Fall; a New-old Scheme to Make Increase on Swamp Bee-pasture**

WE have been practicing migratory beekeeping, moving bees from Medina to Florida and from Florida back again after making increase. In spite of the fact that we brought back the equivalent of about 900 colonies we have only about a third of them left, the rest of them being all sold off for nuclei and pound packages. At the present rate we shall not have a hundred colonies left. If so we shall be up against the problem of making increase so that we can have enough bees to send a carload south again, if we should so decide.

We can make a colony, according to experiments made by our Mr. Selser at Philadelphia, by feeding sugar syrup, for about \$1.00. But this amount on 300 colonies would be \$300. With an automobile truck for moving bees from one locality to another, \$300 would be more than enough to move the bees in all directions from Medina, and then move them back again for cellar wintering, provided, of course, suitable localities could be found where the bees can breed up on natural fall pasturage, and thus eliminate the cost of sugar.

During the last week or so we have been scouring the country in an automobile. During one of these trips we came in contact with Mr. A. J. Halter, of Akron, Ohio, 20 miles away—a city where more rubber tires are made for automobiles than in any other city in the world. At one of Mr. Halter's outyards near a swamp he discovered he could make increase after the main honey-flow was over, with very little expenditure for sugar. Some years he does not buy any. As we are needing more bees we bought a hundred colonies of him, and have engaged him to increase this hundred in that swamp location up to two hundred before the bees are removed to Medina, and he thinks he can do it. As this apiary is near big swamps, there is an abundance of bee-pasturage. As soon as clover and basswood stop there is a succession of one flow after another until late frost during the first of October. Sometimes, says Mr. Halter, the



bees breed so fast that they will swarm unless given a large amount of room. At other times the flow is intermittent, but just fast enough most of the time to keep up breeding; and when the bees go into winter quarters they are in fine condition.

Ordinarily there is not much honey in most of our northern localities after Sept. 1; but after that date Mr. Halter has split his colonies in halves and built up each half into a fair colony for winter. We are starting with a hundred colonies about the last of July. What increase he will be able to make for us during the next two months remains to be seen; but we are arranging to send over more bees where there are something like 1000 acres of swamp land, only parts of which are used for pasturing cattle. If we can "turn the trick" we shall pasture bees there also.

#### THE BEE-FORAGE IN THAT THOUSAND-ACRE SWAMP.

We had a great curiosity to know what might be found in that swamp where bees breed so well, and accordingly drove over this week. We took along Dr. C. D. Freeman, a botanist, and Judge Kennan, of this place, and on arriving at Akron picked up Mr. Halter. Together we went clear around the swamp with Mr. Halter as guide; and one needs a guide in such dense shrubbery and underbrush. We would penetrate the swamp a half-mile or so, and then go back to the machine, run up the road a distance of several miles, and then take to the swamp again. In that way we traversed the whole area, or, to speak more exactly, the outer edge of this series of swamps.

It has been said that a large portion of this swamp land covers a subterranean lake; and the statement has been made that certain of the islands where the water comes to the surface are really floating islands, because their position changes every now and then, especially after a big wind. The further statement is made that there are certain bottomless pits and other places where one may be so mired that unless he can secure help he will be buried in unknown depths. (We have accepted the two last statements with a few grains of allowance.) We did not penetrate far enough into the swamp land to form very much of an idea of its interior. After we had gone half a mile we concluded it would be far more practicable to hire an aeroplane, as it was almost impossible to penetrate some of the dense thickets. However, we came to the conclusion that what we found on the outer edges of the swamp we should probably find at the interior.

Here were hundreds and hundreds of acres of waste land, some of which cannot be used even for cow pasture; but, fortunately, we found a number of well-known honey-plants—plants which we would not have recognized except for the assistance of our friend Dr. Freeman. First, there was the familiar sweet clover on the upland. Then came the common milkweed. But what attracted our attention particularly on one of these incursions was a mass of showy red blossoms that were distributed over small patches here and there over the swamp land. Dr. Freeman identified this as swamp milkweed (*Asclepias incarnata*). The bees were busily at work on it—hundreds and hundreds of them. Then we found other hundreds busy on the blue verbena, sometimes called "vervain" (*Verbena hastata*). The roar of the bees as they made their way back and forth from our apiary a quarter of a mile away; the blue and the crimson as we found it here before our eyes in the swamp caused us to see visions of beeyards scattered around these thousand acres; but this vision may materialize in only a very limited way.

"But, Mr. Halter," we said, "what comes on next when these are all gone?"

"Look," he said, as he pointed out some boneset, or thoroughwort. "Here is a plant that is supposed to have wonderful medicinal value."

When we asked the doctor what he thought about it he gave expression to one of those dubious smiles that convinced us he did not take much stock in the statement.

For the benefit of our botanical friends we may say this is known as *Eupatorium perfoliatum*. Boneset, or thoroughwort, is a good honey-plant for breeding up; but the honey is of a very inferior quality. Unfortunately it comes on at a time when buckwheat is being stored. Buckwheat honey with boneset in it is practically ruined for table use, for the honey, like the leaves of the plant, is bitter.

Pushing on further we found various species of wild sunflower; acres and acres of goldenrod; button-bush; some species of saw-weed, and asters galore; and last but not least some stray specimens of Simpson honey-plant, or figwort (*Scrophularia nodosa*).

This plant, be it said, provoked a good deal of discussion thirty years ago. A. I. Root, in his early days, had a big plot of it; but after trying that and the spider-plant he concluded that, while both were remarkable yielders of nectar, the cost of cultivating either of them would render it unprofitable to set them out for honey alone.

It is quite remarkable, but nevertheless true, that this Hudson swamp land is not wet or spongy at this time of the year. The soil is of a black muck in character; and, while soft under foot, it is not wet in the summer or fall, although Mr. Halter says that in the spring of the year this land is covered with water.

#### THE MENTOR SWAMPS.

We visited some big swamps near Mentor and Ashtabula, in the northeast part of the State, in company with Dr. E. F. Phillips. We told him what we had found near Akron, or, more exactly, Hudson, O., and he remarked that his parents lived in Ashtabula, and he desired to look over this swamp with us if we could spare the time. As we had already gotten the swamp fever (or mania) we were curious to know what we should find at Mentor; but examination showed an entirely different condition. A large portion of it is covered with about a foot of water with a heavy growth of brush, but only a few honey-plants, and these scattering.

#### MILKWEED POLLEN MASSES; DO THEY KILL BEES?

While we were studying the swamp milkweed we had a curiosity to know whether the bees carried away any pollen masses such as are found on common milkweeds. Stories have been told at different times of how bees have been killed by these membranous disks sticking to the legs; and the late Dr. Riley, of the Bureau of Entomology, once suggested that when bees become a nuisance to plant milkweed and thus kill them off. A very close examination of some of the bees working on this species (*Asclepias incarnata*) showed that there were some pollen appendages sticking to their legs; but they were by no means as large or as troublesome as those from the common milkweed, *Asclepias syriaca*. As these swamp milkweeds have been growing in this vicinity for years, and as Mr. Halter has been able to make a good increase year after year, the presumption is that this particular species is in nowise troublesome. The fact is, even the common milkweed pollen masses are not as destructive as generally claimed.

With the swamp-fever mania still clinging to us we had a curiosity to know whether we should find the same set of honey-plants in the swamp lands adjoining a little lake about five miles south of our home apiary at Medina. We drove out this morning, July 28, and were gratified to find many of the same species, and a little yard of bees belonging to Mr. S. A. Heavelin were storing honey in the supers, while our

bees were gathering absolutely nothing. We did not, however, find very much of the swamp milkweed, but quantities and quantities of blue verbena, and acres of boneset; also a large amount of goldenrod and wild sunflower.

#### THE PRACTICAL SIDE OF MIGRATORY SWAMP BEEKEEPING.

The practical side of this whole proposition is that many of our readers, in this year of partial or complete failure of clover, will be able to find localities near them that will furnish plenty of fall pasture. It would be well to make a trip through the country; and if you know of certain swamps within your reach you would do well to examine them thoroughly; and if you find any of the honey-plants we have named, and your bees are doing absolutely nothing, it may pay you well to move them, for there is nothing like a natural honey-flow to make bees breed up and fill up for winter. We expect to try out the proposition about Medina, and the results will be given in these columns.

We have not yet decided whether we shall go south for more bees. If we can breed them up in the fall within fifty miles of us, or within reach of an automobile truck, it will certainly be cheaper than paying freight of \$1.00 a colony on bees from the south.

#### OUR APALACHICOLA PROPOSITION NOT A GREAT MONEY-MAKER.

In this connection, perhaps it is only fair to say that, after all the expense figures were in, our Apalachicola bees cost us much more than we had expected. Had it not been for our general sale of bees and queens we would have lost out on the proposition. It is only fair for us to say that, had we been running those bees for honey only, with the poor season we had locally, we should have been out of pocket. This is only another way of saying that the average man whose only source of income from the bees is the honey would probably lose out if he takes a carload south and then ships them back again after making increase. If one can make an increase in his own locality, he had better do it and thus save freight. The freight and risk are two big items that can not be eliminated.

We do not regret our Apalachicola experience, however, even if it was the kind that Josh Billings says "comes pretty hi." In any event it was worth all it cost for this journal alone. Probably no bee enterprise on a large scale has attracted wider attention than this did. We shall probably repeat the experiment this winter in a modified form.



Dr. C. C. Miller

## STRAY STRAWS

Marengo, Ill.

P. J. HOEVEL, p. 476, I fumigated many combs with bisulphide of carbon, used them afterward, and never saw a sign that it hurt them for brood or honey.

REV. H. S. FRITSCH'S sermon, p. 561, is fine. But instead of quoting "deliver us from evil," why not "from the evil one," as in the American Revision? Isn't that Medina congregation entitled to the best there is?

WERE any of you veterans ever caught without your glasses when you wanted very much to read a little bit of fine print? Next time make a pinhole in the corner of a card or piece of paper, hold it very close to one eye, and it will help you out.

JOSEPH GRAY says, take from a strong colony a comb with the queen, put it in the upper story over the excluder, leaving the remainder of the brood below, and a queen will be reared and mated below, and there will be no swarming. Will it work with others?

P. C. CHADWICK, you think preference for a certain kind of honey is a matter of education rather than of taste, p. 491. Isn't it both? I produce little but white-clover honey, and my son was educated in that direction; yet he prefers dark fall honey to the best clover. My wife prefers clover, while one of her sisters, with the same education, thinks buckwheat far superior.

ADRIAN GETAZ suggests that those who question my giving only 20 days for workers to develop should not overlook the fact that if they have known bees to take longer time the cases may have been exceptional. From various reasons bees may not always maintain the requisite 98 degrees in the cluster, and in any but very hot weather the outer part of the cluster must be cooler than the rest. I'm submitting the question again to the bees, and I wish others would.

E. H. CARR asks how European foul brood is first introduced into a hive if my theory be correct that it is continued by the nurses eating larvæ freshly diseased. This last, I think, is the usual way. In exceptional cases a spore may occasionally get into the baby's food some other way. When a diseased colony is robbed, the foul germs are in abundance, and it is nothing strange that some are carried by the robbers; and of these a single one happening in a baby's dinner is enough to start the whole business. Please remember, however, that my theory is only a theory, and I'm ready to abandon it whenever a better theory is offered. [It is quite certain that European foul brood is

not carried in exactly the same way as American; but on the other hand it is clearly evident that it *may* originate in precisely the same manner. We shall be glad to get reports from those who have had experience with the European type, detailing how that disease is communicated.—ED.]

ARTHUR C. MILLER'S splendid article, p. 495, and the editorial, p. 485, reminds me that imbedding *heated* wires originated "in this locality" with Miss Emma M. Wilson, and some may like the original plan. The foundation having been put into the wired frame, hold the frame, wired side down, flat over the blaze of a gasoline-stove. With one hand move the frame so as to let the blaze follow the line of the wire, while at the same time the tips of the fingers of the other hand are lightly pressed upon the foundation immediately over the blaze. The wax heats so slowly that it is little affected, while the wire heats so rapidly that it melts its way into the foundation, where it immediately cools as the frame moves along. The result is that wax closes up over the wire, just as if it had grown there, leaving a perfect job. Practice will teach how rapidly to move the frame, and how close to hold it to the blaze. [Miss Wilson was probably the first to use the plan that is both neat and quick; and we wonder that it has not been used more generally. There is nothing superior to it except electricity.—ED.]

W. P. FRITZ wants to know how I manage to have the fifth super on before July 1, and whether I use combs drawn last year. I use only a single section or bait with drawn comb, and that in the first super. But the fifth super on doesn't mean that five supers are filled, by any means. The supers are given one at a time as I think they may be needed; and by the time the fifth super is given it is something like this: Next to the hive is a super half full or less, then one a little more advanced, then two that are filled but not entirely sealed at the outside, then one entirely empty on top, or perhaps with just a start made in it. If the flow should suddenly stop, I'd be in a bad fix. But there is a wealth of clover bloom, and I'm not afraid to risk a good deal. All but the top super are well filled with bees; and when I show my confidence in the bees by giving them big room they seldom betray that confidence. The wonder is that they have done as well as they have, considering that there has been so much cold weather, and it's been wet, wet, wet. [It has been hot and dry, dry, dry here.—ED.]



J. L. Byer,

## NOTES FROM CANADA

Mt. Joy, Ont.

Good advice by friend Holtermann on p. 467, June 15, regarding control of swarming at out-apiaries, and I would urge beginners to take his methods if they wish to be *absolutely sure* as to conditions of the colonies during honey-flow. It is a tremendous amount of work examining *every colony every week*, as he advises; but as he has men to do the work and I rough it alone mostly, needless to explain why we differ a bit on this subject. But I just wonder if he has examined, or rather had his helpers examine every colony each week during the last month. For once at least I venture to say he has not gone to all this trouble. Personally I feel sorry to say that we have not examined a single colony to see if they were thinking of swarming. A non-swarming strain surely—when not a bit of nectar is coming in.

\* \* \*

Just one month ago—June 11—I wrote that prospects were not very good for clover honey in Ontario this year, and stated that a light crop at best was all we could reasonably expect. Instead of a light crop, we have in our locality a total failure, and about all reports I have received up to date from other parts of the Province tell the same story. In the July 1st issue I stated that much old honey was in the brood-nests as well as quite a lot of fresh nectar gathered from maples, etc., and I was rather afraid at the time that some of this darker honey would not be turned into bees and that it would go into the supers. Needless worry in this case, as many hives are at this date, July 11th, lighter than they were a month ago. Continued cool weather and drouth explains this unusual condition, and even if we would have had much more clover than we had, I doubt if much honey would have been stored owing to unfavorable weather conditions. In localities where they have basswood, some honey may yet be gathered from that source, but as basswood is now scarce in most places and an uncertain yielder at best, it looks as though Ontario will have practically no white honey this year. There is some buckwheat around us, and naturally we are hoping for at least enough honey from this source later on to fit the bees for winter.

While it is of no use to borrow trouble for next year, it looks at this date as though 1915 will be another year of failure in so far as the clover is concerned, as the long-

continued drouth has given the freshly seeded alsike a great setback, and what plants are left are small. Of course this condition may be only local, as many localities may have had showers that did not come our way.

\* \* \*

The editor's write-up of the district around Haileybury, Ont., page 446, June 15, was read with interest by myself, as I have been through the country and noted its honey-producing possibilities, writing up my impressions in the *Canadian Bee Journal* some few years ago. I surely believe that there are great possibilities in that country, but it is good to remember that, generally speaking, the farther north one goes, the more uncertain are the seasons in so far as late frosts and very cool weather are concerned, during the months of April and June. Then again frosts often come quite early in the late summer and fall, as on one occasion when visiting my sister at New Liskeard, a town just a few miles north of Haileybury, all tender vegetation was frozen on Aug. 15th if I remember correctly. However, taking one year with another I suspect they are as sure of a crop as we are further south. At any rate, the district in question has always had a fascination for me ever since I visited the country. As to wintering, I would not fear it in the least, as a frost-proof *dry* cellar will winter the bees all right. At Milberta, above Haileybury, I knew of one lot that wintered well outdoors, but the bees were covered over with snow quite early in fall and remained so till spring. As the Editor says, the winters are very cold and the summer season short, but my sister who lived there for some time (her husband ran a large market garden) found the climate not at all disagreeable. When up there one year in August, I was looking at a few colonies owned by the postmaster in Haileybury, and at that time the bees were building beautiful sections of water-white honey. Outside of the town there were hundreds of acres of willowherb, so there was no doubt that the honey was coming from that source. But, Mr. Editor, your caption "cold northwest" is a bit misleading, as Haileybury is straight north from Toronto somewhere about 400 miles or more, and, if I mistake not, Toronto is some east of Medina. But as the conditions will be pretty much the same for 500 miles west and many miles east of Haileybury, perhaps after all you may not be so far out of the way

# BEEKEEPING IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.

Occasionally we find a colony that forges ahead and stores much more honey than the others, though having only an equal show with the others.

\* \* \*

A part of my sage range is on red soil, part on sandy loam, and a part on white clay; but the honey from it all was white. We had several different kinds of climate during the season, but the honey remained the same in color.

\* \* \*

Little is heard at the present time of black brood, but it should not be forgotten. Another season of dearth will bring it forward again. Better get in some good Italian stock while the time is ripe. It may save much loss another year.

\* \* \*

Some peculiar conditions are noted in the condition of bees in the San Bernardino Valley. Many of the apiaries along the south slope of the valley that produced quite a few cases of honey last season are this year far behind those on the south of the valley that did not produce a pound of surplus last year.

\* \* \*

There are many times during the year when I am working my way up the steep rough road to my bee-ranch that I almost make up my mind to move down further in the valley; yet when I get a good crop I am ready to let them remain where they are. With some labor I can keep the roads in repair; but to find a location such as I have is not an easy task.

\* \* \*

I have some hive-lids, made five years ago, of pulp board (commonly called heavy pasteboard), such as is used to make heavy boxes. The board is about  $\frac{1}{8}$  inch thick, and is nailed to the lid-frame after having been treated with crude oil—two layers of board to each lid. It makes a cheap, light, durable lid; but treating the board with crude oil does not appeal to me. It's a nasty job.

\* \* \*

The longer we live the more we learn, if we don't think we know it all. My helper, Mr. Byron Crawford, fixed up a robber-trap when the robbers got to bothering him about his work, and made increase with them. After his trap got pretty well filled he set it to one side until the bees rather lost interest in home, then he gave them a

frame of brood. Strange to say, they took kindly to the joke, and went to work. To be sure, some of them found their way back to their own hives, but a sufficient number stayed to start a good nucleus.

\* \* \*

A western beekeeper shipped two cases of fancy water-white sage to an eastern customer. Shortly it came back with the information that if the customer wanted honey made from granulated sugar he could make it himself. This customer is not the only one in the world who has not seen water-white honey. It is a fact that the public prefers honey with color to the whitest, for they are better acquainted with it.

\* \* \*

A gentleman from the Hawaiian Islands conceived the idea of growing sweet lemons by selecting a certain soil rich with elements that go to make fruit sweet. Just how he is figuring this out I will not use space to tell, but his theory is correct. I fear, however, he will come out like a neighbor of my father's who once had a theory for raising sweet potatoes. When the season was over he said the theory was correct, but the potatoes were not worth digging. We have trees in California that bear both sweet oranges and *sour* lemons.

\* \* \*

Mr. E. E. Lawrence, a noted queen-breeder formerly of Doniphan, Mo., has come to the golden West to spend the remainder of his years. He has purchased property in this city, and expects to continue the business of breeding queens provided he can find a location where he can secure pure matings, and one that at the same time is not too far from his home. I feel particularly fortunate in having Mr. Lawrence only a few blocks from my home, as he is a man well versed in the art of beekeeping, and exchange of thoughts with such men is beneficial. A matter of remark in his coming is the fact that he came overland in a Ford automobile with his wife, daughter, and son-in-law, camping outfit, provisions, etc., all of which made a combined weight of 1300 pounds. The party were 26 days running time coming through.

Dr. M. M. Brashaw, of Roswell, N. M., has also moved to these parts, having purchased an apiary in the vicinity of Loma Linda. Dr. Brashaw is connected with the Loma Linda Sanitarium, his son having principal charge of the bee interests.



# BEEKEEPING AMONG THE ROCKIES

Wesley Foster, Boulder, Colorado.

## BEEKEEPING IN BOULDER.

There are quite a number of the residents of Boulder who are keeping bees in the city, which, however, is a small city—hardly metropolitan. The bees may fly to the foothill ravines and canyons where hawthorn, thimbleberry, chokecherry, and scores of other flowers furnish nectar early in the season. Then close up to the city limits are alfalfa-fields that often yield nectar. The bees in the city, however, *upon the average* do not yield more than fifty per cent of the amount secured from colonies in apiaries located in the alfalfa districts further from the city.

\* \* \*

## THE LOCAL HONEY MARKET.

This is the first year for us here in Boulder when the old comb honey on hand has interfered with the sale of the new. A good many grocers will not buy the new until they have cleaned up on the old. The new honey generally brings \$3.50 to \$4.00 a case for the first few cases, but this year \$3.25 is the most that has been paid in the local market so far as I know. The demand for honey from a distance has been better than for several years. The excellent crops in the dry-land country in eastern Colorado, western Nebraska, and western Kansas, is going to make a large market for a good proportion of our production.

\* \* \*

## WORKING UP A MARKET.

The letter of Ray Mittower to Dr. Miller, page 373, May 15, is as interesting as it is important. Located as Mr. Mittower is, he is interested to know whether he can profitably produce comb honey and make a good living. Perhaps he has seen comb honey literally dumped upon his market, and the price shattered or lowered to where the profit is microscopical. The centers of large production are rapidly increasing their shipments, and the marketing and distributing of these increasing crops is going to require work. But if I were in Mr. Mittower's place I would not fear outside honey greatly. I would build up my trade with local dealers and cater to the fancy trade, and I feel sure that I could always dispose of my product at a good figure. I would not put my honey in the hands of dealers any more than I could help, but would try to sell direct to the large retail grocers.

The commercial producers will eventually be forced to adopt methods similar to the

California Fruit-growers' Exchange, and then every honey-producer who wants to market his honey with the least effort will doubtless find it pays to deal with the organization. There always will be a profit, doubtless, for the man who has the time and inclination to work his own local trade; and if it is large enough to take all he can produce he is fortunate in comparison to the producers who are long distances from the markets. I think that the young man has as good chances now as ever to do well with bees, but, of course, he will have to keep up with the times in the marketing end as well as in the production end.

\* \* \*

## MARKETING HONEY.

James H. Collins has a very interesting article on selling honey in the June 13th issue of the *Country Gentleman*. This is one of his "Selling Service" articles that are running in that paper. Many of his statements have to be taken very generally, but the suggestions are good. It would pay many a beekeeper to send for a copy through the local newsdealer if a copy cannot be found. He says that the beekeepers have worked in too general a way. He thinks general publicity has failed, and that what is needed is for every beeman to use more printers' ink in the way of circulars and honey leaflets, advertising honey locally and building a trade close at home.

Mr. Collins recognizes that the great difficulty is that, when the individual beekeeper has made his rounds among his customers and disposed of his crop, the customer does not see him again till next year; but Mr. Collins does not give a remedy for this condition, except to suggest that the beekeeper should work more intensively—that is, work a smaller territory, and it is inferred that he would then have to spend the whole year selling his crop; while, by spreading out, the beeman can dispose of his crop in a few weeks. When the beeman can dispose of his crop in a short time it is not likely that he will adopt the slower method, even though the condition of the public thought regarding honey as a staple product instead of a luxury might be established. We all look pretty close to our own noses, and the betterment of the general honey market cannot hope for much help from the beeman working individually. If the price could be raised fifty per cent by holding the crop throughout the year, the proposition would be a



sound one, and the beemen would not be slow to adopt it.

The recommendation to use glass more instead of tin is a good one so far as the retail market is concerned.

The suggestions on selling through grocers are good; and if beekeepers would work through them along the lines outlined by Mr. Collins there would be much more honey eaten.

The trouble is that the average busy beekeeper has not the time to work up a selling plan like the one suggested, and not one in a hundred has the ability or business acumen.

The honey facts for advertising leaflets arranged by Mr. Collins should be made use of by a large number of beekeepers. They can be changed and added to to fit local conditions.

\* \* \*

Those notes "not for discount" will hardly pass as negotiable with some of us. Of course, we know what Arthur intends. All he wishes is to set some of us slow thinkers to speeding up a bit, and so he says some foolish things in a very interesting way. And for this we thank him very much. For instance, just look here and see what he says: "Better err on the side of trying a lot of fool things than miss one good one because you know it won't work." Then a little further on he reads the riot act on the editors of the bee journals, presumably for publishing the fool ideas of Miller *et al.*

He says, "Stimulative feeding for spring should always be done in the fall. Give them all you think they will need, then double it, and then half as much again for good measure." Arthur has given this instruction for years, and we have not all learned it yet, and we shall not all learn it for a good while, for "it ain't so" *everywhere*. In the first place, if you are a practical beekeeper, and feed all you think a colony needs, you can not double it nor add half again for good measure. You can tell that to your back-lot amateurs in Rhode Island.

But that question regarding the number of queens, cost, etc., I cannot fully answer. Mr. Nichols probably raised 150 queens, and used perhaps half a dozen colonies. He would have a hard time telling how much they cost, for the time was the principal element. Yes, I shall go down there in the East some time, and learn how you raise 400 queens in one hive and get a crop of honey from it too. There are lots of things we can learn from each other.

[This was referred to Mr. Miller, who replies:]

The unexpected has happened! Wes,

Foster has sat up and taken notice. He has discovered Rhode Island and some other things—notably, that he makes mistakes (GLEANINGS, page 166). Glad to have his company. As to feeding, the advice was for ordinary beekeepers, not for *extraordinary* ones, for the kind who think a gallon of half-and-half syrup "an awful lot" for one colony of bees. "Spring stimulating *in the fall*" is backed by some excellent authorities, and I do not feel a bit lonesome.

Now, Wesley, if you will come east I'll show you a few new(?) wrinkles and lots of revamped old ones which pay in my New York and Rhode Island yards. Also I'll introduce you to a Rhode Island "clam-bake," and you will learn of a new joy.

Those who do not know how to take my notes should not.—*Arthur C. Miller.*

\* \* \*

#### MOVING BEES BY AUTO TRUCK.

I have had my fill of moving bees this year. I moved 200 colonies in close to the foothills for the early mountain bloom; made 150 colonies of increase, and moved the 350 colonies back to the country about June 15, together with about 100 colonies that were bought, that were located in Boulder. The bees were all moved by auto, nearly three hundred being moved at three loads with a large two-ton White truck. We had more than two tons on the truck, however. Screens over the top of the hives were used, and many of them had supers on which made them heavy and bulky. The time taken to load one hundred colonies on the truck was about two hours. One hour and a half was taken to run fourteen miles, and one hour was taken to unload and open the entrances.

Two colonies (the best ones) were smothered on the load that we hauled in the day time. The other two large loads we hauled at night with the best of success.

We made fine time in hauling twenty colonies at a load on my Reo auto. We loaded in thirty minutes, drove six miles, unloaded, and were back loading up a second load in one hour. We hauled two loads in this way before breakfast. A few days later, however, we broke the rear axle with twenty colonies of bees on the auto when going about fifteen miles an hour, and we were nine miles from home. Fortunately we had stopped and retied the load more securely, or we would have dumped the load into the road. As it was, not a hive moved from its position.

It is important in preparing bees for moving in the summer to give all strong colonies clustering space in empty supers above the combs,

# CONVERSATIONS WITH DOOLITTLE

At Borodino, New York.

## QUESTIONS ANSWERED.

"Should a beekeeper make his own hives?"

Quite a little depends on the man, and more still on the man's pocket-book. If the man has plenty of money, and can see no fun in making hives, then it is well for him to buy his material in the flat, putting it together and nailing it up. This any man or woman should be able to do, the accomplishment of which should give even a millionaire pleasure. But with the one who has a family to support, and hardly knows how to make both ends meet, the winter evenings and stormy days can be turned into both pleasure and profit by making what hives are needed the coming season, excepting frame stuff and section material. These parts can hardly be made unless the apiarist has motor power and sawing-machines to do it with. But a fairly good workman with the necessary tools should be able to make all the other parts needed after starting, in any well-regulated apiary.

But if the man prefers to cut cordwood at 75 cents a cord to making hives, as a man once told me he did, then let him cut the wood, by all means.

"Why do bees tear down and rebuild comb? My bees have been doing this during May and the first half of June. A beekeeper living near me said that the bees did this to remove the cocoons in very old combs so that the cells would not be so diminished in size as to cause the workers cradled in them to emerge as dwarfs."

This beekeeper has mentioned something new to me, and I mistrust that his credited foresight will be new to most of the readers of GLEANINGS. I am hardly ready to accept his conclusions; for were he right I have combs in my apiary which should have been torn down and renewed long years ago. Forty years ago I purchased some old box hives said to have had bees in them for twenty-five years, and transferred the combs from those hives into Langstroth frames, and only yesterday I ran across one of those frames having this 65-year-old comb in it, and, strange to say, I could not discover that the bees emerging from those cells were any smaller than those emerging from a comb which was drawn from foundation during the season of 1912.

I have frequently seen combs torn down in the manner mentioned, but it is always, so far as I can see, where the comb has been injured by mold or spoiled pollen, or where the pollen has hardened. Then, once or

twice in my beekeeping lifetime I have known bees, where I had excluded *all* drone comb, to tear down the lower corners in a frame or two, septum and all, and build therein drone comb; and I think I have said in print that I have known bees to tear down worker comb where they had naught else, in order to build drone, so that drones might be reared preparatory to swarming.

"How about stimulative feeding? Is it profitable or not? Having a talk with a beekeeper a few days ago he told me what a tedious, troublesome job it was, and afterward took the trouble to describe and recommend what seemed to me a most troublesome, dangerous, and ineffectual way of doing it—namely, by feeding in the open air, either by putting out syrup or extracted honey with floats on it, or by hanging out in the trees partly filled combs of honey."

The plan given you was one of the worst ever put before the public, for two reasons: First, such a mode of feeding incites robbing. At no time should sweets of any kind be left exposed to the bees, and especially in any time of scarcity of nectar from the fields. Nothing so incites robbing as do exposed sweets when the flowers are yielding no nectar. In my early apicultural life, two frames having honey were left carelessly standing outside a hive when a call for help from a neighbor took me away for two hours. This caused the cleaning-out of four colonies, and demoralized the whole apiary for days thereafter, till the nectar secretion began again. This one lesson was enough for me, and has been profited by ever since.

Second, by such a method of feeding, those colonies that need the least will get the most of the feed; and those that need the most get little benefit. Of course, there is such a thing as a colony strong in brood and bees being short of honey; but the rule is that the *weakling* will be both short in bees and honey, and get very little of the feed given in the open air. So if stimulative feeding is resorted to, it should be done in the hive, with an eye to the wants of each colony.

But I am satisfied that stimulative feeding does not pay. Do not misunderstand me. I do not say that it is of no benefit, but that *it does not pay*. Each colony ought to have plenty of stores; and if it has, feeding will add but little to the amount of brood reared, and may encumber the brood-chamber to the detriment of maximum numbers at time of harvest.



# GENERAL CORRESPONDENCE

## A Symposium of Crop Reports from Different Parts of America

### COLORADO HONEY-CROP CONDITIONS; FAIR CROP IF PRESENT FAVORABLE OUTLOOK CONTINUES

BY WESLEY FOSTER

Allowing for a wide margin, I should say that there are 3000 more colonies of bees in Boulder County than in 1913. The indications since early in the spring have been favorable, and the beemen have made increase generously. The increase made by the specialists living in Boulder is about 1000. This heavy increase will affect the honey crop materially, but still we should have honey to ship. The year 1913 was the best season for Boulder County for a number of years, and the indications are still better for 1914, except for several things. We cannot hope for the late flow of honey that we had last year, and we have had several very severe hailstorms. There is more overstocking than last year, and we cannot tell until the last of August whether more shipments will be made this year than last. The indications are that there will be more. The season is two weeks earlier, and there are more colonies of bees. We think that conditions are favorable if we get a case or two of comb honey by the 4th of July, and on the 8th I took off 17 cases. Mr. Collins, of this city, took off five cases of comb honey on the 1st of July. Sweet clover has begun yielding nectar, and the second crop of alfalfa is just coming in bloom (July 9). There has been little work done in the comb-honey supers during the past week; but super work should pick up now. Nearly all the colonies in this county are operated for comb honey. There were about 6000 colonies in the hands of specialists last year, and about 8000 this year. The crop last year was two to three cases of comb honey to the hive; but what it will be this year will have to be guessed at until about the last of August.

The comb-honey shipments totaled about twelve cars last year. Some quite large local shipments were made, and the home consumption is considerable.

The frequent rains have kept the horse-mint on the dry mesas blooming almost continuously; and while it is drying up now, the nectar secured has been quite gratifying. Our surplus, however, is practically all alfalfa and sweet clover. The alfalfa hay

crop has been heavy, which has retarded the cutting by the farmers, and now the grain must be cut so that there should be little complaint on the beekeepers' part, for much alfalfa will stand in bloom some time. If we could have one good general rain in July, with hot weather following, and another good rain early in August it would help wonderfully. Cool weather is our undoing, and we should prefer it dry and hot rather than wet and cool.

We still are  $3\frac{1}{2}$  inches above normal this year in rainfall, though the excess for July so far is negligible—only one-tenth of an inch. There is plenty of irrigation water, however, and growing weather is good. The agricultural outlook as given in Farmers' Bulletin No. 604, issued June 23, gives conditions in the West very well, as they apply to Boulder County, and presumably they are as correct for the rest of the western country as they are for this part of it.

The Rocky Mountain States have been blessed with an unusual amount of moisture as a result of heavy snows and late winter rains. The weather is frequently mentioned as ideal. The irrigated sections have ample water supplies impounded, and the areas devoted to dry-land crops have exceptional supplies of ground moisture. The growing weather has been good, particularly for grains. . . . The hay crop throughout this grand division is reported as extra good, this applying to both the seeded forage crops—clover and alfalfa—and to the native grasses on the open range.

Take it on the whole, Boulder County so far is blessed with good prospects for a crop of comb honey as good in quality as last year. I think this county is in better shape for a crop than the average honey-producing county in Colorado this year.

#### COLORADO AND INTER-MOUNTAIN PROSPECTS.

I want to give the reports of honey prospects in Colorado, New Mexico, Idaho, and Wyoming as given in more than twenty letters from beekeepers in those States. They are intended only as showing indications.

May 13 Mr. C. Stimson, of Holly, in the lower Arkansas Valley in Colorado, wrote, "Weather has been favorable all spring; big rain this spring, and weather fine since. A few flakes of snow fell yesterday. A terrific hailstorm was reported from the west



part of Prowers County the night before, and our cool weather is doubtless from that."

This hailstorm referred to was quite extensive, extending in a more or less broken strip from Fowler, Otero County, through Bent County, and into the western part of Prowers County.

May 25 Mr. D. C. Polhemus, of Lamar, Prowers County, Colorado, wrote, "We have had two quite severe hailstorms that have done a great deal of damage to alfalfa. Most farmers cut it off, although there was not enough of it to rake up. Bees are building up well, and we have commenced to put supers on the strongest colonies." The beekeepers of Prowers County produce extracted honey largely. June 5 Mr. Polhemus wrote, "Bees are working well now. We have got supers on about half of our colonies, and are putting more on as fast as we can."

June 10 Mr. Charles Cheek, of Las Animas, wrote: "The bees have been gathering honey for about ten days, and have done good work for that length of time." Las Animas is the county-seat of Bent County, right west of Prowers County, in the Arkansas Valley. May 24 Mr. F. W. Brainard, of Hill City, New Mexico, wrote: "I have 300 colonies of bees, and am putting on supers. Bees are working finely at present, and I hope to be taking off honey soon. They have the alfalfa (first cutting) nearly all down, but the mesquite and other flowers are blooming quite freely."

May 29 Mr. J. H. Stoneman, Blackfoot, Idaho, wrote: "Prospects look good for a crop here this season. Bees have wintered well, and came through strong. We can make lots of increase."

June 3 Mr. W. V. Ranney, of Lander, Wyoming, wrote: "Prospects for honey are fine up here at present." On June 27 he wrote: "Two heavy frosts in June have lessened our honey prospects here considerably."

May 29 Mr. J. H. Gardner wrote from Garfield County, on the western slope in Colorado: "Bees are not building up here at Grand Valley as well as they are in the upper part of the country around Rifle and Silt. They are short of stores here, and need feeding. We have no dandelion here, but have some sainfoin. The weather has been cool and windy." June 28 Mr. Gardner wrote again: "The weather is hot here, but the bees are not doing much. Some of them are starting a little in the supers. At Rifle it is not much better. On Divide Creek the bees are booming, but near the river they are not doing much."

June 15 Mr. Robert E. Foster wrote me from Rifle, Colorado: "We have just com-

menced to super our bees. We had a bad spell of weather early in June, and had to feed very heavy. The small bridge on the river washed out so we could not get to our Burnett yard for almost a week later than we should, and we lost lots of bees, though no full colonies were lost. Some of the colonies killed all their brood, and many bees were dead when I fed them. There was plenty of nectar, but the weather was so cold and wet the bees could not fly."

May 17 George D. Taylor, Cortez, Colo., wrote from the Montezuma Valley: "Prospects are good for a honey crop here this year. We have just had a soaking rain."

June 19 Mr. E. D. Nichols, of Montrose, wrote me: "The army-worms are destroying whole fields of alfalfa and spuds; and if the pests continue there will be no honey crop here this year. Things are not looking as bright in the Uncompahgre Valley as we should like; but as it is early yet we still have hopes for a flow later in the season. This seems to be somewhat of an off season for beemen. Two beemen have lost quite heavily from the spraying. They think it was not from the trees but from the red clover that the orchards are seeded with. We had quite a nice flow here on June 3 that was cut short by stormy bad weather that lasted until about June 15, and all that time I fed each day and stopped feeding the 14th, and things were going fine until the 18th when the bees began robbing again; so you see we had a very short honey-flow. Our only hope here is for a late flow."

June 30 Mr. Elmer Kennedy, of White-water, Mesa County, Colorado, near Grand Junction, wrote me: "Every thing looks well here for a honey crop. The bees are working well on sweet clover now."

June 23 Gale H. Patterson, of Cedaredge, Delta County, Colorado, says in a letter: "Colonies of bees are unusually strong at this time of year, which was quite contrary to expectations, as the wet and cloudy weather retarded the blooming of pollen and honey-producing plants until late in the spring. Wild flowers, however, came out quickly in great profusion after the rains. Alfalfa did not bloom until almost time for cutting, and the bees had little chance for working on it."

The army-worm, or measuring-worm, is doing considerable damage. It is predicted that they will ruin the second crop of alfalfa. Their work on sweet clover is especially noticeable. They eat the tender leaves near the top of the plants, but so far as can be seen they do not attack the blossom buds, none of which have opened yet. Much damage has been done to bees by orchard spraying. Some large beeyards have been moved

out near the foot-hills away from the orchards to prevent the loss.

June 14 Mr. W. A. Cheek, of Merino, Logan County, Colorado, in the South Platte Valley, says: "I do not think we shall have much honey here to market this year. Bees are in fine condition; but the high water has killed out the sweet clover on the river bottom, and the farmers are cutting the alfalfa before it blossoms. The first crop is mostly up."

June 1 Mr. S. C. Wood, of Rocky Ford, wrote: "We are having very bad honey weather. A severe hailstorm struck in on the river below Fowler, reaching to La Junta, destroying a good deal of our vine crops."

June 3 Mr. W. C. Evans, Fort Collins, Colorado, wrote: "Prospects for honey in the north end of Larimer County are not good. Best that we can hope for is probably half a crop." June 30 Mr. Evans wrote that bees in Larimer County were barely more than making a living.

July 6 Pres. N. L. Henthorne, of The Colorado State Beekeepers' Association, wrote me from Platteville, Weld County,

that bees were doing nothing there. "An east wind is blowing, and no honey to speak of."

June 10 Mr. Wm. Harkleroad wrote me from Grand Junction that bees were dying by the quart in some apiaries, presumably from spray poisoning.

June 2 Mr. George D. Taylor, Cortez, Colorado (Montezuma Valley), said that bees were doing finely.

From all these reports it may be gathered that the crop of honey will be seriously lessened in some districts, local in extent. Taking Colorado as a whole, there should be a fair crop of honey if present favorable conditions prevail. There will likely be more hailstorms, ravages of the army-worm, bees killed by spray poisoning, etc., but the honey crop should be considerable, and it gives every promise of being of high quality.

I have not mentioned the poisoning of bees by smelter smoke near Denver because that was reported in GLEANINGS for June 15.

The poor prospects in Larimer County, or at least parts of it, are due to a very destructive hailstorm several weeks ago.

Boulder, Colo.

## ONTARIO CROP WILL AVERAGE ABOUT 30 POUNDS PER COLONY

BY R. F. HOLTERMANN

The bees throughout southwestern Ontario went into winter quarters last year (1913) in about as fine condition as possible. There were plenty of young bees. Owing to the prolonged flow from red clover they had an unusual amount of good stores, and every thing seemed favorable. The early winter was mild, followed by a fairly severe season of weather; but the bees came through the winter in excellent condition, and I had a large percentage of colonies covering fairly well twelve Langstroth frames.

As to clover, the old fields had been pretty well winter-killed; but the young clover was in good condition, and we had a fairly plentiful amount. Eastern Ontario, owing to the dry summer of 1913, was in none too good condition, yet a fairly wet fall had brought white clover on nicely. The honey-producing section of Quebec province was also well supplied with clover.

This was the first spring for many years in which I did no stimulative feeding. We had so much honey in the hives that, by changing a few combs about, all we needed to do was to bruise cappings on honey already in the hive.

Notes in my diary show that bees were working well on willow and soft maple April

18; drones were seen (I do not know how long they had been in the hives) April 27. Queen-clipping began on May 2; supering began May 7, and a very large percentage of the bees were supered before clover opened. Dandelion came into bloom May 6; golden willow and hard maple were in bloom May 9; wild cherry, May 10; fruit bloom, cherry and plum, opened May 17. We began unpacking bees May 19. Apple bloom opened May 21 (it is usually over by May 24). The first clover honey was noticed in the combs June 6.

So far every thing was fairly well, only we had had a wet cold spring in this section, with an unusual number of frosts; and such a spring is sometimes followed by a dry, cold, early summer. The honey record will show the yields. They speak plainly. The day the colony gained 14 lbs. it really gained 17 lbs. from 8 A. M. (before any bees were out) until 8 P. M.

The yield that day shows that there were enough blossoms to give honey, that the soil conditions were right, and all that was needed was a certain atmospheric condition. There were three supers put on the scale at the time of first weighing—two above the quilt, one below. The object of this was not to disturb the gross weight of supers requir-



ed to be added. The hive record is as follows:

June 11....129 lbs.	June 25....179 lbs.
June 12....129 lbs.	June 26....183 lbs.
June 13....132 lbs.	June 27....180 lbs.
June 14....137 lbs.	June 28....183 lbs.
June 15....138 lbs.	June 29....180 lbs.
June 16....139 lbs.	June 30....184 lbs.
June 17....143 lbs.	July 1....182 lbs.
June 18....148 lbs.	July 2....180 lbs.
June 19....145 lbs.	July 3....182 lbs.
June 20....146 lbs.	July 4....181 lbs.
June 21....147 lbs.	July 5....181½ lbs.
June 22....158 lbs.	July 6....180½ lbs.
June 23....172 lbs.	July 7....180 lbs.
June 24....174 lbs.	July 8....180½ lbs.
	July 9....180 lbs.

It will be seen that on June 23 the colony gained 14 lbs. in 24 hours, and that on June 27 the colony weighed exactly the same as last night, July 9. Our clover is over; basswood, which is very limited, will open in a

few days, and on an average I do not believe I have a surplus of 30 lbs. to the colony and covering a large area of the Province reports are the same.

Quebec is having a fairly good honey-flow, and eastern Ontario is doing much better than we are. A. A. Qurea, Renfrew, reports after a dry spell a heavy rain followed by clover and raspberry honey, and in one week ten-frame extracting supers filled.

It is, perhaps, just as well we have little honey. Even with a very light crop in eastern Ontario and the report of a light crop in Quebec, a great deal of the honey of 1913 is still in the beekeepers' and dealers' hands; and if we had even an average crop we should not know what to do with it.

Brantford, Canada.

## CENTRAL NEW YORK; ONE SUPER OF LIGHT HONEY PER COLONY EXPECTED

BY S. D. HOUSE

My report of the honey-crop conditions in central New York includes about 6000 colonies. Investigation shows that bees wintered well in this section. Although late in starting their brood-rearing in the spring, they bred up fast and were very strong when willow and fruit bloom opened about May 15. During fruit bloom they gathered about 25 lbs. per colony, storing it in extracting-combs. This flow lasted until about May 25, very warm weather prevailing up to May 28, then turning cool, with no honey coming in. The bees gathered an extra amount of pollen, filling the combs with it, which reduced the brood-rearing.

From May 25 to June 23 the bees consumed the greater part of the fruit-bloom honey, as there was nothing in bloom that yielded nectar, although alsike clover opened June 12. Examining large fields of it, I could not find a bee on it.

June 23 sumac opened, and yielded some honey for four or five days, but not fast enough to start drawing combs in sections. Many colonies prepared to swarm. From June 28 to July 7 there was practically no honey gathered. The few new colonies hived had to be fed to prevent starvation.

July 8 basswood opened, and is yielding

some honey. About half the basswood-trees are budded; and if weather conditions are favorable for the secretion of nectar we might look for about a third of a normal crop of white honey, which will be from basswood and sweet clover. The small white clover was conspicuous by its absence; but copious rains during the season have started a new growth which is showing some bloom, and it is yet to be seen whether it will yield nectar or not.

To-day, July 10, basswood is yielding fairly well. Bees have started their sections, and I shall expect at least one super per colony.

Information from many parts of the State coming in this morning shows that there was no surplus honey gathered up to July 7. The acreage of buckwheat will be about normal in this section of the State, owing to the destruction of cabbage-plants by an insect working in the plant-bed, and the fact that the fields were in good condition for plowing and sowing, which encourages the farmer to grow the crop. This leaves us some hopes that we may get some dark honey.

Camillus, N. Y.

## THE SAGE BELT OF CALIFORNIA; THE CROP GOOD AND BAD

BY P. C. CHADWICK

This report is compiled from correspondence, conversation, and from my own personal observation. To my knowledge there has never been a season when there was so

much variation in conditions to take into consideration. Heretofore we either had a crop, a fraction of a crop generally speaking, or no crop. This season some beekeep-



ers have a fair crop while others have no crop.

The mortality since June, 1912, in the sage belt, must figure as an important feature in this report, for no increase of importance has been possible, while the decrease has been steady since that date.

In the orange belt, conditions have been more favorable; and where the two converge, conditions are also better.

At the beginning of the honey season San Bernardino County stood nearly one half below her normal number of colonies, notwithstanding the vast amount of orange-groves. Los Angeles, Ventura, Santa Barbara, San Luis Obispo, Orange, and Riverside counties lost in proportion, while San Diego, from all reports, lost 75 per cent during that time. Allowing the best possible figures we cannot have entered the present season with more than 50 per cent of our normal number of colonies in the sage belt. Of these some apiaries have exceeded a figure I shall use as a normal one per colony for a good sage year—one case of 120 pounds extracted per colony, which is low indeed, it being generally conceded that 200

pounds would be nearer correct. By these figures we see our crop cut in halves at the start. To illustrate: In Redlands district there has been produced, approximately, 900 cases to July 9, from a total of 2000 colonies, spring count, giving an average of less than 60 pounds per colony. In San Diego County, our greatest producer, there will be several carloads of honey; but the vast amount produced there in past years as favorable as this year will not be there this year.

On the other hand, there will be more honey gathered in many localities than has been gathered to date, and I should not be surprised to see the total output for the sage belt increased by one-half, with light amber and amber grades from wild buckwheat and many lesser plants that give up their nectar freely after a winter of excessive rainfall. All told, however, we cannot by any hook or crook produce half a normal crop for a sage-yielding season. No comb honey of consequence has been produced in the sage belt.

Redlands, Cal.

## REPORT OF THE HONEY CROP IN VERMONT, NORTHERN MASSACHUSETTS, AND NORTHEASTERN NEW YORK

### Fifteen Pounds Per Colony a Good Estimate

BY J. E. CRANE

The season has been somewhat peculiar. April was unusually cold and wet, leaving bees quite backward the first of May. May was dry, and the last half of the month warmer than usual. As a result, bees had a good time on fruit bloom and dandelions, so that all fair colonies were able to fill their hives with honey and brood, and in some yards considerable honey was extracted from the brood-chambers, or heavy combs removed and replaced by empty ones. The dry weather continued nearly through June. White clover winter-killed badly in some places, and the dry weather prevented what was left from developing, and kept alsike small and short, with a small amount of bloom. In most places where there was clover bloom it seemed too dry for it to yield much honey.

The vetch that has come in many meadows has seemed to yield honey freely. This, with the hives well filled with early honey, and what little they could get from other sources, has set bees to swarming at an unusual rate in many places, with the result that there has been but little honey

stored in supers up to the second week in July. Recent rains have freshened up the clover, and it seems now to be yielding some honey.

Blue thistle has come in in some localities, and is yielding well; but the yards within reach of it are not many.

The basswood that formerly gave us rich harvests has been greatly reduced by the lumbermen; and in many places where basswood remains, the forest-worms have completely defoliated them, so we have little to expect from this source.

It is yet rather early to tell what the harvest will be; but present indications are that it will be much below the average; in fact, it does not look now as though there would be more than a third of an average crop of white honey in Vermont, northeastern New York, and northern Massachusetts that this report covers. There will be isolated localities where there has been more rain, or the soil is more retentive of moisture, where there will be fair crops. Recent rains may bring more clover than we now expect. Very little extracted honey is pro-

duced in this section. This report is estimated to cover some ten to fifteen thousand colonies.

Recent advices would indicate that condi-

tions reported above would apply to a large part of New England. I believe 15 lbs. per colony a large estimate at this time.

Middlebury, Vt.

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## A REPORT OF THE HONEY CROP IN THE SOUTHEAST AS FAR AS THE SEASON HAS PROGRESSED

BY J. J. WILDER

The posted beekeeper knows that at this season of the year the beekeepers in the great Southeast are not ready to make final reports on the honey crops; for as a whole the harvest is not more than half over. The beekeepers in the clover sections are not fully ready. The beekeepers in the mangrove section of Florida are not ready. The beekeepers in the Blue Ridge Mountains and the surrounding country are not ready. In fact, only a few are ready, the main flow being over with them, for the flow from cotton has not yet come on, which is our greatest honey-plant, and this gives a good yield over the greatest portion of our country. The flow from the partridge pea in middle Florida has not come on yet. In many sections there is a good fall flow from asters, goldenrod, summer-farewell, etc. This is all excluded from our report, which makes it a meager one, including only the spring flow, which is very light in some sections, owing to the scarcity of honey-plants.

For this spring-crop report I am much indebted to beekeepers in almost all sections, for they have taken the time to write me and keep me posted as to what bees were doing in their vicinity. To these I extend many thanks. These reports include approximately 18,000 colonies of bees in Florida, Georgia, Alabama, South Carolina, also southern portions of North Carolina and Tennessee.

The main sources of surplus, and, approximately, results are as follows; also where grown and in order of time of blooming: Orange and other citrus fruit in southern Florida: extracted, 85 lbs.; ti-ti, southern Georgia and northern Florida: comb, 35 lbs.; extracted, 59 lbs.; pepper-bush in same territory, but not in same locality—comb, 35 lbs.; extracted, 50 lbs.; black tupelo gum along large water-courses: extracted, 20 lbs.; white tupelo gum in extreme southern Georgia and northwest Florida: comb, 45 lbs.; extracted, 70 lbs.; poplar in southern portion of Georgia and Alabama: comb, 30 lbs.; extracted, 45 lbs.; in middle section of same States: comb, 15; extracted, 25 lbs. The flow from this source gradually let up further north, and was a total failure at the mountains. Although the plant is plentiful, weather conditions are better for it further south. Black locust in mountain sections gave comb, 40 lbs.; extracted, 60 lbs. Gallberry in Florida gave: comb, 15 lbs.; extracted, 25 lbs.; same plant in southern Georgia: comb, 25 lbs.; extracted, 40 lbs.

Owing to the prevailing drouth in southern Georgia and Florida during the latter part of the spring the flow from saw palmetto was very light, the bloom being badly blighted, the flow not averaging over 20 lbs. of extracted honey.

Summing it all up, the spring flow was not over an average one.

Cordele, Ga.

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## NORTHERN MICHIGAN WHITE-HONEY FLOW FORTY PER CENT MORE THAN THAT OF AVERAGE YEARS

BY IRA D. BARTLETT

To make this report of most value I feel that a general summing-up of conditions during the season of 1913, and its effect on this year's condition of the bees and local honey market is essential. A line drawn east and west across the center of the lower peninsula of Michigan was a point from which the weather condition and honey crop seemed to improve as the distance increased toward the south, and got worse as the distance increased northward.

This location, being in the north section, was hard hit during the white(?) flow, as all honey was unusually dark, and only fair in flavor. It was also very light. This was followed by an extra good fall flow for this locality from goldenrod and buckwheat, with a little aster.

Now, this late honey naturally put all colonies in fine condition for winter, and had something to do with the bees coming through so strong. It also caused some lit-



the honey to be carried over, as there was not the demand for the dark honey. As it is, we have some of the old honey on hand in the stores and in the hands of apiarists (not much, but some). The bees are in fine order, having stored at this date perhaps 40 per cent more than during an average year of the very finest of white honey. Whether this condition will hurt the local market I do not know, but I rather think not; for when the nice new white honey of exquisite flavor is placed on sale the demand ought to be increased on account of the fact that there has been no first-quality honey for a year.

In this locality the willows yield both pollen and nectar the fore part of April if weather permits, and this year we were favored with a short period of fine weather early in April, which opened the bloom and started the bees to breeding fast. This, however, was cut short by a cold snap following, which lasted until May; but the colonies all had plenty of honey; and by getting some brood hatched early it populated them so that they were able to continue brood-rearing, but on a smaller scale. However, the weather brightened up during May; and with the succession of bloom from the poplar, dandelion, and fruit, with some water-maple, also called swamp or spotted maple, in favored sections we were able to fill the hives with bees by June 1.

The raspberry and alsike clover bloomed early, and the bees started at once on them. They also worked on the white clover; but we have very little of this in the sandy sections; and but for the cold and wet weather during the last of June and early July we should have harvested an unusually large amount. But these rains were the making of a future crop from the milkweed plants which were soon to open. These plants are now in full bloom, and bid fair to round up the crop of white honey nicely where they are numerous.

I am not prepared to say just how widely they are spread over the country; but all through Charlevoix, Emmet, Grand Traverse, and Antrim counties, they are plentiful in sections.

Basswood will bloom full, and will be out by the 15th of this month; but the basswood

is fast being cut down, and will soon, if not already, be of little use to the beekeeper.

The average crop of white honey in this section for the past ten years has been about 60 lbs. per colony. I should think that 90 lbs. would be a fair estimate for this year of extracted honey, and 60 lbs. for comb. Of course some will get more and some less.

I would say that there are between 2000 and 2500 colonies within a radius of 25 miles, with 30 per cent or more being run for comb honey.

Following are a list, in the order of their blooming, of the main honey-plants of this section which yield more or less pollen and nectar. Elms, tag alders, willows, poplars, soft maples, hard maples, fruit-trees, dandelions, gooseberries, water-maples, wild red raspberries, white and alsike clover, elders, milkweed, basswood, willowherb, buckwheat, goldenrod, and asters, with a little sweet clover, which the best farmers are sowing, and which will help in later years, as this follows the clovers and lasts until fall.

You will note that I have placed no estimate upon the goldenrod and buckwheat crop. This is because we very seldom secure any surplus from this source, although weather conditions have been very favorable to date, and quite an acreage of buckwheat has been sown.

Following is a report of a strong colony on scales this season:

Date	Net gain	Source	Date	Net gain	Source
	Lbs. put on	Clover & raspberry		Lbs. put on	Clover & raspberry
June 7..	6	"	June 25..	10	"
June 8..	9	"	June 26..	5	"
June 9..	8	"	27,28,29	17	"
June 10..	10	"	30, July 1, 2	8	"
June 11, 12	7	"	July 4..	12	"
June 13..	8	"	July 5... 5	milkweed	
14, 15, 16	15	"	July 6... 6	"	
17-20	17	"	July 7... 4	"	
June 21, 22	5	"	July 8... 2	"	
June 23..	8	"	July 9... 6	"	
June 24..	6	"			
To date, 173 lbs. net gain.					

I trust that this report will be of service in getting at the exact state of affairs. Of course, quite a portion of the honey produced here is consumed at home, especially the comb, which, for the most part, is produced by the smaller apiarist.

East Jordan, Mich., July 10.

## TEXAS CROP LARGER THAN FOR TWO YEARS

BY LOUIS H. SCHOLL

It is rather difficult to report at the present time what the outcome of the Texas honey crop will be. While Southwest Texas has practically harvested its spring crop, Cen-

tral Texas is just in the midst of the honey-gathering season, and more northern localities are just entering in upon this part of the beekeeping work. Taking all matters

into consideration in the various parts of the State, there has already been produced, as compared with the rest of the time of the last two years, a greater amount of honey up to this time; and from indications and prospects in general it is safe to say that the production for the rest of the year will also outweigh that of the past two years. This may not be true of Southwest Texas unless rains prevail during the summer months and produce a late summer or fall crop, as has been the case during several years. Usually, however, Southwest Texas figures only on the spring crop, as the dry summer conditions are too severe on the vegetation.

It is also very difficult to obtain definite figures in regard to the amount of the crop thus far obtained, as well as the number of pounds stored per colony in the various extensive honey-producing sections. This is largely due to the fact that Southwest Texas is just winding up the main spring honey season, and the beekeepers have hardly had time enough in which to size up the situation in this respect. In central and more northern portions of the State the supers on the colonies are in such varying states of completion, and the honey-flows still on, and others in sight, so that new supers are being added, that it is out of the question to ascertain any thing more than a mere guess at the yields per colony. Such guesses would be of little value as compared with true facts or even a fairly accurate estimate.

Owing to the copious rains throughout the fall, winter, and spring months, the season has been most favorable for the various honey-yielding plants and other vegetation upon which the beekeeper depends. Besides a greater profusion of all kinds of spring flowers to insure stronger colonies of bees, and a larger amount of honey from this source, there was an abundance of horsemint this year, and, consequently, a good crop of horsemint honey was obtained. Mesquite is now yielding more or less plentifully in most localities of this section of the State. Very little honey was obtained from this source the last year or two.

Throughout the cotton belt, cotton, the main source from which the biggest part of the honey crop of central and the more northern portions of Texas is obtained, is in excellent condition, and also promises to give us a better yield than last year. In many localities, however, the cotton is in poor condition on account of too abundant rainfall during the spring months. This is especially true of the heavy black-land sections and river-bottom lands.

Sizing up the entire situation, it is safe to say that there is already a large honey crop, and that it will be considerably larger by the end of the year. Compared with last year the crop will be larger, and there will be a still greater difference between this year's crop and that of two years ago. This is already indicated by the unsteady market that prevails now on account of a great rush of honey to the market without any regard to systematic marketing. As Southwest Texas came in with an early crop this year, and with a large production, which was rushed right on to the market, the honey market is in a very demoralized condition at the present time. Prices are just about two cents a pound lower on all kinds of honey, comb and extracted, than have prevailed the last two years. Even at these low prices there is slow demand, and it is difficult to move any quantities of honey except in a few occasional instances and at a low figure. This demoralization is not due to the amount of honey produced so much as to the way the honey is slumped on the market. As the crop in Southwest Texas comes with a rush, and everybody is anxious to turn his honey into money (many of the beekeepers are compelled to do this of necessity, and every effort is made to get it to market), there is always a considerable amount of underselling. And in addition to the rush of honey on to the market, the fact that first one beekeeper and then another sells at a lower price in order to move his honey, causes, in consequence, a rapid depreciation in honey prices.

A further result of this great evil of underselling is that the honey-buyers and jobbers get disgusted with such methods, and quit handling the stuff altogether. The fact that they can not rely on the prices of this product may mean excessive losses to them; and rather than subject themselves to this they will refrain from handling honey at all. For instance, an extensive jobber contracts for honey from one source at a certain price. Another jobber happens to have honey offered to him for half a cent or even a cent per pound less. It is apparent immediately that the first jobber can not compete with the other without selling his honey at the same price. And as honey is handled by these firms on the basis of a cent a pound, it is readily seen that the first-quoted jobber will have to sell for the same price at which he contracted. Consequently he prefers not to run these risks, and stays out of the game of handling an unstable product in the first place at a very unstable price in the second.





M. G. Dervishian's apiary, Nicosia, Cyprus. The two eldest sons shown are his helpers; the three youngest, the honey-eaters. The walls on the back and one side (north and west) are windbreaks.

While the Texas honey crop will be quite large this year, the market is very unsatisfactory just now. But it is hoped that con-

ditions will improve and be much more favorable later in the season.

New Braunfels, Texas.

## BEEKEEPING IN THE COTSWOLDS

BY A. H. BOWEN

Last season we had a beautiful summer of sunshine and a splendid crop of honey. The fine weather started in June, and continued more or less until December; while even in November—usually the dulllest month of the year—the sun shone brilliantly, and bees worked hard on the blossoms of the ivy found in abundance on our Cotswold stone walls. But never did they work with more energy than on those long hot June days when the sainfoin blossomed, and more of this delicious honey was stored than for many seasons past. The capping of sainfoin honey is a pale primrose color, and so attractive in appearance that it is often preferred even to that from the white Dutch clover. Many colonies yielded well over 100 pounds of extracted honey each, while one large apiarist took from his best hive 215 pounds, and left the bees with 30 pounds for their winter stores. Indeed, the season would have been a record one had it not started badly. After such a wet summer as 1912, bees went into winter with but little

natural stores, and queens worn out by excessive breeding.

In the spring they were naturally weak, and in every apiary losses occurred.

March and April proved cold and windy, so that very little pollen and honey were collected—breeding thus being retarded. But with May it grew warmer, fruit-blossoms commenced to yield, and soon the strongest colonies were working in the supers, keeping two and three tiers going right through the season. The early rains enabled the clover to get a good stand so that it bloomed more freely, and yielded honey several weeks later than usual.

Swarms that year were very plentiful, and those hived on ten fully drawn-out combs did well, and stored something for themselves besides.

Chiefly owing to the fine weather and copious flow there was no outbreak of foul brood, and those that were diseased last year appeared completely cured. In the long run, drastic treatment for disease is the



A "skeppist" of the Cotswold Hills of England.

cheapest and best; and if further helped by a good flow the shaken bees quickly build up, and are rarely infected afterward.

The sugar bill for autumn was almost *nil*, no feeding of any thing but nuclei being necessary. This ought to insure good wintering, for nothing beats well-ripened natural stores, and the colonies that have the most are always the strongest in the spring.

There are evident signs that the public is gradually waking up to the great value of honey as an article of food. The interest that beekeeping has awakened, and the prominence given to it by the press, helps wonderfully with the sales; but there is still plenty of scope for the energetic apiarist. Every village and town has its annual flower show, with its classes for honey, wax, and products of the hive. This has been found one of the best means of creating a demand, and there is nothing more attractive than a well-arranged honey-show, while the keen competition has raised the standard of the honey so high that it drives the rough produce of careless beekeepers and straw-skeppists completely out of the market.

There are some who claim that the production of extracted honey calls for but little skill in comparison to the comb. In my experience it is exactly the reverse.

No novice in this country thinks of pro-

ducing extracted honey until he has worked for sections a few years; and every hive sold by manufacturers is fitted with a section-rack unless otherwise ordered. When your hive is strong you place on the 21 sections with foundation, and the bees do the rest. To remove them is easy by means of the "escape" board, and the labor is practically nothing by the side of producing extracted honey.

With the latter, every comb must be clean and perfectly sealed before extraction, while the honey needs great care in the straining, especially if it is to be sold in bottles.

Bits of wax, scum, or froth on the surface is no advertisement, and such honey has a bad effect on the market in general. For the most part, any thing easy is badly done; and if you teach that extracted-honey production is child's play, then can you wonder that often an unmarketable product results?

#### RUSTIC BEEKEEPING.

Every one likes our Cotswold skeppist, even if he is fifty years behind the times. His quaint manner and methods are so delightfully old-world that we shall be sorry indeed when our hamlets know him no longer. To see him at his best you must enter the bee-garden and watch him weaving skeps under the damson tree, with a glistening



pile of straw on one side, and a heap of split bramble wands on the other. The material is cheap enough, and a knife is the only tool for the making of these and their warm hackels of straw.

The swarms are hived in the newest and best skeps; and when they want feeding the beeman whets the edge of his knife upon the side of his shoe and proceeds to cut an alder stick from the garden hedge.

A short piece is selected, split apart, the pith scraped out, and here are two feeders ready for use. They are thrust into the hive mouth, and filled each evening with a mixture of any thing sweet until the bees can take care of themselves. If in a talkative mood he will tell you with pleasure about "owd Tom's bees as died arter all, although 'e fed 'em while 'e could git about." "And what could 'is widdier expect wen she ne'er woke 'em up, nor put 'em in mournin'?"

"Bees be curis things now," he will observe, lighting his pipe, "and I well mind 'ow when Uncle Jim died 'is skep perished the follerin' winter, 'cause 'e ne'er put a scrap o' black on any on 'em. Now, when my father died, close on thirty 'ear ago, I took care to wake the bees up, and put all the hives in mournin'. I cut up his old black weskit on purpose, and not one on 'em perished; and they was the forriddest of any about to swarm and cut that spring. Wot a woppin' lot of honey I 'ad that 'ear too! Sold £6 worth, 'sides wot was eat at 'ome, and brewed a big barrel of mead in t' bargain."

The accompanying photograph shows part of a quaint Cotswold bee-garden with its owner, who spends many happy hours among the bees.

Cheltenham, England.

## A STUDY OF THE HIVE

BY F. GREINER

The process of incubation, as well as the growth of insects, the development of the fetus of and within our different domestic animals, etc., is not so exactly fixed to the minute that we can depend on such exactness. There are retarding influences at work sometimes, of which we are ignorant, which leave us to make guesses, and very many times we are obliged to confess that we do not know the reasons.

Dr. Miller has observed worker bees to mature in 20 days minus two hours. This is, I believe, the shortest time on record up to this time so far as I know. I have *seen* bees emerge from cells into which I *saw* the queen lay the eggs. It was during very warm weather in August, and the colony I was experimenting with was of normal strength, but in a contracted brood-chamber, capacity five L. frames. The time varied from twenty days and two hours to twenty days and fourteen and a half hours. I observed that the larvæ of these same bees were sealed over in their cells in from eight days and fourteen hours to just nine days. In no case did it take any longer.

I have seen queens deposit eggs in drone-cells. These same cells were sealed within ten days; some may have been sealed a little earlier. The matured drones came forth, and I saw them emerging in from 24 days 16 hours to 24 days 22½ hours.

I have kept bees since 1874, and since 1875 have handled from 100 to 300 colonies each year; but I have not yet been fortunate enough to surprise a queen in the act of

depositing an egg in a queen-cell. I am most anxious to satisfy myself as to just how much time is required to bring a queen to maturity under perfectly normal conditions; but I am afraid I shall have to leave it for others to find out.

Other interesting facts along this line, and observations made, I might mention. I have noticed bees coming in loaded with pollen when five days old—this under abnormal conditions; and under normal conditions they were twelve days old.

In a colony of native bees, which had been requeened with an Italian mother, the bees that were at work in the sections were all of the yellow type when the oldest yellow bees were ten days old.

When the youngest native bees were eighteen days old, none were seen in the sections. All the bees hanging in strings in the sections secreting wax, and others climbing up and down on them looking for and gathering wax-scales, were yellow bees. In other words, the comb-building was done by the young bees.

In conclusion I want to recommend to all young beekeepers to make a study of the hive, to watch the behavior of the bees, and to make note of all observations made in detail, using for the purpose a special notebook. The interested student will find the work most fascinating, and will find a great many things to write down he never had thought of before. He may observe the feeding of the larvæ, the sealing of the cells,



Reservoir surrounded by buckwheat at Frank Harlan's berry-garden, Revere, Mo.

the secretion of the wax and the comb-building, the handling of the propolis, the storing of the pollen, the feeding of the queen and the drones by nurse-bees, the depositing of eggs by the queen, and many other things. He may thus obtain a better understanding of what is going on within

the hive. The pleasure and delight which such study affords, and the value thereof, cannot be measured with and expressed in dollars and cents. In a few years his notebook will become a most valuable document, a record for future reference.  
Naples, N. Y.

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## WILD THYME, OR SUMMER SAVORY

### Beekeeping in the Haunts of "Rip Van Winkle."

BY J. B. MERWIN

I have been reading GLEANINGS for several years, and little if any thing have I noticed in its columns of the plant known as wild thyme. A good many know the garden thyme, grown for the purpose of seasoning meats, soups, etc.; but I dare say few of the readers of GLEANINGS have had the pleasure of seeing the wild thyme growing in its natural seed-bed and in full bloom. To pass through a field of wild thyme and get the fragrance, and see the millions of purple blossoms, is certainly a treat to any one who cares for flowers.

For several miles in each direction from my home in the eastern part of Delaware County, Catskill Mountains, New York, this plant has its seed-bed. Here can be found several thousand acres of hills and valleys completely carpeted by this plant. I have

never found it outside of this circle or community. A stranger riding along the highway in July or August, and observing the fields at a distance, would say they were plowed, and that the soil was red slate; but on closer observation he would find the fields covered with thyme in bloom. This plant is not as plentiful in the meadow lands that are cultivated year after year, but along the roadside for miles, and in pasture land, is where the thyme predominates; and it grows in such a mass over the ground that walking over it is like walking on a brussels carpet.

As an ideal honey-plant it is considered by some to be second to none. It begins to bloom about the 15th of July or about the time that basswood is through blooming, and continues to bloom until killed by the frost; and in some sheltered places this



plant continues to bloom late in November. No matter what the season is, we get some honey from this plant, and it comes when there is nothing else for the bees to work on. We never get strictly pure buckwheat honey from our home yard, as it is always part "savory" honey; and after the buckwheat harvest is over the bees continue carrying honey from the "summer savory" (this is the name it goes by here), and nearly every fall in September we extract from the body of the hives from two to five frames of savory honey, and the empty frames are returned for the bees to fill later for their winter stores.

I have been keeping bees for 20 years, and have never failed to get some honey from this plant when I failed from all other sources. Five years ago from 60 colonies, spring count, I produced over four thousand pounds of comb honey besides increasing to 85 colonies.

This was not a record-breaker, but better than none in a poor season. Last season was the poorest in this section that we have had in many years. We had cold freezing weather up to June, freezing back fruit, locust, basswood, etc., so we got no honey from these. One of the driest of summers followed. However, from 170 colonies, spring count, we secured 6000 lbs. of honey; while several miles from here, and just outside this thyme belt, a beekeeper with 75 colonies, and running for comb honey, failed to get an ounce. Another party, in the thyme section, just a few miles from me, secured 800 pounds of comb honey from 60 colonies.

We have one drawback. There are no early honey-flows here excepting from dandelion and fruit bloom, and it is only by moving the bees to out-yards, and careful manipulation, that we get them built up for clover bloom. I don't know that we can call

this a drawback; for in one way, by having the locality a little overstocked at this season it puts a damper to swarming. We had only five natural swarms from 170 colonies the past season.

The honey from wild thyme is of the finest quality and a good seller. "A customer once, always a customer."

I have heard a good many people say that this plant resembles heather; so, after I decided to write this article I wrote to John Burroughs, the naturalist (who has a summer home not far from my place), enquiring in what way this plant resembled heather, and asking if he had ever found it growing in other localities. The following is the reply:

The plant you refer to is a species of mint. It is not related to the heather. The heather is much larger and more showy. Our arbutus, wintergreen, laurel, and many others are of this family. I noticed this mint covering the pasture and roadsides last summer when I drove to Prattsville and to Johnson Hollow. I forget its specific name. I have never seen it elsewhere. I have tried your honey, and like it.

JOHN BURROUGHS.  
West Park, New York, Dec. 17.



Wild thyme, or summer savory, which is a sure yielder in the eastern part of Delaware County, N. Y.

It seems that this is a rare plant, or Mr. Burroughs would certainly have found it in his travels.

As a forage plant there are better (clover and several other grasses are better); but none of them come at a time of year when they can supplant the thyme. This plant will grow and thrive on land too poor for these other grasses to grow on. There is no land too poor, no winter too cold, and no summer too dry, for this plant—at least not in this section, and we have some pretty cold winters and some dry summers. I have known this plant to grow on a side hill of gravel, and in a very dry season cover the ground (stones included) with a luxuriant growth.

In the thyme belt are a good many large farms, and many of these farmers keep from 25 to 100 cows; and on several of these farms all the cows have to graze on through the summer months is thyme. I have known of but two farmers who tried to get rid of this plant. One deemed it a nuisance, and decided to kill it with salt.

He began several years ago by buying salt by the carload and spreading it on the land; but this was only temporary relief. The savory is as much in evidence on this place as ever. Another farmer, purchasing a farm not many years ago, decided he would kill the thyme by plowing, and he started in to plow up his farm, and plowed every field that could be plowed. The plowing of the pasture land only made a better seed bed for the thyme, which grew thicker and more abundantly; and this place that would barely keep eighteen cows, in a few years was keeping sixty.

The illustration shows the plant itself. Nearly all the blossoms have fallen; but by observing closely, a few can be detected. I recently pulled one crown root that contained 30 vines or tendrils from 3 to 15 inches in length, and each vine had half as many shorter vines attached. None of these vines had taken root, but as a rule the most of them do.

Prattsville, N. Y.

## A GOOD YIELD FROM A DOUBLE COLONY

BY C. R. SMITH

I am sending you some pictures of a double hive I made a year ago last spring, and also one of the honey crop that I secured from it. The hive was an experiment only. The supers were too heavy to handle.

I started a few nuclei late in the season of 1912, two of which were side by side. They had four and five frames, and not very many bees; so I put them into a chaff hive with a screen-wire division-board between them. They wintered well, as did all my other bees. Then I thought that, having acquired the same hive odor, they would work together. So I made a hive 32 inches wide the same as two ten-frame hives with two supers, same size. I made a queen-excluding division-board and lifted the nuclei into the large hive when they had brood started nicely. I gave them frames of brood from strong colonies, one at a time, and the hive was filled out full with 20 frames when other colonies began to swarm.

This double colony did not develop its working force till other hives had filled a super or more. The first super had three shallow frames with drawn comb on outsides (which they filled first), and 52 sections with starters. The bees worked together nicely until the first super was partly done; then they swarmed when I was away. My wife found both queens, and put them back with the returning bees. In a few days they swarmed again when I was away, but they were still hanging on a limb. I think both



C. R. Smith's double colony and hive.





108 sections and 45 pounds of extracted honey from a double colony.

queens got lost this time. I wanted to remove the brood-frames of foundation, so I went at them and got the frames out of one side, when a thunder storm came up and the bees came back; so I had to close up the hive and quit. The bees worked on for a week or more, and about finished the super, when they swarmed out with a virgin queen, and were still clustered at dark when I got home. Such a swarm! I got them in a cracker-box and weighed them; went through the hive, cut out all cells (about 30, I think). I dumped the swarm in front, and found there were 19 lbs. of bees in all.

The season was then advanced, and I was in doubt about giving many more sections, but concluded to risk it; so I fixed the other supers with 56 sections and one shallow comb. The weather was extremely warm,

and there were so many bees I put  $\frac{7}{8}$ -inch blocks under corners and middle. There were bees on the front and back clear to the top, in spite of the ventilation, and a large piece of roofing paper which I used for shade. In a short time they had filled every section. The supers were then taken off with two ten-frame escape-boards. The season was about over, but I put on two ten-frame bodies with extracting-frames, and got 31 lbs. of extracted honey, which, with the four shallow frames, made about 45 lbs. of extracted and 108 sections of comb. That is no more than some single hives did; but if the colony had had its working force at the beginning of the honey-flow I should probably have secured two or three hundred sections.

Dresden, Ohio.

## HONEY GATHERED FROM MILKWEED

BY GEORGE H. KIRKPATRICK

We sometimes see milkweed honey advertised for sale. I have seen it on exhibition at fairs, but I can recall but few articles published in the bee-journals in regard to milkweed honey or the plant.

The milkweed plant is found in most parts of northern Michigan. It is said to be very plentiful in localities that were once Indian settlements. I have grown milkweed in the greenhouse, the hotbed, the garden, and on the farm. About 90 per cent of the seed germinates, but I find the small or young plants are very tender. But few ever

mature to a full-grown plant. If a plant once gets rooted down into the soil to a depth of six to ten inches it is apparently there to stay.

For the past 16 years I have been a very careful observer of the milkweed plant, and for years I have encouraged its growth on my farm. My neighbors have discouraged its growth; but to-day many of these same neighbors have far more milkweed on their farms than I have. Milkweed is classed with the noxious weeds. Our highway commissioners require them cut, and the farmers



FIG. 1.—An apiary in Michigan where the yield of milkweed honey last year was 95 pounds per colony.

try to eradicate them. But I am very sure that in this section of the country the plants are yearly becoming more plentiful. Quite a few of my neighbors are frank to make the claim that milkweeds add to the fertility of the soil.

Agriculturists are following the lumbermen so closely that in many sections the wild red raspberry is becoming a thing of the past. The milkweed now thrives in many parts of northern Michigan to the extent that beekeepers are securing some very fine crops of milkweed honey. It begins to blossom about 20 days later than clover or raspberry. When the atmospheric conditions are favorable milkweed yields much nectar. I have had colonies carry an average of 11 pounds per day for ten successive days. A

populous colony will sometimes carry from milkweed bloom 13 to 17 pounds in a single day.

The quality of the honey is excellent. I believe there is no better honey than well-ripened milkweed. The color is almost water-white. It is of good body and flavor. Because of its heavy body it is necessary to warm the combs before extracting.

Fig. 1 shows an apiary that I have had the care of for the past three years, and which belongs to Mrs. Tom Russel, Antrim Co., Mich. In this yard we get only milkweed honey. The 1913 crop was 95 pounds per colony, spring count.

Fig. 2 shows the milkweed in blossom. Rapid City, Mich.

## NATURAL VS. ARTIFICIAL RIPENING OF HONEY

BY I. HOPKINS

I hope, Mr. Editor, you will allow me, before finally closing the discussion on this subject, to reply briefly to your editorial in your issue for Oct. 15, 1913, p. 703. I shall then be quite satisfied to remain silent until you deem it advantageous to open the subject again.

When noticing the discussion on the ri-

pening of honey which recently appeared in *The Australasian Beekeeper*, you say, "We desire to point out in passing that at least one of the writers is laboring under a misapprehension when he believes that the bees do nothing to the nectar of the flowers except to evaporate the excess of moisture—in other words, that the ripening process is



merely driving off the excess of water." Then you further remark, in order to point out the mistake the writer referred to has made, that "All chemists know that there is a decided chemical difference between the sugar found in the nectar of flowers and that in ripened honey. By the time the evaporation is accomplished by the bees, the inversion, as it is technically called, has been brought about."

As I believe I was one of the first to advance the theory you take objections to, and have not yet seen any authoritative statement refuting it, I still hold that the evaporation of excess moisture constitutes the principal process of ripening honey so far as the care to be exercised by the beekeeper is concerned, and that this can be done as well outside as within the hive. That there is a chemical change in the sugar or sugars going on during the course of ripening I have no doubt. Chemical analysis has proved this; but you imply that this change ("inversion") can be brought about only by the bees when honey is ripened within the hive. This appears to be only an assertion on your part. You quote no chemical authority in proof of your statement. If proof can be brought that such changes in the sugars (whatever they may be) resulting in complete inversion take place in honey ripened outside the hive, then your argument on this point falls to the ground.

Now, the two samples of honey I sent from our government apiary to Dr. Phillips, which he very kindly had analyzed for me by Dr. Wiley, then Chief of the Chemical Bureau of your Department of Agriculture, were part of two crops of honey saved in following years, and saved under the system of ripening outside the hive. In the one case the sucrose content was 0.29 per cent, and in the other, 0.00 per cent, indicating, as Dr. Phillips remarked, "complete inversion." He also added: "The water content is very low in both (samples), indicating well-ripened honey. I sent you the full report of the analysis some time ago. The above are facts which speak for themselves. There is no speculative assertion of what the bees do or they don't do. We need facts

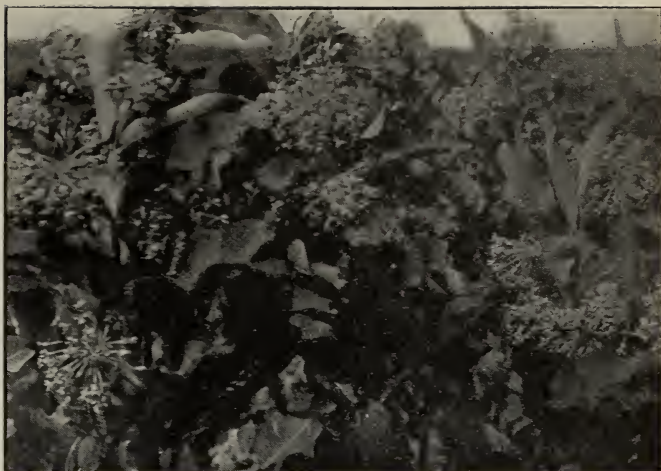


FIG. 2.—The milkweed, which is becoming an important honey-plant in many parts of Michigan.

in a question of so much importance to the beekeeping industry.

You yourself point to the fact that uncapped honey, which, presumably, the bees had little to do with beyond storing it, can be as "thick (ripe) and the flavor equal to the best." You also admit that an "expert may succeed," but you "can not recommend the practice for the average beekeeper under the average conditions." In point of fact you have all along condemned the process, which condemnation, coming from the editor of *GLEANINGS*, has, I know, influenced others. Even in New Zealand I have been told by some who have been influenced without a trial, "Oh! the editor of *GLEANINGS* condemns ripening honey outside the hive," and this is sufficient for them. They don't want to try it after that.

You strongly advocate making all the "short cuts" possible in bee culture; and yet when a clever and reliable man like the late E. W. Alexander shows a way to get, as he says, "twice the amount (of honey) with much less labor and waste," and which he was practicing himself, you condemn it. You have stated in other places that you are afraid there are some who would not carry the work out properly. Therefore you do not advocate the system, which means that you would keep all beekeepers back to the same level of these people—a very unsound argument.

Auckland, New Zealand, Nov. 20, '13.

[Without taking up the question in detail as to whether the chemical change between the nectar of the flowers and well-ripened honey takes place wholly in the honey-sac

of the bee, or to a certain extent after the liquid has been stored in the cell, we merely wish to make this statement which we believe to be the absolute truth: There is scarcely a single honey market in this country that has not suffered at least once, and in most cases a number of times, under the burden of a great quantity of unripe honey remaining unsold on the grocer's shelves, or waiting for a buyer at the warehouse of some commission merchant or honey-dealer. It is true that this fact does not prove that honey may not be successfully ripened outside the hive; but it does prove beyond all doubt that very few beekeepers are able to ripen honey successfully outside the hive. Most extensive producers have found that there are times when honey not entirely sealed or altogether unsealed is, nevertheless, ripe and ready to be extracted. This, however, has little to do with the question before us.

Like our correspondent we much prefer to let results speak for themselves. Here,

then, are the results. There is no doubt that E. W. Alexander was successful in ripening buckwheat honey outside the hive. We also believe that our correspondent is also successful. On the other hand, as we stated above, there is scarcely a honey market that has not had its share of unripe honey, marketed, too, by beekeepers who had done their best to ripen their crop outside the hive. We should say that a conservative estimate would show close to ninety-nine failures out of one hundred. In the face of such evidence, our opinion remains unchanged—that is, that, while a few experts with favorable atmospheric conditions and proper equipment, and by a careful study and unceasing care, may market good honey ripened outside the hive, the average producer can not do better than err on the safe side, and extract only ripened honey, and thus be assured of placing before the consumers an article of food that will be pleasing and that will create for itself a constantly increasing demand.—Ed.]

## BEE-POISON AS A CURATIVE AGENT

CONDENSED TRANSLATION BY J. A. HEBERLE, B.S.

The original article was written especially for the medical fraternity by Dr. A. Keiter-Graz, and published in the *Therapeutic Monthly*, Basel. For several years Dr. Keiter has practiced the application of bee-stings according to the methods of Dr. Ph. Terc, Marburg. The success of this method was so decided with muscular and articular rheumatism, chronic and acute, with polyarthritis deformans and gout, that he considered it his duty to call the attention of his colleagues to this *not new* but *insufficiently* esteemed method of treating the above-named diseases.

Dr. Keiter gives the effect of a sting on normal persons and on persons peculiarly sensitive to bee-poison. He mentioned that beekeepers become gradually immune to bee-poison, and at the same time to rheumatism.

### A BEEKEEPER RARELY SUFFERS FROM RHEUMATISM.

This immunity is like the injection of a serum for certain diseases. Its effect is limited by time, and should be acquired each year for a few years in succession to become permanent.

Dr. Terc found that on persons who were immune from birth a bee-sting would produce no swelling. Such persons were also immune to rheumatism. He also found persons that were healthy, but a single bee-sting would produce an unusually severe

reaction, both locally and in general. This unusual sensitiveness is termed idiosyncrasy.

A person afflicted with rheumatism reacts differently on a bee-sting than a healthy person. Locally the reddening and the quaddle, about  $\frac{1}{4}$ -inch in diameter, are the same primary reaction, according to Dr. Terc, but often disappear completely within half an hour. A secondary reaction on the body and skin—a painful swelling lasting two or three days—has not been observed on persons suffering from rheumatism. The pain of the sting is much less than on a healthy person, and the rheumatic pain is reduced. The effect is very apparent. Persons suffering from angular rheumatism, who could only with difficulty come to the consultation-room, would often by the first trial inoculation (2 to 3 stings) find considerable relief, and become very hopeful because they could walk with more ease. If the patient wishes to be treated, then it is best that the stings be applied daily, gradually increasing the number of stings he may get, so he can stand 50 to 100 stings, and even more, in one day.

The time required until the patient reaches the swelling stage—where the reaction is like that on a healthy person when stung for the first time—depends on the long standing and the severity of the ailment. This state every rheumatic patient must reach—secondary reaction, according to Dr. Terc. Be-



sides the local reaction, this secondary reaction is often accompanied by chill, fever (39 degrees C. and even higher), vomiting, diarrhoea, difficulty in breathing, palpitation, headache, dizziness, etc., but it need give no uneasiness. Fever and swelling of the part where the stings are applied may, with some intermittence, last a few days. During such a time the number of stings may be lessened, or treatment for a few days suspended (this latter is rarely necessary). After this point in the treatment is reached the application of stings must be continued until complete immunity, which in severe cases of long standing requires much time and patience on the part of the patient and physician. Especially in severe cases, there occur during the treatment relapses. The patient must be brave and persistent to hold out until the cure is complete.

The bees are taken into the room where they fly to the window from which they are taken with the bare fingers and put on that part of the patient where the pain is located. After the stinging the bee will get loose; but the sting, on account of its barbs, remains. It bores itself deeper into the flesh, and the attached poison-bladder endeavors by contractions to empty itself of the last particle of poison. Prof. Dr. Langer has made an authentic analysis of bee-poison. It is formic acid, and a base which is destroyed by the digestive ferments.

The daily increase of the number of stings is according to the ease and the age and condition of the patient, from two to five or even ten stings. At the beginning the increase ought to be very gradual. Patients who receive at one sitting too many stings

show often besides a higher blood pressure and increased pulse; an injection in the conjunctiva (red eyes), and always get red in the face. Dizziness, palpitation; sickness at the stomach, etc., are signs to stop with the treatment for that day. There is no need to be alarmed.

During the bee-sting treatment no other medicines ought to be given. No special diet need be prescribed. No alcohol is allowed. These three points were invariably adhered to in all cases treated. (Dr. Terc has about 1500 and Dr. Keiter 500 patients.) Only where in the swelling stage the itching was very annoying, lanoline *creme* or a cooling poultice was used to allay the itching. After the swelling stage is over the acute symptoms—sleeplessness, pain, and immovability of the joints diminish, while the general health and appetite improve, and the patient gains in weight. The particular part treated will have changed so much that further stings will cause hardly any pain.

It seems best to make use of the bee-sting treatment only under the advice of a physician—especially in cases of long standing. The first time two or three stings on the aching part seem to be sufficient in most cases; then gradually increase daily the number of stings until the secondary reaction sets in. Up to that time the rheumatic poison seems to have been neutralized or destroyed. At this stage the patient reacts like a healthy person not accustomed to stings. It is well at this swelling stage to treat the patient just as at the beginning, and gradually increase until immunity is reached.

Markt Oberdorf, Bavaria, Germany.

## THE POPPY AS A POLLEN-PLANT

BY W. G. M'NAIR

Being a beginner in beekeeping, and having heard that poppies stupefy bees, I kept a close watch on my bees and poppies. So far as I could see, the poppies had any thing but a stupefying effect on them. I have seen them gathering pollen from poppies at five o'clock in the morning as fast as they could go.

In gathering pollen from a single poppy the bee never alights on the flower. It stands in the air, as it were, above the stamens, and combs off the pollen and packs it in its bread-baskets.

From the double poppy it works in among the petals to get at the pollen; and as soon as her baskets are full she is off.

I have watched them for hours, and have never seen them sip any thing from the

poppy. They seem to recognize the poppy as a friend, and work it for pollen as hard as they can go.

When the poppy blooms here, there is plenty of pollen to be had from other plants, and it seems very odd that any insect which has the instinct that the bees possess would gather pollen from a plant that is deadly to them.

The only trouble that I can see in regard to the poppy is that, when honey is scarce and poppies plentiful, the bees might store too much pollen in their combs.

The poppies that the bees work the most on are Shirley, Iceland, Single Annual, and Simi Double varieties.

Hamilton, Ontario.

## POPPIES YIELD POLLEN ONLY

BY JOHN H. LOVELL

In reference to the editorial in the Feb. 1st issue of GLEANINGS regarding bees and poppies, I should like to explain that the poppies are pollen flowers, and are absolutely devoid of nectar. There is no such thing as poppy honey. An acre of poppies would not yield a drop of honey. Honeybees visit the poppies for pollen only, of which there is an abundant supply. During the past summer I repeatedly watched the bees at work on the poppy flowers in my garden. Not a single bee was stupefied or injured in any way. Once I saw a bee visit a flower which had just opened. It could obtain as yet no pollen, for the anthers were still closed, and so it searched the flower at the base of the petals for nectar; but, finding nothing, it gave up the attempt in about a minute.

"Poppy juice," or latex, as you know, is milky white. If bees could obtain this, and would feed upon it, possibly the effects described might be produced; but under ordinary conditions this would seem to be impossible. If, however, the poppies were cut down, the milky sap would exude more or less from the cut stems, and might then be obtained by the bees. It seems very doubtful if they would touch it even then. This story, if I mistake not, has several times before been in circulation. It is easy to understand how a beekeeper who supposed the poppies to yield nectar might easily imagine it to be somniferous; and if there were such a thing perhaps it would be. In the case cited, manifestly the bees would have recovered in less than a week or they would have been dead.

Waldoboro, Maine.

## WHAT THE SCALE HIVE SHOWED

BY U. H. BOWEN

We have had a hive on scales each season for many years, and we would not like to be without it. We know every day just what the bees are doing. The record of 26 lbs. mentioned by Mr. Pellet in the *Canadian Horticulturist* last fall was made on July 3, 1912. Last year the highest was 25 lbs. on June 16. Some twenty years ago the hive gained 23 lbs. in one day, and that stood as the record until 1912.

I am sending a view of the apiary. The scales can be seen at the right of the center.

Niagara Falls, Ont.



Apiary of U. H. Bowen, Niagara Falls, Ont., where the scale hive on the 16th of June, 1913, showed a gain of 25 pounds.

## POETS UNDER THE CHERRY-TREES

BY GRACE ALLEN

I linger for hours among my books,  
Where the friendly sun so often looks  
Across the pages and seems to say,  
"What! Reading your poets again to-day?"

And then when the letters have tired my eyes  
And I'm thirsty for breezes blown out of the skies,  
I close up my books and go out to my bees,  
My poets under the cherry-trees.



## CROP CONDITIONS FROM A COMMISSION MERCHANT'S STANDPOINT

BY S. T. FISH & CO.

Western New York reports clover comb and extracted in most sections a total failure. In some places basswood is showing up well.

Some Michigan points report weather conditions quite favorable, and a fair crop expected. Most producers run for extracted honey.

Sections around Richland Center, Wis., report the crop very short, very little white clover, and about half to three-quarters of a crop of basswood. Season is entirely too wet and cloudy.

Some Ohio points report about half a crop, while others report a quarter to half a crop.

Sections around Medina, Wis., report that the month of June was too cold and wet. Basswood, very short duration. Some of the beekeepers may harvest half a crop.

Sections around Greenwood, Wis., report weather entirely too wet. Very little honey to be marketed.

Nevada reports a short crop.

Sections around Marshfield, Wis., report prospects very unfavorable on account of too much rain, also heavy loss of bees, and weak condition of bees at the present time.

Montana points will have about half to three-quarters of a crop. At the present time there is a good honey-flow in that section.

In points around Appleton, Wis., Fond du Lac, and Oshkosh, honey crop is short compared with last season. Weather is too wet, cold, and cloudy.

Points around Chippewa Falls, Wis., report about half a crop on account of weather being too cold and wet. Unfavorable weather prevented the bees from doing any work during two of the best weeks during clover.

St. Anne, Ill., reports a total failure on account of dry weather.

Sections around Boyd, Wis., Stanley, Wis., report honey crop almost a failure. Bees have not stored any honey up to July 10.

Augusta, Wis., reports a fair outlook for honey; however, rains have delayed the season, but colonies are in good condition to gather honey.

Points around Osseo, Wis., report prospects up to July 6 not very good—too much wet weather.

Points around Woodford, Wis., up to July 10 report prospects very unfavorable—weather too cold and too wet. About half a crop or less expected.

DeKalb, Ill., reports favorable conditions, and that a good strong honey-flow is on now.

Points around Idaho Falls, Idaho, report a good crop of both comb and extracted honey.

Points around Baraboo, Wis., report a very poor crop of white clover, but a fair crop of basswood (mostly an extracted-honey section).

Coon Valley, Wis., reports a fair crop (mostly an extracted-honey section).

Chicago, Ill., July 18.

## A CROP OF 70 POUNDS TO THE COLONY

BY GEO. H. KIRKPATRICK

In summing up the honey crop to date I find the number of colonies in the fall of 1913, included in the area which I am reporting, was 1463. Winter losses were very light; and as the spring was unusually fair for the bees, the winter and spring loss was only about 10 per cent. Thus there were in this section of the State, at the beginning of the honey harvest, about 1330 colonies.

At this date only about half of the crop has been extracted, but it is safe to put the net average at 70 pounds per colony, spring count, or a total of 93,100 pounds, only about 2 per cent of which is comb honey. I should estimate this to be about 70 per cent of an average crop. Last season this same section had only about 40 per cent of an average crop.

Very nearly all of the honey included in the above figures was gathered from the wild red raspberry, and, as usual, is of excellent quality, it being light in color, good body, and good flavor.

In many parts of this section of the country the bees are gathering honey from the milkweed plant at the rate of from 6 to 12 lbs. per day per colony. Should there be just a few more days of good honey weather the flow from the milkweed will bring the average per colony up to 100 lbs.

The basswood in the forest is mostly cut; but in some sections there is plenty of second growth; and as it will bloom this season there is a chance for some honey from that.

Rapid City, Mich.

## CROP PROSPECTS IN UTAH AND IDAHO

BY F. W. REDFIELD

Although the spring was unfavorable, especially in Utah, prospects for a full crop, both in Utah and Idaho, are excellent at this writing. The cool damp spring, coupled with the alfalfa weevil throughout most of Utah, necessitated considerable feeding to keep the bees from starving. The alfalfa weevil, however, is still confined mostly to Utah, there being very little in Idaho. Sweet clover is abundant at this writing, and blossoming nicely. The crop depends entirely on how long the frost holds off this season. No comb honey has been completed to date, but the bees started in the comb-honey supers nicely during the past week. They are storing considerable honey in extracting-supers. Extracting at Idaho Falls will begin July 20 to 25, and in most parts of Utah about July 25. If frost holds off until

the last of August the yield both of comb and extracted will be much greater than last year. Weather is warm at present, and conditions indicate an average of about 75 lbs. comb honey per colony, spring count, or 150 of extracted honey. Early frost would cut down this average, while a late frost would increase the average. At this writing weather conditions and condition of the bloom were never better, except in parts of Utah where the alfalfa weevil is at its worst. Even in such parts the weevil has now changed to the beetle, and that, of course, will not injure the bloom in the least from now on, both alfalfa and sweet clover yielding honey heavily throughout Utah and Idaho at this writing.

Ogden, Utah, July 18.

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## OREGON CROP BETTER THAN LAST YEAR

REPORTED BY THE PORTLAND SEED COMPANY

In the Willamette Valley from Portland south we find that the expectations are that the bulk of the crop has been secured. This is true in nearly all localities. The vetch is being harvested; alsike clover is ready to cut; white clover is failing rapidly on account of the dry weather. Colonies average 75 lbs. comb honey. In a few instances some expectations are that colonies have put up 250 lbs. and upward.

East of the mountains we understand the alfalfa crop is hardly up to average, and at the present time the beemen do not seem

willing even to guess their average. Mountain and river district reports will be incomplete, as fireweed is now in full bloom, and bees are storing rapidly. Expectations are for from 75 to 100 lbs. comb honey.

Portland has but one source of surplus—white clover. Hundreds of acres have been blooming for weeks. Honey is first-class, colonies averaging 75 lbs. of fancy white-clover honey. We consider the season a better average in all districts than last year.

Portland, Ore., July 14.

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## LIGHT CROP IN SOUTHERN WISCONSIN

BY N. E. FRANCE

Southern Wisconsin clover bloom has been abundant, and is yet; cold nights and no nectar; abundance of rain. July 5-10, basswood yielded well here. Many hives

now have three sets (30 in all) of L. frames full of white honey. Season is over here. General crop here is light.

Platteville, Wis., July 11.

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## RAIN CAME TOO LATE

BY P. J. R. MANEGOLD

The bees were in fine condition this spring. They did well during fruit bloom, and there was certainly every prospect of a good season, but the dry and hot weather, commencing earlier than last year, ruined it all.

We have no white clover around here

this season, while last year there was an abundance of it everywhere. Those within reach of basswood may have done well as it was excellent. There will be but very little surplus honey in this locality.

West Point, Iowa.



## LATE TELEGRAPHIC REPORTS OF THE CONDITIONS OF HONEY CROP AND MARKETS

FURNISHED BY DEALERS IN VARIOUS PARTS OF THE COUNTRY.

Bees did fine through fruit bloom, but they are not getting much from white or sweet clover because the weather is too dry. Basswood opened a week early, but bad weather cut off three days. A few reports are fair, but most indicate about half a crop. The honey average among good beekeepers will be 50 pounds extracted or 30 comb as against 100 and 60 pounds respectively last year.

Des Moines, Ia., July 18.

Michigan estimate, two-thirds crop. Comb, per colony, 40 pounds; extracted, 75 pounds. Compared with last year, better. Basswood flow good. Clover flow good in spots. Raspberry flow fair. Eastern half of State favored. Northern Michigan fair; southern Michigan doubtful.

Lansing, Mich., July 20.

First crop about gathered. Reports from all southwest Texas show a vast improvement over last year's production—more than equaling a normal year, and averaging seventy to eighty pounds per colony (two-thirds bulk comb). Uvalde crop is three weeks earlier than others, and low quotations resulted in a poor market. The outlook is promising for a fair second crop.

San Antonio, Tex., July 18.

Reports from twelve largest honey-producers in Maine say cold spring. Season two weeks late. More clover-blossom than for several years. Season looks much better than last season at this date. Too early to estimate on crop. Bees working well, and in fine condition.

Mechanic Falls, Me., July 20.

Reports from over the State indicate only half the usual crop of honey. Alfalfa, owing to extremely dry weather, is very poor in nectar. If we have rain we may get good surplus from cotton; usual average per colony in a normal year is fifty pounds figured as bulk comb honey.

Stillwater, Okla., July 15.

Extracted-honey crop from orange is small, practically all sold. Sage and mountain flowers are good, quality fine. Alfalfa is good. Many bees were lost on account of disease, so that there are fewer colonies this year, but a better yield per colony. The yield probably averages 100 lbs. per colony. The market is weak, the demand poor, and prices low. Comb-honey prospects good, but not estimated yet.

Los Angeles, Cal., July 19.

In immediate vicinity of New York city, honey crop is good from apple-blossom and locust, both comb and extracted. White clover is reported a failure owing to drouth. Recent rains have improved conditions. Clover, basswood, and sumac are now yielding well. Connecticut reports indicate crop as good as usual.

New York, July 20.

Bees built up well on fruit-bloom. There was a very light flow from locust and white clover, and there was also considerable honey-dew. Drouth cut sweet clover short. Average about 40 lbs. extracted per colony, and of poor quality. Last year the average was 90 lbs., principally extracted, for this section, Jefferson Co., Ky.

Louisville, Ky., July 19.

In southeastern Idaho the early spring weather was unfavorable. Present weather conditions are excellent. Honey-flow now on in full blast. Estimated yield from 9238 colonies, 10,000 cases comb and 470,000 lbs. extracted, all water-white sweet clover and alfalfa. Average, 70 lbs. per colony—twenty-five per cent over last year.

Idaho Falls, Ida., July 18.

We have conversed with beekeepers who say they cannot give an intelligent or accurate report for thirty days. Harvesting is late in this high altitude. Last year's crop in Montrose County was about 10,000 cases of comb. Not much extracting is done. Present indications are for a medium crop, but favorable conditions for the next thirty days might mean a normal crop.

Montrose, Colo., July 18.

Colonies strong. White and alsike about over. Sweet clover at best. With continued good weather the yield will be about average; too early to make a definite estimate. Crops double last year's yield, owing to increase in apiaries. This locality produces about equal extracted and comb.

Twin Falls, Ida., July 20.

Latest returns from Pennsylvania, Delaware, New Jersey, and Maryland show that recent rains have started nectar in white clover, and the bees are again at work. A large percentage of that gathered through fruit-bloom was consumed in brood-rearing. The present flow will be used in brood-nests. In some locations there is a little surplus from fruit-bloom.

Philadelphia, Pa., July 18.

## EXTRACTS FROM LETTERS AND POST CARD REPORTS ON HONEY CROP PROSPECTS

Dry weather cut the crop in two; only one rain in eight weeks.

Helena, Ark., June 24.

Excessive heat and drouth; only half a crop, and no prospects for a fall crop.

Cochrane, Ala., June 22.

The honey-flow is at a standstill on account of extreme heat and drouth; only a small surplus.

Manford, Ala., June 26.

The local drouth is fearful. Bees are consuming the first crop.

Florence, Ala.

A severe drouth has lasted here over seven weeks; honey crop is short. There is much sweet clover, and it is standing up well so far.

Forkland, Ala., June 27.

Plenty of white clover in bloom, but bees are not working on it yet.

Danbury, Ct., June 22.

Conditions here could not be worse.

Dickson, Cal., June 26.

The honey crop is not up to expectations because of a cold May and June.

Newhall, Cal., June 27.

Bees are doing well just now. The prospects are bright for a good crop. Alfalfa and sweet clover are just coming into bloom.

Durango, Col., July 1.

White clover is dried up by drouth.

Winnemac, Ill., June 25.

No clover honey. Bees are starving.

Jerseyville, Ill., July 7.

White clover was killed last fall; no rain here since April 22; prospects for fall are very poor.

Percy, Ill., June 24.

White clover is a failure. Bees are storing from sweet clover; prospects for half a crop.

Flannigan, Ill., July 9.

No honey so far, and none in sight; drouth last season and this one. All clovers and wild honey-bearing plants are killed outright.

Deer Plain, Ill., June 25.

Bees are doing finely; clover not quite as plentiful as last year because of wet weather.

Galesburg, Ill., June 26.

The white-clover crop is a total failure throughout Madison Co.; poor prospects for a fall crop.

Edwardsville, Ill., June 22.

The clover honey crop is a failure; no rain for three months; crop prospects are bad for a fall flow.

Pittsfield, Ill., July 6.

Clover is a complete failure; no rain since the first of April.

Decatur, Ill., July 2.

Hot and dry. We shall probably have to feed unless relief comes soon.

Mechanicsburg, Ill., June 27.

White clover is almost a failure, because the weather is very hot. Bees are doing fairly well on sweet clover.

Minooka, Ill., July 14.

No white clover this year, because drouth destroyed the old plants last fall, and the spring drouth prevented the seeds from sprouting.

Nashville, Ill., June 23.

Almost no clover; little honey coming in; sweet clover plentiful, and bees on every frame. The surplus crop will be very light.

Newark, Ill., June 23.

White clover is almost an entire failure because the weather is cold and dry. Sweet clover is in bloom, but the crop will be light.

Hoopeston, Ill., June 24.

No white-clover honey in the central and western part of the State. The drouth last year killed out the white clover; some this spring, and presumably from seed; but this year's drouth killed that out.

Jacksonville, Ill., June 22.

The white-clover honey-flow is exceptionally good.

Harlan, Ia., June 27.

Plenty of clover and basswood in full bloom; lots of rain, but not much doing in supers.

Marshalltown, Ia., June 25.

White clover is coming on very thick. Prospects are good.

Onslow, Ia., June 29.

White clover was nearly all killed by drouth last fall.

Shellsburg, Ia., June 23.

Basswood is promising; plenty of rain, but the hives are light.

Strawberrypoint, Ia., June 22.

White clover is very abundant; also considerable alsike; rains are frequent. Bees are doing well. Basswood promises a heavy bloom.

Edgewood, Ia., June 25.

No surplus honey this year. Prospects were good the first of June; but clover dried up because of no rain.

Mitchellville, Ia., July 10.

Less than one-fourth of an average clover crop.

Valparaiso, Ind., July 8.

The honey crop is a complete failure.

Indianapolis, Ind., July 7.

Bait sections will be abundant for next year; normal prospects for fall crop.

Elkhart, Ind., July 9.

The honey crop is a failure so far this year. We are having to feed.

Franklin, Ind., July 6.

Clover is a failure. The drouth last year killed practically all the young clover; no surplus, and basswood just closing.

New Ross, Ind., July 4.

No white-clover honey; small yield from alsike, linn, and berries; no surplus so far; little prospect for a fall flow.

Lebanon, Ind., July 2.

The honey crop is a complete failure; no surplus. Brookville, Ky., June 26.

No white clover, because of drouth; sweet clover is coming on.

Hiawatha, Kan., June 23.

Conditions are bad; sweet clover not as abundant as usual.

Merriam, Kan., July 9.

White clover died out last summer. Bees did very little until June 15 on yellow sweet clover and milkweed.

Ionia, Kan., July 1.



Clover is practically a total failure. Plants are parched by a fearful drouth.

Walton, Ky., June 24.

Clover honey is a complete failure. Honey-dew kept bees from starving. Prospects for aster honey are very good.

Elkton, Ky., June 23.

The honey crop is poorest in years; scarcely any white clover; heat and drouth severe.

Dry Ridge, Ky., June 25.

Clover is a total failure. Bees will need all they can get to last until aster, which looks very promising. We are still having dry hot weather.

Brooksville, Ky., June 26.

We have had no rain since May 4. Bees get hardly enough to live on. The crops are burning up; very little tobacco is planted; only chance for honey is from boneset in September or October; few rains. Kevil, Ky., July 7.

We have a nice little lot of white-clover honey. Alexandria, La., July 1.

More honey to date than for several years.

Lyonsville, Mass., July 3.

Very little white clover, but conditions are just right for cranberry.

East Dennis, Mass., June 29.

The first half of the season was good, the last half bad; half a crop.

Aikin, Md., July 8.

Clover is all dried up; had a good rain, which will help the second crop.

Towson, Md., June 27.

Bees are doing finely.

Reading, Mich., July 13.

Rather light crop in northern Michigan; 60 lbs. per colony of extracted honey from raspberry.

Mancelona, Mich., July 7.

Since our last report bees have done well on basswood; will probably get a fair crop; probably 50 acres in Canada thistle within a mile and a half of my bees.

Clayton, Mich., July 15.

Every thing is drying up; bees are doing nothing. Frederickton, Mo., June 29.

No clover nor any thing else; am feeding.

Strafford, Mo., June 23.

No white-clover honey because of last fall's drouth. Unionville, Mo., June 22.

Excessive rains have prevented the bees from doing much.

Blooming Prairie, Mo., June 30.

No clover; drouth and hot weather are excessive. We shall have to feed.

Durham, Mo., June 23.

The honey crop is a complete failure. We have been feeding three weeks.

Hendland, Mo., July 8.

No clover honey; bloom scarce; weather too hot and dry; hoping for a buckbush crop.

Springfield, Mo., July 7.

Very dry; clover no good; no honey in the hives. Basswood has been yielding the last few days.

Grant City, Mo., June 24.

This is a clover and basswood locality; no surplus, and bees will have to be fed for winter.

Janesville, Minn., July 7.

About one-third the usual amount of white-clover bloom; but we have had continuous bad weather.

Swanville, Minn., June 23.

White Dutch clover not blooming, owing to drouth in southern Minnesota. We get most of our honey before Aug. 1.

Valley River, Minn., June 15.

Bees were on the verge of starvation until basswood, and only a light yield from that. The fields are white with clover; but continuous rains in June prevented any yield of nectar.

Excelsior, Minn., July 10.

No surplus clover honey; not one clover-blossom to the acre; army worms cleaned up the meadows, and a drouth of three months has ruined small fruit. Clover is scarce.

Richmond, Miss., June 24.

Alfalfa is yielding well; weather dry and hot.

Cozad, Neb., July 7.

Prospects are very good; hives well filled, and bees working nicely; abundance of sweet clover which promises to last well and to give a good crop.

Omaha, Neb., July 7.

White clover is very nearly a complete failure, as it is too dry. But we have had rain lately, and expect a fall flow from smartweed and wild flower.

Elk Creek, Neb., July 6.

Because of last year's drouth there is no prospect of any surplus from any source in southeast Nebraska. Conditions are getting worse, because it is too dry.

Humboldt, Neb., July 4.

We have two-thirds of an average honey crop; not over half an inch of rain in eight weeks.

Coolee, N. C., July 1.

Early honey is scarce; little clover and much dry weather.

Pittsfield, N. H., June 29.

No clover honey; hoping for a fall crop.

Salem, N. J., June 29.

White clover has yielded no nectar. June was cold and rainy.

Hillsdale, N. J., July 1.

Clover is a total failure. Hot weather and drouth cooked the clover.

New Egypt, N. J., July 10.

This is the poorest season in 15 years. The early crop is a total failure in central New Jersey. Drouth and cold winds finished the clover in a week; no surplus.

Frenchtown, N. J., June 26.

All the beekeepers in the valley have a fair crop if they take off what honey is in the hives now, and the bees fill up with stores for winter. Bees are doing well now.

Mesilla Park, N. M., July 5.

Clover is scarce and foul brood plentiful.

Himrod, N. Y., June 24.

Bees are doing nothing on white clover, as it is too dry and cold.

Ballston Spa, N. Y., June 22.

White clover is a complete failure because of drouth. Colonies are strong, but just enough honey in the hives for brood-rearing.

Sherman, N. Y., June 25.

Clover is scarce, and not much honey. Every thing dried up last year; can't tell what basswood will do.

Black River, N. Y., July 9.

The raspberry crop is good. The clover season was very short because of cold cloudy weather. It is too early to report on basswood.

Triangle, N. Y., July 8.

The white-honey crop is nearly a failure; average of 25 lbs. per colony. Buckwheat looks promising; will move 300 colonies next week.

Clarksville, N. Y., July 10.

The white-honey crop is not over 10 lbs. per colony; prospects good for buckwheat; excessive swarming.

Homer, N. Y., July 17.

White clover is scarce, sweet clover plentiful. More buckwheat will be sown than usual. No honey crop in sight.

Catskill, N. Y., June 30.

Too dry for clover; prospects good for a fall flow. Frost, O., June 26.

The honey crop is a complete failure. Cleveland, O., July 15.

Very little clover and no honey. Columbiana, O., July 4.

The honey crop is a failure because of great drouth.

Miami, O.

White clover is scarce. Bees are doing very little on alsike.

Blacklick, O., June 25.

Too hot and dry for white clover; honey prospects not favorable.

Jacobsburg, O., June 22.

Bees are doing finely, and everybody is busy trying to keep up with them.

Defiance, O., June 18.

White-clover honey is scarce. Where alsike is plentiful bees are doing well.

Bellevue, O., June 26.

Plenty of white clover, but no nectar. A little surplus is coming from motherwort.

Somerton, O., July 5.

Plenty of white clover, but the honey yield is a complete failure; clover parched.

Ashtabula, O., July 11.

The honey crop is a total failure; no surplus; shall probably have to feed for winter.

Harrison, O., July 10.

The honey-flow is a failure here. Dry hot weather spoiled the clover; basswood looks fair, but is not out yet.

Newton Falls, O., July 2.

Practically no white clover, as it is very dry. Bees have been working well for the last two or three days on basswood.

Negley, O., July 7.

Honey came rapidly the first week in June; by the 15th the weather was too dry, and bees were running off their drones. About the 20th the bees began working again on linn and clover, which are still yielding, although the weather is very dry.

Wilmington, O., June 23.

Conditions were good up to the opening of clover. Fruit and locust yielded well, some of the latter going into the supers during clover bloom on a day when the weather was right. We have had extreme heat and unseasonable cold. Sumac and clover are yielding rapidly now. We may get a fourth of a crop.

Duncan Falls, Ohio, July 8.

The prospects for honey are slim; too cold and dry. Toronto, Ont., June 22.

Clover is a total failure. If it does not rain, basswood also will fail to yield.

Milzmay, Ont., July 13.

The clover crop is a total failure in this part of Ontario.

Mt. Joy, Ont., July 6.

The honey crop is a complete failure so far, though we are hoping for something from basswood.

Adelaide, Ont., June 26.

The crop in southern Ontario is almost a total failure. Bees are killing off the drones; very little clover; weather very dry.

Whitby, Ont., June 27.

Fearful drouth; clover all dried up.

Fenelon Falls, Ore., June 25.

Not much honey coming in; have had to feed some. Guelph, Ont., June 25.

The clover crop is a failure so far; may get some yet if the weather is favorable; secured half a ton from apple bloom.

Oshawa, Ont., July 2.

Clover is a clean knockout; basswood more than half over; 4 lbs. the best gain in a day so far.

Ailsa Craig, Ont., July 17.

The weather is too dry; no honey.

Monongahela, Pa., June 23.

Clover flow is light—none coming in at present.

Decatur, Pa., July 14.

Clover is nearly all dried up. This is the third year of drouth for this section.

Michael, Pa., June 23.

Not as much white clover as last year; wet spring but a dry June.

Pottstown, Pa., June 30.

No white-honey crop; too hot and dry, and, later on, too cool.

Pipersville, Pa., June 22.

No white clover, as it is very dry. There will be some buckwheat.

Elkland, Pa., July 13.

Locust yielded fairly well; white, red, and alsike are almost burned out of the ground. We have just had rains which may help.

Cochranville, Pa., June 27.

Drouth the last of May and fore part of June resulted in a serious shortage of surplus. Recent rains revived clover, but no nectar.

Doylestown, Pa., June 29.

Clover is great, and the prospects are good for a splendid honey crop if it will only stop raining.

Sioux Falls, S. Da., June 29.

Almost no surplus from white clover. We are hoping for a surplus from asters in the fall.

Aspen Hill, Tenn., June 24.

All colonies two-story in fruit-bloom; great profusion of clover now, with sultry weather and plenty of rain. Honey is just rolling in. Basswood promises well.

Derby, Vt., July 10.

Plenty of clover; good flow of nectar, but no good weather; rain almost every day.

Forest Junction, Wis., June 26.

Lots of clover in bloom. Bees are working well when the weather permits.

Stockbridge, Wis., June 23.

The honey crop is good so far this season—rather above the average. Prospects are good for a late yield.

Webster Springs, W. V., June 28.



# Heads of Grain from Different Fields



## THE BACKLOT BUZZER

*When a bee stings a beekeeper, it isn't news; but when a beekeeper stings his bees, it is. Speakin' of foul brood, any man who permitted it to thrive in his hives would give a dog hydrophobia if he bit the dog.*

## Imbedding with the Wires Slightly Loose

H. H. Root, in his article on "putting foundation in wired frames," in GLEANINGS, Nov. 15, 1913, says: "It is not an easy matter to imbed wires out of line." Then editorially, in the Jan. 1st issue, this statement is made: "Some of our readers got the idea that the wires in the frames are loose." Mr. Root is right as to the difficult "cross-grain" imbedding; but I don't imbed them that way. I imbed them practically wholly in a straight line, but have the wires slightly loose, as some of your readers suppose. How do I do this? By taking hold of the wire about two inches from the end of the frame, and pulling it down or up as required about  $\frac{1}{8}$  of an inch, and imbedding this short angle, then reaching across to the other end of the frame, and pulling the wire down or up like the opposite end, so that the greater part of it follows an exact line of cells, where it is then imbedded, finishing up last with the remaining bend.

Doubtless many apiarists have seen enough of "buckled" brood and extracting combs (I have) to have been glad to exchange them for straight ones with a ten-dollar bill. Foundation expands with heat; and the reason horizontal wiring came to replace vertical wiring is because the lesser distance,

number of wires, and length of wires, permitted of some "give" or "go" with the expansion. But in our wire-imbedding we did it thoughtlessly, accidentally deviating the right way as well as the wrong way when we didn't go straight. Then when we deviated the down way with the lower wire, also perhaps having an extra-strong swarm, with, too, a series of extra hot days at hand, we would get *buckling to the extreme*.

And we should remember that "buckling" is not the only thing to look out for. While the lower edge of the foundation gets none of it, the upper part gets full; and the weight of the bees sometimes stretches the cells adjacent to the top-bar into a size in which drones will be raised if we do not take precaution against it in the low imbedding of the upper wire.

Sterling, Ill., April 1.

A. B. ANTHONY.

[It is well to bear in mind that a comb stretches somewhat after it is drawn out. Ordinary combs, especially naturally built store combs, will generally stretch slightly on a vertical line after being filled with honey. The period of storing is usually during hot weather, and as the ventilation of the hive is not always perfect, the entire temperature of the hive will rise slightly above normal, if the hive is not shaded. The result will be that the new comb will stretch slightly. We have never seen any evidence that combs stretch after the first year. Wiring, either vertical or horizontal, tends to check the stretching after the combs are built; but vertical wiring will correct this tendency more than horizontal. But a vertically wired comb will be wavy, while a horizontally wired one will be as flat as a board. The reason for this is that foundation, in the process of drawing out, expands both vertically and horizontally. The sag of horizontal wiring takes care of the sag of the comb downward, and the wires prevent lateral expansion, leaving the surface smooth.—Ed.]

## Introducing by Smoke Method to a Laying-worker Colony

In regard to the smoke method of introduction, I introduced three queens the first part of March, two to laying-worker colonies and one to a colony having capped brood. The queens were accepted, and were laying in four days in the colony; have capped brood and one laying-worker colony, while the one in the other laying-worker colony was killed and dragged out after the fourth day. This is my first experience in introducing in any way.

I have always been told that bees do better if set in the sun, but I have my doubts whether it will work here or not in this part of the country, as the temperature reaches 120 degrees in mid-summer.

Our bees are in Langstroth hives with Madary ventilated covers. By giving ventilation at the bottom along with the ventilated covers, would it also be necessary to provide shade in the heat of the summer? and how much heat will combs of brood stand covered with bees?

There was some discussion as to chico or greasewood, it being the last plant in the fall from which bees gather pollen. They will be seen working on this as late as the first week in November.

Las Vegas, Nev., March 18.

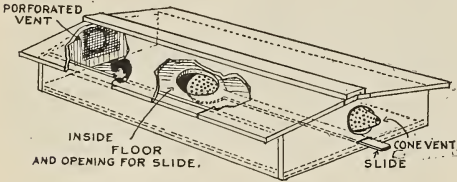
J. M. MILLER.

[The ventilated cover with ventilation at the bottom might not be sufficient to keep the bees cool in some parts of California. The Arizona plan of shading, as illustrated in the A B C and X Y Z of Bee Culture, would be an excellent one to use. It consists of a long shed having a roof of dried grass and weeds. This is held down by wires stretched over the top. This shed should run directly east and

west, and the hives should be placed under it in two rows with the entrances facing outside. In this way the hives will be shaded all day.—ED.]

### A Combination Cover

The cover shown in the accompanying illustration has many advantages over the old-style cover that more than compensate for any additional cost of construction. It was my idea to afford a complete and thorough system of ventilation and to decrease the time necessary to empty the super of bees.



The general construction of the cover is on the same principle as that of a gabled house—peaked roof and flat floor. The bee-escape from the super is a hole cut in the center of the floor that is arranged with a sliding cover, perforated so as to permit a free passage of air, and is attached to a strip that extends to the front end or gable of the cover. This strip is placed in a slot, which makes it possible to open or close the escape by simply withdrawing or inserting the strip. The escape is of sufficient size to permit emptying the super in three or four hours, whereas it usually takes twenty-four hours. There is a ventilator in each gabled end, one being cone-shaped, and acting as an escape from the cover. A beekeeper who had been troubled with his foundation in the brood-nest melting during the hot summer months, with the old-style cover, gave this cover a severe test, and declares that this system of ventilation is the best he has ever seen.

Where it is found necessary to feed the bees, the feeder may be placed under the roof of the cover. Opening the escape from the super the bees may enter the cover, and feed, and return to the hive. Closing the gable escape insures against theft by "robbers," and keeps the home bees from leaving the hive.

Altoona, Pa., Feb. 2. MATTHEW KEARNEY.

[Except for the bee-escape feature and floor of the cover proper, the style here shown is quite old. If the two gable boards are made of  $\frac{3}{8}$  lumber, as we presume they are, to reduce weight, they will give trouble. We have discarded from our own yards several hundreds of this type of cover. The  $\frac{3}{8}$ -inch board will shrink and split as well as curl up, and such a cover will always leak if given two or three years of usage, out in the open. The only satisfactory way to make a double cover like this is to use metal or paper to cover the whole top. In fact, good roofing-papers, if carefully used, will do good service for ten or twelve years.

Our correspondent does not explain how he puts the feeder into this cover. In the absence of any statement to the contrary we will assume that the floor is removable in some way. The plan of having cone escapes on the end of the cover is not new. It has been used very largely on this type of cover.—ED.]

### Why the Paint Blistered on the Hives

I have had your double-wall hives out of doors for several years—three winters, to be exact. This spring I found the paint on the outside of all the hives had blistered. The natural explanation would be that the moisture traveled through from the inside. Do you think this possible? Have you any explanation to offer regarding this condition? The hives were sheltered from moisture during the winter, as

they had a frame, at least 8 to 10 inches away from them on all sides, of black building-paper stretched on a wooden framework, and I am at a loss to understand why this should happen. The dampness on the ground underneath certainly would not cause this. The hives have been painted every year, but this moisture is between the bottom coat of paint and the wood.

### FEEDING ARTIFICIAL POLLEN.

In regard to spring feeding, last spring I fed the bees one-third flaxseed without oil, one-third graham flour, and one-third rye flour. The flaxseed seemed to draw the bees, as they did not take kindly to the pollen until this was put in. However, when the flaxseed was added they took it up in bunches. I put a small tin pan in the hive, 4 inches in diameter and  $\frac{3}{4}$  deep, and found they took it up much quicker this way than if placed outside. Besides, they could get at it in all kinds of weather.

New York, N. Y.

M. J. KAUFMANN.

[It is hardly possible that the moisture from the cluster of bees would pass through the inner wall of a double-wall hive, through the packing material, and then again through the outer wall. In fact, we would say it is utterly impossible. The explanation for the paint peeling off is probably due to the fact that the wood of which the hive was made was not entirely dry, or had become damp through exposure to moisture. Again, the paint might be at fault. Many of the cheap ready-made paints contain fish-oil or an inferior grade of linseed oil. The oil itself is the medium for holding the paint on to the wood; and the oil, if in any way defective, would account for your trouble. But in most cases the blistering is due to an excess of moisture in the wood.—ED.]

### Some Questions

The spring flow here has been a failure. I have 75 colonies of bees, and harvested about 200 lbs. of surplus.

1. Will it do to divide the colonies for increase? There do not seem to be many drones flying. The bees are killing and driving them out.

2. Will they have time to build up for the fall flow which begins about the last of July or first of August?

3. How much sugar will it take to build up each colony? I want to divide each colony once. What is the best method?

4. I have no queens to give them. They will have to raise their own. In that case would you advise me to divide? They are very populous colonies?

I like bee culture, and am going to devote all my time to it when I have enough colonies.

Uniontown, Ky., June 15. J. C. LINEBACK.

[1. Since you have fall honey-flows it will be safe for you to divide or increase. As soon as increase is made, begin feeding a syrup of two parts water to one part granulated sugar at the rate of about one pint daily per colony. This can best be done by the use of the Boardman entrance-feeder, and should be kept up until the fall flows begin.

2. The amount of sugar which it will take for each colony depends so much upon conditions that it is very hard to give you an estimate. For the periods during which you feed for stimulation you should count on not less than four ounces of sugar per day for each colony. After the honey-flows come on it will not be necessary to carry on the stimulative feeding, and later in the fall, after the flowers are all gone, if the bees have not gathered sufficient to carry them over winter you will need to feed for that purpose. The Alexander plan of increase and "shook" swarming are the two most popular methods used. We can recommend either one.

3. The divided colonies will raise queens of their own; but you can not expect queens raised under such circumstances to be as good as when better methods are used. Your best plan would be to take one of your strong colonies and rear the queens that you need by some modern method.—ED.]



A. I. Root

## OUR HOMES

Editor

Butter and honey shall he eat, that he may know to refuse the evil, and choose the good.—ISA. 7:15.

AN ADDRESS DELIVERED BEFORE THE OHIO STATE BEEKEEPERS' ASSOCIATION ON FIELD DAY, JULY 9, 1914.

Perhaps, friends, I should make a little apology for this long story, and explain that at different times before the affair came off Ernest kept suggesting different points that I should touch on. I warned him that my talk would have to be a long one if I put in what I had planned and also the matter he suggested. But he remarked that a good many of the friends had come from a distance, and that they would be very glad to listen as long as I kept on talking. Perhaps I might explain that the speech was delivered in one of our warehouses. Seats were improvised of boards from the near-by lumber-yards, resting on boxes of sections. As the weather was very warm the windows and doors were, of course, all wide open. My remarks were as follows:

I want to remind you, friends, that it is a little bit dangerous to ask an old man like me to talk. Old men are prone to be lengthy, especially when invited to take all the time they wish. Before starting, I wish to mention a little story I read somewhere recently. A young man was preparing to go out as a foreign missionary—I think it was to South Africa. He was very enthusiastic about it. Some of the older and more experienced men tried to explain to him the hardships and difficulties. One of them remarked, "My young friend, please consider that down there sometimes the temperature goes up to 110 degrees in the shade."

Our young friend replied, "But you don't have to stay in the shade all the time, do you?"

Now, this incident illustrates two points: First, that you, my friends, do not have to stay "in the shade;" for at any time you can get up and go out of this wide-open door whenever you are tired and feel uncomfortable. Second, it illustrates the *enthusiasm* with which I began bee culture. Standing here before you I confess I feel a little proud of the fact that I can remember quite distinctly things that happened over 70 years ago. Some of the older men may remember that long, but the ladies rarely remember things that happened over forty or fifty years ago.

It was very nearly 75 years ago when I was born in a log cabin two miles north of where we now are. My mother used to say that I was always curious about every thing

that is going on and to be seen, even in my infancy. As soon as I could talk I asked more questions in an hour than our family and all the neighbors could answer in a week. There were seven of us children—three younger and three older. When I could get outdoors I was still more curious and inquiring. The older children had much to say about the town of Medina and its people; and I teased so much that when I was four years old I was permitted to go to town with father in a big double wagon. It was all woods then on both sides of the road. The roads were muddy, and full of the roots of trees, and it was a remarkable experience of my early life. I especially remember the boxes of honey that were in that lumber-wagon. Father was a carpenter, and had made some very neat boxes of thin lumber; and when we reached town and he pried off the tops of the boxes, the crowd that gathered around the wagon very soon paid his price and cut the honey out in chunks. Before going home he was obliged to go to the blacksmith's. The first words from the smith were, "Brother Root, I suppose you have got that honey you promised me?"

Father replied, "Why, did I promise you some honey?"

"Certainly you did," said the smith, as he looked over the wagon. "You have not gone and sold it all, have you?"

Father replied that he was very sorry, but he had forgotten all about it; and when the smith asked him if he could not bring some later, father said there would not be any more that season. I remember the smith then took out of his pocket the biggest jack-knife I had ever seen. It had a long bright blade. He pried off the top of a box and scraped off some of the honey still sticking to the board. I remember how he smacked his lips and expressed his regret that he could not have some of that nice honey. I felt sorry for him then, and, my good friends, I have been sorry for that poor blacksmith for *over 70 years*; and I am sorry now, not only for the smith, but for everybody else—men, women, and children—who cannot have God-given honey to go with their daily bread. "Milk and honey shall he eat, that he may know to refuse the evil, and choose the good."

I think there must have been quite a few people who wanted *more* of that nice honey. Very likely it was basswood honey, because there were more basswoods around our forest home than there were of fields of white

or red clover at that early date. Somebody suggested that if father would *brimstone* his bees he could have a good lot more of that nice honey. I believe it is quite out of fashion now to brimstone bees to get the honey—at least I hope it is; and I have protested against this cruel and foolish practice for the past 70 years. It is like killing the goose that has laid a golden egg. But as it was to be done I was very eager to be a witness to the operation; but I had just had a spell of what the doctors called in that early day lung fever; and our doctor said the day before that I would have to be kept indoors close to the big fireplace. He said I must not even be permitted to *look* out of doors. As it was near winter time there was a little snow on the ground; but in some way or other when they were busy getting their pans and kettles ready to put the honey in I slipped out of the door that did not happen to be latched. I got up to the crowd around the hives, and then stubbed my toe and fell over with my bare hands sprawled out in the snow; and there my good mother found me and grabbed me up quick. She put me in a chair by the fire; and to keep away drafts they hung blankets on three sides of the big rocking-chair where I was laid on pillows. The doctor was sent for, and later another doctor, and finally a third one. But I went down so rapidly after falling in the snow that all three doctors gave me up. They told my poor mother that there was no hope; and when I had almost ceased breathing they gathered up their medicines and went away. My good mother (bless her memory!) had faith to believe that the great Father above was not only above and beyond all doctors, but she had faith to believe that he *hears* and *answers* prayer, even though that prayer be breathed in the humblest log cabin away back in the woods. For some time I hovered between life and death; but the untiring mother pulled me through. Some one asked which one of the three doctors saved my life. The reply was, "It was none of them—it was no doctor at all. It was the untiring mother and a mother's prayers." May God bless the faithful, patient, Christian mothers of our land. And may God be praised that our good President saw fit just recently to appoint one day in the year as "Mothers' Day."

When I was old enough to remember the incidents of my early childhood I wanted some bees; but father always declared they did not pay for the fuss and bother. Besides, they would sting. After I was married I told the good wife that we would have to have some bees; and after visiting a friend

of mine who was a doctor, and seeing some hives of bees in his pretty garden, I was more determined than ever to have some bees of my own. His bees were working in boxes that had glass ends so one could open a door and see them build new combs and deposit the honey in them. I think that at this time I was 25 years old. I was fairly successful as a jeweler and watch repairer. I also did quite a good business in manufacturing silver chains and rings for the soldiers, for there was a craze for such jewelry at the time the war broke out.

While we were busily occupied one summer day, one of the hands, looking out of the open door, said, "There goes a swarm of bees." My partner in business, W. A. Shaw, having heard me express a wish to get some bees, looked up jokingly and said, "Mr. Root, give me a dollar and I will get them for you."

To carry on the joke I put my hand in my pocket and happened to get hold of a silver dollar and gave it to him. He darted out of the door with a rush. I had so little faith, however, that I forgot all about it. But I remember he came back a few minutes later and set a box down, saying, "Mr. Root, here is your swarm of bees." I could hardly believe it possible that he had caught them from away up in the air, and persuaded them to go into that box.

"Why, Mr. Shaw, how in the world did you get those bees up in the air, and induce them to go in'to that box?"

He jestingly replied, "Oh! that is a *five dollar secret*."

As he did not seem inclined to explain I went on questioning the bees. They did not fly out much that day; but next morning before daylight I was watching them; and I watched those bees and experimented with them until they got out of patience, I presume, and "absconded" the *second* time. But this event by no means dampened my enthusiasm. I found a neighbor who was willing to sell a colony of bees. We tied a rope around the hive and put a long pole through the rope. A friend took one end while I took the other one, and so we carried them home.

One morning I told Mrs. Root that I had important business in Cleveland, thirty miles away. She supposed it was something connected with the jewelry business; but it was really to get to the bookstores and hunt up whatever I could find on bees. In those days it took a whole day to go to Cleveland in a stage coach, and another day to get back. We did not have railways, electric cars, nor automobiles. The mud was often so deep that it was dark before we reached the city.



I found in the bookstores three good-sized books, Langstroth, Quinby, and a book by T. B. Miner. I selected Langstroth, and sat up pretty much all night at the hotel reading it; and I cannot remember that I ever got hold of any thing that gave me such keen pleasure and enjoyment as Langstroth's wonderful revelation of the mysteries of the beehive. Years before, I had read Robinson Crusoe with much interest and enthusiasm; but now, I had really found "truth stranger than fiction." Very soon I selected all the agricultural papers that had articles on beekeeping; and my good sister, who was clerking in the jewelry store, told my wife that it was really too bad the way I "pumped" every old farmer in regard to what he knew about bees. She said that after they had given me all the information they possibly could they looked so wearied and troubled and evidently wanted to get away, she really felt sorry for them.

I soon got in touch with Mr. Langstroth, and in that way found out about the Italian bees; and I also learned that a bee-journal had been started and kept going for three years, but it had gone down for lack of patronage. I scraped up acquaintance with Samuel Wagner, the editor (another of God's noblemen), and by my enthusiasm induced him to recommence (at Washington, D. C.) the publication of the *American Bee Journal*.

Mr. Langstroth had just one imported Italian queen. In answer to my importunity he agreed to let me have her for \$20.00. By this time many of my friends began to be worried because I was neglecting business to fuss with bees. When it was noised abroad that I had actually paid \$20.00 for one single *bug* my friends thought that this capped the climax, and that I was certainly going "daft" over the little insects that everybody *knew* did not amount to any thing. Our express matter at that time came from Cleveland over the stage route I have mentioned. When it was time for the stage to come in one afternoon, that would probably bring my queen, I was on the watch looking away off over the hills for the first glimpse of the stage coach. It finally came up; and when I asked the driver for my queen he came up to me leading a puppy with a chain. Then the crowd that was waiting began to laugh. I remonstrated, saying that that animal was not a queen-bee by any means; but he declared that the playful doggie must be *it*. I went into the hotel office and asked if they had not received a little package for me. When the landlord said that the dog was all, I was mad. Just as I was going out of the door, however, the landlord said, "Hold on! there

is a little box here of something;" and that little box contained my queen-bee. Oh how I did love those little yellow beauties, as gentle as kittens! and the long yellow queen was to me then almost the dearest thing on earth.

Let me explain about that dog "Jip." He was one my brother-in-law, who was somewhere in the South, in the United States army, had sent. Jip was soon such a favorite, not only with our family but the whole town, because of his cute tricks, that I got over my prejudice against dogs, and that particular dog in due time.

By following instructions in Langstroth's book I soon had a movable-comb hive, and the bees were safely transferred, and the \$20.00 queen introduced. When somebody told me that Mr. George Thomson, living down by the river, about three miles away, had a dooryard full of Langstroth hives I dropped my jewelry tools in a hurry, rushed to the livery stable for a horse and buggy, and, sure enough, there were a dozen or more Langstroth hives just like those in the book. From that time forward Mr. Thomson and I were close friends, you may be sure.

About Thanksgiving time he came up to get a look at my \$20.00 queen—the first Italian bee ever brought to Northern Ohio. Now, I had taken brood from that colony to put into an observatory hive, and fussed with them until there was not very much more than a pint of yellow bees left; and when Mr. Thomson declared the whole colony would freeze up before Christmas in spite of any thing I could do, I was thoroughly alarmed. He told me I had better get one of his strong colonies and introduce my queen, and she would then be reasonably safe. I traded him a watch for three hives of bees; and although that was about fifty years ago, his wife showed me the same watch only a few days ago.

The next spring, bright and early, I was at work with the bees. I had so many nucleus hives started by dividing and subdividing that Mrs. Root said she was afraid to pick currants for fear there would be a little swarm of yellow bees on almost every bush. I think it was the first season after that when I secured nearly a barrel of honey (using a home-made extractor) from one hive of bees in one summer.

*To be continued*

THE MOON AND PLANETS; THEIR EFFECT ON THE WEATHER, ETC.

Pretty much all of my life I have labored more or less to convince people that neither the moon nor the planets have any thing to do with the weather, vegetation, nor insanity. When a series of experiments, covering

many years, conducted by the Weather Bureau, declared again and again that careful observation gives no ground for such beliefs, I was greatly pleased. Some of our older readers will recall that when Hicks came out in his journal with elaborate pictures of the heavenly bodies to explain his weather predictions I denounced him as a fraud. I do not know whether Hicks is still trying to delude people with his diagrams and unscientific talk again or not. I have neither seen nor heard any thing of him of late. Below I clip from the *Cleveland Plain Dealer*:

BRANDS ASTROLOGY A MYTH.

WASHINGTON, June 18.—Astrology is branded as a superstition by the Department of Agriculture in its current weekly news letter.

The department declared: "The belief, still to be found in all countries, that planets and the moon affect the weather never had any scientific basis. We believe neither the planets nor the moon can have any effect, because they furnish so little heat, upon which all weather changes ultimately depend."

The next day after, they gave us the following piece of pleasantry:

## HIGH-PRESSURE GARDENING

### DASHEENS UP TO DATE, ETC.

I have been wondering that so little is said just now, especially in our Florida papers, in regard to dasheens. I clip the following from the *Fruit Trade Journal*:

#### HAS DASHEENS TO SELL.

CHULUOTA, Fla.—The acreage of dasheens in this section of Orange County is larger than usual, and farmers are much interested in the outcome of the deal. Lawrence Swanson, a leading grower, is anxious to make arrangements with some merchants in New York and other seaboard markets, to handle his crop.

A little later I shall expect to get postal-card reports from a good many of the friends to whom we have sent tubers. Our dasheens here in Ohio are now growing rapidly; but the weather was so unfavorable that we did not get them planted very early. We are to-day, July 18, mulching them with old well-rotted stable manure. Some of them are now two feet high, and growing rapidly.

#### DASHEENS, ETC., IN OUR FLORIDA GARDEN.

While we are talking about dasheens, you may be interested in the report below, just received from our colored friend Wesley Welch, who has charge of the place in my absence:

*Mr. Root*.—The dasheens by the mulberry are five feet high. The millet is ten feet high. The cassava on the ditch bank is from four to five feet high. I have just worked the place out. It is very nice. The cassava by the alligator's cave, some of it is five feet high. It is certainly a fine patch.

The Department of Agriculture comes out with the heterodox statement that the moon has nothing to do with the weather or the success of crops. It's an iconoclastic age we live in. The next thing you know, the Department will be saying that rheumatism can't be cured by carrying a buckeye in one's pocket.

Some of you may suggest that the Weather Bureau may be *mistaken*; but I think no one (who is at all reasonable), after looking over their carefully kept records for years, will refuse to admit that they are quite right. Perhaps we shall have to wait until some of the popular notions of years ago have entirely died out. Curing rheumatism by carrying something in the pocket, or a cheap iron ring worn on the hand, warding off disease with a horseshoe nailed over the door, etc., are exactly in line with the vendors of Electropoise, Oxydonor, and a whole family of similar swindles, working on people's credulity and imagination, until they are induced to pay \$25 for a mere toy that costs only 25 cents, and cures the ailing *exactly* as a horseshoe cures by being nailed over the door.

The chickens are not laying very much. The ducks are not laying at all, and have not for two weeks. The chickens are looking fine. They are in good shape. We are not having very much rain so far.

I gave Mr. Harrison three African potatoes to send you. That tree that you spoke about has a few fruits on it.

Manatee, Fla., July 14.

WESLEY.

Perhaps if I were on hand I could get the chickens to laying better during the month of July; but perhaps not, as they are now nearing the moulting season in the South. Notwithstanding all that has been said in favor of the Indian Runner ducks, I think they have spells of laying little or none at all, even with the best of management.

The new millet he speaks of as being ten feet high is the same as some that I saw that was eighteen feet high at the experiment station in Brooksville, Florida. His closing sentence is with regard to the "Fei joa" sent me by the Government several years ago. It is a new fruit said to be half way between the mango and the guava. It is grown successfully in California, and is said to be liked by everybody, even when first tasted, which is not true of the guava. If I am correctly informed, the tree on my place bearing fruit is one of the first, if not the *very* first to produce fruit in Florida; and on this account it promises to be almost a curiosity.

The African sweet potatoes mentioned above were from the seed sent us by the



missionary—see page 471, July 15, 1913. As Bro. Thompson suggests, the potato is by no means "vineless;" in fact, from three small tubers he sent me we have quite a patch, and the vines threatened in April to run all over the garden. In regard to the quality, Mrs. Root thinks it is the finest sweet potato we have ever had, grown in Florida. My only objection would be that it is, if any thing, *too* "sweet."

#### DASHEENS IN FLORIDA.

We clip the following from the Jacksonville *Times-Union*:

##### PLANT DASHEENS.

This is a new name for an old vegetable. For countless ages untold millions have lived on the dasheen. It is the "taro" of South America. It will grow anywhere in the Southland the Irish potato grows. It has more protein than the Irish potato has; more starch than cassava (see United States bulletins). At Brooksville, Fla., the United States Government has a large experiment farm where it has given the dasheen a fair trial, and it is a success. It produces from ten to twenty-five tons of tubers per acre.

From one to two tons of cowlot or barnyard fertilizer is best to produce the largest yield. The dasheen will grow on land so sour that it is worthless for ordinary farming. Water may stand on the ground for days without injury to the plant, provided it is drained when the tubers mature. The tops of the plant resemble the "elephant ear," and grow from four to six feet high, returning a lot of vegetable matter to the soil.

The dasheen requires a lot of potash to give best results. Plant about January 4 in drills two feet apart in the row. Cut seed and plant just as for Irish potatoes. It takes less cultivation than for the potato.

It is a great meat-producer. Any food that will fatten meat cheaply will be a boon to the farm. With the dasheen you can utilize the waste swamp and prairie lands, make the waste places furnish meat and other food for the people. Cattle of all kinds are fond of the dasheen.

It can be cooked and eaten in any way that the potato can, and in many ways that the potato cannot be utilized. The dasheen has a nutty flavor very pleasing to the palate. The tender tops are good greens.

Bed out in the sod just as you do sweet potatoes, then cover with four inches of clean white sand, and the shoots are delicious eaten like asparagus. Plant dasheen, kudzu, and Rhodes grass in connection with the other crops, and reduce the cost of living and increase your bank account. The United States will furnish seed and literature free.

DR. G. NELSON DAVIS.

[We understand dasheens will be dug at Brooksville in October. Those who wish to try the culture of this desirable tuber should put in their orders in time, and get seed for spring planting free. The supply is limited.]

The above is mainly correct, so far as I know, except that part about cutting the seed like Irish potatoes. We have always planted the tubers whole; but it may be true that cutting in pieces, especially large ones, they would send up shoots like Irish potatoes. I am now planning to furnish the readers of GLEANINGS, at least those who

are paid up (say a year or more ahead) one pound to each applicant who sends the amount of postage. Your postmaster can tell you what amount will be necessary from your locality. The government station at Brooksville, Fla., sends tubers and pays the postage; but if I am correct they are always behind in filling orders, or have been heretofore.

#### DASHEENS IN CUBA; SOMETHING FROM OUR GOOD OLD FRIEND SOMERFORD.

This "new vegetable" is known here as melanga, and 71 million Americans in "our 21 southern republics" raised and fought on it since their beginning. This proves its value above all other "potatoes," as it is a "tater," and the only one counted on in hot countries where it rains, as it keeps well for three years. Rain daily is the time it grows. Moderately dry weather cuts the crop entirely. It needs much water after it comes up. We have two kinds here—yellow and white. The white is preferred; and for a solid food for a hard laborer nothing, not even corn meal, can beat dasheen. The new plant is as old as Balboa.

Have often thought of you, Mr. Root, and our friend Parson Frazier, of Guanajay and the "black beans."  
W. W. S.

Candalaria, Cuba, W. I., June 25.

I suppose the above is about right, making, perhaps, a little allowance for friend Somerford's characteristic (?) enthusiasm. But my impression is that the melanga that I saw in Cuba several years ago is not exactly the same thing as the dasheen now grown extensively in Florida. At that time I did not understand that the young shoots and the stalk and leaves are in use as a food as well as the tubers.

Yes, friend Somerford, I often think of Parson Frazier and of his class who were learning to speak English while I was getting a little smattering of Spanish. May God bless the dear friends who were just then learning "What a friend we have in Jesus!" sung in Spanish. I hope they are *still* growing in grace and wisdom.

#### MOTH-BALLS AND SQUASH-BUGS.

Our friends will remember that I recently mentioned a cheap way of getting rid of squash-bugs on vines. The following, from the Jacksonville *Times-Union*, gives further proof of the efficacy of moth-balls:

##### MOTH-BALLS SAVED SQUASHVINES.

For several years I had waged a losing fight with the long black squash beetle, and the slender striped harlequin bug, and had lost all my pumpkin and squashvines. When I crumpled a dry leaf, a myriad of little demons would scatter in all directions.

Last year I had a good stand of squashvines planted in fertilized soil among the potatoes. One day a visitor and myself went over all the vines, turning up every leaf and destroying both bugs and eggs. Dropping off to play "possum" on the ground did not help them. We made a clean sweep of the bugs, and I forget how many hundreds were killed that day. Then I got a bag of moth-balls and laid them at close intervals along each vine under the thickest

leaves and beside each young squash. A heavy rain washed some away, but they were replaced. After a few days I saw and killed a few stray beetles, but those squash and pumpkins grew very large, and I saw no more beetles. Last fall I hauled home all one horse could pull on the sled, from a comparatively few vines, and I believe it was the moth-balls that saved them. I shall try the same again.—*Exchange*.

As the above was marked "Exchange" we cannot give credit to the writer; and, by the way, I do wish it would become the fashion, especially in agricultural papers, to give name, residence, and date. Over and over again I have found articles on gardening and agriculture where important points are virtually "knocked out" because the

writer does not tell *when* he wrote nor where he lives. We frequently see statements like this:

"You can get a crop of white beans before frost comes, if planted right off now."

Well, the editor may have put this in print just the minute he got hold of it, or it may have been lying around a month or more. It is such a simple thing, and occupies so little space, why cannot everybody put a date to his communication, and tell whether he lives in Maine or Florida—that is, if the editor does not object to giving the name and address?

## TEMPERANCE

### "VOTING AS WE PRAY."

We used to hear a good deal about the above years ago; but if I am correct the phrase has of late rather dropped out of sight. The good brother who writes below is, I think, too severe on professing Christians and ministers of the gospel. It may be true in localities, but I think it is not true as a rule. When the saloon vote has again and again outnumbered us I have asked the question, "Is it possible that any professing Christian of the present day will vote with the wets?" Just now while I write there is a war in Ohio, but I think it bids fair to be a *peaceful* war, and I wish I could say it will be an honest one. The ministers of our county are getting names on a petition from voters for Statewide prohibition. As I am rather old for such canvassing I told the good brothers I would furnish gasoline for the automobiles, and dinners and livery hire for the good pastors, and they are working with a vim, and gathering in names.

You may now listen to the good brother from Kansas who writes me a "love letter" as he calls it:

Drinking is a disease to be prevented, like the bubonic plague, etc. To be consistent, let all the Christians pray against the plague and then vote for a law permitting Uncle Sam to license doctors and undertakers to spread it. Of course the Christians would have the spreading regulated. The pest-houses would have to close on Sunday, and all who were already incurable would not be allowed any more—"germs." After having these plague-houses upon every street where our boys and girls would be compelled to pass and every art used to induce them to enter, the undertakers would be allowed to mix some germs with their food and medicine; and then, if they did not contract the disease, still other means would be sought. Those who did not take the plague, or, better, the few who did have it only in a temperate form, would be pointed out by the Christians as fit subjects for heaven.

Let us vote for what we pray and preach. Let the church members join in with the unbelievers, and this evil will be "downed."

Let us license the stealing of horses, the committing of murder—*any* thing rather than the rum traffic—that greatest of all evils that threatens the utter ruination of the human race—an evil that is transmitted with increasing power to all posterity.

The church is behind every reform—*away* behind. Brethren, let us catch up or the infidels will get all the glory.

More preachers voted against Abe Lincoln than for him. They preached "Slavery is of the Lord;" "Servants, be subject unto your masters."

In the office of the Missouri Pacific Depot at Benedict appears this sign:

Beer is bad,  
Whisky worse;  
Drink lemonade—  
Safety first.

What causes the most wrecks on our railroads? Rum, rum, rum. What causes the most wrecks in our homes? If the Christians had an old well back of their church lot that children would *continue* to fall in, they would not fill it up. Oh, no! they would preach to their children and tell them of the great danger of playing around its rotten curb. "Brethren, let's fill 'er up, even if it ruins the business of the undertakers."

I love Christians—some of them. But can we point with pride to our Christian nation and say we drink less booze, have less crime, than the poor be-nighted heathens who worship idols?

Now, Mr. Root, this may strike you as a peculiar "love letter," but I assure you I too love A. I. Root, his family, G. M. Doolittle, Dr. C. C. Miller, and a great host of others who are "God's noblemen."

Guilford, Kan., July 15.      HERSHEL SHORT.

### NORTH CAROLINA MEDICAL SOCIETY DENOUNCES THE USE OF ALCOHOL.

Dr. J. M. Parrott, of Kinston, president of the medical society of North Carolina, as reported in the *Raleigh News and Observer*, said:

As medicine, in the opinion of many of our greatest doctors, it has practically no value. The great weight of scientific evidence leads to the conclusion that alcohol is an unmitigated evil. It is about, if not already, to be eliminated from the pharmacopoeia. That it is not efficient as a medicine is easily shown by the fact that many of our best doctors never prescribe it at all. There are a number of cities in North Carolina in which it is not kept at the drugstores, and where no prescriptions have been written for it since statewide prohibition went into effect.



**A LAKE TRIP FOR REST AND RECREATION**

Use D. & C. Line Steamers for Business and Pleasure Trips

**T**HE refreshing lake breezes, the freedom of the decks and the luxurious comfort of the popular D. & C. Line steamers are waiting for you. Whether you go north to beautiful Mackinac Island, the famous summer resort of the North country, or choose the "Water Way" on your trip from the east or west, you will appreciate the many comforts on our palatial steamers.

Daily service between Detroit and Cleveland, and Detroit and Buffalo. Four trips weekly from Toledo and Detroit to Mackinac Island and way ports. Delightful day trips between Detroit and Cleveland during July and August. Popular week-end excursions every Saturday between Detroit and Buffalo, and Detroit and Cleveland. Special Steamer Cleveland to Mackinac Island direct, two trips weekly, June 25th to Sept. 10th, making no stops enroute except at Detroit every trip. Daily service between Toledo and Put-In-Bay, June 10th to September 10th.

**YOUR RAILROAD TICKETS**, reading between Detroit and Buffalo or Detroit and Cleveland, are available for transportation on D. & C. steamers either direction.

**AN INTERESTING PAMPHLET** giving detailed description of various trips will be mailed you on receipt of two cents to pay postage. Address *L. G. Lewis, Genl. Passenger Agent, Detroit, Mich.*

**DETROIT & CLEVELAND NAVIGATION COMPANY**

*Philip H. McMillan, President. A. A. Schantz, Vice-Pres. and Genl. Mgr.*  
Steamers arrive and depart from foot of Third Street, Detroit, Mich.

**THE COAST LINE TO MACKINAC**

**DETROIT, CLEVELAND  
BUFFALO, NIAGARA FALLS**



**TOLEDO, PT. HURON,  
ALPENA,  
STIGNACE.**



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Stevenot's Weather Cottage foretells weather changes 8 to 24 hours in advance. This little weather cottage is carefully made. In bad weather the man, with raised umbrella, comes out, and in fair weather the lady appears. Every cottage fully guaranteed. Size 7 1/2 inches high Sent parcel post prepaid for \$1. Your money back if dissatisfied.

**FRANK H. STEVENOT CO.,**  
Cooper Union, New York City.

Dept. 6.

**FREE TRIAL 30 DAYS BESSEMER KEROSENE ENGINE**

Success with cheap kerosene or coal oil absolutely guaranteed. Try before you buy. Most economical, reliable and durable engine made. So simple and easy this wife or boy can start and run it. People everywhere throwing away their old engines, buying Bessemers and making money by it. Get one for yourself. Be ahead of your neighbors. Runs fast or slow. Will do a dozen things at once. Wonderful beyond belief. Pays for itself in fuel saved. For special discount write at once.

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132 LINCOLN AVE. GROVE CITY PA.

**BARNES' Hand and Foot Power MACHINERY**

This cut represents our combined circular saw, which is made for beekeepers' use in the construction of their hives, sections, etc.

**Machines on Trial**  
Send for illustrated catalog and prices. Address

**W. F. & JOHN BARNES CO.,**  
545 Ruby St.,  
ROCKFORD, - ILLINOIS.

**RAISE GUINEA PIGS**

We furnish stock—show you how and buy all you raise. Big demand—thousands needed yearly. Easy and inexpensive to raise—very prolific—more profitable and less trouble than poultry or squabs. Particulars free.

**CAVIES DISTRIBUTING CO.,** 731 West 74th St., Kansas City, Mo.

# Select ITALIAN Queens

SELECTED FOR BUSINESS. NOW READY.

Under date of December 24, 1913, a queen-breeder known the world over, and whose 1913 queen sales were well above the 5000 mark, writes:

"I had occasion, through the invitation of one of your customers, to visit his bee-yard where he showed me some of your stock. They were ordinary Italians, but in their storage he told me they excelled any other strain he had in his yard, and he had a good number of queens from other breeders. As he recommended these bees so highly, and I am always in the market for something new and better, that is the reason I am asking you to book me for the half-dozen queens next season."

"The proof of the pudding is in the eating," and I solicit your trial orders this season. Now is the time to order a half-dozen and try them out before requesting time in August and September. Safe arrival and satisfaction guaranteed. Money promptly returned if unable to fill orders on date specified. Apriary under State inspection.

Untested queen, 75 cts.; six, \$4.00; 25 or more, at 60 cts.; 1 lb. bees with untested queen in Root cage, \$2.50; six 1-lb. packages of bees with queens, \$13.00. Circular and a "Good Cheer" blotter free.

**J. B. HOLLOPETER, Pentz, Clearfield Co., Pennsylvania**

## Queens by Return Mail. SATISFACTION GUARANTEED.

F. J. Wardell, formerly head queen-breeder for The A. I. Root Company, is now prepared to furnish queens of his gentle stock. The bees are so gentle that their owner seldom needs a veil—just the thing for the beginners that are afraid of stings. The editor of GLEANINGS who saw these bees and handled them, says they are the gentlest bees he ever saw. They are bred direct from the Root \$200.00 queen.

PRICES:

Untested .....	\$1.00
Select Untested .....	1.25
Tested .....	2.00
Select Tested .....	3.00
Breeders .....	\$7.50 to \$10.00

Send all orders to

**F. J. Wardell, Uhrichsville, Ohio.**

# QUEENS!

Quirin's Improved Superior Italian Bees and Queens. . . They are Northern Bred and are Hardy. . . Over 20 Years a Breeder.

	Before July 1st			After July 1st		
	1	6	12	1	6	12
Select untested ...	1.00	5.00	9.00	.75	4.00	7.00
Tested .....	1.50	8.00	15.00	1.00	5.00	9.00
Select tested .....	2.00	10.00	18.00	1.50	8.00	15.00
2-comb nuclei.....	2.50	14.00	25.00	2.25	12.00	22.00
3-comb nuclei.....	3.50	20.00	35.00	3.25	18.00	32.00
8-frame colony....	6.00	30.00		5.00	25.00	
10-frame colony...	7.50	38.00		6.50	32.00	
1-2 lb. pkg. bees...	1.50	7.00		1.00	5.00	
1-lb. pkg. bees...	2.00	10.00		1.50	8.00	

BREEDERS—the cream selected from our entire stock of outyards; nothing better. These breeders \$5.00 each.

Can furnish bees on Danzenbaker and L. or Hoffman frames. Do not write for lower prices even if you want 1000 queens or 100 colonies. Price is already low, considering the quality of our stock and prompt service.

Above price on bees by pound, nuclei, and colonies, does not include queen. You are to select such queen as you wish with the bees, and add the price.

ALL ORDERS FILLED PROMPTLY FROM NOW ON.

Send for testimonials. Orders booked now.

**H. G. Quirin - the - Queen - Breeder**  
BELLEVUE, OHIO

# ITALIAN QUEENS!

Our Prices:  
July, August, September

Prices:	1	6	12	25	100
Virgins .....	\$ .50	\$2.75	\$5.00	\$9.50	\$35.00
Untested .....	.85	4.50	8.00	15.50	62.50
Select Untested	1.00	5.00	9.00	17.00	65.00
WARRANTED.	1.10	5.50	9.50	18.50	70.00
Tested .....	1.50	7.50	13.50	25.00	90.00
Tested Breeders	3.00				
Sel. T'd Breeders	5.00				

Your choice of either Golden or leather-colored queens by return mail.

The A. I. Root Company purchase queens from us, and we refer you to their letter of endorsement below:

Medina, Ohio, Feb. 6, 1914.

The Penn Co., Penn. Miss.:

Replying to yours of Feb. 3, we would state that we have bought a large number of queens of you. We have found them uniformly marked, and of a good stock; in fact, they are first-class in every respect. Another thing, we have always found that you make prompt deliveries, or give us notice promptly when such deliveries can not be made.

THE A. I. ROOT COMPANY,  
by E. R. Root, Vice-pres.

Address Orders to

**THE PENN CO., . PENN, MISS.**



# LOCKHART'S SILVER - GRAY CARNIOLANS

"LINE BRED" for the past 23 years. They are VERY hardy, gentle, prolific, great workers, and builders of VERY WHITE combs, and use mostly wax in place of propolis. Untested queen, \$1.00; six for \$5.00; dozen for \$9.00. Select untested queen, \$1.25; six for \$6.00; dozen for \$11.00. Tested queen, \$2.00; six for \$9.00; dozen for \$15.00. Select tested, \$3.00. Best breeder, \$5.00. Extra select, the very best we have, \$10.00. Safe arrival guaranteed in United States and Canada. No foul brood here.

F. A. LOCKHART & CO., Lake George, New York.

## W. H. LAWS

is prepared to take care of all your queen orders the coming season.

Twenty-six years of careful breeding places LAWS' queens above the usual standard.

My bees, in my own and in the hands of others, have taken first premiums at the leading fairs all over the United States; and, in the hands of single individuals, have gathered over a car of honey in one season.

Tested queens ready now. Each, \$1; 12 for \$10. Untested, after April 15, breeding queens, about fifty of the finest ready at any time; each, \$5.00.

W. H. LAWS, Beeville, Bee Co., Texas

## Queens - Queens

Bees by the Pound and Full Colonies

From a superior strain of THREE-BANDED ITALIANS. . . Hardy, gentle, and they are hustlers. . . . Guaranteed to please you.

Send for My 1914 Descriptive Catalog

I have a large stock of modern BEE SUPPLIES always on hand. ROOT'S GOODS at factory schedule of prices, packed and delivered to my station. All orders will receive prompt and careful attention.

Earl M. Nichols, Lyonsville, Mass.

## GET YOUR QUEENS Direct from Italy



May to September. Tested, \$2.00; Champion Layers, \$4.00. Dead queens replaced if box is returned unopened. Discount to dealers or for quantities. Honest dealing. For further particulars write to

**MALAN BROTHERS**  
Queen-breeders  
Lucerna, San Giavanna, Italy

## Buy Your Queens

from the man that guarantees every one to be purely mated or your queen replaced free. Three-banded bees are the best all-round bees. Prices as follows:

1 queen, \$1.00	25 queens, \$18.00
6 " 5.00	50 " 35.00
12 " 9.00	100 " 68.00

The above is for guaranteed queens. If you want queens raised from the same stock but not guaranteed you may have them for \$7.00 per doz. You may order your queens in batches to suit yourself from 6 to 100.

**CURD WALKER, QUEEN-BREEDER JELICO, TENN.**  
Queens furnished till Nov. 15.

## Queens of MOORE'S STRAIN of ITALIANS

PRODUCE WORKERS that fill the supers quick With honey nice and thick.

They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Untested queens, \$1.00; six, \$5.00; 12, \$9.00. Select untested, \$1.25; six, \$6.00; 12, \$11.00. Safe arrival and satisfaction guaranteed. Circular free.

**J. P. MOORE,**  
Queen-breeder  
Route 1, Morgan, Ky.

## Famous Queens Direct from ITALY!

Bees more beautiful, more gentle, more industrious; the best honey-gatherers. PRIZES: VI Swiss Agricultural Exposition, Berne, 1895; Swiss National Exposition, Geneva, 1896; Beekeeping Exhibition, Liege, Belgium, 1896; Beekeeping Exhibition, Frankfort, O. M. (Germany), 1907; Convention of the German, Austrian, and Hungarian Beekeepers, August, 1907; International Exposition, St. Louis, Mo., U. S. A., 1904, the HIGHEST AWARD. Extra breeding queens, \$3.00; Selected, \$2.00; Fertilized, \$1.50; lower prices per dozen or for more queens. Safe arrival guaranteed. Write Oklahoma Agricultural Experiment Station, Stillwater, October 7, 1913.

'Dear Sir:—Your queen arrived in first-class condition, and I introduced her without any difficulty.  
Prof. C. E. SANBORN, State Entomologist.

**ANTHONY BIAGGI, PEDEVILLA, near Bellinzona, ITALY**  
Please in writing mention "Gleanings in Bee Culture."

## MILLER'S STRAIN ITALIAN QUEENS

By RETURN mail or money refunded. Bred from best RED-CLOVER strains in the U. S. In full colonies from my SUPERIOR BREEDERS; Northern bred for business; long-tongued; leather-colored or three-banded; gentle; winter well; hustlers; not inclined to swarm; roll honey in. One untested, 75c; 6, \$4.00; 12, \$7.50. One select untested, \$1.25; 6, \$5.00; 12, \$9.00. A specialist of 17 years' experience. Safe arrival and satisfaction guaranteed.

I. F. MILLER, BROOKVILLE, PENNSYLVANIA

## Archdekin's FINE ITALIAN QUEENS

THREE BANDED

Bred for Persistent Profitable Production of Honey. Prolific, hardy, gentle. The bee for pleasure or profit. One customer says, "Your queen soon had her ten frames running over with bees that are hustlers." Cells built in strong two-story colonies, and mated by best-known methods. No disease. Satisfaction guaranteed. Orders filled promptly. Ready May 20. Untested, \$1.00 each; three for \$2.75; six for \$5.00; dozen, \$9.00. Select tested, \$2.00 each.

J. F. Archdekin, Rt. 7, St. Joseph, Mo.

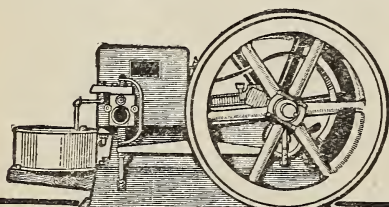
## ITALIAN QUEENS--NORTHERN BRED

Superior winterers; descriptive list free. Bees by the pound. Untested, 75 cts.; select tested, \$1.50. Plans "How to Introduce Queens," 15c; "How to Increase," 15c; both for 25 c. E. E. MOTT, Glenwood, Mich.



These liquid-proof  
**Sanitary  
 Paper Bottles**  
 are the ideal containers  
 for packing extracted  
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**Kerosene, Gasoline & Gas**

**Look at these New Prices!**

2 H-P, \$34.95; 4 H-P, \$69.75; 6 H-P, \$99.35;  
 8 H-P, \$129.65; 11 H-P, \$219.90; 16 H-P, \$258.80;  
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**Direct From Factory to User**

WITTE engines, Stationary, Portable, Skid-  
 ded and Sawrig styles, have set the quality  
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Castings of semi-steel, detachable cylinders,  
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No need to pay double price for any good engine, or  
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**How To Judge Engines**

My New Book shows the "inside" of engine selling  
 as well as of manufacturing. Tells you how to besafe  
 in your engine selection, even if you don't pick a  
 WITTE. Send me just your address, for one of these  
 fine books by return mail.

**Ed. H. Witte, Witte Iron Works Co.**  
 1939 Oakland Ave., Kansas City, Mo.

**CORN HARVESTER** with binder at-  
 tachment, cuts and throws in  
 piles on harvester or winrows.  
 Man and horse cut and shock  
 equal to a corn binder. Sold in  
 every state. Price only \$20 00  
 with fodder binder. J. D. Borne, Haswell, Colo., writes:  
 "Your corn harvester is all you claim for it; cut, tied  
 and shocked 65 acres mile, cane and corn last year."  
 Testimonials and catalog free, showing pictures of har-  
 vester. Address **PROCESS MFG. CO., Salina, Kans.**

The Heavy Demand for  
**"SUPERIOR" Foundation**  
 Signifies  
 Highest Quality & Prompt Shipments  
 Manufactured by  
**SUPERIOR HONEY CO.**  
 OGDEN, UTAH  
 Highest Prices Paid for Beeswax

## INCREASE YOUR HONEY CROP!

by introducing some of Leininger's strain of Italians.  
 Have been a breeder for 25 years. No better bees in  
 America. Untested, 1, \$1.00; 6, \$5.00. Tested, 1, \$1.25;  
 6, \$6.00. Breeders, \$10 each. Every queen guaranteed.  
**FRED LEININGER & SON, Delphos, Ohio**



**FINE YELLOW  
 GUARANTEED ITALIAN QUEENS**

only \$1; 3-fr. nuclei on Hoffman frames with  
 fine queen, \$2.75; full stand \$5.50 with queen.  
**J. L. FAJEN, STOVER, MISSOURI**

**BEE SUPPLIES** Send your name for  
 in January. new 1914 catalog out  
 Dept. T, **CLEMONS BEE SUPPLY CO.,**  
 128 Grand Ave., Kansas City, Mo.

## INCREASE Your SALES

... By a Liberal Distribution of Our Booklet ...

## THE USE OF HONEY IN COOKING

The 1913 edition is ready for distribution, and may be  
 had in quantities at reasonable rates. The back cover  
 page affords space for a display advertisement. As this  
 booklet contains no advertising whatever, it can be  
 employed with telling effect. Better order your supply  
 early. Sample and prices in quantities on application.  
 Fifty-eight pages; one hundred and twenty-two valu-  
 able recipes in which honey is used. Just the book for  
 every household. A two-cent stamp will bring a copy.

Address the Publishers

**THE A. I. ROOT COMPANY, MEDINA, OHIO**



## Classified Advertisements

Notices will be inserted in these classified columns at 25 cents per line. Advertisements intended for this department can not be less than two lines, and should not exceed five lines, and you must say you want your advertisement in the Classified Columns or we will not be responsible for errors.

### HONEY AND WAX FOR SALE

FOR SALE.—Ten whole and one-half barrels white-clover honey. DR. GEO. BIENER, Port Allen, La.

FOR SALE.—Sweet-clover alfalfa-blend white extracted honey, fine quality, at 7½ cts. per lb. in 120-lb. cases, f. o. b. Cochrane, Ala. JOE C. WEAVER.

FOR SALE.—No. 1 white comb, \$3.00 per case; fancy, \$3.25; 24 Danz. sections to case, six cases to carrier. WILEY A. LATSHAW, Clarion, Mich.

FOR SALE.—Best quality white-clover extracted honey in 60-lb. cans. State how much you can use, and I will quote price. L. S. GRIGGS, 711 Avon St., Flint, Mich.

RASPBERRY HONEY FOR SALE.—Left on the hives until it was all sealed and thoroughly ripened. It is thick, rich, and delicious. Put up in new 60-lb. tin cans. Price \$6.00 a can. Sample by mail, 10 cts. Said 10 cts. may be applied on order for honey. ELMER HUTCHINSON, Rt. 2, Lake City, Mich.

FOR SALE.—An extra-fine quality of white extracted honey put up in new 60-lb. net tin cans, two in a case for shipment. Our crop of honey this year is a blend of about half each of clover and basswood, thoroughly cured on the hives by the bees before extracting. The fact is, not a single pound of the crop was extracted until some time after the close of the honey-flow. Rich, ripe, roapy goods, worth twice as much as thin unripe honey extracted during the flow. For this exquisite stock we are asking 10 cts. per pound on car here. Do not be deceived by cheap unripe stock when a trifle more buys this superior white-clover-basswood blend that your customers will want more of from time to time. Ten yards. One thousand colonies. Liberal sample free. Address E. D. TOWNSEND & SONS, Northstar, Mich.

### HONEY AND WAX WANTED

WANTED.—Comb, extracted honey, and beeswax. R. A. BURNETT & Co., 173 S. Water St., Chicago.

WANTED.—Comb honey and beeswax. State what you have and price. J. E. HARRIS, Morrisown, Tenn.

WANTED.—Honey, extracted and comb. Will buy or handle on commission. Beeswax—will pay highest price. HILDRETH & SEGELKEN, New York, N. Y.

### FOR SALE

FOR SALE.—A full line of Root's goods at Root's prices. A. L. HEALY, Mayaguez, Porto Rico.

FOR SALE.—Full line of Root's goods at factory prices. E. M. DUNKEL, Osceola Mills, Pa.

Unhulled white-sweet-clover seed, \$5.00 per bushel of 30 lbs. ROY WOOD, Ellsworth, Neb.

FOR SALE.—500 cases of empty five-gallon honey-cans at 25 cts. per case. J. E. CRANE & SON, Middlebury, Vt.

Beekkeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. WHITE MFG. CO., Greenville, Tex.

FOR SALE.—A few hundred cases of 60-lb. cans and cases, all in first-class condition. Must go, and at the low price of 20 cts. per case. Money order or registered letter. J. A. BUCHANAN & SONS, Holiday's Cove, W. Va.

The A. I. Root Co.'s Canadian House, Dadant foundation, bees, queens, honey, wax, poultry supplies, seeds. Write for catalog. THE CHAS. E. HOPPER CO., 185 Wright Ave., Toronto, Ontario.

"Root" bee supplies and "American" honey-cans always on hand in carload lots. SUPERIOR HONEY CO., Ogden, Utah. (Branch at Idaho Falls, Ida.) Manufacturers of the celebrated "Weed Process" foundation. Highest prices paid for beeswax.

The Beekeepers' Review is now owned and published by the honey-producers themselves. It is the paper all honey-producers should support. Eight months' trial subscription, beginning with the May number, for only 50 cts. Sample copy free. Address THE BEEKEEPERS' REVIEW, Northstar, Mich.

### WANTS AND EXCHANGES

WANTED.—To buy a yard of bees in New York State, in a good location. Mention full particulars, style of hives, etc. BOX 57, Mahwah, N. J.

Table and white Scotch collie puppies. Will trade for some bees. Registered dam, Tazewell Model, AKCSB135891 and Sir Laddy Betsey, NDBA340. These pups are the finest in the Southwest. Every beeman should own one. L. T. EMBREE, Hobart, Okla.

WANTED.—To furnish every beekeeper within 500 miles of Boise, Idaho, with the best and cheapest bee supplies on the market, quality considered. Send me your order or a list of your requirements for 1914. Our catalog and price list will be mailed to you free. Order early and get the discounts.

C. E. SHRIVER, Boise, Idaho.

### REAL ESTATE

FOR SALE.—20-acre farm in the fruit-belt of New York. For full information address CHAS. E. TUTTLE, Wolcott, N. Y.

FOR SALE.—One 80 and one 20-acre farm. Good soil and bee location. 225 colonies of bees and equipment. LEWIS FRANCISCO, Mosinee, Wis.

For Sale at a Bargain.—A 40-acre bee-ranch in the famous Ozark Mountains, close to a good town, and 40 good strong colonies of bees. For description address OZARK BEE RANCH, Rt. 3, Verona, Mo.

FOR SALE.—90-acre farm in good locality for bees, with 2 horses, 5 cows, 200 hens and chickens, 20 colonies of bees, all the wagons, machinery, and crops, also furniture, for \$3400, 1-3 cash; ½ mile to creamery and village; buildings are insured for \$2050. MAX SCHRATT, So. Worcester, N. Y.

FOR SALE.—250 stands of bees in two apiaries, two acres of land, good house, 700 comb-supers, 250 extracting supers, 15,000 new sections, 1000 extra frames, extractor, tanks, etc., every thing needed here. Surrounded by several thousand acres of irrigated alfalfa and sweet clover. No bee disease in this county. 2500 feet elevation. 20 miles from Mt. Shasta. Fine dry climate. \$1500 for all, or will sell one apiary. On main line of S. P. R. R. Sold \$1800 worth of honey last year. Must sell.

ROY D. TAIT, Montague, Cal.

### BEEES AND QUEENS

Leather-colored Italian queens for sale. Send for price list. GEO. B. HOWE, Black River, N. Y.

FOR SALE.—Untested Golden Italian queens, 60 cts. each. J. F. MICHAEL, Winchester, Ind.

Italian queens, untested, \$1.00; tested, \$1.50. E. M. COLLYER, 75 Broadway, Ossining, N. Y.

Golden queens; guarantee no disease. Mated, 1, \$1.00; \$10.00 per doz. Safe arrival guaranteed. Fine honey-gatherers, and gentle.

J. STUART SCOFFIELD, Kirkwood, N. Y.

FOR SALE.—Fine Italian queens. See my large ad. in this issue.

J. F. ARCHDEKIN, Rt. 7, St. Joseph, Mo.

Phelps' golden bees, \$2.00 per lb. Common bees from outyards, \$1.50 per lb.

C. W. PHELPS & SON, Binghamton, N. Y.

Three-band Italian queens. Tested, \$1.00; untested, 75 cts. Ready May 15.

S. CLICK, Mt. Jackson, Va.

FOR SALE.—Italian bees in 10-frame hives at \$4.50; 8-frame at \$4.00; have more than I need. No disease.

L. H. ROBEY, Worthington, W. Va.

Try my bright queens. Select untested, 60 cts. each; \$7.00 per 12. Safe arrival and satisfaction guaranteed.

M. BATES, Rt. 4, Greenville, Ala.

Connecticut queens, three-banded Italians only; large and vigorous; ready May 15. Price list.

W. K. ROCKWELL, Bloomfield, Ct.

FOR SALE.—25 Italian colonies of bees in eight-frame dovetailed metal-cover hives at \$5.00 each.

HERMANN J. GREULICH, Scotia, N. Y.

Untested three-banded Italian queens for the rest of the season in any quantity, 50c each. Safe arrival.

W. J. FOREHAND, Rt. 2, Ft. Deposit, Ala.

A three-frame nucleus, with young queen, Hoffman, full sheet, wired combs, \$3.50. Red-clover strain.

A. J. SEAVEY, Rt. 2, Farmington, Me.

Will sell Italian bees in August at \$4.00 per colony in 8-frame Gallup hives. No disease.

G. H. ADAMS, Spring and Central Aves., Troy, N. Y.

FOR SALE.—25 colonies of bees in fine condition; must be sold; bargain if taken at once.

N. D. YOUNG, Fort Plain, N. Y.

Young tested queens, 85 cts. each. Bred from comb-honey stock which I have been selecting for 20 years.

C. F. BENDER, Newman, Ill.

Golden yellow Italian queens my specialty. Untested, 75 cts.; 3 for \$2.00; 6, \$3.75; 12, \$7.25; tested, \$1.50. Address E. A. SIMMONS, Greenville, Ala.

Golden and leather Italian queens, 100, \$60; 50, \$32.50; 12, \$8.25; 6, \$4.50; 1, 75 cts.; tested, \$1.50.

BURDICK & MEEKER, Redlands, Cal.

Fine untested queens, 50 cts. each, \$5.50 per doz. Year-old queens, 30 cts. each.

THE STOVER APIARIES, Mayhew, Miss.

FOR SALE.—A limited number of Italian queens. Untested, \$1.00, from Root red-clover and other best strains.

O. F. SNOW, East Dennis, Mass.

FOR SALE.—90 colonies healthy bees and outfit at half real value. Strictly modern. Excellent location and market. Write for details.

J. J. KADLETZ, Chatfield, Minn.

Untested Italian queens 75 cts. each; six, \$4.00; 1 lb. bees with queen in Root cage, \$2.50. Circular and "Good Cheer" blotter free.

J. B. HOLLOPETER, Pentz, Pa.

Northern-reared queens of Moore's strain of leather-colored three-banded Italians. After June 20, untested, \$1.00 each; 6 for \$5.00; 12 for \$9.00.

RAMER & GLUEN, Harmony, Minn.

QUEENS OF QUALITY.—Three-band, leather color, select untested, 75 cts. each; \$8.00 per dozen. Satisfaction guaranteed. Circular free.

J. I. BANKS, Liberty, Tenn.

Untested yellow Italian queens, each, 75 cts.; six, \$4.00. Bees gentle, prolific, hustlers, with good honey records. Ready to mail.

J. B. CASE, Fort Orange, Fla.

Golden Italian queens that produce golden bees, the brightest kind, gentle, and as good honey-gatherers as can be found. Each, \$1.00; six, \$5.00; tested, \$2.00; breeders, \$5.00 to \$10.00.

J. B. BROCKWELL, Barnett's, Va.

Keystone State Golden Italian queens will keep your bees free of disease, will please you for honey-gathering. Untested, \$1.00; doz., \$9.00.

WILL H. CARL, Elysburg, Pa.

Doolittle & Clark's Italian queens. Safe delivery guaranteed in the United States and Canada. Breeders, \$2.50, \$5, and \$10; untested, \$9 per dozen. DOOLITTLE & CLARK, Marietta, Onondaga Co., N. Y.

FOR SALE.—Having sold my farm I now offer for sale 59 colonies of bees in 10-frame hives, with or without supers and supplies. No foul brood.

C. S. RUSSELL, Pine City, Minn.

FOR SALE.—25 or 30 stands of Italian bees, mostly Quirin strain, in eight-frame hives; healthy, vigorous; more than I have room for this winter. Price \$5.00 per hive.

JOHN TURLEY, Woodbine, Ill.

FOR SALE.—Golden Italian queens that produce golden bees; for gentleness and honey-gathering they are equal to any. Every queen guaranteed. Price \$1.00; 6 for \$5.00. WM. S. BARNETT, Barnett's, Va.

Bees and queens; three-banded Italians; 1 lb. bees with queen, \$2.00; ½ lb. with queen, \$1.50. Untested queens, one, 50 cts. each; 6, \$3.00; 12, \$6.00. Safe arrival.

W. J. FOREHAND, Ft. Deposit, Ala.

FOR SALE.—After June 20, fine golden Italians; untested, 75c each; six, \$4; select untested, \$1.25 each; few choice breeders, \$3 each. No better honey-gatherers. Will resist brood diseases. Cash with order. EDW. REDDOUT, Box 43, Lysander, N. Y.

Phelps' Golden Italian Queens combine the qualities you want. They are great honey-gatherers, beautiful and gentle. Mated, \$1.00; six, \$5.00; tested, \$3.00; breeders, \$5.00 and \$10.00. C. W. PHELPS & SON, 3 Wilcox St., Binghamton, N. Y.

High-grade queens by return mail. Tested, \$1.25; warranted, 75 cts.; choice breeding queens, \$2.50. Italian, Carniolan, or Caucasian virgins of any of the above strain, 3 for \$1.00.

STANLEY & FINCH, 1451 Ogden Ave., Chicago, Ill.

Golden and three-band Italian and Carniolan queens ready to ship after April 1. Tested, \$1.00; 3 to 6, 95 cts. each; 6 to 12 or more, 90 cts. each. Untested, 75 cts. each; 3 to 6, 70 cts.; 6 or more, 65 cts. each. Bees, per lb., \$1.50; nuclei, per frame, \$1.50. C. B. BANKSTON, Buffalo, Leon Co., Texas.

FOR SALE.—We offer best Italian bees in ten-frame hives, from one to carload, f. o. b. here, or in yards of 100 or more complete with fixtures and location. Cash or reasonable time. If preferred, will rent on shares several years with privilege to buy. Particulars on request. SPENCER APIARIES, Nordhoff, Cal.

Try Forehand's three-band Italian queens. They are raised from imported stock, unexcelled for honey and gentleness. One untested, 75 cts.; 6, \$4.25; 12, \$8.00. Send me your order; and if not satisfied I will return money. Safe arrival.

N. FOREHAND, Rt. 2, Brewton, Ala.

Dunn's Golden Italian queens, bred strictly for business that produce a strong race of honey-gatherers. March 1 to Oct. 15: One, mated, 75 cts.; 6, \$4.25; 12, \$8.25; 50, \$32.50; 100, \$60.00. Tested, \$3.00; breeders, \$10.00. L. J. DUNN, Queen-breeder, Box 337G, Rt. 6, San Jose, Cal.

Golden and three-banded Italians—ready March 1. They have been bred for three points—prowlness, gentleness, and honey-gathering qualities. Select untested, each, 75 cts.; six, \$4.25; 12, \$8.25; 50, \$32.50; 100, \$60; tested, \$1.50; select tested, \$2.00; three-banded breeders, \$4.00; golden breeders, \$5.00.

GARDEN CITY APIARY CO.,

Rt. 3, Box 86, San Jose, Cal.

FOR SALE.—Our three-banded leather-colored hustlers, Queens are bred from a few select colonies, the record-breakers out of over 700. Tested, \$1.25; warranted, 75 cts.; untested, 50 cts.; select untested, 60 cts. Queens are ready by return mail. Satisfaction and safe arrival guaranteed. No disease. For large quantities write for wholesale prices.

BROWN & BERRY, Hayneville, Ala.



Golden Italian queens, good layers and good honey-gatherers; tested, \$1.00; select tested, \$1.25; untested, 60 cts.; dozen, \$7.00.

D. T. GASTER, Rt. 2, Randleman, N. C.

Queens by return mail, or your money back. See larger ad. Write for free booklet, "How to Transfer, Get Honey, and Increase."

J. M. GINGERICH, Arthur, Ill.

FOR SALE.—Choice select tested 1913 hatch Italian queens, \$1.00, August; 75 cts., September. We wish to replace for 1915 sales. Order before all are gone.

E. E. MOTT, Glenwood, Mich.

Italian untested queens by return mail. We guarantee our queens to satisfy you. No disease. They are bred for honey-producers. For the rest of the season they go at 50 cts. each, any number. If you are particular about your queens, we wish to supply you.

W. D. ACHORD, Fitzpatrick, Ala.

Hardy three-band Italian bees and queens; gentle, prolific honey-gatherers; guaranteed purely mated or another queen; no disease. Select tested, \$1.50; six, \$7.00. Untested, \$1.00; six, \$5.00; 12, \$8.00, by return mail. Colonies, \$6.00. Nuclei, \$3.00 with queens.

S. G. CROCKER, JR., Roland Park, Baltimore, Md.

California Italian queens, goldens and three-banders, by return mail, select untested, one, \$1.00; 3, \$2.50; 12, \$8.00; tested, \$1.25. Bees by the pound a specialty. One 1-lb., \$1.25; one 2-lb., \$2.25. Safe arrival and satisfaction guaranteed. Correspondence invited. Circular free.

J. E. WING,  
155 Schiele Ave., San Jose, Cal.

Bees with improved and unimproved land in never failing alfalfa and sweet-clover-seed raising locality. Bees with or without land, on easy payments; labor accepted as part payment; also bees in good isolated queen-rearing locality for early queens; can use a steady man.

OGDEN BEE AND HONEY CO., Ogden, Utah.

Fine Italian queens by return mail postpaid. Large vigorous queens, reared from great hustlers; mated to pure Italian drones at \$1.00 each; 6 for \$5.00; untested, 75 cts. each; 6 for \$4.25. No disease. Safe arrival and absolute satisfaction guaranteed. Give me a trial order.

CHAS. M. DARROW, Star Route, Milo, Mo.

*It is all true blue.* Try Seavey's improved three-banded Italians. Gentle, hardy, white cappers, hustlers for honey. Every colony wintered in 1912-'13; two yards; one yard run two years for comb honey without a swarm. Untested, 75 cts.; 6, \$4.00; select untested, \$1.00; 6, \$5.00; tested, \$1.25; select tested, \$1.50; extra select, \$2.00; good breeder, \$5.00; best, \$10.00. A square deal; no disease; try them; be and be convinced. Over 20 years in the business. Delivery guaranteed.

A. J. SEAVEY, Rt. 2, Farmington, Me.

Queens by return mail or your money back. Guaranteed purely mated. J. E. Hand strain of three-banded Italians, bred for gentleness, honey-gathering and wintering. State Inspector's certificate. Select untested, 1, 75 cts.; 6, \$4.00; 12, \$7.00; tested, 1, \$1.00; 6, \$5.00; 12, \$9.00; select tested, 1, \$1.25; 6, \$7; 12, \$13. Breeders, \$4.00. Write for price on large orders; 10 per cent discount on 30 days' advance orders. Safe delivery and satisfaction guaranteed in U. S. and Canada. Reference, First National Bank.

J. M. GINGERICH, Arthur, Ill.

PIONEER APIARY.—I am now doing my annual requeening, and have decided to offer my present stock of queens for sale. They are nearly all one and two years old, are all clipped, and are all descendants of the famous Moore strain. They are good queens, mothers of splendid colonies that have gathered a large crop of honey this year. There are many queens in the lot, equal to any I have formerly sold for \$5.00 and \$7.00 each for breeders. They are nearly all pure Italians, and the most of them purely mated. I offer them for sale for 50 cts. each, in lots of two or more. No selections made for any one, at any price. You take them as they come, and every one has an equal chance for the prize. Safe arrival guaranteed.

ELMER HUTCHINSON, Rt. 2, Lake City, Mich.

FOR SALE.—Three-banded Italian queens, from the best honey-gathering strains, that are hardy and gentle. Untested queens, 75 cts.; 6, \$4.25; 12, \$8.00; tested queens, \$1.25; 6, \$7.00; 12, \$12.00. Selected queens, add 25 cts. each to above prices. Breeding queens, \$3.00 to \$5.00 each. For queens in large quantities, write for prices and circulars.

ROBERT B. SPICER, Wharton, N. J.

## POULTRY

S. C. White Minorcas, \$3.00 per 15; R. C. Buff Leghorns, S. C. Brown Leghorns, and Partridge Wyandottes, \$1.00 per 15.

HILLCREST FARM, Winchester, Ind.

Runner and Pekin Ducklings and hatching eggs. White-egg strain. Blue-ribbon stock. Also drakes. Catalog for stamp.

THE DERBY TAYLOR CO., Newark, N. Y.

## MISCELLANEOUS

You have been thinking for some time you would like to become a National Beekeepers' Association member. Now is your time. A year's dues to the National, and eight months' subscription to our own paper, the *Beekeepers' Review*, beginning with the May number, both for only a dollar. Address, with remittance, THE BEEKEEPERS' REVIEW, Northstar, Mich.

## HELP WANTED

WANTED.—Young man, good habits, to learn bee business, by helping me the rest of the season. Comb, extracted honey, and queen-rearing. Board, and perhaps more to adept helper.

W. A. LATSHAW, Clarion, Mich.

WANTED.—Middle-aged man and wife on a small California ranch—man to milk cows, have care of poultry and vegetable garden; woman to do the housework in a family of two; no neighbors, schools, nor churches; nearest town 15 miles away; some knowledge of bees required.

DR. H. SEDEBOTHAM, St. Ynez, Cal.

## SITUATION WANTED

WANTED.—By experienced beekeeper, work in apiary the year round.

WM. HAMMOND, Sand Point, Idaho.

WANTED.—A sober young man who has had experience; a position in a beeyard for the season of 1915.

ALEX. ELWOOD, Walton, N. Y.

WANTED.—A position for the remainder of the season and the coming winter. Can handle bees, stock or farmwork. Have no bad habits. Michigan, Wisconsin, or Minnesota preferred.

LEON MORRIS, Rt. 4, Box 44, Greeley, Colo.

WANTED.—Position with an extensive beekeeper in Cuba or Porto Rico. Ready Sept. 1. Age 30; steady, reliable, no tobacco nor liquor; ten years comb and extracted honey and queen-rearing experience. Reference. Speak English only. Good wages and a steady position desired.

A. A. GILLING, Box 178, Clinton, N. J.

## BEEKEEPERS' DIRECTORY

Nutmeg Italian queens, leather color, after June 1, \$1.00 by return mail. A. W. YATES, Hartford, Ct.

Well-bred bees and queens. Hives and supplies. J. H. M. COOK, 70 Cortlandt St., New York.

QUEENS.—Improved red-clover Italians bred for business June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00 each; dozen, \$10; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.

H. C. CLEMONS, Boyd, Ky.

## SPECIAL NOTICES

BY OUR BUSINESS MANAGER.

### HONEY WANTED.

If you have a crop of choice honey, either comb or extracted, let us hear from you, stating how much you have for sale, how packed, whether comb or extracted. If the latter mail us a sample and state what you ask for it.

### SPECIAL ON SHIPPING-CASES.

We have on hand a good-sized stock of shipping-cases for 12 and 16 sections which we will close out at bargain prices. If you can use either size it will pay you to write us, advising us how many you can use, and we will quote you.

### SWEET-CLOVER SEED.

Those who are saving sweet-clover seed, either white or yellow, hulled or unhulled, for which you have as yet no market, will do well to write us, submitting sample, stating quantity you have to offer. The interest in this clover and its value as a farm crop is on the increase, and the market has not yet been overstocked with seed.

### SPECIAL IN GLASS JARS.

For a great many years we sold what was known as No. 25 jars with porcelain tops, lacquered tin rims and rubber rings. We still have in stock between two and three hundred cases of two dozen each of these jars which hold a pound of honey. We offer them at a big reduction from former price, while they last, for shipment from Medina only. Per case of 2 dozen, \$1.00; \$5.40 for 6 cases; 20 cases or more at 85 cts. per case.

### CHIPPED TUMBLERS VERY CHEAP.

In putting up honey in ten-cent tumblers we find a small percentage very slightly chipped on the edge of the glass. These cannot well be sealed for honey, but they would serve the purpose of putting up jellies or jams very nicely. They will hold about  $\frac{1}{4}$  lb. of jelly. They are in corrugated paper shipping-cases of 2 doz. each. In lots of ten cases or more, including the caps, we will sell them at 20 cts. per case; fifty case lots without caps at 16 cts. a case. The cases alone cost us 9 cts. each, so you see we are almost giving the tumblers away at this price. Will mail two or three samples to show what they are like for 10 cts. to pay postage.

## SPECIAL NOTICES

BY A. I. ROOT

### COTTAGE CHEESE AND BUTTERMILK.

Just now I am feeling sorry every day that I have been permitted to live 75 years without discovering sooner how delicious, nutritious, and sustaining are the two mentioned above. Of course, what suits me and my digestion might not suit everybody else in a like manner; but I find this to be true: Fruit without cheese or buttermilk does not answer. It does not make a "balanced ration." In like manner the cottage cheese and buttermilk of itself does not digest perfectly; but a combination of luscious peaches, and cottage cheese stirred into some fresh buttermilk, seems just about the *menu* needed to enable one to live to be a hundred years old. Just try it. You can get the buttermilk and "Dutch cheese," as we children used to call it, almost anywhere for a trifle. Cottage cheese is in our Medina market every day at only 10 cts. per lb., and even if your peaches do cost you several cents, what is the odds? There are almost no dishes to put away, no time needed to prepare a meal, and it all comes in nicely with the "simple life" so much talked about nowadays.

### THE HONEY CROP IN FLORIDA, ETC.

In answer to many inquiries in regard to Florida as a place for beekeepers I have

usually replied that the years are uncertain. Previous to the great freeze, we had some reports that were not exceeded and perhaps not equaled anywhere in the world. Since then there have been many ups and downs. If I am correct, the great yields were from mangrove, and the mangrove localities are just beginning to get back to their own as they were previous to the freeze. The following I clip from the *Sarasota Sun* of July 4:

THE HONEY CROP YIELDING LAVISHLY; C. M. BIORSETH GATHERS THREE TONS OF HONEY FROM NINE YARDS IN SHORT PERIOD—FIFTY MILES BETWEEN EXTREME COLONIES.

Honey is now the greatest crop Sarasota is marketing. While other crops are harvested, the busy bee is getting there with customary industry.

C. M. Biorseth, the honey king of Sarasota, has already gathered five hundred gallons of sweetness from his five yards extending from Corey's dock on Longboat Key to Lemon Bay. This is an apiary fifty miles in extent, and Mr. Biorseth uses both a houseboat and an automobile in gathering his harvest. As yet the bees have been only in the orange, mangrove, seagrape, and cabbage palmetto, and it has been an especially good year, as the bees love warm dry weather. Mr. Biorseth has 250 colonies at work now, and he expects to have 300 by fall.

There are great opportunities in the honey industry in this district. The outlying keys have proven the best honey-producers with their wealth of mangrove, palmetto, and seagrape trees. This is the first season that Mr. Biorseth has planted his bees among the seagrapes, and he says the quality of the honey is attracting attention wherever sold. He says that on Longboat Key he has had hives that stored seven gallons each in two weeks of seagrape honey. This year he did not try to get orange honey for market, as he did not winter feed his bees, being busy with other business; but others are having splendid success feeding up the bees so that they are ready to store their honey when the orange bloom is on.

The summer crop is the big crop; and if the weather remains as favorable as the indications now are, the biggest crop of honey ever marketed in Manatee County will be gathered. J. W. Drumright, of Philippi Creek, is another beeman, but was not feeling as active as usual this year, owing to the encroachments of age, and his bees filled all his hives to overflowing and went to loafing before he could get the honey taken care of. At that he gathered enough honey to keep a few million griddle cakes sweet, with plenty dripping over the sides.

Dr. J. E. Paulk is a new comer who is a bee enthusiast as well, and brought with him from Georgia some good workers. He is delighted with results, and will increase his number of colonies.

There are so many and diverse industries in Manatee County that often a crop like this goes unnoticed; but there is no reason why a half million dollars' worth of honey is not extracted here every year. It is an Eden for beemen.

Sarasota is only a short distance from Bradentown, and I wish to caution our readers that most of the local papers in Florida are always anxious, as a matter of course, to boom their own localities, and usually it is best to allow a little for mistakes and exaggerations. We give the entire article, heading included.—A. I. R.



## EDISON AND THE CIGARETTE BUSINESS; SOMETHING MORE ABOUT IT.

Although we have touched on this matter before, the clipping below from the South Bend, Ind., *Tribune*, is too good and too true to be lost. It seems from this that Edison has 6700 employees.

### "THEY DULL THE BRAIN."

"Cigarettes not tolerated; they dull the brain."

That is the terse yet eloquent notice recently posted in the Edison electrical works in New Jersey, for the government of 6700 employees. It would be quite natural to expect that, after the publicity given that notice, the manufacturers of cigarettes would endeavor to make some counter to the mighty jolt the seven-word notice on the Edison bulletin board has given them. The president of a tobacco company has tried to make reply. Yet to any one who reads his answer carefully and critically it is a disgusting disappointment. The answer is as good as any one could make. Largely it is a flatly contradictory statement. There is little argument in it. Before its conclusion is reached it launches forth into most fulsome praise of cigarettes and cigarette-smoking, which only serves to disgust the man with a brain to think or with eyes to see.

Thomas A. Edison is not a man given to foolish statements. By sheer force of habit he has for a lifetime observed minutely and carefully every thing that passed before his eyes. It cannot be said that he has ever experimented either on others or with himself to learn the harmful effects of cigarette-smoking, but he has watched and watched carefully, the results on others who have experimented with them, although they may not have intended to experiment with them. And when Thomas A. Edison concludes that cigarettes dull the brain the majority of people will throw the burden of proof upon its defenders.

The president of the tobacco company and Mr. Edison may dispute the chemical changes which take place in a burning cigarette, and whether or not the result is deleterious to health. The general public has only to open its own eyes and ears to learn for itself. Wherever city health boards or institutes are opening clinics for the cure of the cigarette habit the lines of victims stretch out of the doorways. Ask any of the men in Battle Creek, Mich., or Ft. Wayne, Ind., who eagerly sought the cure if cigarettes dulled their brain.

Even that inquiry is not necessary. Watch the average boy who has learned to smoke cigarettes. That lack-luster eye does not speak the vigorous quick brain which once was his. The sallow complexion is not a badge of physical health. The trembling fingers are not governed by strong nerves. The entire countenance shows enough to convince the average man that a change has come over the fresh-faced, quick-thoughted, vigorous young fellow who started smoking cigarettes. The brain, the governing organ of the boy's body is dulled, and the public can recognize the fact.

These things do not show all at once. An occasional cigarette does not bring them; but the cigarette is in itself a constant temptation to continual smoking. They are cheap. They are "short smokes." They become a diversion between acts at the theaters, between dances in the ball-room, between letters on the typewriter, between innings at the game, between about every two things the one indulging in them does. Inevitably the result comes. The brain is dulled; and in the Edison electrical works, at least, the loss of position follows. Edison's latest pronouncement is not a discovery peculiar to that wizard brain. It is a human experience. But the world will profit by Mr. Edison's declaration upon the subject. It needs more men such as Thomas A. Edison, and, if we mistake not the signs of the time, they are coming.

## POISONS—BE CAREFUL ABOUT HAVING THEM ABOUT YOUR PREMISES.

We clip the following from the *Practical Farmer*:

As almost every farmer keeps carbolic acid about his place, it may be interesting for them to know that during the past year there were in the United States 286 fatalities as the result of accidentally drinking carbolic acid; 80 deaths came from drinking wood alcohol; 17 lives were lost by drinking fly-poison, and 14 by taking disinfectants; 26 children lost their lives by taking lye; Paris green destroyed 37, gasoline 15, bedbug poison 13, butter color 12, matches 84.

We mention these facts with a hope that our farmer friends will be more careful in handling these poisonous articles—at least take the greatest precaution in keeping them out of the reach of little folks.

I came across the above just after I had been using a preparation of arsenate of lead for poisoning potato-bugs. The mixture looked exactly like milk; and as the grandchildren were following me around I took particular pains to put all my poison on a high shelf where the little toddlers could not possibly get hold of it. Let us all now join not only in a "sane and safe" *Fourth of July*, but in sane and safe measures every day in the year.

## Convention Notices

The joint annual field-day meeting of the Worcester Co. Beekeepers' Association and Eastern Massachusetts Society of Beekeepers will be held at the home of O. F. Fuller, Blackstone St., Blackstone, Mass., August 8, 1914, under the auspices of the State Board of Agriculture. Hon. Wilfred Wheeler, Sec.; Dr. Burton N. Gates, Inspector of Apiaries.

Noon.—Basket luncheon. Coffee served by the Associations.

1:00 P. M.—Address by Hon. Wilfred Wheeler, Concord, Mass., Secretary of the State Board of Agriculture, "Massachusetts as a Honey-producing State." Address, Dr. Burton N. Gates, Amherst, Mass. Bee-disease Demonstrations, John L. Byard and Dr. Burton N. Gates, Massachusetts Agricultural College. *a.* Materials for beekeepers. Simple and indispensable apparatus will be explained. *b.* The manipulation of bees. Instructions for operating a colony. *c.* The shaking treatment for brood diseases of bees. These demonstrations will utilize living bees and essential apparatus. Address, Arthur C. Miller, Providence, R. I.; address, A. W. Yates, Hartford, Ct., "Bees a Necessity in Fruit-growing;" address, E. F. Tuttle, Woonsocket, R. I., "Beekeeping in Early Days;" remarks by distinguished apiarists present. Exhibition: Beekeepers are urged to make displays. Queen-bees. Bees by the pound. A full program. Live bees. Live beekeepers. Everybody come. Ladies especially invited.

Trains: Blackstone may be reached from Boston by the New Haven Road. Leaves Boston at 8:00 and 8:25 A. M. Leaves Blackstone at 4:30 P. M. Trains leave Providence for Blackstone every hour. Trains leave Worcester for Blackstone at 10:35 and 12:15 A. M., also by electric. Return to Worcester 4:48 and 6:37 P. M., also by electric. Blackstone may be reached by trolley from Boston via Dedham and Franklin. Takes about 2½ hours from Dudley St. The best automobile route is via Dedham and Franklin.

Eastern Massachusetts Society of Beekeepers, T. J. Hawkins, President, Acting Secretary, 4 Emery St., Everett, Mass.

Worcester County Beekeepers' Association, O. F. Fuller, President, Blackstone, Mass. Chas. Whittemore, Secretary, Leicester, Mass.

# Beeswax Wanted

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We offer for average clean beeswax 30 cts. per pound in cash, or 32 cts. in trade, delivered at San Antonio. If you have any good wax ready for the market, ship it to us, mailing shipping-receipt together with letter stating gross and net weight. To avoid any possible delay be sure and label your shipment so that we may identify same when received.

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## Honey-cans

**DON'T FORGET** that this company—**AND NO OTHER**—carries the **STANDARD CONTINENTAL CANS**. They are the right size; they won't leak; the ears are crimped into the top of the cans so they won't come off. **BE SURE THAT YOUR CANS ARE THIS KIND**, then you will know that your honey is going to reach its destination just like it leaves you.

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## Remember

That we at all times carry a complete stock of **"ROOT'S BEEKEEPERS' SUPPLIES"** on hand ready for prompt shipment. For large orders write for estimate.

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**Toepperwein & Mayfield**  
Nolan and Cherry Sts. San Antonio, Texas



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# The Old Original 1853 Edition of Langstroth Reprinted Now Ready for Distribution

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## One of the Most Charmingly Written and Entertaining Books that was Ever Published

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It so stirred A. I. Root in the early days that he wrote: "What a gold mine that book seemed to me! . . . . Never was romance so enticing—not even Robinson Crusoe; and, best of all, right at my own home I could live out and verify all the wonderful things told therein."

### Here is what Others say:

This will preserve the original for future generations.  
G. M. DOOLITTLE.

Marietta, N. Y., April 16.

I am much pleased with the reprint which has come to hand.

Amherst, Mass., April 15.

B. N. GATES.

It is very interesting, not only from a sentimental but from a practical standpoint.

Guelph, Can., April 21.

MORLEY PETTIT.

The dear old man was one of God's very own; and to have this reminder of him on my book-shelf will give me much pleasure.

A. J. COOK,

State Commissioner of Horticulture.

Sacramento, Cal., April 18.

It seems good to read again this charming work. It must ever remain to the American beekeeper a classic, both instructive and fascinating.

Middlebury, Vt., April 15.

J. E. CRANE

It is well to have Langstroth reprinted; and if all would read it, many would be saved from going over well-thrashed straw. I have several of the early editions, and am glad to add this to them.

ARTHUR C. MILLER.

Providence, R. I., April 20.

I have a copy of the reprint of the 1853 Langstroth. I have long admired the writings of Langstroth, and had read his original edition with great interest. It is especially interesting in that he discusses some of the points that are annually "discovered" by others who are unfamiliar with the literature on bees. I feel that it might benefit American beekeepers to become familiar with this book, and trust that it will have a wide distribution. The book is a classic, and should be known to all good beekeepers.

E. F. PHILLIPS.

Washington, D. C., April 16.

I am much pleased to get the reprint of Langstroth, and I thank you heartily for the same. I have not yet had a chance to look it through, but did look into it enough to recognize the dear old book. It was the very first thing I ever read on bees, and I read it through the first night—the night of the day I captured my first swarm. At least I read it till I dared not sit up any longer, lest my father arrive on the scene with a slipper. I did not dare look at the clock when I finally did go to bed. Yes, I got the fever bad.

Norwichtown, Ct., April 30. ALLEN LATHAM.

"Entered according to Act of Congress in the year 1853, by L. L. Langstroth," Entered at the same time, without any act of Congress, by means of the book containing the aforesaid legend and the hive which accompanied it, a flood of light upon the dense darkness that had from the foundation of the world enshrouded the secret and mysterious doings of the little busy bee within its closed domicil.

That divides the history of beekeeping into two distinct periods—the long ages before 1853, and the little span of threescore years since then. The rapidly diminishing few who have lived in both periods are in best position to appreciate the immense difference in the two. As we scan again the pages of the old—and ever new—book, "Langstroth on the Hive and the Honey-bee," how memories arise of "the grand old man" with the inventive brain and loving heart, and with the gentle voice we loved so well to hear! What a blessing that the same man who could make such a revolutionary invention could also write so beautifully! Whatever other books the beekeeper may or may not have, he is likely always to cherish the one classic from the graceful pen of the beloved Langstroth.

Marengo, Ill.

C. C. MILLER.

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While some of our readers may, perhaps, feel that this work would be out of date, the fact is,

FATHER LANGSTROTH WAS 60 YEARS AHEAD OF HIS TIME.

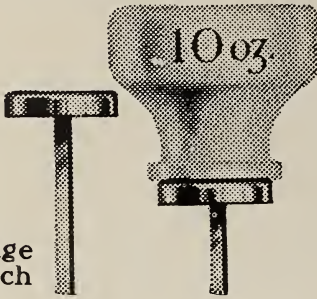
So much so that he revolutionized beekeeping throughout the world.

The book that helped to bring about this remarkable revolution is well worth reading to-day. It is full of valuable tricks of the trade.

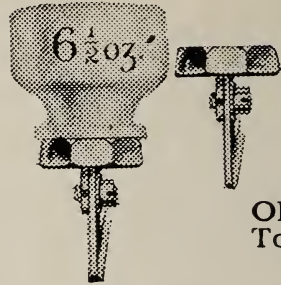
PRICE: 400 pages, bound in cloth, \$1.00 postpaid; clubbed with GLEANINGS, \$1.50; with A B C and X Y Z of Bee Culture, \$2.50; with Dadant's Revised Langstroth, \$1.85.

## The A. I. Root Company, Medina, Ohio

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Average  
Touch



Oliver  
Touch

# TYPEWRITER TOUCH BY ACTUAL WEIGHT

Now mark the story this test tells. To operate the average typewriter requires a 10-ounce pressure on the keys. Some  $7\frac{1}{2}$ , some  $13\frac{1}{2}$ . Mark that the Oliver writes at  $6\frac{1}{2}$  ounces—scaled down to 50% lighter! And it wins its leadership in other points, too.

Here again a service to the world—the new model Oliver—the Silent Seven. A benefaction to all mankind. Labor of thousands lightened. With touch so sensitive that experts marvel—the weight of your finger, tapped on the key.

## You Can Prove It

Place some small, flat object on a key of the average typewriter. Add enough objects to make the key write. Now perform this experiment with the Oliver No. 7, set at equal tension. Then weigh the two sets of objects. Your nearest druggist can do so if you have no handy means.

Others have made this demonstration. The result is as interesting as it is *conclusive*.

## Speed Test

Many are misled by the operator's performance. Oliver capacity exceeds all human pace. And before it leaves our factory we run each typewriter by mechanical tester — each key at a speed no human hand can reach.

*Yet, without once pil-  
ing the letters.*

## Easy for the Novice

Now all who can touch a key can write at once. Start the first day your Silent Seven arrives. No schooling necessary — no skill. Just the normal practice that comes as you operate.

## The Silent Seven

This brilliant triumph has all our epoch-making inventions — visible writing, visible reading, fewest keys, and Printype if desired.

To these have been added the cushioned keyboard, anchor-keys, and automatic improvements. With the new paper holder no care is needed—your sheet cannot crumple.

The return of the carriage advances your paper to another line—our famous automatic spacer. It prevents you writing on the line just written. Now the hardest thing to do with the Oliver is to make mistakes.

## 17 Cents a Day

Our popular purchase plan applies to the new Silent Seven. And we give you by careful estimate 25% more value! Yet we have not increased the price one penny.

## De Luxe Book Free

It fully pictures and describes the Oliver. It coaches you on points worth money if you ever use or own a typewriter. A postal brings it by return mail, free. Write today.

# The OLIVER 7 Typewriter No.



The Standard Visible Writer

**Apply for Local Agency**  
and make every hour pay you a profit. No experience necessary. For we give you exclusive sale in your town and train you free thro our home course of salesmanship. Over 16,000 honest hustlers now making handsome incomes. Send for "Opportunity." Book free and our special agents' Proposition. Tell us why you think you can make good. Write before your territory's assigned.

The Oliver Typewriter Co., Oliver Typewriter Bldg., Chicago