

BEEKEEPING IN UPPER VOLTA

Part II

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Standard American Hives and Upper Volta Beekeeping

The Gourma with whom I worked could not believe that box hives would work and were utterly amazed by the beeswax foundation. How, they said, was I going to take out the honey? The bees, they said, would never enter such boxes because they wouldn't know what they were for. It was explained to me that wild bees found in trees only live in trees, hive bees in hives — in the same sense as there are other kinds ('species') of honey producing stingless smaller bees to be found in the bush. What kind of bees would enter the boxes?

From the beginning the bees liked our box hives. They smelled so good from the beeswax! Sometimes scout bees would be investigating a completed hive before we would get it out of the workroom and placed in a tree. Swarms arriving at the hives containing full sheets of foundation would not completely enter and would in a day leave again. Once a swarm had left a hive it was very difficult to attract another swarm — no doubt because of some odor left by the departing bees. Only after using four half-sheets of foundation did swarms move in and stay put — revealing their desire to stay clustered during the first days after swarming.

In a few months these hives were lowered to the ground and put in an apiary on stakes 3 feet off the ground. An important deterrent to beekeeping among the Gourma is thievery, usually — and justly — ascribed to the local population of Fulani herdsmen. Because the bees of grass hives are fairly simple to rob, we are now attempting to place a boxed colony beside grass hives down a row in the apiary. The bees of the boxed colonies stand as sentinals for the rest, as a thief does not know how to handle or control the flow of bees out of such a hive

when attempting to work a grass hive nearby.

Depending on the location and availability of water, a first super may be placed on the hive by the sixth month and in a year's time honey production becomes heavy — with extractions possible every three or four months thereafter, sometimes more frequently. In the year and a half that such hives were in production we have noted that one colony in one year will produce a minimum of 20 liters to a maximum of around 50 liters of honey. This minimum is four times as much yield as that of the Gourma grass hives. Therefore despite the initial expense, the box hives are far superior to the grass hives in both productivity and length of use of hive.

Working modern hives with wild bees aroused in me dreams of what luxury American beekeepers possess in their tame bees. It might be considered an exciting nightmare if having hundreds of bees swarming around and stinging could be termed exciting. These bees can *only* be handled at night. The awesome consequences of one daylight attempt cured me of any such further foolish endeavors. Since I (and my Gourma assistants whom I was training) couldn't and wouldn't use fire we bundled up: bee veils, knee high leather boots, two pairs of heavy pants and shirts, bee gloves, and a heavy cloth wrapped around the neck to keep bees from crawling up under the veil. We were at least safe!

Any smoke drove the bees mad — especially if they had any quantity of honey. Their ancestor's experience with the raiders of wild bee trees must have sunk in somehow. The warmer the night the worse for the bees and ourselves. We were roasting and the bees caught our scent more quickly and went wild. Even before taking off the top cover the bees would be pouring out of every hole — as well as

from hives several yards away. Speed was essential: take off top and inner covers, snap on the fume pad liberally soaked with "Bee-Go" (butanoic anhydride), and run. During the next 10 minutes we would try to brush off some of the bees that plastered us. Back again: off went the super and on went the covers again (the process was reversed when the empty supers were returned). Some distance away, after once again brushing ourselves and the now available frames of honey of the remaining bees, we were ready for extraction. Extraction was fairly simple using hot-water heated knives and a hand-extractor. All this was done through the late hours of the night, hot, and with the pungent smell of bee-stings all over our clothes. Boots and gloves would be white with stingers. Our bodies, despite the clothing, were stung as well.

Honey

Honey has in the past been the only source of sweetening for the Gourma. Before the days of market sugar, beekeeping was, as a consequence, much more widely practiced. Honey is highly sought after among the population and is used as a drink, for the making of a beer, or just to eat as is. Certain forms of sacrifices offered to ancestors calls for honey. It is used in a number of medicinal procedures, one being immediate application to the spot of a scorpion sting. Many Gourma enjoy eating young brood and larvae and pollen as much as the honey itself. When sold on the local market, honey will be found in ceramic pots and gourds. It is still in the comb and usually contains varying amounts of grass and soot (from the fire brands), dead bees, and larvae. For this reason it is not commercially exploitable.

During the past world wars and depression years, the French government attempted to exploit the honey potential of the country. Chiefs from vari-

ous outlying areas had to supply great quantities of honey to larger centers. It has become a part of the oral tradition of the Gourma to recount how their parents or grandparents, when young, were forced to carry large heavy pots of honey hundreds of kilometers to centers where they received only a few cents for their trouble. At these centers the honey was strained under French supervision and put into 55 gallon drums and sent to large towns and cities where it was rationed out in the place of sugar. To this day the price of honey on the market is measured by the price of sugar — pound for pound the same price. An attempt was made during colonial times to use European box hives but failed. No one knows what happened to these hives or the equipment. To my knowledge there is no other person in Upper Volta with the exception of ourselves, attempting to produce large quantities of honey using removable frame hives. There is presently a great and unfulfilled need for honey within the country. Wax, though in demand, brings a poor price.

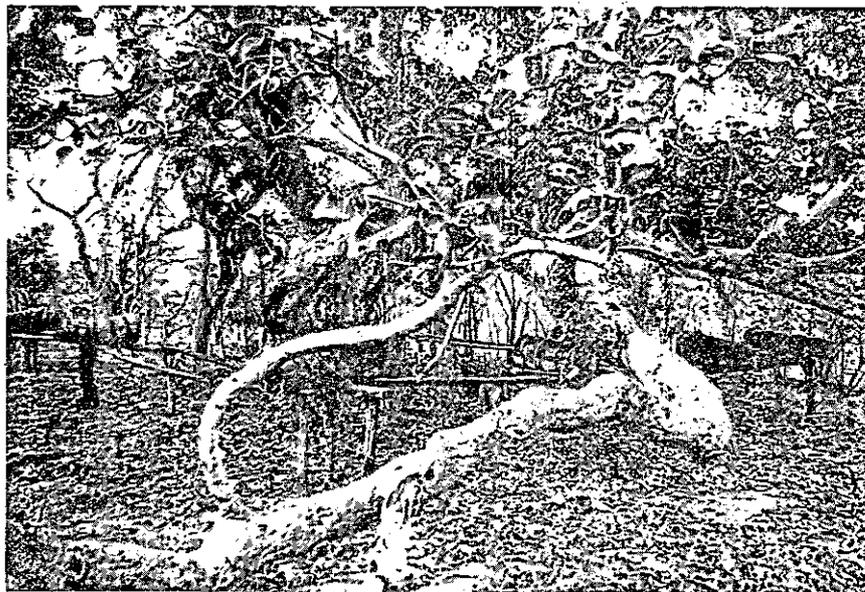
Floral Sources

What makes beekeeping in Upper Volta attractive — despite the bees themselves — is the almost year-round availability of nectar producing flowers. Heavy honey flows take place during January to early March (just before the first rains when trees are in bloom) and in September and October (at the end of the rains when field flowers, grasses, and crops are in bloom). However, honey is available in harvestable quantities between these times as well giving a delightful variety of flavors. There is the dark, strong, accented honey of specific flowering trees as well as the light amber to white honey from certain wild fruit and acacia thorn trees. Some of the trees of greatest importance can be seen in the graph.

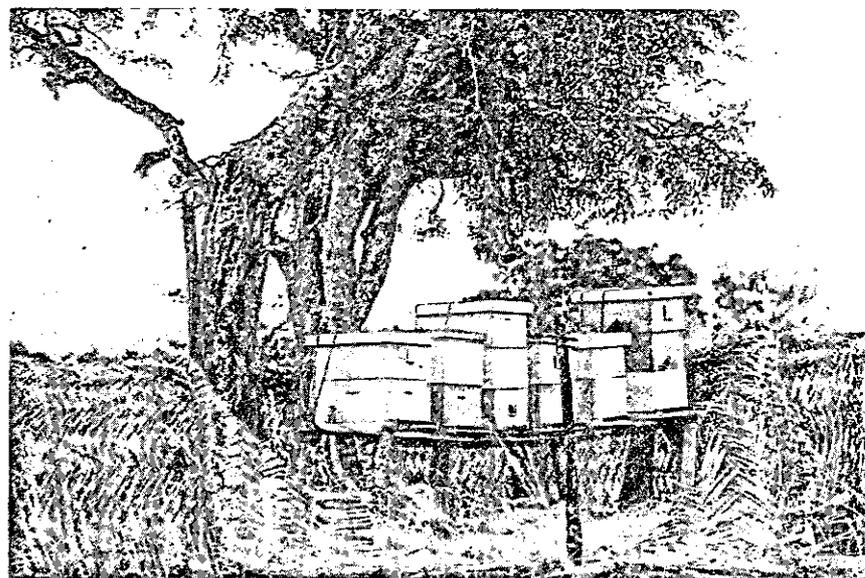
Conclusion

The project started two years ago was a success. Gourma men are trained to run all aspects of the modern equipment left with them as well as the proper handling and marketing of the honey. They are knowledgeable in their traditional beekeeping methods. The institute can be supported by the proceeds of the sale of honey alone.

More important however, are the implications for beekeeping in Upper Volta and related areas of West Africa. The existing bees are exploitable with modern beekeeping methods giving



A typical apiary of grass hives.



Established colonies of honey bees in their new homes. Quite a difference from the grass hives.

Botanical Name	Peak Time of Flowering — Fada N'Gourma, Fama											
	J	F	M	A	M	J	J	A	S	O	N	D
<i>Butyrospermum parkii</i>	*	*	*	*								
<i>Lanea microcarpa</i>	*	*	*									
<i>Combretum</i> sp.	*											
<i>Parkia biglobosa</i>		*	*	*	*							
<i>Ficus graphalocarpa</i>		*										
<i>Sterocarpus erinaceus</i>		*										
<i>Khaya senegalensis</i>			*									
<i>Daniellia oliveri</i>			*									
<i>Poinciana regia</i>				*	*	*						
<i>Acacia pennata</i>										*	*	
<i>Grexia</i> sp.						*						
<i>Nuclea hetifolia</i>							*					
<i>Adansonia digitata</i>								*	*	*		
<i>Ptilostigma reticulata</i>								*	*	*		
<i>Bauhinia thonningii</i>								*	*	*		
<i>Acacia gourmaensis</i>								*	*	*		
<i>Tamarindus indica</i>											*	*
<i>Acacia dudgeoni</i>						*						
ground flowers								*	*	*		
grasses, shrubs, crops									*	*		

NOTE: Blooming seasons vary from one area to another and from year to year depending on amount and times of rainfall.



Giant baobab tree with two exposed colonies — A very common sight in the African bush.



Swarm preparing to enter hive in tree.

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high yields. The possibilities for future development are unlimited. Improvement of the local bee through breeding would have high rewards. Even through natural swarming a beekeeper can become quickly and inexpensively put into business. Increased honey production would greatly aid the populations concerned as an important source of food.

It is my hope that some beekeepers in this country will be encouraged to use their knowledge and resources in aiding countries like Upper Volta in the establishment of highly profitable beekeeping businesses for themselves. I trust there will be an attempt not only to improve the native stock of bees, but that financially profitable techniques for handling native bees may be developed so that the average farmer can be trained and encouraged to further and more effectively exploit his available resource and thereby enrich and improve his life. ☉