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and 905 Hibernia Bank Building, New Orleans.

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ATTORNEY AT LAW
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¶ KEEPING the quality of your goods a secret is what you accomplish when you don't advertise them.

You know they're best; so do a few others! But the general public—are they informed? Tell them! Don't keep it a dark secret.

¶ Let the light shine through the columns of this paper.

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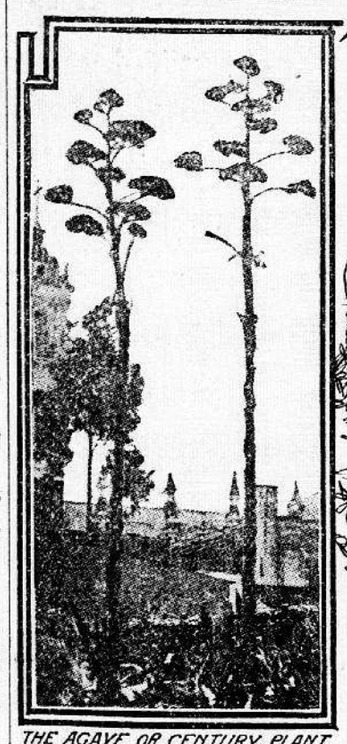
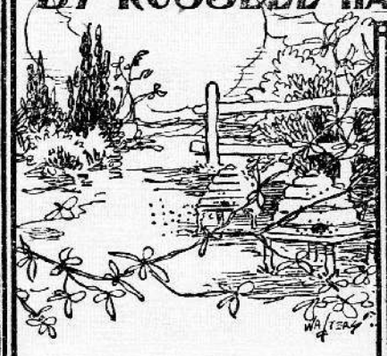
TRADE MORAL—Nobody would have known the Good Samaritan's kind act were it not for Our Saviour's parable. Be the home folks' Good Samaritan, Mr. Merchant; make this paper your commercial bible; write your own parable and put it in our advertising columns.

# THE BUSY BEE AND HIS PRODUCT

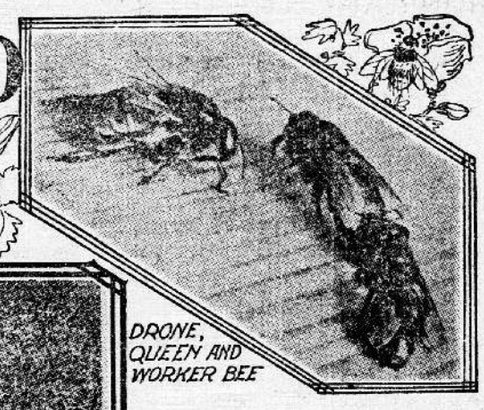
## By RUSSELL HASTINGS MILLWARD



THE AGAVE OR CENTURY PLANT IN FULL BLOOM



AN APIARY NEAR AREQUIPA, PERU.



DRONE, QUEEN AND WORKER BEE

IT IS not known to which country the bee is really indigenous; but it is a well-established fact that in ancient times primitive man kept his beehives and gathered the honey, which he used for food and on sacred occasions brought before his gods as an offering. The fame of the honey gathered by the bees on the slopes of Hymettus was sung by Virgil and even today this product of world-wide renown is served to the tourist by the zealous Greek. In both Egypt and Mexico honey has been found in earthen and metallic vessels, hermetically sealed, and in an excellent state of preservation, among the prehistoric ruins.

The finding of honey among the Aztec ruins establishes the fact beyond all question that bees were known in Mexico long before the days of Cortez, although scientists have attempted to disprove repeatedly the theory that bees of any species were native to America.

This valuable article of commerce may be described as the sweet sirup or nectar derived from the bees and other insects, which gather it from trees, plants or flowers. It is both vegetable and animal in origin and contains about 20 per cent. of water, 75 per cent of reducing sugars, such as dextrose and levulose, twenty-five one-hundredths per cent. of ash, and the balance of other components. Honey is variable in color and quality, the product of one district excelling that of another, and is commercially classified as follows: First, combed, or that which is contained in the cells of comb; second, extracted, or that which has been separated from the uncrushed comb by centrifugal force or gravity; third, strained, or that which has been removed from the crushed comb by straining or other means. In color the best grade runs from clear, almost colorless to pale yellow and the flavor depends upon the nature of the tree, plant or flower from which it is gathered. With age, honey turns considerably darker in color, but both honey and comb will keep indefinitely without suffering decomposition.

The honey bee is usually found in swarms of from 5,000 to 75,000, and is divided into three distinct classes: The queen, or female; the drone, or male, and the worker, or neuter. Each hive contains but one queen, which propagates the species, frequently laying eggs at the rate of 2,000 a day. Upon the death of the queen a young neuter is selected from the colony, its cell enlarged and the food changed. The neuter then becomes a queen bee and is mated with the drones, who are afterward destroyed by the workers.

Although the average life of the queen covers a period of three years of usefulness, it is considered advisable to annually restock each colony with a new queen. The systematic rearing of queen bees and the improvement of the breed are considered the most important branches of apiculture. It is also important in breeding queens that the so-called "hybrids," or mismated queens should not be employed, on account of their inability to produce young bees of desirable and consistent character. Selections have been made from the various types of bees and an attempt made to combine all the good qualities of each species, but as yet it is quite impossible to find the bee that is stingless and at the same time the largest producer of honey and wax and the most prolific in breeding. It appears that each species possesses certain distinctions of race and is created to work out its own destiny, holding at all times the instincts and characteristics peculiar to its kind.

The drone bees live through periods of but from three to eight weeks and the workers from six weeks to six months.

These workers collect all the honey in their mouths, whence it passes into the crop or honey bag and is then carried to the hive, where it is ejected into the comb. They also construct the cells of the comb from a wax secretion in the honey and feed all the other bees. The food of the young bees is called beebread and consists of small pellets prepared from the pollen of flowers. Honey is fed to the adult drone bees.

It is interesting to note that the amount of honey involved in the secretion of a pound of wax is a much-debated question among students of bees, the various estimates ranging all the way from two to twenty pounds.

It is conservatively estimated that over 300,000 tons of honey are produced in the world each year, of which the American republics yield about two-thirds. This quantity, put up in standard combs of 14 ounces each, would, if the combs were placed side by side endwise, make a line 50,000 miles long, or twice the circumference of the earth at the equator.

According to Latreille, the European species of bees predominate in America; but it is evident that the stingless variety of bee is a native of South and Central America and Mexico, where honey has been gathered by the natives for many centuries, and that many of the other varieties found were introduced from China, Japan and Palestine, as well as from European countries.

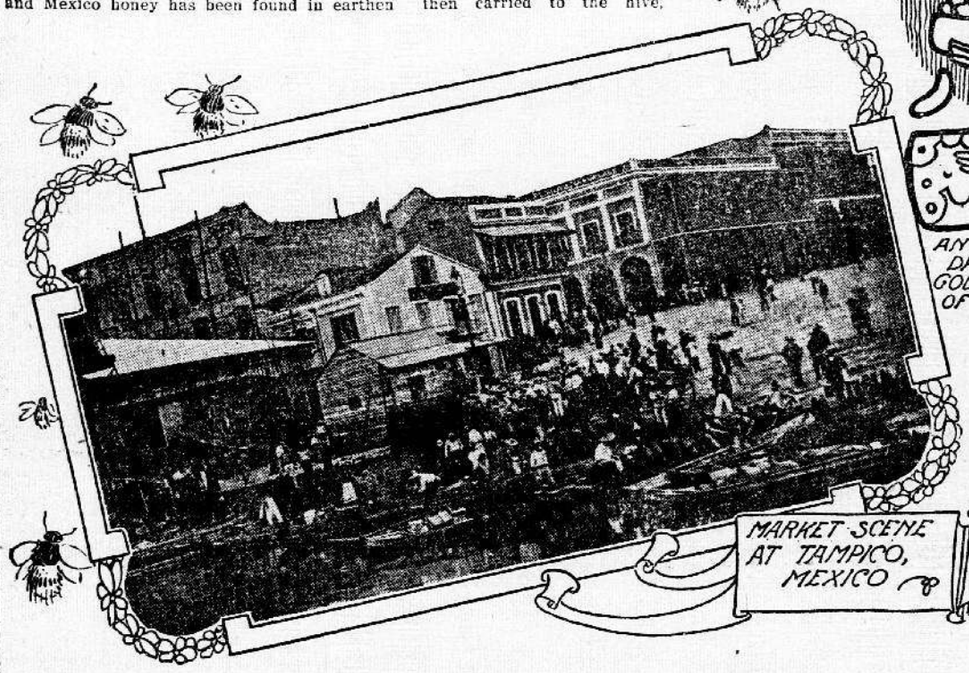
When the pilgrims landed at Plymouth in 1620 honey was not to be found in that part of the country and bees were consequently imported from England in order to meet the requirements of the time, but the first systematic keeping of bees in the United States was probably established at Newbury, Mass.

In a bulletin of the United States department of agriculture it is stated that the importance of the industry was of municipal moment to the extent of holding out to one John Eales, who was then living in what is now Hingham, Mass., an inducement to come to Newbury for the purpose of teaching the settlers how to make hives and to care for bees.

Since that time steady advances have been made in the establishment of systematic bee culture in the United States. Bees have been imported from all parts of the world and the industry has reached such an extent that the annual average yield of honey now amounts to about $20,000,000 and beeswax about $2,000,000.

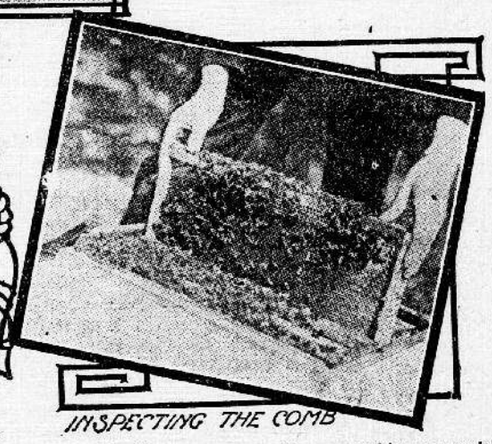
The United States imports annually about 2,500,000 pounds of honey and about 750,000 pounds of beeswax, about 95 per cent. of which comes from Cuba, Mexico, Haiti, Salvador, Dominican Republic and Venezuela; and all of this regardless of the fact that according to the census about 700,000 bee keepers, or one in every 120 of the entire population, are engaged in the industry throughout the United States.

The passage of various pure-food laws and the establishment of a rigid inspection by many of the importing countries have made the marketing of adulterated honey almost an impossibility. No substitute for honey, or artificial means of preparation, have as yet been found and for many years the pure product has been adulterated with commercial glucose, cane sugar, or invert sugar sometimes to as great an extent as 85 per cent. It is the opinion of many bee keepers that the feeding of bees with saccharine substances for the purpose of increasing the production of honey should be considered as palpable adulteration, and that the artificial coloring of the product by electrical means should be so stated when it is placed on the market.



MARKET SCENE AT TAMPICO, MEXICO

AN ANCIENT MAYA DRAWING OF FIRE GOD HOLDING POT OF HONEY



INSPECTING THE COMB

The sage honey from California is pronounced by experts as an example of the purest, best flavored and most consistent grade produced in the United States.

What is known as the Holy Land bee was first brought to the United States from Palestine by a Mr. Howard, in 1884, since which time the species can be found in many parts of America and is regarded by apiculturists as one of the best honey producers. About the time of the exportation of bees from Palestine, famous in ancient times for its honey, the Turkish government became deeply interested in the industry and imposed an exorbitant tax upon the apiaries.

Honey is used in the far eastern countries in the manufacture of hydromel, a popular and most intoxicating beverage, having an agreeable flavor closely resembling cider. Alcohol has also been distilled from honey, but not to any great extent.

Many of the large manufacturers of candy in the United States complain that they have great difficulty in purchasing sufficient honey to meet their requirements owing to the recent and enormous demand of German manufacturers, who secure about 60 per cent. of all the product that is exported from the American republics. It is estimated that over half of the world's production is employed in the manufacture of candy and medicinal preparations and new uses are being found for honey and beeswax almost daily.

In the manufacture of biscuits and fancy cakes in the United States, Germany and England honey is extensively employed, both on account of its usefulness as a base in sweetening and its remarkable immunity from organic change. This answers the question which has been a matter of great speculation by those unacquainted with the inside secrets of the baking industry, as to how the numerous varieties of sweet crackers and cakes "kept on hand" through long periods of time remained apparently fresh, in the little village stores scattered throughout the country districts. The art of making fancy crackers that would "keep indefinitely" has for many years been considered one of the mysteries of the baking industry, attributed by the natives of Latin America to "Yankee cleverness."

Not many industries offer as many attractions as apiculture. It may be taken up by agriculturists as a specialty or as a side line. A small capital only is required to start the enterprise and returns are measured and certain if ordinary care is taken in the selection of the location of the apiaries and consistent management of the bees maintained. Furthermore, a good market is always afforded for the product, which is neither perishable nor subject to a marked depreciation in value.

Practically all of the wild honey is shipped in barrels and is either extracted or strained, the handling of beeswax being usually treated as a separate industry and one which has been followed extensively by the natives of Latin America for many years. When the wax has been refined and bleached, it is used in many of the arts and trades and has become an article of great commercial value the world over.

In the Argentine Republic honey is in such great demand that it is necessary to import over 100,000 pounds annually, most of which comes from Chile, although about 10,000 pounds of strained honey are annually exported to Germany and France, where it is employed in the manufacture of fancy crackers.

An effort is now being made by the government to introduce modern methods of bee keeping and encourage the farmers to engage in the industry as a side line.

The agricultural department of the Brazilian government is now making a special effort to develop the industry of apiculture and increase the output of honey and beeswax. In order to meet the ever-increasing demand, modern facilities are being rapidly afforded which will permit the transportation of the product to convenient shipping points and encourage both the home and foreign trade.

Many varieties of bees are found in Brazil, and for some time the natives have gathered the honey, which, on account of its fine quality, has been used almost exclusively for medicinal purposes. The Tapurriba tree, in blossom time, is the source of a most abundant supply of wild honey; but the product has not been exported to any great extent, as a ready sale has always been found in the local markets.

The stingless bee which is common to all of the Latin-American countries is found in great numbers throughout Brazil and numerous other varieties have been imported from Europe, notably the Italian, which was introduced in 1904, when the government began to take an active interest in apiculture.

Although the production of honey is enormous, but 600,000 pounds are exported annually, most of which goes to Germany.

In Chile bees were first introduced from Italy by Mr. Patricio Larrain Gandarillas, about 45 years ago, since which time rapid progress has been made in the advancement of apiculture.

There are now nearly 100,000 apiaries in actual operation throughout the republic, the majority of which are located in the provinces of Aconcagua and Coquimbo, where the mildness of the climate and richness of the flora are peculiarly adapted to the culture of the Italian bee.

Over 1,000,000 pounds of purified wax and 5,000,000 pounds of honey are exported annually from Chile, of which Germany purchases about 60 per cent., Great Britain 15 per cent., France 15 per cent. and Belgium and the Argentine Republic 10 per cent., the product being pronounced fine in quality and bringing top prices at all times in the markets.

Wild honey is found in abundance throughout Mexico and especially in the forests of the Algarroba tree, whose flowers through a long blooming season are always a favored source of supply to the bee. The industry of gathering the honey, in the old days, was followed chiefly for the purpose of obtaining the beeswax, which formed a valuable material in the manufacture of candles consumed in the ceremonies of the church.

Hives were found among the rocks and suspended from trees, and the natives, in gathering the honey, smoked out the bees with little regard to what became of them eventually.

Mexico exports annually about $90,000 in strained honey, most of which is shipped to the United States, Germany and England, and imports about $50,000 in comb honey, most of which comes from the United States, England and Germany and a small amount even from China.

Over 25,000 pounds of wild honey are annually exported from the port of Tampico and the industry has become one of great importance in that district.

An interesting honey-collecting ant is also found in Mexico, which lives in underground chambers and gathers honey from the numerous wild flowers and plants. A certain number of these ants remain at home and are used as living storehouses. They are fed honey by the workers until they swell to about the size of a pea and during the seasons when honey is not obtainable they regurgitate their supplies, drop by drop, as food for the colony.

Wild honey is found in great quantities in the woods near San Juan del Norte, Nicaragua, but is not exported to foreign markets owing to a strong local demand throughout the inland towns and villages, where it is always readily purchased and consumed by the native population.

## When Death Drives.

A local preacher in Cornwall, England, had an eerie experience, being driven home from a preaching engagement by a dead man the other Sunday. Philip Pascoe, a cab proprietor, had been engaged to drive some local preachers to various places in the St. Austell circuit in a wagonette. Returning in the evening there was, for the first part of the journey, only one passenger, Mr. Houseman of Mount Charles. When the conveyance reached Fair Cross the driver was seen to be leaning forward, with the reins in his hands, and the wagonette collided with a trap going in the opposite direction. The driver on the trap remonstrated with Pascoe, but the latter took no notice and remained in a stooping position, as if asleep or intoxicated. Mr. Houseman then touched Mr. Pascoe on the arm to arouse him, and was horrified to find he was dead.

### A Household Ordeal.

"What makes you grin when everybody tells you the fruit crop is a failure?"

"Because," replied Mr. Crosslots, "it makes me hope that maybe I'll miss the fuss and worry that happen every time preserving time comes 'round."

## A Point on Pencils.

Life is just one worry after another, and just as we are getting accustomed to the high cost of living along come the manufacturers of lead pencils to tell us that in five years from now the supply of wood suitable for lead pencils will be exhausted.

The number of pencils consumed annually is 350,000,000, and red cedar furnished the wood for these. That is chosen because it is soft, whittles easily and is free from knots.

The pencil manufacturers have become so alarmed over the prospect of a disappearance of the supply that they have interested the United States forest service, and that branch of the government is sending broadcast for suggestions to meet the threatened deficit.

FOR OLD AND YOUNG
Tutt's Liver Pills act as kindly on the child, the delicate female or infirm old age, as upon the vigorous man.
Tutt's Pills
give tone and strength to the weak stomach, bowels, kidneys and bladder.

Memphis Directory

Conkey's Poultry Remedies
Are recognized by all poultrymen. We ship them anywhere. Send 2c stamp for their free book on poultry diseases.
E. E. BUCHANAN & CO., 222-224 S. Main St., Memphis, Tenn.

KODAKS and Supplies
From $1.00 to $25.00. Films for every camera. Postage paid. Write for amateur catalogue. Memphis Photo Supply Co., 158 Union Ave., Memphis, Tenn.

Memphis Umbrella Co.
134 South Main Street
Recover your Umbrella with a Taffeta Finished Silk for $1.50. Embroidered Designs for Parasol FREE.

Rubber Stamps Are needed in every business house because they save Time and Labor.
M. C. Logan, 158-160 N. Main St., Memphis, Tenn.

CROESUS FEED
Contains 15 to 20 per cent more nutriment than any other mixed feed on the market. No ground hay or oat hulls.
Write for prices and samples.
JONES & ROGERS
Manufacturers
Memphis Tennessee
Also dealers in GRAIN, HAY and other FEED STUFFS

BACK TO THE WORLD.

Editor—We've lost another poet.

Assistant—What was the trouble, dead?

Editor—No; he got back his old job in the department store.

### The Valuable Match.

There was a loud splash, and a moment later a dripping head appeared above the waves. On the end of the dock was a stevedore nonchalantly lighting his pipe.

"Help, man!" cried the chap in the water. "Can't you see I am overboard? I can't swim."

"How often have you been down?" asked the stevedore, shielding the flickering match from the wind.

"Once, I believe, but hurry up, man! Give me a hand!"

"You wait! You have two more times yet to go down, and I have only one match. I'll catch you on the last trip."—Exchange.

### What He Knew.

"You can tell me the names of the twelve apostles, Sam?" said the pretty Sunday school teacher one morning. Sam's face fell, and he shifted his weight from one foot to the other.

"Can't do it, ma'am," he said, sorrowfully; and then his eyes brightened; "but I can call off all of the pitchers in the league teams," he volunteered.—Harper's Magazine.

### Too Much of a Target.

Brown—How did you feel, Jones, when the burglar had you covered with his revolver—pretty small, eh?

Jones—Small! Great Scott, no! I felt as big as the side of a house.

There's no reason why a woman shouldn't take boarders if she wants to, but she shouldn't try to board a moving train.

There is a reason
Why Grape-Nuts does correct
A weak, physical, or a
Sluggish mental condition.
The food is highly nutritious
And is partially pre-digested,
So that it helps the organs of
the stomach
To digest other food.
It is also rich in the
Vital phosphates that go
Directly to make up
The delicate gray matter
of brain and nerve centres.
Read "The Road to Wellville
In pkgs. "There's a Reason."
POSTUM CEREAL COMPANY, Ltd.,
Battle Creek, Mich.