



# FOUNDATION FOR RESEARCH ON ANCIENT AMERICA

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NEWSLETTER NO. 22

January 20, 1976

## Greetings:

Another year has passed and it is about time for our annual meeting of the Foundation for 1976. This meeting will be held February 1, at 3:00 p.m. at the Stone Church, Partridge Hall, Floor A.

Dr. Richard A. DeLong will be the speaker. Those who heard him last year will be happy to know that he will again address us. Dr. DeLong has just recently returned from another trip to Mexico, and we anticipate additional information from there, presented with all his personality and enthusiasm. We are confident that you will not want to miss this meeting. Come and bring your friends.

In addition to the election of officers, there will be an accounting by those who have served the Foundation during the fiscal year which is just closing. Since the establishment of our Foundation library has been our major project this year, special interest will focus on the report which will be given by Maxine Wight, special library committee chairman. She will report on the progress of establishing the Foundation library in the space made available by Richard P. Howard, World Church librarian, in the Research Library at the Auditorium, Independence, Missouri. Sister Wight will report on recommendations by Charles R. Hield, Richard A. DeLong, and others as to suitable books for purchase, which include books on history, archaeology, art, and American Indians, some of which are highly technical works. Many of the books contain beautiful color photographs. Some books which it was hoped could be purchased were found to be out of print. Claiming the library discounts, which many publishers grant, has insured making the allocated money go as far as possible. Sister Wight also will report concerning the cataloging by herself and assistants of both purchased and gift books. Linda Baker has served as secretary of this special committee. We add that any gift books which any of our readers wish to contribute will be received with gratitude.

Increased postal rates make it imperative that newsletters go only to those who really desire them and those whose addresses are kept up to date. We shall drop all from our mailing list whose letters are returned because of incorrect addresses. Bulk mailings do not carry forwarding privileges.

Our thanks go to all who have contributed to the advancement of our cause financially and through service. We trust that 1976 will be a good year for all who are seeking to advance the work of the Master in any way, and because of our particular interest, we say through the advancement of the Book of Mormon in particular, by means of research and study.

--T.D.S.

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Brother John Moody, of Kingsville, Missouri, has submitted such a scholarly paper on honeybees that we are presenting it in its entirety here, though it is somewhat lengthy for a newsletter. We do this with a twofold purpose--to share this excellent material and to challenge others to do similar work on other subjects. We remind our readers that we will send free on request a list of some 162 topics from which you may choose one or more subjects, or you may choose your own topics.

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#### DESERET - - A HONEYBEE

This story is told in Ether: "Gather together thy flocks, both male and female, of every kind; and also of the earth of every kind, . . . And they did also carry with them deseret, which, by interpretation is a honey bee; and they did carry with them swarms of bees, and all manner of that which was upon the face of the land, seeds of every kind" (Ether 1:16, 24). "And it came to pass that the Lord God caused that there should a furious wind blow upon the face of the waters, towards the promised land: and thus they were tossed upon the waves of the sea before the wind. And it came to pass that the wind did never cease to blow towards the promised land, while they were upon the waters: and thus they were driven forth before the wind; . . . three hundred and forty and four days upon the water; and they did land upon the shore of the promised land" (Ether 3:6-13).

Thus it was that the Jaredites brought honeybees with them to the New World "promised land."

Honeybees belong to the order of insects called Hymenoptera, to which also belong the wasps, ants, etcetera. More specifically they belong to the "superfamily" of bees called Apoidea.<sup>1</sup> This superfamily is divided into a number of "families," among which is the Apidae family, to which belong two "subfamilies" of bees, one of which is Apinae. It is in this subfamily of Apinae that is found all those species of bees which could be called honeybees. This subfamily, Apinae, is divided into two "tribes," the Apini and the Meliponini.<sup>2</sup> The tribe Apini contains that genus of honeybee, the Apis, in which is found the species mellifera, the common stinging honeybee kept by most modern beekeepers.<sup>3</sup> The other tribe, Meliponini, contains many genera, the most useful to man being the genus Melipona and the genus Trigona. These are the so-called "stingless" honeybees.<sup>4</sup> Only these two tribes of bees, the Apini (Apis mellifera stinging honeybee) and the Meliponini (stingless honeybees) could reasonably fit the description given in Ether 1:24 of swarms of honeybees. Only these two tribes form large perennial colonies composed of thousands of individual bees with a highly developed social order, and also produce a significant amount of honey. One difference between these two tribes of bees is that the Meliponini store their honey in "pots," while the Apini store their honey in "combs."<sup>5</sup>

Which of these two tribes of stinging and stingless honeybees did the Jaredites carry with them to the Americas? Authorities say that the common stinging honeybee (Apis mellifera of the Apini tribe) did not exist in the western hemisphere until it was introduced by the Europeans in the 17th century.<sup>6</sup> The Meliponini tribe of bees, however, has been present in the more tropical areas of the Americas since ancient times, and one species, Melipona beecheii, was kept by Mayan beekeepers in hives made of hollowed out logs.<sup>7</sup>

Since the Jaredites were to take flocks "of every kind," they may have attempted to take several kinds of honeybees. The genus *Trigona* and the genus *Melipona*, of the tribe *Meliponini*, would have been desirable because of their 'stingless' qualities, and their production of an excellent though limited amount of honey, which is very similar to that produced by the common stinging honeybee, *Apis mellifera*. Also their brood (larvae) are edible, which is quite an attraction to "primitive" peoples.<sup>8</sup>

The common honeybee, *Apis mellifera*, would have been desirable because it can produce large amounts of honey, much more than the *Meliponini* tribe of honeybees produces. However, they do have the drawback of being able to sting quite effectively if provoked.<sup>9</sup>

So the Jaredites could have carried with them the two genera, *Melipona* and *Trigona*, of the tribe *Meliponini*, and the species *mellifera* of the genus *Apis*, of the tribe *Apini*. But, as we shall see, the two tribes, *Apini* and *Meliponini* vary greatly in their ability to withstand a journey of 344 days shut up in a barge. If the wind blew continually for the whole voyage, as the record indicates, there would have been no opportunity for the bees to safely leave the barge.

An article in the May 1968 American Bee Journal (p. 190), mentions the difficulty found in introducing the common honeybee (*Apis mellifera*) to California in the mid 1800's. The article tells of one shipment of three hives of honeybees sent by steamship, which took thirty-five days to reach San Francisco, during which the bees were shut up much as they would have been in a Jaredite barge. Two of the three hives were dead on arrival and the author states that "A large percentage of the bees would be dead under any condition after being confined for such a long period." This "long period" of thirty-five days was but a fraction of the nearly year-long journey of the Jaredites, and if they had taken *Apis mellifera* with them, it is very doubtful that any could have survived. The common honeybee does not stand long confinement well, especially in warm weather.<sup>10</sup> On the other hand, the *Meliponini* tribe of honeybees have the "ability to live sealed up in their nest cavities for long periods, as in time of floods."<sup>11</sup>

Another important difference between the two tribes of bees is that "stingless" bees build a nest which has excellent insulation, far superior in this respect to the nest built by the common stinging honeybee.<sup>12</sup> On a long journey of 344 days, insulation from heat and cold would greatly reduce the stress they would be subjected to, and could have proved crucial to the survival of the colony.

Since the stingless honeybees are a tropical variety of bees, they could not have reached the tropical areas of the Americas by way of the Bering Strait, and authorities recognize that the distribution of these bees is "unique." Some theorize that because of the ability of stingless bees to stay sealed up in their nests within logs for long periods, that "as a rare event" a log containing a colony may have been "carried across the ocean" from Africa to South America. However, the scarcity of stingless bees on those islands which lie between Africa and the Americas tends to discount this theory of accidental introduction. Others would explain the presence in the Americas of this tribe of bees by the fact that at one time the African continent was connected to the South American continent and the bees could have spread from Africa to South America before continental separation occurred. But the absence of other families of tropical bees in the

Americas does not accord with this theory since the other families of bees could also have spread to South America in the same way. Charles Michener, the author of the book, "The Social Behavior of the Bees," in discussing the problem, gives no final solution, simply suggesting that there is "something unique about Meliponine dispersal."<sup>13</sup>

An objection to the hypothesis that the Jaredites were responsible for the introduction of stingless honeybees to the New World might be that there are now many more species of the tribe Meliponini present in the tropical areas of Central and South America than it is likely for the Jaredites to have been able to collect or transport. In fact, there are now more species of Meliponini in the Americas than there are in the Old World where they originated.<sup>14</sup> But a newly discovered genetic phenomenon may prove the answer to this problem. It seems that when a species is separated from its relatives of the same species and is transported to "virgin" territory where none of its species is found, it rather suddenly separates into a number of new types which then begin their adaptation to the new environment. This is contrary to the older theory of the slow, gradual evolving of one species into another and seems to be dependent on the species becoming separated from others of its species, which, were it to breed with, would tend to have a stabilizing effect on that species. But in virgin territory where the species has no competition from similar life forms, the species seems to "mutate" freely, giving rise to many new species, the most adaptable of which survive.<sup>15</sup> This could explain the presence of many more species of stingless bees in the New World than there is any likelihood of the Jaredites being able to bring.

Some interesting possibilities are suggested: The unique and unexplained presence of the Meliponini tribe of bees in the Americas, while other families of tropical bees are absent, and any conceivable method of their accidental introduction being unlikely, may give further evidence, not only that transoceanic voyages from the Old World to the New World took place in ancient times, but that not all of these voyages were accidental.

Scientific authorities are grudgingly acknowledging that some transoceanic contact between the Old and New Worlds took place in ancient times, but most believe these contacts to have been accidental. However, the introduction of honeybees to the Americas could not likely have been accidental, as we have seen, but would have required forethought and preparation. No boatload of fishermen, blown out to sea and carried by the currents to the New World, would just happen to have been carrying a swarm of bees with them. A voyage that included swarms of bees must have been well planned by voyagers bent on colonization.

All of this fits the account we have of the Jaredite migration. Further research in this or related areas could be very helpful in supplying additional evidence that the Book of Mormon is true and could not have been a product of the 19th century.

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FOOTNOTES

1. The Social Behavior of the Bees--A Comparative Study, by Charles D. Michener--The Belknap Press of Harvard University Press, Cambridge, Mass. 1974, p. 372, p. 3.
2. The Social Behavior of the Bees, by Charles D. Michener, p. 29.
3. The Social Behavior of the Bees, by Charles D. Michener, p. 364.
4. The Social Behavior of the Bees, by Charles D. Michener, p. 329, p. 346; American Bee Journal, May 1968, p. 186.
5. The Social Behavior of the Bees, by Charles D. Michener, p. 23, p. 329; The ABC and XYZ of Bee Culture, by A. I. Root, 1966, p. 677; American Bee Journal, May 1968, pp. 186-187.
6. The ABC and XYZ of Bee Culture, by A. I. Root, 1966, Published by The A. I. Root Co., Medina, Ohio, p. 446; The Social Behavior of the Bees, by Charles D. Michener, p. 347.
7. The Ancient Maya, by Sylvanus Griswold Morely, Revised by George W. Brainard, 3rd ed., Stanford University Press, Stanford, California, 1956, printed 1968, p. 217; The Social Behavior of the Bees, by Charles D. Michener, p. 346; American Bee Journal, May 1968, p. 186.
8. American Bee Journal, May 1968, pp. 186-187; The Social Behavior of the Bees, by Charles D. Michener, p. 346.
9. The Social Behavior of the Bees, by Charles D. Michener, p. 365; The ABC and XYZ of Bee Culture, by A. I. Root, p. 592.
10. The ABC and XYZ of Bee Culture, by A. I. Root, p. 576.
11. The Social Behavior of the Bees, by Charles D. Michener, p. 330.
12. The Social Behavior of the Bees, by Charles D. Michener, p. 333.
13. The Social Behavior of the Bees, by Charles D. Michener, p. 330.
14. The Social Behavior of the Bees, by Charles D. Michener, p. 330.
15. The Life Game--Evolution and the New Biology, by Nigel Calder, The Viking Press, New York, 1973, pp. 32-34.

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The following is submitted by Bea Luther, of Washington, D.C.:

The April 23, 1973 issue of Newsweek carried a story about the extensive pre-Columbian counterfeiting of archaeological treasures going on in Mexico and Central and South America. Dr. Froelich Rainey of the University of Pennsylvania

Museum indicated some genuine articles brought to them for identification are indistinguishable from the forged.

It was estimated that in Mexico there are at least five times more false figurines in circulation than genuine. The forgeries from Mexico, Guatemala, Costa Rica, and Ecuador are so expertly done they bring all the way from \$50 to several hundred for three-inch clay, jade, and gold pre-Columbian-design figurines.

These modern artisans go to great lengths to turn out a superior product. Some use the same pre-Columbian molds and tools their forebears used to make the gold Totonacs "smiling faces." Those working in clay heat their ovens with wood just as their ancestors did. Materials for the jade forgeries, however, could well come from Canada since jade is now difficult to mine in Mexico, according to Newsweek.

Great pains are taken to age the pieces so they have the look of an antique. A thin coating of lime on a clay object before firing removes all marks of tools, and a thin coating of sugar before being put to the fire will give the appearance of a fungus growth. Some pieces are deliberately broken, then meticulously mended. Others even have roots painstakingly pasted into place.

Only three centers in the world have thermoluminescence equipment--Oxford, Philadelphia, and Tokyo--a technique which can, beyond doubt, discover a clay forgery. However, this method works only on clay, not jade or gold.

The forgers are not prosecuted in Mexico. The government, according to Newsweek, takes the position that the forgeries help keep the genuine article in Mexico where it belongs, and besides the purchaser is still getting genuine Zapotec, Olmec, or Mayan--just a later version.

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