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# Beekeeping Round the World

## Beekeeping in the Central African Republic

KATHLEEN DEBOLD AND THOMAS FONDELL

The Central African Republic (CAR) is a land-locked nation in the heart of Africa. Bordered by Cameroon, Chad, Sudan, Zaire and the Congo, the CAR forms a geographical link between the Sudanese zone and the Zaire (Congo) basin. Its 622 984 km<sup>2</sup> area (marginally larger than France) contains an estimated 2.7 million inhabitants, an average population density of only 4.2 km<sup>2</sup>; 80% of the active population is engaged in agriculture. With poor transport being one of the major constraints on the country's economic development<sup>1</sup>, farmers are often unable to find buyers for agricultural products outside their immediate area. Honey hunting and beekeeping can be important sources of cash income for the subsistence farm family, because there is usually a local demand for honey.

### Honey hunting

Honey is basically a cash crop destined for sale to honey-beer makers; very little is sold for direct consumption. Although it is eaten 'raw' from the comb and in porridge, honey is not generally used as a sugar substitute for sweetening tea or coffee. In regions of the CAR with beekeeping potential but with a preferred alternative

source of alcoholic beverages (e.g. palm wine, sorghum beer), there is little beekeeping activity. Honey hunting, however, often associated with traditional hunting expeditions, is practised throughout the country. Sometimes, it is the honeyguide bird (*Indicator indicator*) that leads hunters to feral colonies. The hunters imitate the honeyguide's call either vocally or by shaking a small box of matches. If a bird appears and leads them to a honey bee nest it is rewarded with a piece of comb. Local folklore has it that anyone who does not give the bird its due reward risks being tricked by it on a future hunt and taken to a place of great peril, perhaps a lion's den or a nest of snakes.

The 'harvests' take place at night and no special protection is worn; in fact, most honey hunters prefer to wear a minimum of clothing to prevent bees from crawling inside. Smoking torches are prepared and a fire may be lit on the ground under the bee's nest. The bees are smoked out of the nest, but the colony is not necessarily destroyed. Depending on the season, the extent of the damage and the condition of the queen, the bees are sometimes able to rebuild the nest. All combs are removed and those containing brood and pollen, along with a fair amount of honey, are eaten by the hunter's family and friends. The remaining honey is used by the hunter's wife or a female relative to make honey beer, or is sold to other women for the same purposes. The honey

is sometimes filtered through cloth or sieves to removed crushed combs, but it always contains pollen, debris and parts of bees. Water is often added to increase the quantity available for sale.

### Traditional beekeeping

The stages in the development of the bee-human relationship form a continuum from 'bee killing' through 'bee-having' to 'beekeeping'<sup>8</sup>. What is here, for convenience sake, called beekeeping in the CAR context is really an intermediate step between bee killing (i.e. honey hunting) and bee-having, the definition of which implied the maintenance of the colony for future harvests. Beekeeping in the true sense of colony management was non-existent, except as practised by some missionaries, until the recent advent of American and French apiculture development projects.

Much information is available concerning traditional hives in the CAR<sup>1-9</sup>. They vary in form and construction from region to region, depending on the locally available materials and the traditions of the beekeeper's tribal group. Hives are usually cylindrical or conical containers made from bark, sticks, or baskets (fig. 1). Layers of leaves and straw are added on the outside for protection, and the open ends of the hive are covered, leaving a single, small entrance for the bees. The finished hives vary in length from 1 m to 1.75 m, but bark hives are often longer and thinner, whereas basket and frame hives are shorter and thicker; their volume is usually between 30 and 70 litres. Hives are installed in trees at various heights, usually fixed to forked branches. The hive entrance is positioned below the horizontal plane and away from the prevailing wind. Many beekeepers bait their hives to attract swarms of bees. Wax

from stingless bees or honey bee colonies, cassava root, aromatic plants, and the sap of certain plants (e.g. *Bauhinia reticulata*) are ingredients in many of these baits, but each user has his own special blend that he claims is the most effective. Some beekeepers burn selected leaves or seed pods and blow the smoke into the hive opening to make the interior attractive to scout bees.

Some hives are installed during the major swarming period in the early dry season (November and December). The rest are installed later in the dry season to replace old hives or those destroyed during the harvest. Honey is harvested between February and June, the exact date of each harvest depending more on the beekeeper's need for honey or cash than on the amount of stores in the hive (honey beer is used by farmers to entice friends and neighbours to help with labour-intensive tasks such as field clearing and planting).

Harvesting the honey is destructive to the bee colony, the hive, and sometimes to the beekeeper himself. It takes a great deal of courage and skill to work with African bees, in a tree, in the dark, wearing no protective clothing, holding a flaming torch, and surrounded by billowing smoke. In some areas honey is harvested while the hives are still attached to the tree; in others, the hives are lowered to the ground and opened there. As in the honey-hunting operation, a large quantity of smoke is used and the bees are driven out or to the extreme rear of the hive and all the combs are removed. The Central African Apiculture Service, in collaboration with French Volontaires du Progrès and American Peace Corps volunteers, has attempted to modify traditional hives and honey harvesting practices to encourage management of colonies instead of 'destructive harvesting'.



FIG. 1. Making traditional hives.

### Movable-comb hives

The Central African Apiculture Service and its collaborators have introduced Kenya top-bar hives (KTBH) (fig. 2) in experimental/demonstration apiaries throughout the beekeeping zones. Although the KTBH has been found useful for beekeeping with African and Africanized bees in certain other countries, its theoretical potential for improving the lot of Central African Republic beekeepers has not been realized. Materials for making, installing and managing KTBHs are not available in beekeeping villages, and an appropriate technology smoker has yet to be produced. Even in the largest towns it is often impossible to find suitable cloth for making bee-suits and veils. The cost of standard wooden KTBHs is prohibitive — the price of a single hive being nearly one-tenth of the average yearly per capita

income. The protective clothing and smokers needed to work with these highly defensive bees add to the initial costs of KTBH beekeeping. Experiments with alternative construction materials (e.g. woven mats, mud, cow dung) have not been successful under CAR conditions.

The experimental introduction of the KTBH began in the early 1980s. A large number of the original experimental hives already have been severely damaged or destroyed by fire, termites, wood-boring insects, ants, rot and vandals. CAR beekeepers cite theft as one of their most serious problems. KTBHs are not installed very high in trees and this makes them easy targets for thieves.

Certain cultural factors are also constraints to the adoption of the KTBH in the rural areas of the CAR. There is no

tradition of animal husbandry, and the idea of insect husbandry is even more foreign. Beekeeping, by definition, necessitates conservation and management of the honey bee colony; the bee-human relationship as it exists in the CAR, on the other hand, has always meant its destruction. The leap from bee killing to beekeeping would involve changing attitudes and behaviours that have been traditionally successful for centuries. Also, it would mean adopting a long-term outlook as opposed to focusing on the present, a common characteristic of subsistence farmers. Until more is known about the CAR honey bee, it will be impossible to determine the best management scheme for KTBH beekeeping.

### Future perspectives

Much research needs to be done before an appropriate policy can be formulated for beekeeping development in the CAR. Africa has included beekeeping in its five-year Rural Enterprise Development Project (US AID) and, in collaboration with the Central African Apiculture Service and the Peace Corps, is studying the CAR honey bee, traditional and intermediate beekeeping practices, marketing of hive products, and fabrication of appropriate technology beekeeping equipment. It is hoped that the results of the research will give new direction to apicultural development efforts in the CAR and thus enable small-scale beekeepers to maximise the potential of their hives.

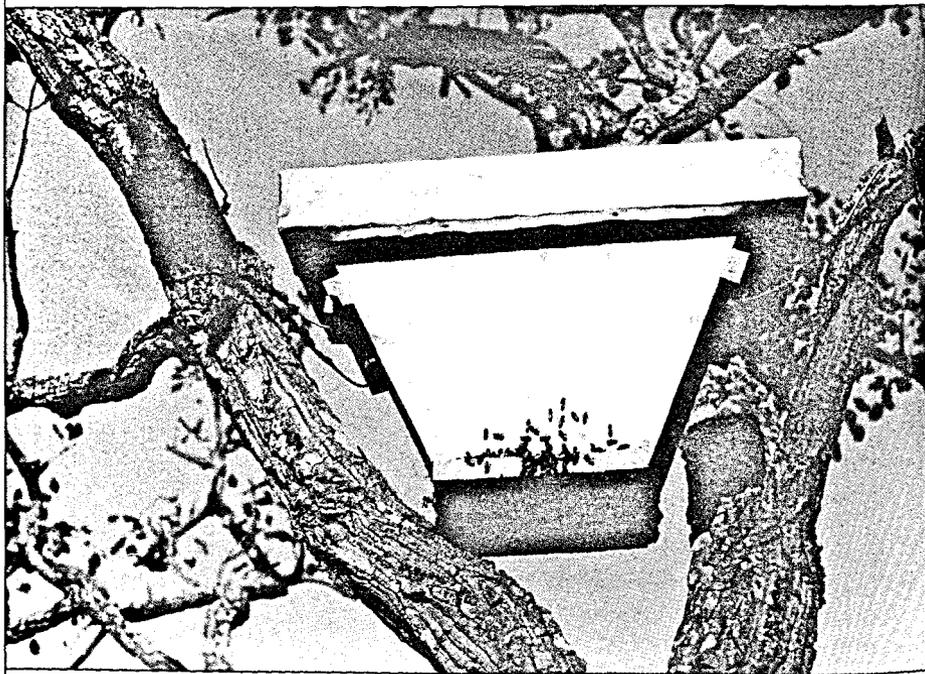


FIG. 2. KTBH Capture hive.

## References

1. BOUCHER, J (ed) (1983) *Spécial: apiculture No. 36*. Revue de l'Association Française des Volontaires du Progrès; Menthery, France.
2. DAYO, R; YAMBENZA, G (1980) *Projet de Développement de l'Apiculture en République Centrafricaine*. Bureau d'Etudes et de Coordination; Bangui, CAR.
3. DEBOLD, K (1984) Beekeeping development in the Central African Republic. *American Bee Journal* 124(7): 113-114.
4. DEBOLD, K (1985) *Manuel d'Apiculture*. Peace Corps Information Collection and Exchange; Washington, DC, USA.
5. DEBOLD, K; FONDELL, T (1985) *Beekeeping in the Central African Republic: perspectives for development Africare*. (unpublished).
6. DOUHET, M (1979) *L'apiculture en empire centrafricain: situation et perspectives*. Ministère de la Coopération; Paris, France.
7. DOUHET, M (1981) *Apiculture: Le Monde Rurale, No. 3 Mai/juin*. La Caisse de Stabilisation et de Péréquation des Produits Agricoles; Bangui, CAR.
8. GENTRY, C (1984) *Small Scale Beekeeping*. Peace Corps Information Collection and Exchange; Washington, DC, USA.
9. HODGKINSON, E (1988) The Central African Republic: economy. *In Africa South of the Sahara*; Europa; London, UK; pp 336-339.

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## Beekeeping in wildlife reserves

RONALD WATTS

Amidst growing concern for the long-term survival of Africa's wildlife there is a small but significant move towards beekeeping in national parks and game reserves.

In areas as far apart as Malawi and Kenya people living near to parks and reserves are being allowed, or are campaigning to be allowed, to cross the normally prohibited boundaries to harvest honey and wax. The hope is that these beekeepers will recognize the value of leaving indigenous forest untouched and so gradually become supporters of the concept of reserving land for wild animals.

In Malawi, a Miombo Management Project was set up with assistance from the UK Overseas Development Administration in 1992. It was designed to look at the sustainable production of fuelwood and poles. An important secondary aim was to 'investigate the potential of indigenous forests in providing non-timber forest products such as wild fruits, honey, mushrooms, medicines and fodder', according to Mr Kabwaza of the Department of Research and Environmental Affairs in Malawi.

Of all the countries along the eastern side of Africa Malawi is one of the most densely populated, with severe land pressure accentuated by declining soil fertility. Several national parks, such as the one at Kasungu, are next to highly productive farming areas. The authorities have been forced to reduce the park area as a result of pressure from local farmers. Beekeepers have also been allowed into the Kasungu National Park.

At Mzuzu the German-Malawi Beekeeping Development Project has been assisting beekeepers in the Nyika National Park and