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*The  Rocky
Mountain.....
Bee Journal.*

M A Y

1901.

Boulder, Colo.

Volume 1.



Number 4

*By The Peoples' Publishing Co.
H. C. Morehouse, Editor and Mgr.*

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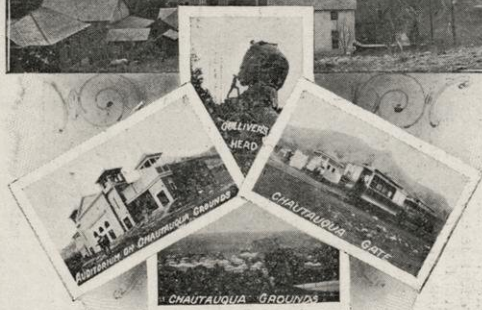
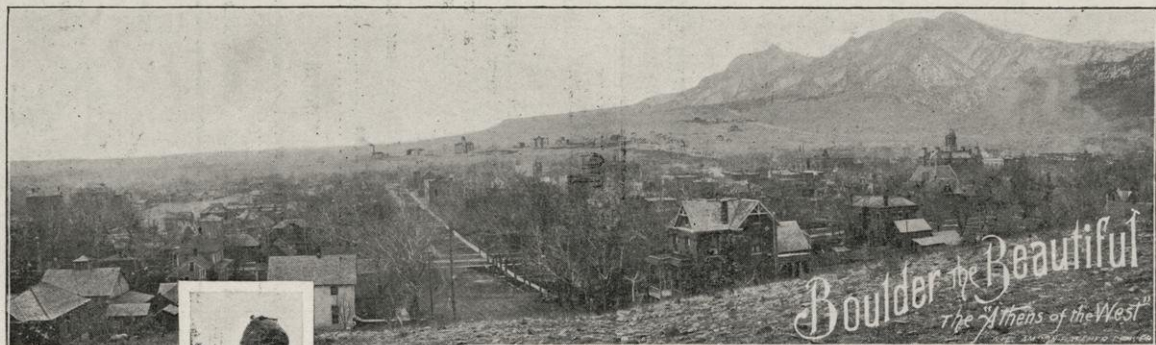
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A GLIMPSE of Boulder, "The Beautiful," looking south-west from the head of Sixteenth street. In the far background may be seen the outlines of the State University buildings, while nestling close to the high foot hills the buildings in Texado Park—the home of the Colorado Chautauqua—are plainly in view. Population 8,550; altitude 5,400; terminus of the Colorado & Northwestern railway, one of the world's scenic lines; situated 28 miles north-west of Denver on the Colorado & Southern railway; nature's gateway to Middle Park and North-western Colorado.

Rocky Mountain Bee Journal.

For Colorado and the Great Inter-Mountain Region.

VOL. I.

MAY 15, 1901.

No. 4.

TWO STATE BEEKEEPERS' ASSOCIATIONS MEET.

The Utah, at Salt Lake City, April 5th—The Colorado, at Longmont, April 30th.

THE UTAH MEETING.

Business began promptly at 10 a. m., with President E. S. Lovesy in the chair. Secretary J. B. Fagg read the call and the proceedings of the last meeting.

A letter of regret was read from County Vice President, C. C. Bartlett, of Uintah county, who, while not being able to attend, reported that the bee industry in his county was in a satisfactory condition. There were fifty or more beekeepers in the county owning approximately 4,000 colonies. Letters of regret were also read from County Vice Presidents A. N. Winsor, of Washington county, W. F. McAllister, of Kanab county and P. M. Grigg, of Wayne county.

Mr. Roberts, of Provo, an old time beekeeper and one of the first to introduce bees into the territory, related some of his early day experience in hauling bees by wagon from California; he also spoke on the introduction of the movable frame, organization, and the medicinal qualities of honey.

The President's Address.

Reports from nearly all parts of the state received during the past ten or fifteen days, especially from the south, south central and southeast portion, have been universally encouraging. The snow fall has been abundant and is more

evenly distributed than in other years, thus insuring a fair supply of irrigation water. This makes the chances of success fairly good where the bees are in good condition. While the outlook is encouraging, still our picture may have a dark side. Smelter smoke has weakened the bees in some localities and a still more serious condition exists in at least one or more counties. There is more disease among the bees than is desirable. While this subject is distasteful, or anything but gratifying to us, we have tried to urge a more united and persistent effort on the part of our beekeepers in resisting its ravages. A few minutes spent to prevent is worth a month in trying to cure. One of the many reasons for publishing our expected treatise is that it will benefit our beekeepers and aid our bee inspectors by placing in the hands of every beekeeper simple and effective remedies for the cure of these diseases. Beekeepers should begin the new century by cooperating with the association in its laudable efforts in their behalf.

ORGANIZATION.

There are other things which as beekeepers we could improve upon for our own advantage. One of these is organization. No prophet is needed to foresee that our only salvation depends upon a strong union of interests through organi-

zation. Other interests are organizing for mutual benefit, and why should not the beekeepers? They should organize for the purchase of supplies and also for the disposal of their products.

MANAGEMENT.

While many obstacles can be overcome by timely and proper management, still we find that even then our brightest prospects do not turn out a shining success, and if we attempt to count our profits by our prospects, we sometimes reap disappointments. The wintering question in this state is still an unsolved problem. With proper care bees can be wintered successfully in most localities, but in some places success seems to be next to impossible.

FAIRS.

Would it not be well to consider the matter of our beekeepers exhibiting their products at our state fair, at the Pan American Exposition at Buffalo and the World's Fair at St. Louis two years hence. We certainly should be represented there. We would be pleased to have our beekeepers throw any additional light upon these or any other subjects connected with our industry—not forgetting the treatise we wish to publish as soon as possible.

Vice President Hansen, of Box Elder, reported the industry prosperous at Bear River.

J. L. Hamilton, of Corinne, reported some winter losses in his locality.

Inspector J. L. T. Johnson, of Brigham City, reported some foul brood in his county.

County Vice Presidents Geo. Hone, of Utah county, A. F. Stevenson, of Davis county, C. O. Folkman of Weber county, Thos. Belliston of Juab county, and Uhlrich Bryner, of Carbon county, all reported their respective counties in good condition.

A number of letters were read by the secretary from county Vice Presidents, inspectors and others; these reported

some losses from disease, but otherwise the outlook was fairly encouraging.

Inspector Anderson, of Cache, reported some disease in his county, and said that the county commissioners desired him to eradicate it.

Mr. Dart exhibited some samples of diseased brood, and had a letter read from Dr. W. R. Howard, of Ft. Worth, Texas. A long discussion followed as to best methods of prevention and cure. The McEvoy treatment, with some modifications, was recommended.

A resolution was offered and passed authorizing the publication of a treatise on bee diseases, their cause, prevention and cure, by the association. To include, also, the State foul brood law, and a discussion of the relation of beekeeping to the fruit industry. Messrs. Lovesy, Fagg, Belliston, Whitney and Dart were appointed a committee to compile and publish the treatise.

Organization among beekeepers was discussed at length, but no definite action taken.

A resolution was discussed and passed urging the beekeepers of the state to aid the association in making an exhibit at the State Fair in October, and also at the Pan American Exposition at Buffalo and the World's Fair at St. Louis.

The election of officers resulted as follows:

President, E. S. Lovesy; first vice president, R. T. Rhees; second vice president, Wm. Wartham; secretary and treasurer, J. B. Fagg; assistant secretary, C. R. Matson; county vice presidents: Salt Lake, Wm. A. Bills; Utah, Geo. Hone; Wasatch, J. A. Smith; Davis, A. F. Stevenson; Box Elder, J. Hansen; Weber, C. O. Folkman; Juab, Thos. Belliston; Washington, A. N. Winsor; Tooele, Ben Barbus; Cache, Henry Bullock; Morgan, T. R. G. Welch; Uintah, C. C. Bartlett; Emery, Chris. Wilcox; Wayne, P. M. Grigg; Carbon Uhlrich, Bryner; Sevier, R. A. Lowe; Kane, W. C. F. McAllister.

Afternoon Session.

The next question discussed was the purchase of supplies and the disposal of bee products. In regard to supplies, it was demonstrated that, with the exception of sections, nearly everything can be purchased in the home market. As to disposal of the season's products, it was decided to try to keep all beekeepers posted as to prices, etc. The question of grading was discussed at length. A few dealers preferred amber to water white extracted, because it was cheaper. The demand for the best, was, however, good regardless of the difference in cost. It was urged that great care be taken in grading comb honey, as a few partially filled or uncapped sections materially reduced the value of the case and injured the reputation of beekeepers. The reputation of Utah beekeepers for fair dealing was good, and in order to trace up mistakes name and address of the producer should be on each case.

QUESTION BOX.

1. Is dividing preferable to natural swarming?

Mr. Howe preferred dividing because he had better success than with natural swarming. Mr. Whitney was very successful with his forced swarms. Mr. Lovesy preferred dividing; the bees were more gentle and the strength of the colonies easier regulated.

2. What style of hive is preferable?

Mr. Fagg preferred the 10-frame Langstroth, both for comb and extracted honey.

3. Does spraying fruit trees while in bloom kill the bees?

It was proven that in did, and also that it was an injury instead of a benefit to the fruit grower.

4. Is winter ventillation necessary?

This was decided in the affirmative.

A resolution was passed appointing Louis J. Whitney, of Mapleton, to represent the Utah State Beekeepers' Association at the Pan American Exposition,

at Buffalo, and also, Mr. Roberts, of Provo, as delegate-at-large to represent the Utah State Beekeepers' Association in England.

THE COLORADO MEETING.

The first semi-annual meeting of the Colorado State Beekeepers' Association in many years was held in the city hall, at Longmont, on Tuesday, April 30th. The day was an ideal one for such a gathering—a typical Colorado day. Bright sunshine and a cloudless sky were very much in evidence; the air was soft and balmy, and fragrant with the odors of spring and the sweet breath of the mountain pines. The trees that line the streets of this beautiful village—cottonwood, poplar, balm of Gilead, black ash, box elder, et cetera—were in bloom and fairly roaring with little workers from the near by apiaries. To complete this inspiring picture, to the westward the grand old Rocky range lifted its huge snow masses far into the purple sky. The attendance was very fair considering that the busy season for beekeepers had begun. Northern Colorado, from Ft. Collins to Denver, was well represented, and by people as earnest and enthusiastic as ever assembled in any cause.

Morning Session.

Promptly at 10:30 o'clock the meeting was called to order by President R. C. Aikin. The first feature of the program was the address of welcome by the mayor of the city. The mayor spoke of the importance of the honey industry to the state at large, and particularly to the country contiguous to Longmont, stating in the course of his remarks that over four carloads of honey had been shipped from that point alone the past season. This was responded to on behalf of the association by M. A. Gill. The balance of the forenoon was spent in social intercourse, after which adjournment was taken until 1:30.

Afternoon Session.

About sixty assembled for the afternoon session, which was opened by the reading of a paper by M. A. Gill on

SPRING MANAGEMENT OF BEES.

Begin the previous season, say in September, by providing each colony with a good, vigorous queen. Don't manipulate much in early spring, but help the bees to conserve their heat. Supply artificial pollen if none is available from natural sources. Remember that the old axiom that "heat is life, and cold is death," is as true with bees as anything else.

Work the drone combs to the outside of the hive, or if you have too many, remove them. Have your apiary in a protected location, or supply artificial protection. See that your bees have water in a protected place, and by the use of a little salt you can teach them to water where you wish. I believe that salt is much needed by the bees, not only by the adult bees, but in the make up of the larval food.

Equalize the stores of your colonies, see that all have plenty, and thirty to thirty-five days before the honey flow, if honey is not coming in sufficiently, keep up breeding to its full capacity by feeding.

I hardly dare advise beginners to feed in the open air, but practice that plan myself. I feed in troughs filled with alfalfa stems, or open vessels with a piece of burlap thrown over to prevent the bees from drowning. I feed at two to three o'clock p. m., giving each colony from one-half to a pound of honey or syrup made as thin as raw nectar. After feeding in this manner for a couple of days, if I have any brood combs filled with honey, I uncap them and hang not more than three in an empty hive, equally spaced apart, and let the bees have it. If properly done, there will be no trouble from robbing. I had as soon feed 100 colonies in the open air as 100 pigs, provided my neighbors do not have too many bees.

If you have not been foolish enough to keep drawing brood from your best colonies to help old or poor queens you will now be in a position to help all worthy queens by giving them frames of hatching brood, enabling them to bring their colonies up to the honey flow in splendid condition.

The text books lay down the rule as infallible that when a queen deposits two or more eggs in one cell that she is failing and should be replaced. My experience is that both poorest and best queens indulge in this freak. I have seen vigorous queens when confined to a small cluster of bees, so plethoric with eggs that they would deposit a dozen or more in one cell. Give such a queen plenty of nurse bees and in thirty days you would wonder where all the bees came from in her colony.

It is much better to kill a worthless old queen in the spring and unite her bees with some other colony or buy a good one to take her place.

Father Langstroth's advice to beginners to "confine your experience to pecks of bees instead of pints" is good advice for us all to follow.

Discussion of Mr. Gill's paper led by Herman Rauchfuss:

Mr. Rauchfuss: September is late to begin getting colonies ready for next season; July or August is better. I do not approve of equalizing colonies so long before the honey flow. Better defer it until the beginning of the flow.

Mr. Gill: How would it do to give the weak colonies young bees?

Mr. Rauchfuss: Colonies that dwindle down weak in the spring are not good bees; they are short lived. Better weed them out.

Mr. Collins: What did you mean by salting bees to induce them to water in a certain place?

Mr. Gill: I meant to induce bees to take water where you want them too. They relish salt water.

President Aikin: How many have

practiced giving brood to weak colonies?

Ten hands were raised.

President Aikin: How many were sorry they did it?

Five hands were raised.

Mr. Adams: In case a fertile worker is found how do you manage?

Mr. Porter: If early enough in the season, introduce a queen; if late,—shake off bees and break up the colony.

Vote showed a majority of members favoring this procedure.

Mr. Rauchfus favored exchanging positions of weak and strong colonies to bring former up to required strength, but did not practice requeening after the honey flow.

Mr. Adams: How are we to tell a worthy queen from a poor one at any time?

Mr. Gill: "By their works shall ye know them."

Mr. Rauchfuss: It is a hard matter to determine.

A member: Don't attempt to build up weak colonies by artificial means. See that they all are well protected and have plenty to eat, and later, all that do not build up, break up.

Mr. Rauchfuss: Do not equalize your colonies until eight or ten days before the honey flow.

President Aikin: Exchanging colonies is dangerous except when bees are coming in loaded with honey. Strange bees are liable to attack the queen if their honey sacks are empty. Giving bees from other yards is better. In doing this, for the safety of your queen, always be sure to have their honey sacks filled with honey.

What conditions induce the queen to lay? Isn't it the honey coming in or the handling of honey? That condition can be artificially induced by either feeding or uncapping.

Get all the brood reared you possibly can up to the beginning of the honey flow. When that begins, do not work for more bees, but to get all you can out

of the bees reared up to that time.

The next paper was by D. W. Working, on the subject of

PRINCIPLES OF BREEDING.

Like those who raise sheep and cattle, beekeepers are breeders of live stock. The first principle in breeding, the one which every breeder accepts as sound and worthy of all acceptance, is that "like produces like." This is a rule as old as the Scripture that affirms its truth by asking, "Do men gather grapes of thorns or figs of thistles?" It is even older, for you all remember Jacob, the thrifty keeper of the flocks and herds of his father-in-law Laban, and how wisely he managed the breeding, with the inevitable result that "the feeble were Laban's and the stronger Jacob's."

We expect the offspring to be like the parents. We are sure that the little will not produce the great; we are no less sure that the large will not produce the small. We expect the striking characteristics of the parents to be repeated in their children.

The first rule, then, to be kept in mind by the breeder, is, that to have the best, he must breed from the best. This is the law. He who violates it suffers the penalty which most of us must bear as best we can, and get along with what is worse than the best.

But the law that "like begets like" must not be interpreted too rigidly. Each of the higher animals has two immediate parents, and grandparents without number, and they all have their influence under the same law. The father and the mother are never exactly alike, and the differences in the grandparents are likely to be greater in number, if not in degree. You have seen children with the appearance of the father and the disposition of the mother—the outer characteristics of one parent and the inner qualities of the other. One child may inherit the weakness of the father and the strength of the mother; another may receive the endow-

ment of the unfortunate, the imperfections of both; while one in ten thousand may unite in himself all the good gifts which both his parents could transmit. These choice products of fortunate unions are the hope of the human race; among the domestic animals they are the seed and the secret of progress and improvement.

The great breeders of cattle, horses and sheep recognized these facts, and realized that if they would improve their stock they must breed toward an ideal. To be able to predict results, they must be able, in a measure, to control conditions. This control of conditions in breeding means nothing less than to control the mating of the animals. Without such control there can be no systematic progress in breeding. The intelligent breeder must know his animals, their weak points as well as their characteristics of strength, and he must bring such animals together as will neutralize each other's defects and accentuate the points of superiority.

I have spoken of heredity and of what is called variation. These are the fundamentals in breeding. Heredity determines the type. It holds to what has been gained. It declares that the young shall be what the parents are. Variation provides for progress. It does not annul the law of heredity. It supplements it and makes possible the improvements we hope for, just as it has made possible the development that has brought all organized animal and vegetable life to its present stage. Heredity is conservative, holding to the doctrine that it is better to retain what is good than to run the risk of spoiling it by struggling toward the unknown. Variation is not satisfied. It insists on making experiments. It has built the breeds.

The breeder has his evil genius. Heredity, or conformity to type, is at the bottom of his business. Given the breed or type suited to the man and the situation, and heredity will keep it substanti-

ally as it finds it. Given a man who is a real breeder, and he will take advantage of heredity and variation and improve his animals by selection, by in-and-in breeding; by cross-breeding, and by feeding and care. All the while he must guard against his evil genius, which the wise men call atavism or reversion. Every observant breeder has seen its effects. It is also called "breeding back," "crying back," "throwing back," and other self-explaining names.

Some of you, no doubt, have supposed that I would speak of breeding bees or breeding queens. How could I, knowing nothing on the subject? To open the subject for discussion, let me ask a few questions, first reminding you that I have already called attention to the necessity of controlling conditions in breeding.

There are many who advertise tested queens and pure queens of the several wellknown strains, and I believe that there are some who advertise pedigreed queens. Do you know any breeder who controls the mating of his queens? Do you know any one who can say with confidence that his queens have been fertilized by strong, healthy drones from swarms that are successful honey producers? Or, is it true that the breeding of bees is practically natural? Is it true, as I in my ignorance have been led to suspect, that the breeders of queens for the market are not true breeders at all—that they are not sure of the ancestry of the queens they sell and know nothing of the mating? Is it possible to control the breeding of bees and provide a pedigree that will be a trustworthy record along both male and female lines?

Discussion of Mr. Working's paper was led by F. L. Thompson, who read from manuscript substantially as follows:

There is a theoretical science of breeding, and there is a practical science of breeding. The theoretical science of breeding is in its infancy, and requires a profound knowledge of some other sciences, coupled with extreme caution, in

making generalizations. The practical science of breeding also requires no mean abilities, such as close observation and accurate reasoning.

It has been said that the art of breeding is almost exclusively based on the experience of practical men. The modern art is founded on the practice of the most successful breeders, and its rules have been almost exclusively empirical in their origin; that is, they were not reasoned out, but were found to be true from the comparison of many instances.

If, then, the art of breeding for practical purposes requires none but the most general ideas of the abstruse sciences, the query arises, how important is it for us common beekeepers to become acquainted with its fundamental laws? How will it affect our profits? A practical example will illustrate the measure of importance we should attach to that knowledge. Last season, somebody, I forget who, advertised a strain of queens which were a direct cross between two other advertised strains, each purporting to be of peculiar excellence. He left it to be inferred that his queens, therefore, would surley be of the very highest quality to breed from, and no doubt he obtained many customers just on that showing. Now, while I have had no experience myself in that line, I happen to know that the experience of all the best authorities, based on many thousand actual cases, shows that while the first cross may be good in itself, cross-breeding causes many undesirable qualities to crop out, while pure breeding does not. It should never be practiced with a view to further breeding from the offspring, except by a skillful breeder, who has some particular object in view, and who takes plenty of time to select the comparatively few individuals who have the qualities he desires to fix. In the case in question, one of the parent strains had been advertised but a short time, showing that the owner of the new strain knew nothing of the characteristics of his own strain, and had simply jumped to a con-

clusion through ignorance of the riskiness of cross breeding.

Let us consider a few of those points. First, as stated, cross-breeds should not be purchased for breeding purposes. Then it is very important that the individual chosen for breeding should not only have good qualities in itself, but should have a peculiar power to transmit those qualities to its successor. This trait is known as prepotence. Most offspring partake about equally of the characteristics of both parents. But occasionally an individual arises whose offspring always resembles him or her more than the other parent, and which in turn produces offspring that resembles itself more than the other parents of the next generation, and so on. It is self-evident that of two individuals, both equally excellent in themselves, the prepotent one is the most valuable, because its progeny is more valuable. We should take care, therefore, to buy only of breeders whose queens are likely to produce progeny which is uniform, though crossed by any drone in the neighborhood.

This brings up another subject, that of inbreeding. It is well known that stock breeders practice inbreeding largely, in order to secure a greater proportion of prepotent individuals, and a higher degree of prepotency, than would be the case by watching for chance cases. But there is a popular idea that inbreeding is bad, very bad. There is some truth in the popular idea, but also considerable error. Hence it will pay us to be posted also on inbreeding; for even now some queen breeders largely control the drones, and hence could, and perhaps do, practice selective inbreeding; and in the near future it is probable that mating in confinement will be attained, whereby the drones will be absolutely controlled. Now, the experience of the best authorities is that inbreeding is not, in itself, of any detriment whatever. The instances of vigorous animals which have been inbred for many generations are too numerous for the popular

idea to be altogether true. But it is partly true, for this reason; if the two parents have any common tendencies, their offspring will have those tendencies, doubled. Of course, this is more liable to happen with related parents than when they are not related. Hence if any of those common tendencies are bad, they will be approximately twice as bad in the offspring. On the other hand if they are good, inbreeding has none but good effects.

The practical application of this is, that if one wants a fixed and prepotent strain of bees, the breeder who breeds closely is more apt to be able to furnish it than those who do not, always provided—and this is important—that he is thoroughly acquainted not merely with the details of queen-rearing, but also with the application of the principles of selective breeding. It should be remembered also that there are various degrees of inbreeding. To mate parent and offspring has only half the effect, for good or evil, of mating brother and sister. At present, on the whole, it may be better to avoid stock in bees likely to be inbred but as soon as queens will be mated in confinement, the case will be altered.

Another of those big sounding words that are apt to frighten people away from a consideration of their interests, is atavism, sometimes referred to as reversion. By this is meant the manifestation in an individual of characteristics, not of its parents, but of its grandparent, or great grandparent, or some other ancestor or relative more or less remote. It is because of the frequency of atavism as a result of cross-breeding between different strains that it is to be avoided for immediate purposes, for thus the labor of fixing qualities which have been continued through a number of generations is practically thrown away. Atavism also indicates the importance of a full record of the pedigrees of breeding animals, as a means of tracing the history of ancestors, so that the qualities likely to be transmitted may be determined.

There is another class of facts known as correlation. To illustrate: A white cat with blue eyes is almost invariably deaf, and albinos generally have delicate constitutions. Cannot this, also, be applied to bees? Can we discover anything of the qualities of a queen from her appearance or build? I believe Willie Atchley claims that he can tell by the appearance of the face of the queen whether she has been reared from a young or old larvae.

Perhaps the most important thing to remember is that simply to mate two individuals of good stock DOES NOT insure desired results, but that time and knowledge of principles are needed in addition.

To sum up, it is of direct practical importance to know the fundamental principles of breeding, both for what has been and what may be done.

Mr. Working: The only point gained by the presentation of these two papers will be to put beekeepers on their guard as to the pretentious claims of queen breeders who advertise great merit for their methods of breeding, etc.

Mr. Raufuss: Our bees up to the present time have been inbred too much.

Mr. Gill was in favor of leaving the fine points of breeding to the queen breeders. What we, as honey producers, want is bees for business—bees that will do good workmanship and are long lived. We should select and take from such our cells for breeding up our apiaries.

President Aikin: I am thoroughly in sympathy with the subject of improvement of bees. I would like to see our queen breeders bring up the art of exact breeding to its highest perfection and give us a bee embodying, as far as possible, all the qualities that we hold as desirable.

A member: I have patronized eastern queen breeders to quite an extent, and I am sure that I have improved the qualities of my bees.

The next number on the program was a paper by W. P. Collins, who discussed the subject of

COMBS AND HOW TO UTILIZE THEM.

This is a subject that I myself am very unsettled upon. Wax is one of the most valuable products that we take from the home of our industrious little friends. In regard to trimmings and all combs that are infected with foul brood, I think all will agree with me that they should be reduced to the solid cake of wax about as soon as it is possible to do so.

Next, I will touch on the care of unfinished section combs. To begin with, let me say that my plan is to have none whatever on hand at the close of the honey season, or as near none whatever as possible, and it is possible to have next to none at all on hand with such honey flows as we have had the last two years.

My mode of reducing them to the minimum is to insert the section holders in next to the bees the first half of the season and place them on top of the first started sections the last half of the season. With this plan I have very few unfinished sections, at the close of the season. But what I do have, I follow one of two plans in handling:

I either strain at once, or else if I have a good, warm, dry room to keep them in, store them for spring feeding. At all events, plan in some way to preserve the comb as they are a great help the following season.

Now as to old brood combs I am at a loss, in fact, am undergoing a change on the subject, or am inclined to. In the past I have always been very careful to save them, and have some on hand that are from ten to fifteen years old, but I am inclined to think that these old combs will be worth more to me in the wax than as comb. At any rate, last season, my bees that were on new comb did do better than those on the old combs. I believe that after combs have been used five or six years, it is time to melt them up, at least as fast as one loses bees off this class of comb. But up to that time I should save them by all means, as they represent a great deal of work from the

bees that they would otherwise employ in gathering honey.

Mrs. L. Brock: I supposed the cocoons reduced the size of the cell, but I always use the old combs and will continue to do so indefinitely.

Mr. Adams: Is it not a fact that bees will cut out cocoons before the cell gets so small as to reduce the size of the bee?

A vote of the members indicated that a majority believed that they would.

Mr. Brock: I have colonies on combs 25 years old, and bees reared in them are strong, healthy and of average size.

Mr. Gill: If I were presented with a full set of combs and had a swarm hanging on a tree, I would doubt the advisability of accepting them. I can produce more comb honey by hiving the swarm on starters and give sections with full sheets of foundation. Section honey made over new combs is much whiter and nicer than that built over old combs.

Mr. Raufuss: I cut out old comb and put in starters.

Mr. Gill: I believe that we can produce cleaner honey by following that method.

President R. C. Aikin was scheduled for a paper on

COMB OR EXTRACTED HONEY FOR PROFIT. but having failed to prepare one, spoke in part as follows:

I produce largely extracted honey. I would prefer to produce comb honey. In my case it is governed by local conditions. If I could dispose of all my product in the home market, then I believe there would be more profit in comb honey. In the production of comb honey we must come up to a high standard or take a low price. While extracted honey always brings a lower price than comb, there is this difference to be considered: Extracted will keep indefinitely, while comb must be hurried off to market within three months—before it candies in the cell. In settling this question for your individual selves, much will depend on the home

market. If you live in a community that consumes comb honey and you are at no expense for cases, probably there is more profit in comb, but if your community will take extracted at a fair price there is probably more profit in that. In deciding, first consider where and how and when you are to market your honey, then cost of cases and sections for comb and cost of cans and fixtures for producing extracted.

Mr. Bader: My specialty is extracted honey. I supply mostly Boulder markets, supplying several stores and private customers, also the adjoining mining camps. My policy is to have a fixed price and stick to it, whether I make a sale or not. In this way I maintain the price and realize a better profit on my honey.

Mr. Foster: Speaking of cost of fixtures for producing extracted honey, my brother, Oliver Foster, who is an extracted honey man, states that the outfit for each colony in the spring is worth about \$10. His average yield last season was 150 pounds per colony.

Mr. Evans: For the small producer who can not ship in car load lots I believe extracted honey is most profitable on account of easier and safer shipping.

Mr. Collins: In Wisconsin, where the flow was short and heavy, I could produce considerable more extracted than comb, but at Boulder they run about even.

Evening Session.

The following committee was appointed to revise the grading rules for comb and extracted honey: W. L. Porter, Frank Rauchfuss, L. Brock, Harry Crawford and F. L. Thompson.

The next feature of the program was a paper by W. L. Porter on the subject of
COOPERATIVE BEEKEEPING.

[NOTE:—For reasons explained in an editorial under the caption of "Cooperation," publication of Mr. Porter's paper has been deferred until next month.]

President Aikin: Cooperation is the road to success. It is what we need and

what we must have. In olden times individual effort was the rule, but now the drift of the times is toward cooperation. This is an age of specialism. The more we go into specialism, the more we become dependent upon each other; hence the greater need for cooperation.

Mr. Collins: I believe in carrying cooperation one step farther than has been proposed. Let ALL the people cooperate, and if necessary, run the entire business of the country.

Mr. Working: Cooperation in Colorado has secured the enactment of legislative measures favorable to beekeepers—the law preventing the spraying of fruit trees while in bloom, and the foul brood law.

The evening program was concluded by the reading of a paper by Philip Large on the subject of

PREPARING COMB HONEY FOR MARKET.

It is very important that honey producers should know the best way to prepare comb honey for market. Unless it is put up in proper shape it will not bring the highest price. I do not think any state in the United States can produce a finer honey than Colorado. If it is put up in good shape there is no reason why it should not bring the highest market price.

To prepare comb honey for market we should begin in the winter or spring, when we begin putting up our sections, for unless that part of the work is well done, it will be a difficult job to get the honey in proper shape for market.

I get my honey all in to the honey house; get three or four good careful hands and arm each one with a knife. I open up three or four supers of honey and put them to work. They scrape each section thoroughly until it is perfectly clean, being careful not to allow the knife to touch the honey. If it does, it will cause a leak, and will not be fit to case until it drains, and should be set aside. When scraped, it is all placed on the table ready to be cased.

We make two grades of honey. The first should be No. 1 in all respects. Should be well filled, all capped over, straight and not bulged beyond the side of the section, and be of good weight and light in color.

No. 2 includes all marketable honey that is not in No. 1. Should be all straight, never two together as they are liable to be broken and cause a leak. May be a little lighter in weight than No. 1 and darker colored.

In casing honey be sure that the honey in the sections do not touch each other. If they do it is sure to cause a leak and make a muss in the case.



Uintah County, Utah.

We have had dry, cold weather for the past twenty days that kept the bees at home. The greatest loss in this county is among those who have only a few colonies. Six out of two hundred and thirty-eight is my loss up to date. My first drones made their appearance yesterday, April 1st. G. W. VAUGUNDY,

Vernal, Utah, April 2, 1901.



Southern Utah.

I think there are about 400 colonies of bees in this city of about 1,600 people. I have 200 of them. The bees have wintered well but we have had about three weeks of very hard and cold winds. I don't know how they are at present. Our honey comes from lucerne and wild clover and we run them up till the first of September. Our market is very nearly all local. We are about sixty miles from the railroad and twenty-five hundred feet above sea level. R. A. MORRIS,

St. George, Utah, Apr. 7, 1901.



"Drone Eggs by Mail."

In the Mar. 15th number of the ROCKY MOUNTAIN BEE JOURNAL, page 29, I note "Swathmore's" article on "Shipping Drone Eggs by Mail." If our Northern

queen breeders can, (as he says) "gain six or eight weeks time in getting under way with his breeding operations for the season," by procuring drone eggs from the South in early spring, they should give the plan due consideration at least.

One promising feature of the plan, and one he did not mention, is this: There would be very few, if any, drones flying except those from the supplied eggs.

Now if this be true, we could get all, or nearly all, early queens purely mated. This one feature, alone, should cause queen breeders to look with favor on this method of procuring early drones.

Yes, Mr. S.—give us more of your experience along this line.

About the "new baby," (THE ROCKY MOUNTAIN BEE JOURNAL) it appears to be a very promising "young-one." We wish it a long and prosperous life.

A. E. WILLCUTT,

Swift River, Mass., Mar. 23, 1901.



Heavy Honey Flow in Texas.

W. H. Laws, of Beeville, Texas, under date of April 29th, writes: "I am in the 'hills' twenty-three miles out where I have 100 colonies of the long tongue leather colored bees, and 150 nuclei. O, such a honey flow as we are having now. These big three story 10-frame hives are too heavy to lift one end. I am resting as I write, and wish for something to re-enforce this old back of mine."



Brood Rearing in Mid-Winter.

I have about 60 colonies of bees, all looking fine this spring. My bees commenced brood rearing on about the 12th of January. Can Colorado beat that?

J. I. EARL,

Bunkerville, Nev., March 28, 1901.



While attending the Longmont meeting Mr. M. A. Gill showed us some hives of his own manufacture, equal in appearance and we should judge also in durability and workmanship, to factory goods.

ROCKY MOUNTAIN BEE JOURNAL

Unofficial organ of every Beekeeper west of the 95th meridian.

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Office of Publication with the Colorado Representative, 1021 Pearl Street.

BOULDER, COLO., MAY 15, 1901.

FOR the past twenty days Colorado has enjoyed ideal weather for spring brood rearing.



FOUR extra pages this month—and still not room enough for all the excellent matter we have filed away for publication.



THE paid circulation of the JOURNAL now reaches to fourteen of the United States and the island of Cuba. The youngster is growing, thank you.



PROSPERITY has smiled upon the JOURNAL so kindly during its brief existence, that it is enabled to go to its readers this month clad in a "bran" new dress of body type, which will be its regular costume hereafter.



THE Colorado Honey Producers' Association, per F. L. Thompson, is gathering data for periodical reports as to conditions governing the honey market. In all, nine reports are contemplated, covering May 20th to October 1st, inclusive. No beekeeper producing honey in marketable quantities can afford to be without the information that these reports will supply. For particulars about receiving them, write the Colorado Honey Producers' Association, 1440 Market street, Denver, Colorado.

COOPERATION.

It is the sentiment of all Western beekeepers that the most imperative need of their industry at the present time is more thorough cooperation—cooperation in disposing of their products, buying supplies and protecting their interests from undue encroachments by other members of society. This was most forcibly brought out at both the Utah and Colorado association meetings. Where such a unanimity of feeling exists a plan of union ought to be easily formulated. In the furtherance of this idea, the June issue of the JOURNAL will be given up to a discussion of "Cooperation and Organization of Beekeepers." The leading article will be by W. L. Porter, of Denver, Colo., it being the substance of the paper read by him before the Colorado State Beekeepers' Association at Longmont. Mr. Porter will tell what has already been accomplished in Colorado, and suggest a plan for making the work more thorough and extensive. JOURNAL readers, one and all, are invited to send in their ideas on this topic.



THE JOURNAL, three months on probation for 10 cents. Hadn't you better try it?



AN ITALIAN-CARNIOLAN cross is recommended by the Southland Queen as a business bee.



A SIGHT of the Rockies on a clear day at this time of year from ten or fifteen miles out on the plains, would cause the most prosaic clod on earth to break out into poetry.



IT is stated in the Leipziger Bienen-Zeitung that bees stupefied with puff-ball will, when they regain consciousness, have no recollection of any previous occurrence. This peculiarity, if true, may be made use of in case of bees robbing, the robber colony to be treated; also, in case of moving bees a short distance.—American Bee-Keeper, Falconer, N. Y.

IMPROVEMENT OF STOCK.

Here is a field in bee-culture practically unexplored. It is true a few of our queen-breeders have crossed the boundaries of that unknown land, but they have penetrated only far enough to discover that immense possibilities lie beyond. We are still importing mother bees from Italy, and it is questionable if any permanent improvement has been made over the first importation of 1859. Notwithstanding this, there is a vast difference in bees. Some bees seem to combine all the good qualities that would make an ideal bee, while others are deficient in several or all. Under the law of atavism the best revert to the poorest, and vice versa, so that all attempts to establish a distinct superior strain of Italian bees has resulted in more or less disappointment. Before much real improvement can be looked for, two necessary conditions must obtain:

1. Our would-be queen-breeders must thoroughly master and understand the fundamental laws of progressive breeding. Without this knowledge they are simply groping in the dark and falling into every ditch that yawns across their path. Who among us will deny that darkness, black as Egyptian night, envelops the whole beekeeping world on this subject. This includes queen-breeders, bee journal editors and all others.

2. Absolute control of the mating of the parent stock must be secured. All guesswork and haphazard mating must be entirely removed from the proposition. Where is the queen breeder that will erect a Davitte tent and undertake the improvement of his stock along scientific lines? The Davitte tent may not be a success, but using that as a basis, we do not doubt that something may be evolved that will serve the purpose.

Great progress and improvement has been made in methods of rearing queens, but in breeding, nature's original method of selection of parentage still largely prevails. If we do not mistake the temper of beekeepers, those, especially, who are

specialists in that line, who produce honey by the ton and want bees that are honey getters, greater exactitude in breeding and guaranteeing of results will be demanded in the future. Such queens will cost more to produce, but they will be worth more and beekeepers will gladly pay more for them. So, Mr. Queen-breeder, wake up! This is one of the "changed conditions" of the new century that you will have to meet.



Do NOT fail to read our great offer on second cover page. You cannot afford to miss accepting it, either.



AGRICOLA ARIDUS is the title of a bi-monthly publication that has recently made its appearance from Ft. Collins, Vol. 1, No. 1 of which is now before us. As its name indicates, it is devoted to arid farming. It is a handsome product of the printers' art, and as it emanates from the State Agricultural College, the information it contains can be relied upon as practical and scientific. The initial number is largely filled with digests of institute work, and it also contains much valuable matter in relation to the culture of the sugar beet and its adaptability to our various soils. Send for it; it is free to every crop raiser; to all others 50 cents per annum.

**"AS OTHERS SEE US."**

THE ROCKY MOUNTAIN BEE JOURNAL is a bright and instructive paper. The April number contains a full chapter on foul brood. You ought to send for that number; then, we think, if you can use another paper you will subscribe for it.—The Southland Queen.

Mr. Hutchinson says in the Review, "THE ROCKY MOUNTAIN BEE JOURNAL is the best bee journal that has been started in many a long year." I have been looking over several numbers of this new bee-paper, and conclude that Mr.

Hutchinson's judgment is about right. It is a very creditable publication, well edited and nicely printed. Colorado is one of the greatest honey producing states in the union, and it may possibly be the greatest one, in the aggregate of honey produced, before another decade passes by. There is a splendid field for bee-journalism up among the Rockies, and we wish our contemporary every success.—Gleanings in Bee Culture.

Volume 1, No. 1 of the ROCKY MOUNTAIN BEE JOURNAL is before us. The new candidate for public favor hails from Boulder, Colo., and H. C. Morehouse is the editor and manager. As the birth-place of bee-journals Colorado has recently become a record breaker; although we understand that the ROCKY MOUNTAIN BEE JOURNAL is the only apicultural periodical now extant in the West. It certainly has the appearance of greater stability than was displayed by its predecessors, and is well edited by one evidently conversant with the practical side of the industry which he has undertaken to represent. We gladly welcome THE ROCKY MOUNTAIN BEE JOURNAL to our exchange table, and sincerely wish it success.—The American Bee-Keeper.

THE ROCKY MOUNTAIN BEE JOURNAL is the best bee journal that has been started in many a long year. In the first place it is exceptionally neat in its make-up, while the paper and press work are first class. Would-be publishers should know that a slovenly gotten up paper stands not the shadow of a shade of a chance in these days of neat typography. I don't know how much editorial or apicultural experience is possessed by the editor, Mr. H. C. Morehouse, but his paper does not indicate that he is lacking in either. If this journal should improve upon the first issue as much as some of the older journals have improved upon their first issues—well, we would have to improve too, or be left behind. This journal is a 16-page monthly (with cover),

at 50 cts. a year, and is published at Boulder, Colorado. If western bee-keepers really care for a first-class journal that is peculiarly their own, now is the time for them to support such a paper.—The Bee-Keepers' Review.



The Journal and the Review.

As will be noted in our advertising columns, arrangements have been made whereby both the JOURNAL and the Bee-Keepers' Review can be secured by new subscribers to both for the regular price of the Review alone—\$1.00 per annum. This is a special offer, made purely to get both papers into new hands, and is liable to be withdrawn at any time.

This is a splendid combination for any locality, but most especially for Western beekeepers. The JOURNAL is your home paper and will take care of local interests. The Review is cosmopolitan, in its relation to the beekeeping world; not only does it employ the best apicultural writers, but its editorial policy is to develop new lines and push out into undiscovered fields. Thus, the Review, instead of being a mere reflector of what others are doing, has come to be regarded as a leader of progress in apiculture. No beekeeper can keep thoroughly up-to-date and not read the Review.



NEW ADVERTISEMENTS.

In writing to advertisers please do not forget to say you saw their ads. in the JOURNAL.

Bartlett Bros. & Merkley.

Western beekeepers desiring to purchase home bred stock can be accommodated by this enterprising firm. The queens they are offering must be from a very choice strain, as last season they averaged 331 pounds per colony, spring count. Write them for circulars.

E. T. Atwater.

This gentleman, formerly of S. Dakota, has now located in Idaho and is offering

some choice tested breeding stock at a low price. Read his advertisement and write him.

J. W. Miner.

This experienced North Carolina queen breeder is offering some very choice stock of both the red clover workers and five-banded bees. Do not fail to note his advertisement, which begins in this issue.



When to Spray.

No date can be fixed upon, yet spraying must be done at the right time if the best results are to be obtained. The right time is immediately after the blossoms fall and before the calyces of the forming apples close. If there are belated blossoms on the trees after the great mass of bloom has fallen, do not wait for them if some of the calyces are closing. If the trees do not all bloom nearly together, spray the early blooming trees first and then in a few days spray the others. Repeat the application in one week, or, at the latest, ten days.

PROF. C. P. GILLETTE.



Some of The Trials and Tribulations of the Bee Inspector.

By J. B. Adams.

I am asked to write of some of the tribulations of the bee inspector. That they are many no one should ever doubt for a moment. Instead of meeting him with opposition, he should be helped and supported in every possible way by beekeepers. If they only knew it, he is their best friend, and his only mission is to do them good, but far too many seem to think he is an enemy. They ought to know that the more disease their bees have, the worse they need his services and advice.

In 1891 I was sent to inspect an apiary of 144 colonies. At first the owner refused to let me inspect and abused me; he said I was a ward heeler, and that the

office of bee inspector had been created for my especial benefit, etc. All explanations and arguments were of no avail. I had to insist upon inspecting his bees, and found eight colonies diseased, six of which had been robbed. I explained the nature of the disease, told him what to do to guard his apiary against it, and told him he would lose all his bees if he did not watch them closely. I could get him to put the diseased colonies in the cellar and kill them, but he would not try to save them and he would not inspect the inside of the brood chambers—he “was not in the habit of it!” I had to inspect them as occasion required and found more or less disease each time, until he had no bees to inspect. About two years later he came to visit me; we had a good, long talk, and as he was starting to go home he said: “It has cost me \$500 to find out that I was a fool, but I have learned it.” This is only one of a dozen similar cases.

Another man whom I had never met sent word twice without any provocation that he would shoot me if I came about the place. I, of course, hoped that I would never have to go there, and you can imagine my feelings when I was ordered to inspect his apiary. Well, I went there and introduced myself as a brother beekeeper and wished to talk bees with him. I soon made up my mind that he meant too much of what he said about shooting, for I believe that he was an ugly customer when aroused. He was a broad shouldered, powerfully built man, while I am a feather-weight. I soon found that he liked a little taffy, of which I had a good supply, and in our bee talk, when he would make a point, I carefully gave him a little until I got into his good graces. When I thought I had him fixed about right, I said: “I am sent to inspect your apiary, and I would like to discuss some of these points over the open hive.” He dropped that smile quick, but said I could go through them, but he would have nothing to do with it. I found them all right, for which I was very

thankful, for I do not know what would have been the outcome if I had found any disease; I had fully made up my mind to do my whole duty at all hazards.

I could relate more, about clubs, etc., but this will suffice to show that the bee inspector does not always ride on featherers or sit in flower beds, but the worst is now over, for, as I predicted in a paper before the State Beekeepers' Association a few years ago, foul brood has driven the careless and ignorant out of the business; only the careful, reading and thinking man can succeed.



***Foul Brood And Black Brood.
How to Treat These Diseases.***

By F. S. Dart.

I will begin with "Foul Brood" and "Black Brood," or as it is commonly called, "New York Bee Disease." I think the best way to cure these diseases, is to follow closely after such men as McEvoy and Dr. W. R. Howard. They are admitted to be the best authority on foul and black brood there is today.

There seems to be a general idea that these two diseases are one and the same. This impression is a mistake, for it has been proven beyond doubt that there is no connection between them, though they require nearly the same treatment. Foul Brood is due to "Bacillus Alvei," while black brood is caused by "Bacillus Milli." Foul brood attacks only the larvae and usually before the tenth day, while there can be no doubt that black brood affects the mature bee. Thus you will see it is of the utmost importance to distinguish between these two diseases, for while a colony of bees affected by foul brood may last all winter or possibly a year or more, black brood, by destroying the mature bee, leaves the colony unable to protect itself from robbers and soon spreads the disease throughout the apiary.

I, therefore, advise any one who thinks his bees are affected by either disease, to at once contract the entrance of the suspected hive, also those of the neighboring hives on each side so as to throw the three entrances as far apart as possible, for fear that bees from the diseased colony may get in the wrong hive. It is well known that loaded bees may be allowed to enter a strange hive thus giving them opportunity to spread disease. After contracting the entrances get a competent man to examine the bees. If found to be affected by black brood at a time when there is no honey in the field, they had better be destroyed for they will not last until another flow if long delayed. If this disease is found during a honey flow, first cage the queen and proceed as in the McEvoy treatment for foul brood.

Spanish Fork, Utah.



Criticism of the April Issue.

I have looked over the April number of THE ROCKY MOUNTAIN BEE JOURNAL, and I find much to commend on the foul brood and other questions. But we can hardly indorse, as such, the cure given for foul brood on page 49, for we have seen scores of bad cases break out again by a single transfer on to foundation, as there given. The treatment as given on page 49 will work all right if it is done in the early stage of the disease, just after the larvae are first affected, or when they first begin to show the wrong or backward presentation, but if you wait until it becomes a bad or advanced stage such treatment can not be depended upon as safe.

After eleven years' experience I find the box treatment which I described to you as the subject. Give the bees ventilation but shut them up three or four days so they can not mix and no others can mingle with them; then transfer on to foundation into a clean hive; then as a rule the cure will be complete, but if the

beekeeper wants to be doubly sure of a cure he can feed the bees a week or so with the Naphthal beta process and he would be pretty sure of success.

Since writing the foregoing I have received your favor of the 24, and I note what you say in regard to foul brood turning to black brood; you quote it as being a new feature.

I would say that I noticed many cases of the kind several years ago, long before the name of black brood was heard of. It will sometimes start in the second year. That is, if foul brood in the apiary is not cured and cleaned up the first season it will often start in more violent than ever the second year. Then I have noticed the larvae die and turn as black as ink. And in very bad cases, unless the bees are attended to at once, it soon destroys the colony. The larva often dies soon after the tiny egg hatches and on up to nearly their full size and in very bad cases the greater portion of it is never sealed over. The only remedy is prompt and thorough treatment the same as for foul brood.

The prospects in our state at present are flattering. As a rule we have much fruit bloom and the bees are building up, and we are anticipating a good honey flow and a successful season.

E. S. LOVESY.

[We are not prepared to endorse the idea of foul brood turning into real black brood. In fact we don't believe that it can occur. We should want the statement backed by some trustworthy bacteriologist before accepting it as orthodox. At a certain stage it turns black, as our good friend Lovesy has observed, but we feel quite sure he is in error in classing it as genuine black brood.—ED.]

BEEKEEPERS' ORGANIZATIONS.

National Beekeepers Association.

A national organization of beekeepers for mutual protection more particularly for defense of their legal rights, protec-

tion against dishonest commission men and the prosecution of adulterators of honey. Annual membership fee \$1, which should be remitted to the general manager. The officers are:

President, E. R. Root, Medina, O., V. President, R. C. Aikin, Loveland, Colo. Gen'l Mgr. Eugene Secor, Forest City, Ia.

Colorado Beekeepers Association.

Co-operative and Educational. Meets annually at call of president and secretary.

President, R. C. Aikin, Loveland; vice president, J. U. Harris, Grand Junction; secretary, D. W. Working, box 432 Denver; treasurer, Mrs. R. A. Rhodes, Ft. Lupton; member of executive committee, Frank Kauchfuss, 1410 Market St. Denver.

Utah Beekeepers' Association.

Regular sessions are held in the first weeks of April and October. The officers are:

President, E. S. Lovesy, Salt Lake City; first vice president, R. F. Rhees, View; second vice president, Wm. Wartham, Springville; secretary and treasurer, J. B. Fagg, East Mill Creek; assistant secretary, C. R. Matson, Springville.

Denver Beekeepers' Association.

The objects of this Association are social, educational and co-operative.

The date of the next meeting is subject to call of the president.

President, W. L. Porter,
3322 Alcott St. Denver
Vice President, H. Rauchfuss,
40th St. St. Denver
Secretary, D. F. Moon, Golden.
Treasurer, J. Cornelius,
222 Vassar St. Denver.
Reporter, F. L. Thompson,
825 23d Avenue, Denver.

The Colorado Honey Producers Association.

A co-operative organization of beekeepers for storing and selling of honey and dealing in beekeepers supplies. The officers are:

President, W. L. Porter, Denver; V. President, V. Devinney, Villa Park; Secretary, F. Rauchfuss, Denver; Treasurer, L. Brock, Littleton.

South Dakota Beekeepers' Association.

Meets annually. Last meeting was held at Yankton, Jan. 25, 1901. The officers for 1901 are:

President, Thomas Chantry, Meckling; Vice President, J. M. Hobbs, Yankton; Secretary, E. F. Atwater, Yankton; General Manager, J. J. Duffack, Yankton.

Some Good Things

That have appeared in the Review for the present year are as follows:

A Visit to the Coggshalls. The editor visited the Coggshalls last winter, and in the January Review he gives the gist of the methods that have enabled these men to build beautiful homes —of which pictures are given—and put thousands of dollars in the bank. W. L. Coggshall says it is the best “write-up” that has ever been given of their business.

The Frontispiece. A special feature of the Review is the beautiful frontispiece that it gives each month. This month it gives a characteristic California scene—snow capped mountain peaks in the distance, valleys and orange groves in the middle distance, and an irrigation reservoir in the foreground.

Fertilization of Queens in Confinement. The special feature of the February Review is an illustrated article by J. S. Davitte, telling how he secured the mating of 100 queens in confinement. Full particulars are given.

Working According to Locality and Killing the Queens Each Summer. The March Review has an article on this subject, and I think it one of the best, if not the best, article that has ever appeared in the Review. The methods described are probably not adapted to all localities, but the thoroughness with which the writer, S. D. Chapman, of Mancelona, Mich. has studied out the conditions of his locality, and devised a system of management adapted to the conditions, is a most interesting and encouraging object lesson.

Wake up, Beekeepers, to the Changed Conditions. In the March issue is commenced a series of articles from the men who have made money by “keeping more bees.” You can do the same. I consider these articles the most timely and helpful of any the Review has published. They will be continued into the April, and possibly into the May, Review.

Three Editors. The frontispiece of this issue is from an 8x10 photograph, taken last February at Madison, Wis., and shows the editors of Gleanings, American Bee Journal and the Review.

Special Offers. The Review is \$1.00 per year; but to each one sending \$1.00 for 1901 I am sending 12 back numbers, of my own choosing, free. For \$2.00 I will send the 12 back numbers, the Review for 1901, and a queen of the Superior, Long Tongue Stock.

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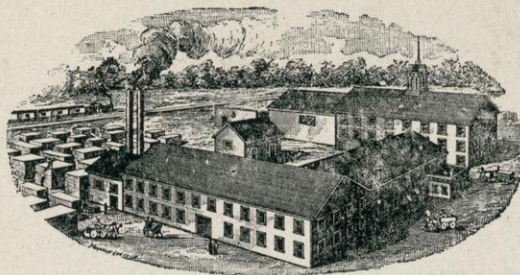
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