



Keeping an eye on the sentinel

Mutualistic relationship between the honeyguide bird and honey hunters



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mo è jee mbèlèkò yîè pòkî kò !

If you hear the honeyguide singing, honey is near!
(a Baka pygmy proverb expressing evidence)

Importance of honey hunting among African Pygmies

Honey hunting is a prominent activity among the various groups of African Pygmies. Pygmy hunter-gatherers eagerly look forward to the taste of honey. Honey does not only provide the pleasure of eating, it also functions as a medium by which social relations are regulated. African Pygmies collect honey produced by the honey bee *Apis mellifera adansonii* and from a dozen different species of stingless bees. Honey harvesting is a seasonal activity that depends on the flowering season of the major nectar sources of the forest. It can be carried out almost continuously from November to June, with picks occurring in February and May. Throughout the Congo Basin, no people other than the Pygmy hunter-gatherers collect honey in such a systematic way. Collecting honey is a characteristic subsistence activity in the tropical forest. There are so many natural hollows suitable for beehive that the successful settlement of bees into artificial hives is highly hazardous. Accordingly, collecting wild honey is much more adaptive to the tropical rainforest environment, thus explaining that foragers are much more adapted to other groups to carry out such activity.

Birds-Pygmies interactions

Whatever the latitude, humans entertain complex relationships with birds, but these interconnections have a particularly high influence on the life of forest foragers. According to African Pygmies, birds encompass three characteristics that make them so special: 1) the ability to fly, 2) the talent of uttering unique sounds, and 3) the habit of coming close to man. Since birds are the residents of the sky, they are frequently perceived as messengers sent by supernatural forces to deliver messages to humans and to mediate the relations between humans and the other surrounding life forms. Catching birds is a hazardous and energetically costly effort with regard to their limited food value. By contrast, birds are highly prized for their ability to sing and for providing basic material to traditional healers for magical purposes. Among the African Pygmy groups, each of most salient forest resources is associated to a particular type of bird that is given the task to guide humans to the coveted resource: bird of the wild yam, bird of the elephant, bird of the okapi, bird of the blue duiker, bird of the bush-pig, bird of the buffalo, bird of the leopard, bird of the pangolin, bird of the viper, bird of monkeys... Such associations are mainly symbolic and seldom empirically true. They bring insight into the complex immaterial relationships of these forest dwellers with their environment.



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Honeyguide ecology and behavior

Guidance to beehives by honeyguides (Indicatoridae) forms a major exception since these "birds of honey" have developed a true mutualistic interaction with humans and other honey consumers. The honeyguide feeds exclusively on beewax and bee larvae. Since it is unable to open colonies by itself, it enlists the partnership of mammals, including humans. After locating a hive, the honeyguide seeks out a



suitable "follower" which it then leads to the hive by means of a series of characteristic vocalizations, gestures, and flight patterns. The bird feeds on honeycomb left behind voluntarily by the hunters in exchange of the guidance. Besides being a mutualist with honey hunters, the honeyguide is also a symbiont with a wax-digesting bacteria, and is a brood parasite with 39 known hosts.



Honeyguide - honey badger mutualistic relationship
(© Dorling Kindersley)

black-collared barbets protecting their nest from a honeyguide brood parasite
(© Les Weber)



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Different techniques by Baka Pygmies of Cameroon to detect natural hives

Most bees establish their nests in natural hollows in tree trunks that can be located several dozens of meters above the ground. Honey hunting requires excellent sensory abilities to detect the nest, and climbing skill for collecting.

The first process to detect a nest consists of detecting bees activities at dawn when the workers *mbiàlò* leave the nest but still fly near the entry.

The second process consists of exploring the detritus mounds *mbenzù* left by the arboreal ants *mòkpeèkpeè* (*Palthothyreus tarsatus*) near the entry of their nest. The high proportion of chitinous remains of bees is a key sign that a bee hive is nearby.

The third process to detect a beehive consists of following the honeyguide.

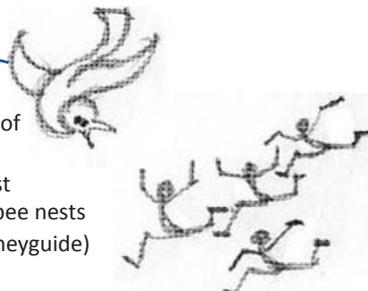


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The Baka distinguish 2 different species of honeyguide:

- kpagba a dàndù *Indicator exilis* (least honeyguide), which guides to stingless bee nests
- mbèlèkò *Indicator indicator* (lesser honeyguide) which guides to *Apis mellifera* nests.



In Baka language, the etymology of mbèlèkò is "small disease" ; eating the honeyguide is strictly forbidden and transgression would cause breathlessness. Interestingly, the honeyguide and the *Dynastes* beetle that drills galleries in wild yam tubers (another prominent forest resource for the African hunter-gatherers) share the same founding myth among the Baka.