

STINGLESS BEES IN KENYA

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The *Commercial Insects Project* of the International Center of Insect Physiology and Ecology, *Icipe* is investigating beekeeping with stingless bees, meliponiculture, as an activity to compliment forest conservation. This is an activity suitable for the maintenance of forest biodiversity and protection of the environment as well as increasing the economic well-being of communities living around the forests.

Stingless bees are important for pollination of cultivated and wild plants. They also produce highly valued honey that communities use to treat various ailments. Stingless bees depend on tree cavities for nesting and with the increase in deforestation, many nests are being destroyed. This project aims to develop methods for domestication and colony multiplication. *Icipe* has introduced hives to a community living adjacent to forest. The major techniques employed to colonise hives are transfer of wild colonies, and division of colonies that are already nesting in hives. Also, a new method of queen rearing for colony multiplication is under development.

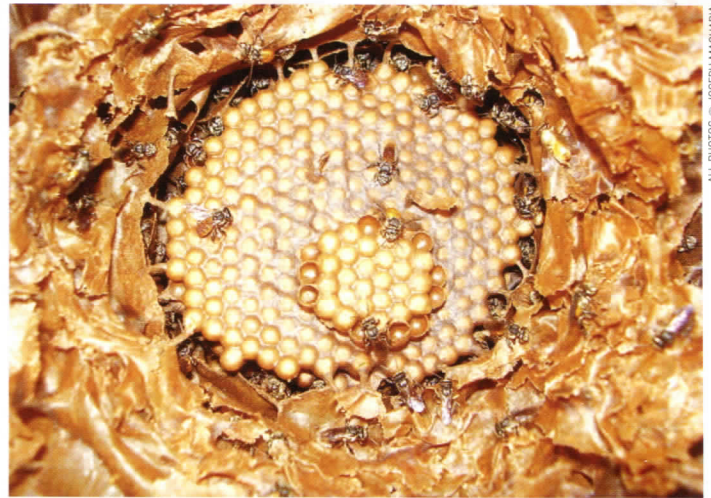
Farmers are aware of the existence of stingless bees but there are no laid down procedures for their conservation. Most farmers depend on forest resources, where they gather honey from both stingless and honey bees. Many people seek this honey because they believe it has high medicinal value in treating colds, chest pains, and vigorous healing of burns and wounds.

Of the various species in Kakamega forest, *Meliponula bocandei* has the greatest potential for domestication due to their large colony and body sizes (almost the size of honey bees). However, this species absconds frequently compared with *Meliponula lendliana* or *Meliponula ferruginea*.

Demonstration of hanging hives for stingless bees



An established 'Meliponary' close to the Kakamega Rainforest



Meliponula sp nest showing brood and worker bees

In the Mwingi woodlands, many farmers distinguish stingless bees by their 'very sweet honey'. *Hypotrigona gribodoi* and *Hypotrigona araujo* are the commonly kept species of stingless bees. Farmers cut the trunks in which the colonies occur and continue keeping the bees in the same trunk near their homesteads.

In Arabuko Sokoke forest along the Indian Ocean, three species of stingless bees have been identified: *Dactylurina schimdti*, *Hypotrigona gribodoi* and *Meliponula ferruginea*. No effort has been made to domesticate *Dactylurina schimdti* due to its defensive nature and open nesting. Swarms of *Meliponula ferruginea* and *Hypotrigona gribodoi* easily colonise other types of hives, for example the top-bar hive, and catcher boxes meant to lure honey bee swarms. Ants, lizards and robber flies have been identified as major predators of stingless bees in hives.

Even though it has been reported that stingless bees store only limited amounts of honey, colonies found in the forest can yield 15-20 litres.

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Further information

Caribbean Update: Guyana
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Simple ways to manage stingless bees
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Meliponiculture: beekeeping with stingless bees
Bees for Development Journal 18



Destructive harvesting from colonies of stingless bees in Kakamega