

How to keep *Apis florea* in an *Apis mellifera* - hive

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Introduction:

- Until 1985 only *Apis mellifera* existed in Sudan.
- The first *Apis florea* colony in Africa was reported in Khartoum in 1985.
- Twenty years later (1985-2005), *Apis florea* covered more than 90% of agricultural land in Sudan.
- In this study four different hiving- systems were tested to hive 40 *Apis florea* colonies:
 - *Apis mellifera*- traveling box.
 - Shade.
 - Tree branches.
 - Guffa hive.

Objectives

- To assess whether *Apis florea* is manageable or not.
- To find a suitable method for hiving *Apis florea*.

Materials and Methods

Colony removal:

- Each tested colony was removed in the following steps:
- Each colony was smoked slightly for 1-2 minutes.
- A tree- scissor was used for cutting the branch.
- The branch was either cut as long as the Lang troth- frame (if possible) or at least 3 cm after the comb edges (on both sides).
- The comb was either put directly in an empty traveling box (if the branch was long as langstroth-frame) or attached to the upper wire of langstroth frame (if the branch was shorter) using two wire strips.

- The traveling box (with the *Apis florea* colony) was then left partially opened (an entrance of 5cm along the length of the upper side of the box).
- Next day early in the morning (before the sun rise) or in the evening, the traveling box was completely closed and removed to the new site. Out side feeders were used.
- The colony was either left in the traveling box or attached to the other type of hiving systems (Tree-branches, shade and guffa).

Results:

- This table shows: Mean settlement periods for *Apis florea* colonies on different types of hiving system, using Duncan's multiple range test for analysis.

Hive	Min-Max (days)	Average duration (days)	D.M.T	Colonies rejected settlement
Trees	0- 215	69.10 ± 18.89	A	10%
Shade	0- 195	67.10 ± 18.06	A	20%
Traveling box	0- 185	63.10 ± 18.03	A	30%
Guffa	0- 92	33.6 ± 10.94	A	40%

Summary and conclusions:

- *Apis florea* could be managed easily for pollination purpose and honey production.
- The hiving systems could be ranked as: tree – branches, shade, traveling box and guffa.
- *Apis mellifera*- traveling box was the most efficient tool for transferring *Apis florea* from one place to another and also could be recommended for hiving.
- Care should be taken against wax moth in the traveling box.

Apis florea colony on window -bar



Apis florea colonies under the shade



Apis florea colony in a travelling box



Honey comb of *Apis florea*



Apis florea clony under Guffa hive



How to keep the box open



Florea used for pollination



Tow florea colonies on a Langstroth-frame



Thank you for listening

