DEAR BEEKEEPING FRIENDS,

Happy New Year!! Hope that your holidays were blessed and happy!!

I must apologize for the late arrival of this newsletter. As you will note above, this is actually the December 1984 edition. I have been under the weather for the last 8 weeks and fell behind in publishing the newsletter. You will be receiving your first issue of the 1985 newsletter during the first week of March.

MARK YOUR CALENDAR NOW . . . .
The Annual Spring State Meeting will be held on Saturday, March 23, at the University of Missouri in Columbia in the Memorial Union. The general topic of that meeting will be Pesticides and Honey Bees — Uses and Misuses. The agenda and details will be published in the March newsletter.

The 150 plus individuals who attended the 1984 Fall State Meeting were treated to an excellent program by Dr. Norman Gary. Dr. Gary presented each of his three scheduled topics with clarity, conciseness and humor. And he remained until after the business session to give an extra talk and tape to those interested. All of this was in addition to his very informative and interesting Friday evening workshop on Practical Beekeeping Problems! Expectations were high at Dr. Gary’s coming to the meeting and he surpassed those expectations! Thank you, Dr. Gary, for a wonderful day.

Thank you’s are also in order for Dr. Flenroy Jones, our program chairman, and Mr. Mike Roling and Mr. Larry Hensley for their aid. These three gentlemen took care of the logistics and details that go into every one of these meetings from securing the speakers to plugging in the coffee pots. THANK YOU AGAIN!

The complete minutes of the Fall Meeting will be published in the March newsletter. A few of the highlights are found on the next page.
The 1984 Missouri State Officers are as follows

PRESIDENT John Walther from Jefferson City (Central Missouri)
1st VP Dr. Flernoy Jones from Columbia (Boone Regional)
2nd VP Louis Smith from St. Charles (Two Rivers)
SECRETARY Jim Thaxter from Moberly (Boone Regional)
TREASURER Truman Hardin from Springfield (Ozarks)

BOARD MEMBERS
3 year - Clayton Johnson from Columbia (Boone Regional)
2 year - Charles Wills from Springfield (Ozarks)
1 year - George Vanarsdall from Sibley (Midwestern)
At large Curt Dennis from Florissant (Eastern Missouri)

Liaison - Jay Tohtz from Kirkwood (Two Rivers)
Editor - Carol Boeckmann from Kirkwood (Eastern Missouri)

Mr. Mike Roling has been chosen as the 1985 Missouri Beekeeper of the Year. Mike will be honored at the Spring Meeting.

Mr. George Vanarsdall was chosen as the Missouri Beekeepers' nominee for outstanding supporters and alumni of the College of Agriculture at the University of Missouri. He will be considered to receive the Citation of Merit or Honorary Membership. The recipients will be recognized during the 1985 Ag Day Barbecue on February 6.

It was recommended that the 1985 Fall State Meeting be held in Jefferson City.

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The officers and members of the Missouri State Beekeepers extend our deepest sympathies to Mr. and Mrs. Tom Hawman on the tragic loss of their son. May he rest in peace.

We have also heard that Mr. Carl Kalthoff has suffered a stroke. We pray for his recovery and future good health. Mr. Kalthoff is a long-time and active member of the Missouri Beekeepers. From June 1970 to March 1973 Mr. Kalthoff wrote a column in each issue of the newsletter entitled MISSOURI BEEKEEPING HISTORY. Most interesting articles!!!
MISSOURI STATE BEEKEEPER ASSOCIATION
Financial Report

BALANCE on hand March 21, 1984 $6645.51

INCOME
Dues - March 21 through October 15th
  Local - 929.50; Individuals - 92.00 $1021.50
Interest - Checking account 36.58
  Farm and Home Money Market 270.51
Book sales - Fair Account 86.98
Newsletter paper returned (Mimeo) 73.93
Postage - Film and slides 6.36 $1495.76
  Profit - Fair Honey Booth 480.87 $1976.63 $8622.14

EXPENSES
State meeting - Columbia $410.00
Newsletter 229.32
President 11.43
Treasurer 16.36
Donation - Am. Beekeeping Fed.-Am.Honey Pro. 40.00
Bulk Honey Recipes 25.00
Publicity 37.46
Film and Slides - UPS and mileage 169.19 $938.76

ASSETS
Checking Account $1414.45
Farm and Home Money Market 6268.93 $7683.38

BALANCE OCT. 15, 1984

** EXPENSES - for comparison **

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** DUES paid by Associations - March 21 through October October 15th **

| Boone Regional | 5 paid $15.00 (24) Midwestern | 19 paid $57.00 (85) |
| Central Missouri | 3 paid 9.00 (20) Mo. Valley | 2 paid 6.00 |
| Dallas County | 7 paid 21.00 (25) North Missouri | 5 paid 15.00 |
| Eastern Missouri | 152 paid 451.50 (156) S.E. Mo. Honey | 13 paid 39.00 (New) |
| Honey Dippers | 15 paid 45.00 (19) South Central | 18 paid 54.00 |
| Honey Producers | 4 paid 12.00 (8) Two Rivers | 11 paid 33.00 |
| Jefferson County | 6 paid 19.00 (27) Ozark | 8 paid 24.00 (28) |
| Laclede County | 26 paid 78.00 (27) Individuals | 23 paid 92.00 |
| Lincoln County | 1 paid 3.00 (9) | |
| Mid Missouri | 16 paid 48.00 (31) TOTAL DUES received since |

October 1983 through Oct. 84 $1807.50
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| Total    | $410.00              | 229.32   | 11.43      | 16.36     | 169.19     | 102.46      |

Already reported on Honey Booth Report.
MISSOURI LOCAL BEEKEEPERS ASSOCIATIONS

1. NORTH MISSOURI BEEKEEPERS ASSOCIATION (Around Kirkville and Macon)
   Sec. Ronald Whitacre, Box 33, Glenwood 63541

2. MIDWESTERN BEEKEEPERS ASSOCIATION (Kansas City area)
   Sec. Truman Mansell, 10302 NW Meadow Lane, Kansas City 64152
   (816) 741-2976

3. BOONE REGIONAL BEEKEEPERS ASSOCIATION (Columbia area)
   Treas. Stanley Whitaker, 841 Sun Valley Drive, Columbia 65201
   (314) 474-4166

4. TRI-COUNTY BEEKEEPERS ASSOCIATION (Warrenton area)
   Sec. Joan Grant, Rt. 4, Box 16, Warrenton 63383 (314) 456-4798

5. LINCOLN COUNTY BEEKEEPERS ASSOCIATION (Troy area)
   Sec. Margaret Hornburg, Rt. 1A, Box 314, Hawk Point 63349

6. TWO RIVERS BEEKEEPERS ASSOCIATION (St. Charles area)
   Sec. Jan Hesse, 2303 Patma, St. Charles 63301

7. EASTERN MISSOURI BEEKEEPERS ASSOCIATION (St. Louis area)
   Sec. Roy Gill, 427 Nelda, Kirkwood 63122 (314) 821-3505
8. CENTRAL MISSOURI BEEKEEPERS ASSOCIATION (Jefferson City area)
   Sec. Margaret B. West, Rt. 1, Box 84, Lohman 65053

9. HONEY PRODUCERS OF MID-MO (Around the Eldon and Olean area)
   Sec. Phyllis Bond, Rt. 1, Box 46, Olean 65064

10. JEFFERSON COUNTY BEEKEEPERS ASSOCIATION (Around Hillsboro
    & Cedar Hill)
    Sec. Marko Biscan, 7255 Hwy 30, Cedar Hill 63016

11. MID-MISSOURI BEEKEEPERS ASSOCIATION (Rolla area)
    Sec. Les Burris, P.O. Box 328, Rolla 65401   (314) 364-6663

12. DALLAS COUNTY BEEKEEPERS ASSOCIATION (Buffalo area)
    Sec. Inge M. Foster, Rt. 1, Box 105, Urbana 65767   (417) 993-5196

13. LACLEDE COUNTY BEEKEEPERS ASSOCIATION (Lebanon area)
    Sec. Liz Gregory, Rt. 19, Box 112 A, Lebanon 65536

14. OZARK BEEKEEPERS ASSOCIATION (Springfield area)
    Sec. Truman Hardin, 1829 W. Washita, Springfield 65807
    (417) 866-2602

15. OZARK MOUNTAIN BEEKEEPERS ASSOCIATION (Branson area)
    Sec. Walter Hess, Star Rt. 4, Box 2173, Branson 65616

16. SOUTH CENTRAL BEEKEEPERS ASSOCIATION (Mountain View area)
    Sec. Pat Gastineau, Rt. 2, Box 197, Mountain View 65548

17. HONEYDIPPERS BEEKEEPERS ASSOCIATION (Fredericktown area)
    Sec. Mike Morris, Rt. 1, Box 166 B, Arcadia 63621

18. SEMO HONEY PRODUCERS ASSOCIATION (Poplar Bluff area)
    Pres. Glen Thornton, Rt. 6, Box 270-U, Poplar Bluff 63901

19. PRAIRIE COUNTRY BEEKEEPERS ASSOCIATION (Lamar area)
    Sec. Virginia Hininger, Rt. 2, Lamar 64759

20. MISSOURI VALLEY BEEKEEPERS ASSOCIATION (Washington, Sullivan
    Beaufort area)
    Sec. Dennis Sammeth, Rt. 1, Box 126 A, Beaufort 63013
OLD, BLACK COMBS MAY BE DETRIMENTAL TO YOUR BEES

Several years ago I wrote a story, "Comb foundation—are we using enough?" which is included in my book, *Beekeping Tips and Topics*. In the article, I explained how European beekeepers routinely replace old combs with sheets of comb foundation when the combs become dark enough so that light will not pass through them, usually in 3 or 4 years of use. The beekeepers in Europe believe that old, dark brood combs are a detriment to the colony and that they are possible reservoirs for bee diseases. We know also that dark combs discolor honey and produce smaller bees because the cells are reduced in diameter by thick layers of old cocoons and larval feces on the cell walls.

Beekeepers have responded in different ways to this story about old, black combs. Some are offended because they have been told that the combs they received from their father or grandfather may not be good after 20 to 40 years of service in the family bee hives. Most beekeepers are not offended, but they also are not motivated enough to get rid of black combs or to learn whether their bees would do better without them.

Glen L. Stanley, state apiarist of Iowa, has been culling out and replacing all the black combs in the colonies he operates with his brother. Glen is pleased by the results but sorry that he cannot convince more beekeepers to do the same thing. The Stanley colonies are producing more honey than before, they develop better, and for two years have come through the tough Iowa winter without losses. Obviously, not all the success can be attributed to the comb culling, but the Stanleys think it is an important part of the results. In the past, *Nosema* disease was found in samples of bees from the Stanley colonies. Recent samples, however, have not shown any trace of *Nosema* infection.

There is some old and some new evidence that black combs could influence the success of honey bee colonies. The old evidence is a study reported in 1964 by Kerr and Hebinger. They weighed newly emerged worker bees and selected the ones of lightest and heaviest weights for observation and comparison. The bees were numbered and placed in observation hives where an observer watched and recorded their activities for 4 to 8 hours daily until the bees became successful foragers. When the observations were completed, the ages at which the light and heavy bees performed different jobs were compared. In all cases, the heavier bees began their tasks earlier. From cleaning cells and nursing larvae to attending dancers and doing field work, the heavier bees were 1 to 12 days ahead. The heavier bees began to do field work 7 to 9 days earlier than the light bees.

We know from other studies that bees raised in old, black comb may be as much as 17 percent smaller than normal bees. This difference could be enough to slow the activity of the bees as demonstrated in the study by Kerr and Hebinger. A field force that is a week late getting started might miss out on many a nectar flow.

New evidence for the value of comb replacement was contained in the report by Nelson and Gochenaur, 1982, on chalkbrood disease. They found less chalkbrood infection in new than in old combs. They suggested that more use of comb foundation could help control chalkbrood and that old combs may actually stimulate the growth of the chalkbrood fungus.

You should strongly consider getting rid of the old combs in your colonies. You do not have to do it all at once, but give it a try and make some comparisons between colonies with and without black combs. Stronger colonies, better wintering, less disease, and lighter-colored honey are goals worth striving for.
CLEANLINESS IN HONEY PROCESSING
BY Monroe Duboise, VP of AABA
from the Feb. '84 issue of BEEKEEPER BRIEFS, monthly newsletter of the Austin Area Beekeepers Assn.

Although our speaker in January (representative from the Texas Department of Health) made it clear that regulation of honey processing is a low priority for state health authorities, we should all recognize that priorities are subject to change and that we have a responsibility to honey consumers to process our honey in a sanitary manner. I think the most important factors for sanitary honey processing are an attitude that cleanliness is important and a determination to produce a high quality product.

Unfortunately the attitude toward cleanliness in honey processing is sometimes rather careless. Al Kinser, in last month's discussion, gave us the extreme example of a large commercial producer scooping spilled honey off the floor and putting it into a tank for later filtration. Probably that producer believed he was doing no harm to consumers because he had doubtless heard many times that "nothing will grow in honey".

A more common and less serious type of carelessness rationalized by the "nothing will grow in honey" attitude is yielding to the nearly irresistible urge to dip a finger into the honey for a taste.

As one who has been a microbiologist for longer that I have been a beekeeper, the falacy of the "nothing will grow" justification for carelessness is apparent. Honey producers need to recognize that growth and survival of microorganisms are not equivalent. Just because an organism will not grow in our honey we cannot assume that the organism cannot survive in the honey until it is introduced into a more suitable growth environment such as the consumer's body. Although many organisms are no doubt inactivated rather rapidly by honey's high osmotic pressure which can be expected to dehydrate many organisms and by honey's naturally occurring hydrogen peroxide, highly resistant organisms with significance to public health do exist.

The most obvious example is the spore-forming bacterium Clostridium botulinum, which is a common soil inhabitant. Growth of this bacterium produces a powerful toxin that results in botulism food poisoning which is usually associated with improperly sterilized canned foods. Fortunately, C. botulinum spores will not grow in honey nor in the mature human digestive system. However honey, corn syrup, fresh vegetables or any other food containing the rather ubiquitous spores could be a source of infant botulism. The immature digestive tract of certain susceptible infants allows C. botulinum to grow and produce its life-threatening toxin. All food producers and handlers can help reduce the risk to susceptible children by scrupulously avoiding dust and soil contamination of foods.

In addition to bacteria resistant to inactivation, there are minute viruses and many larger parasitic organisms that survive in environments that would seem to be quite hostile. The survival of the eggs of many parasites should be a compelling reason for keeping your pets out of honey processing areas. A few years ago I extensively studied the literature concerning survival of viruses in a wide range of environments. From the literature review and from my own experiments testing survival of poliovirus in soils, I concluded that some viruses can persist for many months particularly when attached to surfaces such as soil particles.

Honey producers should be aware that filtration of honey has some value in producing a pure product, but that filtration cannot assure the removal of all contaminants. Bacteria, viruses, many parasite eggs and even clay particles that may harbor organisms are small enough to pass through any filter that is commonly used in honey processing. Thus, the only way to really assure that your honey is clean is to prevent contamination from occurring in the first place. As beekeepers we should consider ourselves fortunate to be handling a product that will not support microbial growth and that is indeed somewhat bactericidal. That good fortune cannot justify careless handling of honey, however.

April 1984 TBA Newsletter
MISSOURI BEEKEEPING TIME CAPSULE

Firsts
by Mike Roling

Let's explore three early events that probably represent "firsts" in the development of the beekeeping industry in Missouri. We will work backwards in time with these events.

The first event was reported in Colman's Rural World in 1883. The Rural World procured the story from the Atlanta, Georgia paper: The Constitution.

"One Saturday, a car containing a curious freight was switched on the East Tennessee & Virginian Railroad, and moved south. It was filled with bee-hives. One hundred and forty of the latest styles of bee-hives piled systematically on top of each other, and to the foreground a philosopher with his bed and board.

"Where are you going to take your bees?"

"To Florida for the winter. My name is Thomas McFarland Jackson, and I live in Northern Missouri. I have large apiaries that are forced to be idle in the winter. I'm going to take this carload of hives to Florida, where they can make honey every day in the year. As soon as the clover is out again in Northern Missouri I will take them back there."

"Will it pay you to move them?"

"I think so. It costs me less than a dollar a hive for transportation, and each hive will have from $6 to $7 worth of honey in it when I bring them back. That is what Italian bees I sent to Florida last year did last winter. Only Italian bees will thrive in Florida, as the moths eat up the common bees."

"Will you live in the open air there?"
"I'm going to camp around with my bees. I believe I will bring back about $1,000 worth of honey in hives that would otherwise be idle all the winter and be empty in the spring."

The second event is the formation of the first state beekeepers' organization in Missouri. This epic begins in 1864. In the July issue of the Valley Farmer, Wm. Muir of St. Louis, Missouri, offers his services to initiate the "Western Apiarian Society."

"Dear Sir: In the May No. of the Valley Farmer, I see a note from an Apiarian urging the necessity of organizing a Western Apiarian Society.

I have long felt, the importance of this, and would be most willing to act in any way that is found desirable in order to forward this movement. In order to get the ball in motion, might it not be well at first for the few of those that are willing to take up the subject, to begin a correspondence, with a view to get the matter before the community?"

Well, either the mail was a lot slower then or there was little interest, because no immediate results were produced.

In September, 1869, in Colman's Rural World, another gentleman took the challenge.

"Will you allow me through the medium of your valuable paper, to call the attention of the beekeepers of Missouri to the propriety of organizing a State Bee Keepers' Association?"

Nearly every State, and many counties love such organizations; and by a free interchange of thought must advancement be made. The coming fair at St. Louis will afford an excellent opportunity for perfecting such an organization,
and I would suggest to my fellow apiarians that we come to some understanding as to day and place, and organize.

I would be glad to hear from other bee keepers on the subject, either through the Rural World or through the mail.

México, Mo., August 22 W. G. Church.

This time the editor thought the idea had merit as well. Instead of waiting for the mail to roll in, he called for a meeting on September 10 in St. Louis that would coincide with the latter part of the Horticultural Exhibition. This meeting did occur and at that session it was "deemed expedient to postpone final action till the evening of Wednesday, the 6th of October (the St. Louis fair week) during which time effort will be made to bring a goodly number of the lovers of the "Marvellous Insect" together."

October 6 arrived and so did the first of "The BeeKeepers' Association of the State of Missouri." The objective of the "new arrival" was the "advancement of the science of Bee Culture, by all means within the reach of the Association." Dues were one dollar. The first president elected by the members was (drum roll please!) Wm. Muir of St. Louis, Mo. Yes, the same Mr. Muir who thought that it would be a good idea back in 1864. With that persistence the man deserved to be the first president. Big topics of the day were wintering, transferring bees, bee forage, moth proof hives and sour honey in the hive.

The final issue pushes us farther back into time. When did the moveable frame hive, in particular the "Langstroth hive," make its appearance. One of the earlier accounts of this event is taken from a letter by T. Stevens from the Valley Farmer in 1860.

EDS. VALLEY FARMER: Having had several colonies of Honey Bees untouched for several years, for want of knowledge how to obtain the honey without
destroying the bees, and for want of interest in them, I let them enjoy the fruits of their own labors, in company with the bee moth and cockroach.

At the great Fair of 1859 in Saint Louis, I met an old acquaintance, Mr. R. C. Otis, of Wisc. with the Rev. L. L. Langstroth's Patent Hive. He explained the history and working of bees in connection with this hive, which infused such an interest in my mind in behalf of bee culture, that I purchased one of said Langstroth's Hives and Books at an expense of $3.75. All the instructions needed, is obtained from the book. I went to work and transferred one colony. I was so well pleased with my success that I ordered one dozen more hives. I have saved every new swarm in ten minutes time, without cutting a limb, or destroying a bee—having now thirteen colonies, from five old ones. I have made this increase and sold over seventy dollars worth of choice honey, and have on hand quite a surplus, after using freely the whole season in a family of fourteen. . . . In my judgment the Langstroth hive is by far the simplest and best in use.

Thanks Wisconsin. Thanks Rev. We needed that.