

Traditional Beekeeping: A Time-Honoured Craft

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In an era of swift technological progress and constantly shifting fashions, there is a classic craft that hasn't altered much in hundreds of years: traditional beekeeping. This age-old practice, rooted in the symbiotic relationship between humans and honeybees, stands as a testament to the profound wisdom of our ancestors. The building of beehives and the meticulous care of the bees are the two main components of this craft and the construction of beehives, has evolved over generations to accommodate both the needs of the bees and the beekeepers (Grenier, 1998). Traditional beekeeping, which has been passed down through the ages, is more than just the skill of extracting honey; it is a way of life, a connection to nature, and a significant component of cultural legacy. The article dives into the fascinating world of traditional beekeeping, examining both its ecological importance and its rich history. Furthermore, it will unravel the diversity of beehive designs and structures utilized in this ancient craft, demonstrating the intricate and creative ways that people have interacted with these magnificent creatures.

History of Traditional Beekeeping

The roots of traditional beekeeping reach far into history, dating back thousands of years. The earliest evidence of beekeeping can be traced to ancient Egypt, where clay pots adorned with hieroglyphs depict scenes of honey collection. The practice is also mentioned in ancient texts, such as the Vedic scriptures of India and the writings of Aristotle. These historical records provide a glimpse into a world where the relationship between humans and honeybees was not solely about resource extraction but rather a harmonious coexistence. As time progressed, beekeeping techniques and hive designs evolved. Ancient Greeks and Romans are credited with developing the log hive, a simple yet effective structure that provided shelter for bees. Medieval Europe saw the emergence of skeps, woven from straw, and cylindrical hives. Over time, the craft spread to various corners of the world, each region

adding its own unique twist to beekeeping traditions. This historical tapestry of beekeeping traditions serves as a testament to the adaptability and innovation of human culture.

Significance of traditional beekeeping

Ecological Significance

Beyond the sweetness of honey, traditional beekeeping plays a vital role in maintaining ecological balance. Bees, as pollinators, are essential to the reproduction of countless plant species, including many of our food crops. This ecological interdependence ensures the abundance of fruits, vegetables, and flowers while safeguarding the habitats of various wildlife species. However, in recent years, there has been a growing concern about the decline in bee populations worldwide due to factors such as pesticide use, habitat loss, and climate change. In this context, traditional beekeeping emerges as a guardian of bee populations and biodiversity.

Cultural Relevance

Traditional beekeeping is not only a practical endeavor but also a cultural touchstone in many societies. It is a practice that bridges generations, connecting the past with the present and the future. In different regions and cultures, beekeeping carries unique traditions and rituals, often entwined with folklore and storytelling. The bee, with its industrious nature and cooperative hive structure, is a symbol of community, dedication, and harmony in many cultural narratives. In some communities, beekeeping is not only a source of sustenance but also a sacred tradition. The maintenance of these traditions becomes a point of pride, uniting communities in the shared knowledge and practice of beekeeping.

Health Benefits

Honey from stinged and stingless bees is considered as an energy-rich medicinal product. Generally, it is obtained from the species *Apis dorsata*, *A. florea*, *A. cerana* and Italian bee, *A. mellifera*. Since, *A. dorsata* is a wild rock bee and it can't be domesticated, the beekeepers rear *Apis cerana* and *Apis*

mellifera. Tribal peoples living in the Himalayan mountains and Western Ghats are successfully rearing Indian bees and stingless bees which are somewhat difficult to be reared in the popular modern bee hives. The medicinal honey from *A. cerana* and stingless bees represents the high nutritional and therapeutic properties of indigenous honey.

Traditional Beekeeping with different types of bee hives

The native bee, *Apis cerana* is known to better survive winter in wall hives compared to freestanding hives or wild colonies. In mountainous regions and hilly terrains of India (Verma and Attri, 2008; Singh, 2014) such as Himachal Pradesh, Jammu & Kashmir, Uttarakhand, and Uttar Pradesh etc farmers have traditionally managed the indigenous honey bee *Apis cerana* in log and wall hives close to their homesteads which are a form of traditional fixed comb hives. In Kullu (Sharma et al., 1998), Chamba (Verma & Attri, 2008; Sharma et al., 2022), Sirmour (Kumar and Thakur, 2016) and Kinnaur (Bhatia 1999, Rafal 2000) and other hilly areas of Himachal Pradesh, people keep *A. cerana* in both traditional and movable frame bee hives- Log hives and wall hives. The tribal people of the Western Ghats are also successfully rearing stingless bees, which are small and resident species that nests among boulders, old walls, dead trees and tree cavities. The different types of bee hives used in traditional beekeeping are shown in Figure 1.



Figure 1. Different types of traditional hives used by tribal people of from regions of Himalayan mountains and western Ghats

(Source: Verma and Attri, 2008; Sharma et al. 2014; Sood, 2022; Kumar et al. 2012)

Low-cost mud hives- A way towards conservation of *A. cerana*

A new technology in the form of low-cost mud hives for rearing the indigenous honeybee, *A. cerana* is a way out for their conservation which has been brought out by Dr. J P Sharma, during 2007-2008 in Himachal Pradesh. Fixed bee hive, so named because it is fixed in one place and cannot be shifted from one place to other as can be done with Bureau of Indian Standard (BIS) wooden beehives. This mud hive has the qualities of both modern and traditional hives.

Merits of Traditional Beekeeping

Traditional beekeeping besides promoting biodiversity, supports ecosystem, providing high nutritional as well as therapeutic properties of indigenous honey and preserving culturing heritage along with sustainable traditions. The traditional bee hives are made with locally available materials or using wall spaces in the dwellings which are safer from wild animals and maintain a suitable

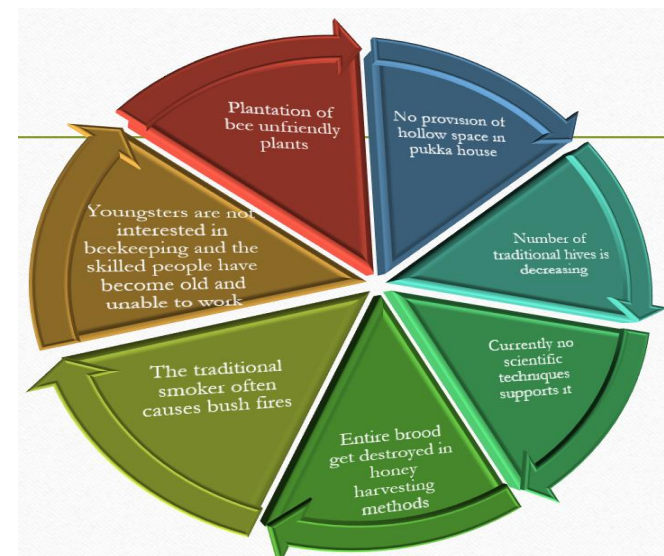


Figure 2. Constraints and challenges to traditional beekeeping

temperature. The designs of the hives are very simple, the only consideration is the volume of the bee cluster to be accommodated. There is no input in the form of sugar feeding, comb foundation, chemicals etc. The management of colonies is minimal and consists of arrangements for the attraction of swarms and harvesting of honey. Traditional beekeeping integrates itself with the prevailing customs and socio-economic conditions of the people and helps conserve

the biodiversity in bee fauna. Besides, so many benefits, the constraints and challenges to traditional beekeeping are shown in Figure 2.

Conclusion

Traditional beekeeping is a live heritage of hilly terrains, tribes and some incredible techniques beyond envisage, because they have learned by practice since immemorial or by themselves. Tribals and residents of steep terrain have been caring for *Apis cerana* bees in a particular method for ages that they inherited from their dads and ancestors. These indigenous hives still have significant potential as compared to contemporary beekeeping because of their low cost and appealing management techniques. Indigenous beekeeping blends nicely with the community's socioeconomic structure and established practices. Since small-scale traditional beekeeping has the benefit of cheap input costs in the context of bee hives and is safer against natural enemies, training and supporting these beekeepers may result in better success in the apiculture market.

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