

ZANZIBAR BEEKEEPING PROJECT

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Keywords: Africa beeswax frame hive NGO research top-bar hive

In 2011 a small beekeeping project began in Zanzibar planned to run for three years, and funded by the Danish Foreign Ministry. The NGOs involved are ZALWEDA (Zanzibar), Bees for Development (UK) and DANTAN (Denmark). Four local beekeeping experts are responsible for the training part of the Project. They are: Mr Assaa Sharif Ngwali and Mr Mussa Said Bakari (trainers in Pemba); and Mrs Mwajuma Haji Ussi and Mr Mgeni Rajab Mgeni (trainers in Unguja).

Zanzibar

Zanzibar comprises the main island of Unguja in the south (1,651 km²) and Pemba in the north (980 km²). In Pemba a significant amount of original forest remains, while on Unguja there is less forest and only the western part of the island has fertile soils. The population of Zanzibar in 1998 was about 800,000. By 2007 this had risen to more than a million. The growth rate is now about 3.1% *per annum* and the population is approximately 1.5 million.

Need for a better income

Most of the inhabitants are living on less than US\$1 a day, making Zanzibar one of Tanzania's poorest regions. However some people on the islands are extremely wealthy and there has been considerable building of hotels. Incomes come mainly from agriculture (especially for clove and copra export), fisheries, seaweed production and the tourist industry, while foodstuffs and fuel are imported.



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Beekeeping with open bark hives in the mangrove forest: probably the most sustainable way of beekeeping as long as honeycombs are harvested without killing bees

The growing population and the expanding tourist industry threaten the natural areas. Most forest on the islands has been cleared for farming, buildings and roads. Prices are rising fast and there is a need for improved income for a great part of the population.

Project goals

The main goal of the Zanzibar Beekeeping Project is to improve livelihoods for poor families by raising their income by 25% from beekeeping activities. In addition, it is important to raise awareness of the economic importance of honey bee pollination to prevent the killing of wild honey bee colonies (see www.superbee.dk).

Sustainable equipment

Ten beekeeping groups have been selected on each island, each group with 20 members. During the Project period they are being trained in sustainable beekeeping methods with top-bar hives made from different materials. Tool boxes, training books, materials for protective clothing and some demonstration hives are given to each group, but it is an important part of the training to demonstrate that many types of hives can be used, especially hives that are made locally.

The B/D Research Project at Njiru Wildlife Research Centre, in Arusha (Tanzania) showed that the comparison between honey harvested from frame hives and top-bar hives is small. More than two litres of honey can be sometimes harvested from frame hives, but more beeswax can be harvested from top-bar-hives: the income generated when beeswax is used to make skin ointments and other value added products can be higher than the income from honey. This suggests that the potential income from top-bar hive beekeeping in the tropics can be double that of frame hive beekeeping. Top-bar hives can be made from locally available materials such as straw and bark or clay. Also they do not need an expensive extractor for honey harvest.

(left) Most stingless bees are peaceful when handled, but not when attacked by other bees

After honey extraction with frame hives it is necessary to return empty frames to the hives which may create robbing between colonies, and there is great potential to spread honey bee diseases. Because the frame hive system produces so little beeswax, the Zanzibar frame hive beekeepers often have to buy wax from top-bar hive beekeepers.

In spite of all these facts there is still widespread confusion about what makes beekeeping sustainable and a strong belief that frame hive beekeeping should lead to much more honey.

Over the years several beekeeping groups in Zanzibar have been supported by a number of foreign NGOs. Some groups have received equipment without any instructions, while others received the minimum of instruction. Other groups have been persuaded to buy expensive European equipment. During our last session of field work, we encountered groups with hives full of honey, but with no knowledge of how to harvest it: our trainers are now helping these groups. Some of the beekeepers' groups who are participating in the Project are already doing well, while others need more support.

Trade and marketing

Honey trade and marketing are important aspects of the Project. Trade in honey is complicated in Zanzibar and probably most honey is sold locally. A proportion of honey is exported to Oman and other Middle Eastern countries, while some is transported from Pemba to Unguja. A lot of honey is imported from mainland Tanzania to Zanzibar and sells at relatively low prices. It is necessary to find a model to ensure that the local beekeepers sell their honey at a good and fair price. There is potential for the sale of 'special Zanzibar honey' to hotels and tourists, but this requires small jars, special labels and information about the importance of the bees and the local beekeepers' groups. It is possible for the honey to be marketed in small baskets together with other bee products. In addition, a network between the producers and buyers has to be established. A Workshop on this plan and how to make the best beekeeping products will form part of the Project's future work.

Beekeeping with stingless bees

Some beekeepers in Zanzibar look after stingless bees. The advantage of working with them, in addition to their lack of sting,



777's Pemba beekeeper has succeeded in earning so much from beekeeping that he has been able to buy materials to build a new house



Beekeeping in the mangrove forest. Hives are placed here to deter ants and (hopefully) frighten away timber thieves



Mrs Mwajuma Haji Ussi providing training in Unguja

is that they do not need much attention and the price for stingless bee honey is more than double that of honey bee honey, even in villages.

A disadvantage is that stingless bees produce less honey. There is also no knowledge about how to divide colonies and how to make the best equipment. However, during the Project we will work on this - a great deal of useful information on stingless beekeeping has been produced already in Ghana and other countries.

Bees against thieves

Zanzibar has 20,000 ha of mangrove forest. It is probably the most important nectar producing vegetation, but is threatened from legal and illegal harvesting for charcoal, firewood and timber. Some NGOs have been encouraged by the Forestry Department to establish bee colonies in the mangrove to frighten thieves from stealing mangrove timber. In some places this works, but in other places both the timber and the honey are stolen!

NGO Non-Government Organisation