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A Souvenir of the Denver Meeting
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..... September 3=5, 1902 .....

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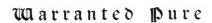
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## Something About the Bee Industry in Colorado::::

Bathered . . and Worked Over by D. W. Working





W. Z. HUTCHINSON, Flint, Michigan.
President National Bee-Keepers'
Association.

#### Preface.

VERY well-regulated Book needs a Preface. This particular Preface is written to tell you that the Advertiser supplies the money to pay the Printer. If you feel like thanking anybody for it, please thank the Advertiser: he

is a Gentleman and the Friend of the Busy Bee and the Busy Beemaster. If you don't feel like thanking any one, take the advice of good old Izaak Walton and "be quiet and go a angling"—or talk it over with the undersigned.

D. W. WORKING.



#### Two Doctors.



A. B. MASON, Toledo, Ohio. Secretary National Bee-Keepers' Association.



C. C. MILLER, Marengo, Illinois.
A Director of the National
Association.

#### Cwo Men Who Worked for the Success of the Denver Meeting.





GEORGE W. YORK, Chicago, Illinois. Editor American Bee Journal.



ERNEST R. ROOT, Medina, Ohio. Editor Cleanings in Bee Culture.

## Che Bee Industry in Colorado.

Scraps of History.

HE LONGMONT TIMES of October 4, 1892,—
Honey Day Edition,—contains more information concerning the growth and importance of the bee-keeping industry in Colorado than any other publication known to the Compiler of this Booklet. Connected with the occasion commemorated by the Times there is a good deal which bee-keepers are now inclined to dignify by calling it history. Two short paragraphs from the Times of the date mentioned will serve very appropriately to introduce the various subjects included in this Souvenir:

"Neither a fair nor a festival, yet partaking of their characteristics and being something more than a combination of them, the meeting at Longmont on September 28th and 29th of the Colorado State Bee-Keepers' Association was an event in the history of the bee industry in Colorado.

"For months the officers and members of the Northern Colorado Bee-Keepers' Association had been preparing to make the meeting pleasant and profitable for all who should attend, helpful to every owner of a hive of bees in Colorado and instructive to every one who should read the proceedings. Now, that the meeting is past, and the task of telling what was done is undertaken, it is with much satisfaction that the Times can say that it was a



D. W. WORKING, Denver.
Secretary, Colorado State Bee-Keepers' Association.

success in a very large and liberal sense of the word. The hundreds that came to listen and to see could not but learn something; and the thousands who will read the proceedings and papers as given in the Times will be sure to learn much of Colorado's honey industry, and will in turn tell others what they have learned."

Besides the proceedings of the Longmont meeting, the Times contained a number of special articles, several of which seem to be of more importance after ten years than they were thought to be at the time. Among these, the one of the greatest permanent value was written by Mr. Harry Knight, Secretary of the State Associ-

ation at the time and one of the most useful workers in building it up and making it a power in developing and protecting the industry which it represents. Mr. Knight's article is here reproduced just as it was written a decade ago.



#### Colorado Apiculture.

By H. Knight.

HE honey-bee is not a native of America. The first were brought here and landed in Boston in 1670. Since that time the little honey gatherer has traveled either by natural swarming or some enterprising bee-keeper has

taken them, hive and all, into every state and territory in the Union.

The first brought to Colorado was in 1862 by Isaac McBroom of Fort Logan, who hauled one colony across the plains by ox team. They did not increase any, but after one season died. In 1866 ex-Gov. A. C. Hunt brought a colony to Denver by wagon. These

First Bees in Colorado



H. KNIGHT.
A former Secretary of the State Association.

also died without increase, the second winter. Shortly after the railroad reached Denver in 1870 a car load of bees were brought here and sold to several that wanted to buy, at \$25 per colony. From these the industry grew.

The object of bringing them to Ameruseful ica, and later to Colorado, was twofold. First, because of their healthful
and delicious product, and second, the

great benefits derived from their work in the fertilization of blossoms. The great naturalist, Darwin, truly says: "The more bees the more flowers; the more flowers the more seeds; the more seeds the more flowers; the more seeds." If all the bees were taken out of the country, less seed would be raised and less fruit grown, because the honey-bees are the principal agents by which the pollen is carried from one flower to another and thus the

bloom is fertilized and becomes seed-bearing.

Before the introduction of alfalfa into Colorado, wild flowers furnished a scanty supply of nectar, and the bees were often short of stores for winter, and spring would bloom forth to find but few bees to kiss her flowers, they having died of starvation.

Foney-Producina **Plants** 

With alfalfa came the red, white, alsike, and sweet clovers. until now, thousands upon thousands of acres of alfalfa, thousands of acres of red clover, and miles of ditches and streams are lined with sweet c over and many pastures and fields of white and alsike clovers are to be found.

Of the indigenous plants, Cleome (Rocky Mountain bee plant, skunk weed) is the best, and it has increased rapidly since the advent of civilization, so that to-day the honey flow is considerably prolonged in regions where it abounds.

With these changes in the flora, the progress of the bee-keepers changed also. When wild flowers were the only dependence for honey the apiarian asked for a wet season, as it was the best for honey. Now he prays, if he has time, "Please give us a dry season with an abundance of irrigating water, and keep foul brood out of my apiary." Another season he will add, "and please kill all the grasshoppers."

Ree-Keepers' **Progress** 

Twelve years ago (1880) J. L. Peabody, E. Milleson and Mrs. State Olive Wright, met in Denver and formed the Colorado State Bee- Association Keepers' Association. There were then but few bee-keepers and about 250 hives of bees in the State. Nine years ago the coming winter the writer had the pleasure of attending a meeting of the

Association held in the county commissioners' room, upstairs, corner Fifteenth and Lawrence streets, Denver. About ten persons were in attendance.

In December, 1888, the Association was incorporated under the laws of the State.

In 1890, the apiculturists of the western slope met in Mon- Other trose and organized the Associations Uncompangre Valley Bee-Keepers' Asosciation with J. T. Hartop as President.

In 1891 two associations were born. First the Northern Colorado Bee-Keepers' Association at Longmont, with R. F. Coffin, President. D. L. Tracy. Secretary. This association



ELISHA MILLESON, Denver. A former President of the State Association.

now has 73 members. In September of same year the Weld County Bee-Keepers' Association was organized at Greeley, with D. S. Beal, President, H. E. English, Secretary. This association numbers 60 members.

All of these associations are in a thriving condition, and ere another year rolls around as many more will be formed.

### Colonies in

This is a difficult problem, but after getting statistics from Colorado assessors, and county inspectors and from correspondence with bee-



MRS. RACHEL A. RHODES. Fort Lupton. Treasurer State Association.

keepers, the number can safely be put at 64,000 colonies. Boulder County leads them all with 18,000 hives. Of these bees it can be said that fully four-fifths are in moveable frame hives. One fourth are owned by specialists and another fourth by semi-specialists, and one-half are in the hands of farmers that only about half take care of them. The last named get only comb honey and average from nothing to thirty pounds per colony, and save about one-tenth of the increase. Those making a specialty of the business get from 50 to 150 pounds section honey or 75 to 200 pounds extracted in the average season. The past season (1892) is the poorest in the history of bee-keeping in the State, and the average yield will be very low.

#### Fioney Produced

Placing the honey production at sixty pounds per colony with the specialist, thirty pounds with the semi-specialist, and ten pounds by the farmer bee-keeper, which I think a fair

estimate, would make a honey crop of 1,760,000 pounds. The average price of which has been about eleven cents per pound, making the honey crop worth \$193,600 per year, 1892 not taken into consideration, as there is not one-fourth of a crop.

#### Beeswax

The amount of wax saved by bee-keepers is very small as so many of them throw all scraps away: but nevertheless about fifteen hundred pounds is put onto the market each year in this State, the price of which is twenty-five cents, or \$375 on the yearly crop. This amount could be greatly increased by the saving of all scrapings and scraps of wax.

The amount of cash represented in the business each year is-	(
64,000 colonies bees at \$5\$320,000	F
1,760,000 pounds honey at 11 cents 193,600	\$
1,500 pounds beeswax at 25 cents 375	
Necessary supplies each year 48,000	

Making a grand total of .... \$561,975

This, you see, does not include wages paid to hired help, which is considerable, as many bee-keepers have so many bees that it becomes necessary to have assistants.

The prospects are not flattering. Each year in the last five the honey crop has grown less than the crop of the previous year, and the price has dropped from eighteen cents per pound in 1877 to ten cents in 1891. Foul brood is here, which will kill off some bees, although I believe that it can and will be eradicated in a couple of years. Grasshoppers may be worse next year than they have been this, and we may have a law making it a misdemeanor to allow sweet clover to grow on our farms; but notwithstanding all these drawbacks I believe the business will increase and get more into the hands of the specialists, and that honey can, and will be produced for less money than it now is.



#### Later History.

R. KNIGHT'S article brings the history of the beekeepers' industry down to the fall of 1892. There has been growth during the years that followed---and some rather remarkable changes. For example, Boulder

County, according to Mr. Knight's estimate, had 18,000 colonies; in the fall of 1900 Mr. Frank Rauchfuss and the Compiler of this publication united in estimating the number of bees in the State, and gave Boulder County credit for having 6,000 colonies, while Arapahoe was put at the head of the list with 7,000 colonies.

In December, 1900, the writer of this prepared an article for the New Year's edition of one of the Denver papers, setting forth in a popular way the status of the bee industry at the end of what was one of the most prosperous years for the bee-keepers of Colorado. It seems worth while to reprint that article here, with no change except the omission of a single unimportant paragraph.

**Eash**Represented

**Prospects** 

#### Colorado's Honey-Producing Industry.

By D. W. Working.



HE honey-bee is not the smallest animal that works for man, though it is the smallest which can be said to be truly domesticated and to work under direct personal management. It is the only domesticated insect. And

what a wonderful worker the honey-bee is! The "honey-bee" is proverbial, and is useful in more ways than one--is more than a maker of the choicest of sweets.

It is an old story that red clover seed could not be raised in Australia till bumble-bees were imported to aid in the fertilization of the blossoms. It is not so well understood that in Colorado we could not raise alfalfa seed without the help of the honey-bee. And



MISS SUSIE R. COOK, Littleton.

A Member of the Reception
Committee.

comparatively few of our fruit-growers realize the importance of the work of the bees in fertilizing their fruit blossoms. "Be sure," writes M. B. Waite in the concluding paragraph of an article in the Year Book of the United States Department of Agriculture for 1898, "that there are sufficient bees in the neighborhood, or at least within two or three miles, to properly fertilize the blossoms. When possible, endeavor to favor the bees by selecting sheltered situations for the orchard or by planting wind-breaks." And Mr. Waite was not writing as a bee-keeper, but from the standpoint of the fruit-grower.

So the reader is reminded.—bluntly enough, it may seem.—that the money value of the honey-bee to Colorado is not measured by the market price of the honey and beeswax produced. Every orchard is debtor to the honey-bee; every berry patch and flower garden owes him something. The alfalfa fields, with their purple blooms that yield the nectar for

the best and sweetest and whitest honey, get as much as they give. Wherever he goes, the bee pays his way if given an honest bee's fair chance. No loafer or shirk is he, but a worker of the workers. Though he gives due respect to his queen, he is no sycophant at the

feet of royalty. A democrat of the democrats, he chooses his own queen, and he lives and works as if he believed the doctrines of industry, thrift, and equality which he preaches. The queen-mother of his social democracy must not contract the habits of indolence. She rules by her power of service, and when her power to serve is spent, she must give place to the young queen, chosen by the workers.

The history of honey production in fragmentary. The loose ends have not been gathered up and tucked in as they might have been. The early bee-keepers were too intent on getting honey to write history.

A year ago Frank Rauchfuss, Secretary of the Association, in a summary of the history of the industry in Colorado, stated that the first statistics of the business were gathered in 1885 by Secretary Shiff of the State Association. Shiff estimated that there were about 500 bee-keepers and 6,000 swarms of bees. "Two bee-keepers had 150 colonies each and reported a crop of five tons of honey for that season."



Apiary of F. H. Hunt, Edgewater, Jefferson County,

In 1899 the Association had thirty-eight members, who owned 3,178 swarms of bees, yielding 130,000 pounds of comb honey. How many bees were owned by persons not members was not known. The business was growing and prospering.



FRANK RAUCHFUSS, Denver.
Manager Colorado Honey Producers'
Association; a Former Secretary
of the State Association: Member Executive Committee.

Secretary Rauchfuss estimated the number of bees in the State in 1897, putting the total at about 70,000 colonies. The yield of honey that year was twenty-six pounds per hive, and the total value of the honey was about \$80,000. The Association then had forty-three members. From this time on the organization grew faster than the business it represents.

In 1899 Mr. Rauchfuss was able to report 165 members in good standing, and now the membership roll includes about 290 names. The industry represented has grown in importance. The bee-keepers are learning the need of organization and proving the value of co-operation. They save by buying together; they gain by selling together. They have established a system of grading that has given Colorado honey an honorable name in the markets of Eastern cities, where the choicest of our products are consumed.

Among American associations of beekeepers the Colorado organization is one of the foremost. Among its members are some of the best known bee-keepers in the United States, as well as a number of the most competent writers for the bee journals. Colorado is famous for her alfalfa honey and her wide-awake honey producers, some of the most successful of whom are women.

Most people like to read of big things. The business that is represented by millions appeals to them. They are interested in things in the mass--in carloads of needles and pins, in train loads of apples and strawberries. In speaking of the bee industry in Colorado we are not forbidden by the truth to use large figures. The bee is small, but his name is legion. An average swarm of bees weighs five pounds; but there are 25,000 of the little workers in the swarm. There are, approximately, 75,000 swarms or colonies in the State--nearly 2,000,000,000 of bees! To keep these myriads of tiny workers busy, two Denver firms distributed fifteen carloads of bee

supplies.--hives, sections, wax foundations, shipping cases, smokers, veils, gloves and a hundred other things known only to the men and women who are acquainted with bees. Twenty-five thousand dollars is the sum paid by the bee-keepers for these supplies. But the bees must be kept busy. And there seemed to be a rivalry during the year just ended, the bees keeping their owners on the run; their masters trying to give the bees a chance to do their utmost during the honey flow. The result was satisfactory.

The 75,000 stands of bees in Colorado are scattered throughout the State substantially as follows:

Arapahoe County 7,000
Boulder County 6,000
Delta County 5,000
Fremont County 3,000
Huerfano County 3,500
Jefferson County 5,500
Larimer County 5,000
Logan County 1,000
Montrose County 5,000
Mesa County 6,500
Morgan County 1,500
Otero County 6,000
Prowers County 3,000
Weld County 6,000
Other counties11,000

These estimates will seem low to many well-informed bee-keepers of the counties named. But the figures may stand. They furnish a basis for other estimates.

At the recent annual meeting of the State Bee-Keepers' Association a member who suc-



H. C MOREHOUSE, Boulder. Editor Rocky Mountain Bee Journal.

cessfully handles a large apiary estimated the value of every good swarm of bees, including hive and one super, at \$5.50. But there are swarms that are not good. Call the average swarm worth \$4.00 and we have \$300,000 as the value of the bees in Colorado. Add the cost of buildings, tools and appliances, and the total investment represented by the bee industry will amount to fully \$500,000. This does not include the value of "bee pasture."

The value of the honey produced in the State is not easily estimated. Most of the 2,000 bee-keepers in the State are not members of the State organization. A large share of them have only a few

stands and use the entire product at home. Many of them follow primitive methods, and sell only broken honey. Manifestly it is impossible to "get at" the average product per hive. Numerous examples could be given of single hives that produced 200 pounds of comb honey during the season: large apiaries could be named from which honey was sold by the ton at the rate of 100 or more pounds per colony. Many small apiaries have done as well. Unfortunately conditions were not favorable in all parts of the State, and all bee-keepers are not equally skillful in handling bees.

It is a low estimate to put the average production of surplus honey at 20 pounds per colony, or a total of 1,500,000 pounds for the State. For home use and for sale this honey was worth about 10 cents a pound, or \$150,000. The value of the natural increase by swarming is not far from \$50,000.



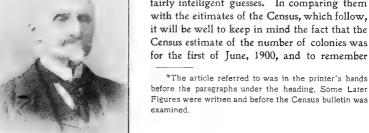
#### Some Later Figures.

F THE EDITOR thought it necessary to apologize for anything in the foregoing article,\* it might be for the item "other counties" in the table and for the lack of accuracy in the use of a few words that have particular meanings

to bee-keepers. But it is not worth while to apologize; though it may be worth while to remark in passing that the Working who

> wrote the foregoing article was an amateur bee-keeper, while the Working who writes this is also an amateur, but not quite so amateurish.

> The estimates given above were for the end of the year 1900. They may be called fairly intelligent guesses. In comparing them with the eitimates of the Census, which follow. it will be well to keep in mind the fact that the Census estimate of the number of colonies was for the first of June, 1900, and to remember



LEVI BOOTH, Denver. Whose Wife is the Bee-Keeper.

that the increase in the number of colonies by swarming was exceptionally great during that year; also that several car loads of bees were shipped into the State. A Census bulletin on Colorado agriculture, dated June 2, 1902, gives the following paragraph under the heading Honey and Wax:

"In 1900, 4,518 farmers reported, in the aggregate, 59,756 swarms of bees. They obtained, in 1899, 1,732,630 pounds of honey and 24,930 pounds of wax, the gains in the last decade being 87.4 per cent in the former item, and more than twofold in the latter. The leading counties in 1900, as in 1890, were Jefferson, Arapahoe, Montrose, Delta, Larimer and Weld."

It might be well to add that the bulletin referred to does not give details, either by counties or otherwise, and that it estimates the value of the 59,756 swarms of bees at \$195,096, an average of \$3.26 per colony. During the spring of 1902 many colonies changed hands at \$6.00 per colony, and some at even higher prices. At the present time prices are much lower, and doubtless will remain low until next spring.



MRS. BOOTH, Denver.

Since the figures of the Census were collected there has been a large increase in the number of bees in Colorado, and there are reasons for believing that at the present time (August 1, 1902) there are nearly eighty-five thousand colonies in the State. This, of course, is a guess, but not an entirely unintelligent guess. It will have been noticed that the number of bee-keepers given by the Census bulletin is largely in excess of any local estimate; and it would seem that the Census figures in regard to the number of persons owning bees ought to be substantially accurate.

The following approximate estimate of the number of colonies in the State is given on the authority of Mr. Frank Rauchfuss, his figures being prepared independently of those above given and after the foregoing paragraphs were written:

Arapahoe County	8,000
Bent County	2,000
Boulder County	8,000
Chaffee County	200

Delta County	4 000
Devia County	200
Douglas County	
Elbert County	
El Paso County	800
Fremont County	2,000
Garfield County	1,200
Huerfano County	2,000
Jefferson County	8,000
La Plata County	1,000
Larimer County	6,000
Las Animas County	1,500
Logan County	
Mesa County	
Montezuma County	2,500
Montrose County	5,000
Morgan County	3,000
Otero County	7,000
Pitkin County	300
Pueblo County	1,500
Rio Grande County	300
Weld County	
Total	78.300



Apiary of Gill and Francis, Boulder County.

#### A Calk with a Pioneer.

N MR. KNIGHT'S SKETCH it is stated that Mr. J. L. Peabody was one of the three organizers of the State Bee-Keepers' Association. Mrs. Wright, one of the three, has passed away. The other two, Mr. Peabody and Mr.

Elisha Milleson, live in Denver, the latter still a bee-keeper, the former out of the business, but interested, nevertheless, in the bees and those who care for them.

Mr. Peabody, like other early bee-keepers, has a fund of interesting reminiscences of the early days; and as he has the name of being the first President of the State Association, it is worth while to know something of his experience. He came to Colorado in 1873, he says, "to get away from bees, for a time, at least, on account of his health." But the bees followed him and he could not be contented without a few at least, if only for pleasure and to have an opportunity to make experiments. Not before 1881 did he give much attention to increase and honey-production, having the year before sold all his bees but two colonies.

In 1881, with his two colonies to start with, Mr. Peabody secured 400 pounds of honey, mostly extracted, and increased his apiary to fourteen colonies. The extracted



J. L PEABODY, Denver, The First President.

honey sold at twenty cents a pound and the comb at twenty-five, the total income from this source being about \$90. Six swarms of bees were sold for \$60. Valuing the other six new swarms at the same rate, Mr. Peabody figures that his income from the two colonies was a little better than \$200. The increase was all artificial, and the queens were bought at seventy-five cents each. The honey was nearly all from the Rocky Mountain bee plant, Cleome.

Of course a yield of 200 pounds of honey per colony is extraordinary, especially when the bees are increasing so rapidly. But Mr. Peabody says that the season of 1881 was "a great year for the bloom all over the city," though he admits that it may not have been better in that respect than some other particularly favorable years. His explanation of the large yield is as follows: "It was a moist season, with little rains every few days, which made the honey thin, so the bees could fill themselves very quickly. They could work most of the day which they can not do in this climate when it is so extremely dry, as the honey in the flowers seems to get thick during the middle of the day."

From 1881 to 1884 Mr. Peabody was in the supply business, as well as keeping bees and dealing in honey and queens. He handled Root's goods for the most part, but manufactured all the hives he sold.





JAMES U. HARRIS, Grand Junction. President State Bee-Keepers' Association.



M. A. GILL,
Longmont.
Vice-President State Bee-Keepers'
Association.



#### Bees in Boulder County.

R. J. B. ADAMS, of Longmont, is the authority for the following facts about the bee industry in Boulder County:

"The pioneer bee-keeper of Boulder County was David J. Lykins. Mr. Lykins, who came to Colorado in 1859, began his work with bees some time in the sixties, after receiving from an uncle in Missouri two colonies in rough box hives. Like other pioneers he had many interesting and exciting experiences

with Indians and became familiar with the men and events that made the early days so full of what has come to be of so much interest at the present day.

"Like many others, Mr. Lykins, whose home was and is in Little Thompson Canon, neglected his bees, and the increase for many years went to the trees in the mountains where are to be found the only full blood black bees in this county. After Mr. Lykins was married his wife took charge of the bees, and bought twenty-five colonies of Italians from Mrs. Baker of Upper St. Vrain, paying eight dollars a colony for them. She sold honey to the amount of \$175 the first year, 1885. She had a swarm come off on September 9th and afterwards make honey enough to winter on.

"Dr. King of Boulder and Mr. Barten and W. S. Flory of Hygiene were among the first to handle bees according to scientific principles. Mr. Flory shipped four colonies direct from Italy. Others bought Italian queens from breeders in the East. From these nearly all the bees in this country have become Italianized."

#### \*\*\*\*



A Corner of one of W. B. Hopper's Apiaries.
Otero County.



F. H. C. KRUEGER, Brighton. Bee Inspector, Arapohoe County.



B. W. HOPPER, La Junta Bee Inspector, Otero County



Apiary of the Sterling Bee Company. Harry McCombs, Apiarist.

#### Jefferson County.

HE Rev. R. H. Rhodes, now of Fort Lupton, gives the following interesting account of the beginning of the bee industry in Jefferson County:

"The first colony of bees of which we have any

authentic knowledge was brought to the county in 1864.

"F. J. McQuiston of Ralston Crossing (post office address, Golden, Jefferson County) bought a colony of bees in a log gum, on Coon Creek, Iowa, and paid the sum of four dollars for it, and then placed it with his household goods upon an ox wagon, in the fall of 1863, and migrated with others across the plains, arriving in Denver the first day of January, 1864, safe and sound. From Denver he moved with his effects to his present home, where he unloaded his household goods including his bees.

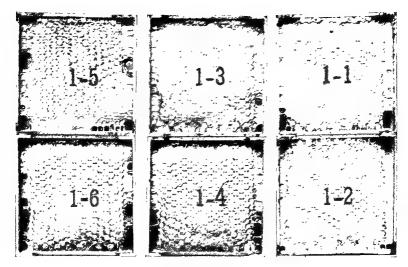
"During the time he kept the bees he was twice or thrice offered the sum of \$100 for his one colony. And for the first honey that was taken from the hive to Central City he received one dollar a pound for all that he had, and Mr. McQuiston says that if he had known how to keep bees in modern style he could have made a fortune with them."



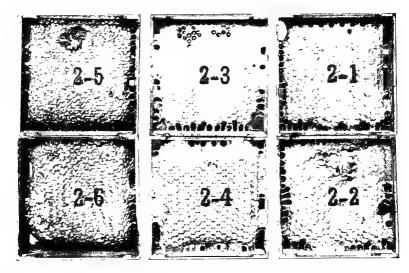




1. S. BRUCE, Montrose.



NO. 1 HONEY.



NO 2 HONEY.

#### Grading Rules

OF THE

#### Colorado State Bee-Keepers' Association.

COMB HONEY RULES.

S

ECTIONS to be well filled and capped, honey white or slightly amber, comb white and not projecting beyond the wood, wood to be well cleaned; cases of separatored honey to average 21 pounds net per case of 24 sections.

**n**o. 1

with a minimum weight of not less than 20 pounds for any single case; cases of half-separatored honey to average not less than 21 \( \frac{3}{2} \) pounds net per case of 24 sections, with a minimum weight of 20 \( \frac{3}{2} \) pounds for any single case; cases of unseparatored honey to average not less than 22 \( \frac{1}{2} \) pounds net per case of 24 sections, with a minimum weight of 21 \( \frac{1}{2} \) pounds for any single case.

no. 2

Includes all amber honey of a pronounced tinge, and all white and amber honey not included in No. 1; to be fairly well sealed, uncapped cells not to exceed fifty in number exclusive of the outside row, wood to be well cleaned; cases of separatored honey to average not less than 18 pounds net per case of 24 sections; cases of half-separatored honey to average not less than 19 pounds net per case of 24 sections; cases of unseparatored honey to average not less than 20 pounds net per case of 24 sections.

عر

Extracted honey shall be classified as white and amber, shall weigh twelve pounds per gallon, shall be perfectly free from particles of wax, and shall always be marketed in new cans. All rendered honey, whether obtained by solar heat or otherwise, shall be classed as strained honey and not as extracted.

Extracted Figure 19 Bules

It is recommended to sell all cull honey around home as much as possible; to grade only in daylight, near a window; to use the standard  $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$  inch section and the 24-pound double-tier shipping-case, in order to have uniformity in loading cars; to stamp all cases of No. 1 honey with the owner's name above the handholes; to mark all cases of No. 2 honey with two dashes in the handholes at each end of the case, and with no other marks whatsoever; to use no second-hand cases for No. 1 and No. 2 honey; to pack all sections with paper below and above, and in double-tier cases to put a sheet of paper between the tiers; to store comb honey in a warm, dry place, protected from flies and dust; and to haul carefully, well protected from dust and rain.

Recommendations



PART OF THE COLORADO STATE BEE-KEEPERS' ASSOCIATION, AS PHOTO



ED BY W. Z. HUTCHINSON, ON THE CAPITOL STEPS, NOVEMBER, 1901.



PROF. C. P. GILLETTE,
State Agriculture College, Fort Collins, Colorado
An authority on long-tongued bees.

#### Bee-Keeping in Delta County.

By Frank H. Drexel.

F THE COUNTIES on Colorado's western slope none offer to bee-keepers greater inducements in the way of honey resources, climatic conditions, and congenial environments than does Delta County. 'Twould be putting it rather too strong, however, to say that this is the bee man's paradise, or to endorse what appeared only recently in Gleanings in Bee Culture regarding this county; but we have, undoubtedly, a fine country here with prospects most promising.

Bee-keeping in Delta County had its birth shortly after Uncle Sam's regulars cleared out the Indians. Some of the first settlers



Apiary of Frank H. Drexel, Crawford, Delta County.

found bees in trees and in caves; and it may be worthy of mention that these bees were not the common black ones, but were in fact nicely marked. Indeed, a colony of black bees is a rare thing here even now, although very little has been done by anyone to import fresh blood.

It was in 1883 that Mr. W. D. Brown of Delta shipped in about twenty colonies of bees in frame hives. He retained part of these for his own use and sold the balance to his neighbors at twenty-five dollars per colony, thereby setting Delta County's agricultural ball a-rolling.

A start in bees was expensive in those days, and it was likewise expensive to run them in an up-to-date way; for hives, sections, shipping cases, and in fact everything was high in price and difficult to obtain. So it transpired that notwithstanding bees increased very rapidly and honey sold for twenty-five cents per pound in the local market, bee-keeping as a business made but little headway. By this time (1893) bees were in the possession of nearly every ranchman, but declining prices in honey and the panicky times brought to an untimely end many high hopes.

Only a few of our pioneers—Miss Rose Kennicott, Mr. Geo. T. Conklin, and Mr. Geo. Fogg—kept on producing honey for market in a large way, honey then being worth only seven to eight cents per pound. This marked the ebb tide in the bee industry of our county.

It was at this stage that the writer, having come to this country from Baltimore in 1892 at the age of twenty-three years, for his health, entered the field of apiculture. To find an out-door occupation, not requiring very heavy work and yielding fairly good returns for money invested and labor performed, was the object sought. Two bee papers, a text book, fifty colonies of bees in box



Apiary of Coggshall & Weeks, Delta. Delta County.

hives, some lumber, and a beginner's outfit formed the stock on hand. Interest in the work ahead, determination to stay with the business and the most powerful incentive in the world to back up the enterprise was to compensate for the total lack of learning or experience in bee matters. Eight years of service in a large hardware house under a tireless and exacting employer had not, I soon found, been for naught. Business is business—be it hardware or bees or profession or anything else. Eight years of bee-keeping has not brought all the success dreamed of in the start, but it has brought health, has made possible the establishment of a home and a nice, clean business; the fifty colonies in one yard have grown to some



Apiary of R. T. Stinnett, Delta, Delta County.

four hundred, in four yards; and there is no doubt that in more competent hands the results would have been much better in many ways. All things considered, I have never felt the least regret in making Delta County my home or bee-keeping my business.

The foregoing was written, not so much with any idea of making known my small accomplishments, as to more forcibly impress the reader with the fact that this is a honey-producing country; for it must be admitted that not in every country can a man start in the bee business as a specialty without any knowledge of the work before him and make it pay.

Some time around the year 1898 a bee-keeper and his wife from near Denver came into this county and purchased several hundred colonies of bees. Being practical bee-keepers with plenty of hustle, they made the business pay from the start. Each year the number of their colonies and the size of their honey crops increased and success to them came quick and sure. But, mind you, it took work. Partly through their instrumentality a better grade of supplies at closer figures than before were handled by Delta supply houses. With an increased output of fine honey, fine fruit, fine cattle, and what not, Eastern buyers were attracted to our market, the price of honey ruled higher and higher, so that in 1901 the bee industry of Delta County was thoroughly alive and awake to its possibilities.

The beginning of the present year witnessed several large deals in bees as well as the building of a new line of railroad through the county—a line which will put Delta County many hours nearer to Denver.

Mr. W. L. Coggshall and Mr. C. H. Weeks, both of New York, became the owners of one thousand colonies of bees located in nine yards in a very fine portion of the county. These yards are under

R. T. STINNETT, Delta

the management of Mr. Weeks, an enterprising young man who has been in the West long enough to know Western requirements. Given a county such as Delta County, and a man with grit such as Mr. Weeks no doubt possesses, and there can be little question as to the result of the enterprise.

Simultaneously with Messrs. Coggshall and Weeks came Mr. R. T. Stinnett, who purchased a very fine hay and fruit ranch together with 160 colonies of bees. Mr. Stinnett, while thoroughly practical, having served under such men as W. L. Coggshall of West Groton, N. Y., and N. C. Alford of Fort Collins, Colorado, and having kept bees on shares and for himself in New Mexico, where he had 1,150 in his care, is also qualified to "tackle" the scientific side of apiculture. At the College of Agriculture and

Mechanic Arts of New Mexico, from which he graduated in 1897, he pursued a scientific course and made a thorough microscopical study of the anatomy of the bee. He now considers himself permanently located in what he thinks is the finest State, for a home, in the Union. Having lived in Virginia, where he was born in 1874.

in New York, in New Mexico, and in Colorado, his opinion in the matter should deserve recognition.

Several other ventures in bees have been made, but space will not admit of making further mention of them than that they are indications of a healthy growth, auguring well for the future. These men are all intelligent, wide-awake pushers. It has been my privilege as bee inspector for the county to meet them, to see their yards and get their views; and I am sure that any one coming to our part of the State will find them as ready to extend the right hand of fellowship, if rightly and intelligently approached, as he will find them resolute in standing up for their proper rights.

Our county is not a large one, but the greater portion of it I think is under cultivation. Each year sees improvements in irrigation which admit of an increase in tillable land. Fruit and alfalia hay are our main products. We have no infallible crops. We have no boom. We do not produce twenty-five cars of honey per season --- only about three. We haven't abundance of room for squatters--locations must be bought--- or at least old apiaries must be. We have no room for idlers---we want pushers. Neither have we any foul brood--- not one case has been found.

But we have a glorious climate, and we have beautiful scenery. We have good schools and churches. We have a rich county any way you wish to look at it.

#### TWO LARIMER COUNTY BEE-MASTERS.







W. C. EVANS, Fort Collins.

#### Bee-Keeping in Carimer County.

By R. C. Aikin.

ARIMER COUNTY does not stand at the head as a honey-producer, though it is by no means at the foot of the list. The annual output of Boulder County exceeds that of this, having a little better natural conditions of soil and flora, and a better development of the industry. However, Larimer puts out at present about from three to six car loads as an

annual product in fair seasons.



R. C. AIKIN, Loveland. Bee Inspector of Larimer County. President State Association from 1893 to 1901.

The main source of nectar is alfalfa; second, sweet clover, and third, cleome or Rocky Mountain bee plant. The latter thrives best in a somewhat sandy soil, and as we have much clay, cleome does not abound as in some other parts of the State. Alfalfa begins yielding nectar about June 15th, and continues until mown for hay, generally closing about July 1st to 10th. Cleome and sweet clover begin the last of July and usually close about August 15th to 20th.

The writer is not able to say when the first bees were brought into the county or who brought them in, but possibly among the first to keep bees and produce extensively were Mr. Will Amos and Mr. N. C. Alford of Fort Collins. In 1889 the first car load was shipped out of the county from Fort Collins, Mr. Alford producing eight tons of the amount. This honey was bought by the G. G. Liebhardt Commission Co. of Denver. That year was

one of the best, probably the best, of any in the history of the county. Not only was the yield large, but the price was well up, making the business so flattering that many others were led to go into the business more or less, and a boom was the result, only to go flat again within the next three years.

However, it was with the bee and honey industry as with other lines: some went into the business in a more conservative way and to make of it a permanent business, and, as above stated, our annual product is now several car loads. This write up is in no sense a boom, but simply more in the nature of an advertisement of the business as it exists in this territory. To boom the industry here would be a sin against those now engaged in the pursuit, and a wrong to any prospective locators. The field is being systematically occupied by apiarists distributing their stock to the best advantage and to best utilize the pasture. The year of 1889 has not been equaled since in either yield or prices, and possibly will not be again in many years. There is no doubt a fair income to be made from the business, but it will require a careful and judicious management and strict business principles.



A. ELLIOTT, Timnath. Looking for a Queen.



HARRY CRAWFORD, Broomfield.



A ELLIOTT, Timnath.



Apiary of W. C. Evans, Fort Collins.

Our county at present contains several practical apiarists, among whom we might mention at Fort Collins, Walter Hawley, Will Lindenmier, W. C. Evans, and others; at Timnath, E. A. Miller and A. Elliott; at Loveland, E. S. Allen and Sons and R. C. Aikin. In the Berthoud district we have Mr. A. C. Van Galder, S. C. Rising, L. P. Milburn, Mrs. Lovejoy, W. Hickox, and others.

Of late years there is getting to be a more close and careful farming, and a custom of cutting the alfalfa before it blooms, which largely decreases the average yield per colony. We do not dare to overlook two facts—this early cutting of the principal nectar plant and the large increase of bees to pasture upon the bloom. The spread of sweet clover, blooming in July and August, in a measure supplements the early cutting of alfalfa, and at the same time somewhat complicates the management necessary to success. The writer does not anticipate any decrease in the annual output from this county, but thinks it will be very materially increased; but it will be done by carefully utilizing all pasturage, and an intelligent—and scientific management. In the early days when alfalfa was allowed



Agricultural College Apiary, Fort Collins.
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to bloom freely and there were only hundreds of colonies where now there are thousands to feed on the bloom, some astonishing yields were obtained. But conditions have changed. I go back in memory to the early days in Iowa when 75 and 100 bushels of corn were harvested from the rich virgin soil without much effort; but now it requires the most careful cultivation, rotating, and manuring to produce half the former yields. I take it that this fairly represents the bee industry in this and very many localities throughout our State. Industry and intelligence will maintain our pursuit and cause it to prosper, and Larimer County will continue to put out a honey product not to be discounted by any.

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Apiary of E. A. Miller, Timnath.

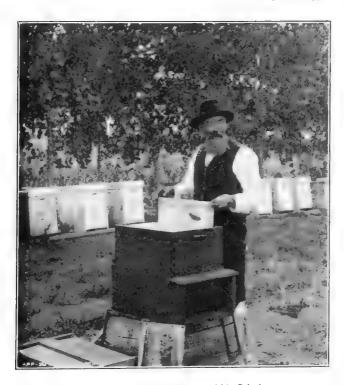
S A LAST WORD, I must acknowledge my obligations to all who have helped to make it possible to print this little book. It is not possible to mention all of my helpers.

Two names, however, deserve to stand out conspicuously.

Mr. Frank H. Drexel of Crawford, Delta County, and Mr. Walter Hawley of Fort Collins, Larimer County, did especially valuable work. Besides these, Mr. Frank Rauchiuss and Mr. R. C. Aikin have earned particular thanks. Then there are the advertisers: I am proud of every one of them.

Of course the Souvenir is not as handsome or as valuable as I originally hoped to make it; but I think it is worth keeping.

D. W. WORKING.



F. H. C. Krueger Examining one of his Colonies.

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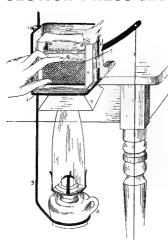
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