

Indegenous methods of honey harvesting from rock bee (*Apis dorsata*) colonies by Siddhi tribes of Uttar Kannada district, Karnataka, India

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Collection of honey has been a traditional occupation of the tribals and forest dwellers. There are many tribal families who engage in honey hunting for a livelihood. Honey harvesting is mainly from the nests of rock bee's. The rock bee (*Apis dorsata*) colonies are generally found on rock cliffs or on large trees.

The giant honeybee *Apis dorsata* commonly referred to as the “rock bee” is a large open nesting species which hangs a single large comb from high tree branches, rock cliffs and lives in colonies with a population ranging from 25,000 to 80,000 bees in a single colony (Reddy, 1988). Before 1980 (Engel, 1999), *A. dorsata laboriosa* was considered to be a subspecies of the widespread *A. dorsata*, the giant honeybee, but in 1980 and for almost 20 years thereafter it was elevated to the rank of a separate species. It is now classified once again as a subspecies of *A. dorsata*. It is highly adapted to its highland habitat in behavior and there has evidently been little gene flow between it and lowland *A. dorsata* for millions of years; some consider this evidence that it should be classified as a species (Arias *et al.*, 2005).

The method of honey hunting varies according to the nature of the support, number of colonies in aggregation or singly. There are many traditional methods that are followed in different regions for honey harvesting. Honey hunters have to climb steep cliffs or ascend tall “bee trees” by hand-made ladders during the darkness of the night then kept away with smoke and cut away the comb completely for collecting honey. This technique is a very strenuous, laborious and demanding job (Mardan, 1989, Othman, 1997).

Studying about these traditional methods, the customs & religious beliefs of these people is of utmost importance in the light of advancements in the field of science and technology. In Karnataka major honey flow is in the Western Ghats region and Malnad

region (comprising of Hassan, Shimoga & Chickmagalore districts)

The Siddhi tribes of Uttara Kannada district belong to scheduled tribe category. They are the original inhabitants of Africa and were brought by Britishers to do heavy manual work. Harvesting of honey is done from April to July, October & November. The Rock bee's collect nectar from Matthi, Nandi and other forest flowers. Therefore the honey of this region is most sought for its medicinal importance. The Siddhis harvest about 100 comb's from 7pm to 2am during dusk.

Honey harvesting by crossing from one tree to another:

Two of the harvesters prepare themselves to climb the tree. They tie a torch to their head with a thread, they tie a sickle holder with sickle to their trunk, they tie 3 to 4 smoker's to their hip and then they carry a string/ thread about 150 to 200 feet. With these materials the two harvester's climb a tree, which is adjacent to the harvesting tree. The string they carry is tied around a stone/ weight block and thrown at the branch of the adjacent tree, which bears the comb. Two harvester's present below, tie a rope to the string which has descended down. The rope is firmly knotted to the branch which has the comb. The other end of the rope is tied to the branch of the adjacent tree and the harvester's present on top cross over the rope to the adjacent harvesting tree one after another.

Only the upper portion of the comb which contains honey is neatly cut off using sickle. The honey that drops into the hollow pan is alighted down the tree using the rope. After harvesting from one tree, they shift on to the adjacent tree's which have comb's on them, using the same method. Harvesters present below the tree, squeeze the honey comb and collect the honey in a large vessel, which is then transferred to a large can and then carried to the jeep parked at a distance. About 5 to 15 kgs of honey/comb can be harvested.

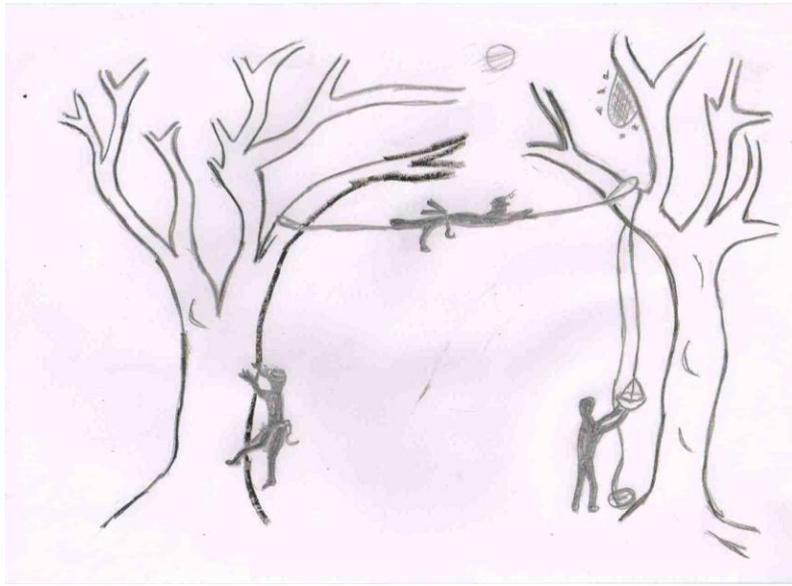


Plate 1: Honey harvesting by crossing from one tree to another (pictorial)



Plate 2: Siddhi men with rope and vessel waist



Plate 3: Sickle tied around the light torch tied to the head

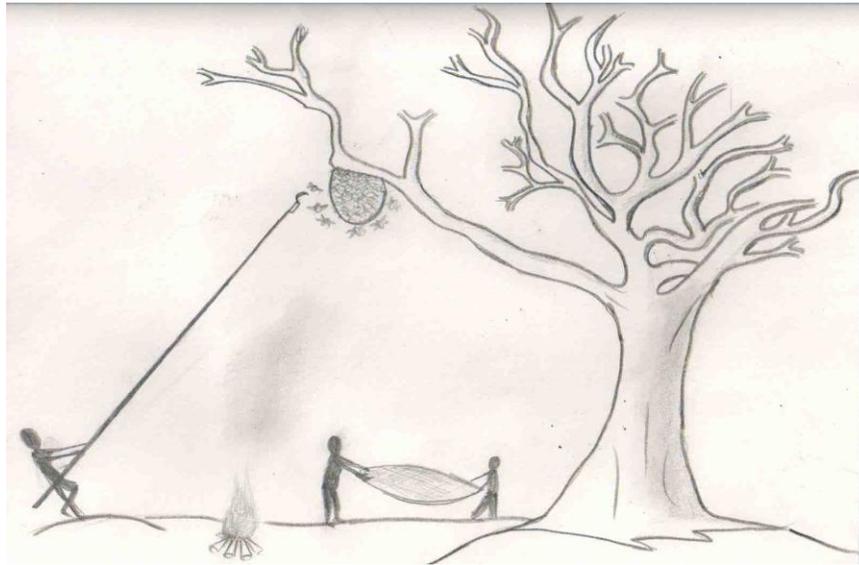


Plate 4: Honey harvesting from ground (pictorial)

Honey harvesting from ground:

If the comb is small and is reachable, the Siddhis use a long bamboo stick with a sickle tied to its end to cut the comb. Usually 3 or 4 men are sufficient to harvest honey by this method. A fire is lit on the ground just below the nest, to drive away the bees. Two of the harvesters spread out a net and hold it below the comb. Another harvester cuts off the honey comb using a long bamboo stick with a sickle tied to its end. The honey combs which drops into the net are collected by the harvesters. The honey is squeezed into a large vessel and stored in large cans. The honey is then used for direct consumption or sold to local people.

Honey harvesting from roadside bridges:

The Siddhi's are more used to harvesting honey combs built under the bridges. Four to five of them go for harvesting. Two of them take a thick bamboo pole and release them to the underside of the bridge using ropes tied to it. Another two of the harvesters climb on to the pole and cut off the honey part of the comb using a sickle. The comb so harvested is dropped into the vessel, which is then lifted to the top of the bridge by ropes.

The comb is squeezed for honey in a vessel, transferred to a plastic can and taken for further processing.

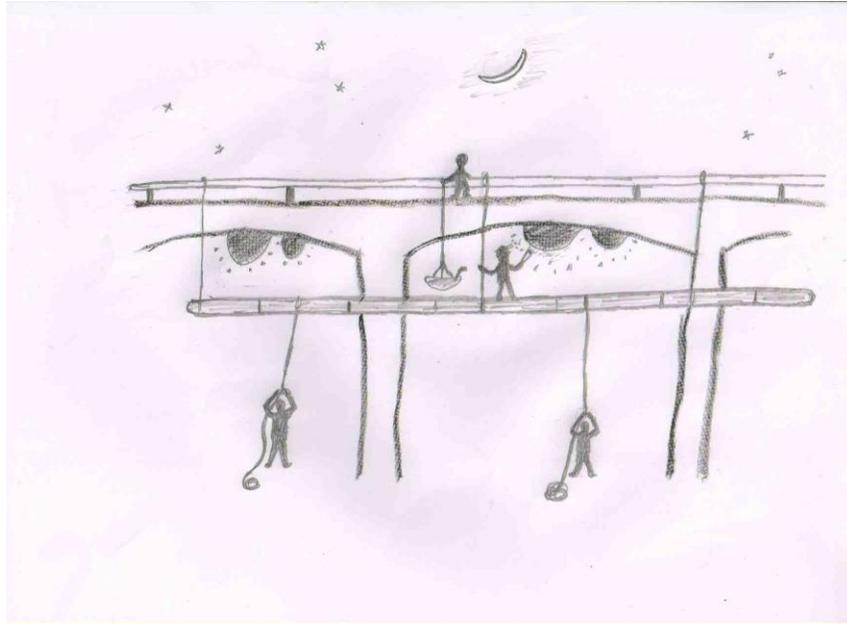


Plate 5: Honey harvesting from roadside bridges (pictorial)

Table 1. Honey harvested by Tribal's

Tribe	Quantity of honey/comb	Rate/kg of Honey
Localites of Javagal	5kgs	60
Siddhis	15 kgs	70
Hadiyaas	45 kgs	65
Kudiyaas	20 kgs	70
Jenukurubaas	5 kgs	65
Yerawaas	20 kgs	50
Bettakurubaas	5 kgs	60

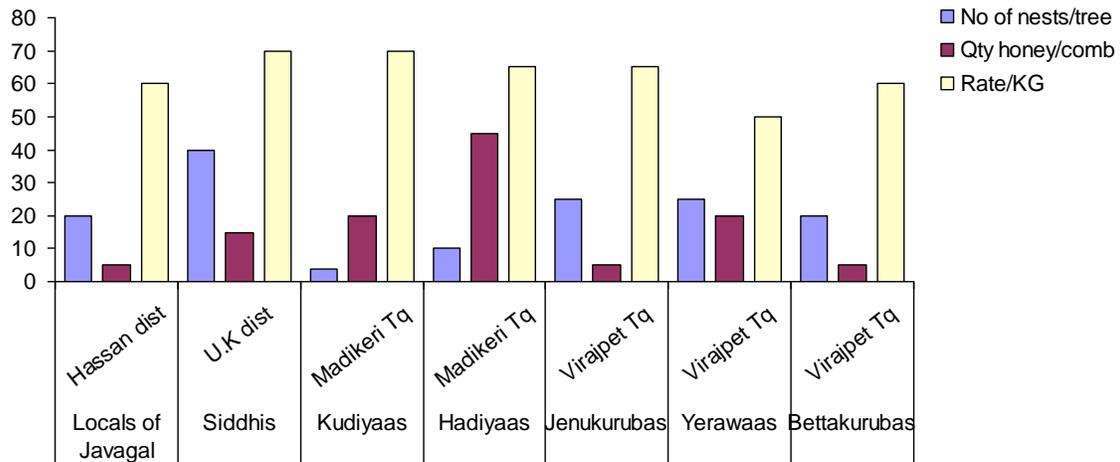


Fig 1: Honey productivity by different tribals

The cost of honey from Sirsi-Yellapur belt of Uttara Kannada district is more when compared to that of Hassan region. Honey collection by the above crude methods creates the following complications:

- Bee's are distracted from comb's using smoker's, some are burnt alive.
- During honey harvesting the whole comb is removed.
- Honey comb's are harvested without wearing protective clothing, the harvesters are sometimes stung.
- Honey is extracted by squeezing the entire comb by hand, which leads to accumulation of dirt in the honey.

Educating honey hunter's for scientific honey collection is necessary to protect the ecosystem and hygienic honey & wax collection. This can be done by coming out with alternative steps that helps conserve the biodiversity of bee's and local ecosystem, without hampering the traditional knowledge of the harvester's. At no point of time the scientific method's should completely take over the traditional method's, as these methods have passed on from generations to generations and reflects the ethnicity and cultural background of the harvester's and their region.

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