

Mayans Millenary Beekeeping Tradition and their Regal Lady Bee

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Many cultures throughout history have established a tightly knitted relationship with beehives and the commerce of their products. Although Egyptians were the first society to leave extensive records of honey bee rearing, archaeologists suspect that we may have been practicing beekeeping since the Paleolithic era, over six thousand years ago.

Egyptians used honey and wax for ceremonies, food, trades and burials. Later, the Greeks found in bees the perfect object of admiration and contemplation. Virgil thought that these insects were an example of divine creation. For Aristotle, they were a reflection of society itself. The Romans thought that honey had divine status and that some gods were connected to bees.

As a source of food, income and religious worship, bees have played a central role in the development of different civilizations throughout the ages; nonetheless, few societies have had such a deep and intimate relationship with their beehives as the Mayans did.

The year 2000 BC was when central Mesoamerica saw the dawn of the Mayan Civilization with the establishment of their first settlements in what today is Tabasco, Mexico. For over 3,500 years, until the fall of their last city in 1697 AD, Mayas extended and controlled today's south of Mexico, all of Guatemala and part of El Salvador, Honduras and Belice.

Their interest in apiculture products was such that, upon the arrival of the Spanish conquistadors, 94% of the Mayan cities paid tribute to the Spaniards in the form of wax and honey. According to ancient records, some 29 tons or 65 thousand pounds of wax and 3.3 tons or seven thousand pounds of honey were collected.

According to Mesoamerican studies researcher, Genoveva Ocampo, for the Mayas, honey was considered "a food of the Sun, creator and regenerator, mysteriously elaborated in the stomach of *melipona* bees."

In the manuscript, *Ritual of the Bacabs*, we find at least one honey-based medical prescription as treatment for each illness listed in the book. Honey was said to restore the *hun ol* or "the well-being of the hearts." Among these remedies, we find honey as a treatment for respiratory, digestive, circulatory and immune system disorders, and to soothe fevers and poisonous bites. It was also used to alleviate hunger and clear the mind of people in sickness.

The wonder worker responsible for the sacred honey is the *Melipona beechi*. Colloquially known in southern Mexico as the "sacred Mayan bee," it is known as *xunan kab* in the Mayan language, meaning "regal lady bee." *Meliponas* are a stingless group of bees of golden color with black stripes, smaller than their European counterparts but packed with a ferocious bite. Their honey production is considerably lower than that of Europeans' hives, producing only a liter of honey a year, in contrast to the 30 liters European ones can produce.

Unfortunately, many of the traditions that linked beekeeping and the Mayan culture are now lost. Due to the intrinsic relationship bees and religion had to their culture, a great number of their practices were forbidden during the Spanish inquisition. Not only were they prohibited, but many of their records and books were burned.

What was saved through manuscripts, books, the work of archaeologists and oral lore, tells the story of a pantheon deeply associated with bees. *Caab* was the Mayan word for both the world and honey. So, their *caab* and the netherworld were held by a giant ceiba, and connected them with the sky. The latter was held in place by gods called *bacabs*, represented with bee-like features and associated with the cardinal points. Each point was also connected with a particular colored bee and a special type of flower.

To keep the gods satisfied and to ask for the protection of beehives and their flowers, ceremonies and feasts were held during the fourth, fifth and

ninth months of the Mayan calendar. These ceremonies were also celebrated to ask gods for rain, good harvests and health for the owner of the milpas and the whole community. The gods were *Ah Mucen Caab*, *Noh Yum-Caab*, *Balam-Caab* and *Moc-Chi*. The latter three were bee-shaped deities that used bees to help other gods and keep their people in check. Among them, *Ah Mucen Caab* was the most relevant. Also known as the descendant bee, he was their god and protector of honey and its collection, and according to some archaeologists, he was related to the creation of the world. He gave bees to humanity for their care, and as so, bees represented a piece of a deity, producers of wax, of nutritious food and worthy of worship.

To properly take care of their bees, the Maya built artificial hives in hollow logs with easily removable lids made of clay. They would then place them under a palm roof or palapa to protect them from sun and rain. Hives would always face east so that bees would receive the first rays of sunlight at dawn and "wake up early to work." This is a tradition that is still practiced in southern Mexico.

Even though some of what made the Maya an intrinsically apicultural society is known to us, many of their traditions and practices were lost in time or are still waiting to be discovered. However, the profound impact that *melipona* bees, the *xunan kab*, had in their culture and modern Mexican beekeeping is undisputed.

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"Melipona beecheii" by gailhampshire is licensed under CC BY 2.0

Today, *Melipona beecheii* is an endangered species, and many of the practices that once supported it are now endangered too. Climate change, the destruction of its habitat, the excessive use of pesticides, infections and their displacement by European and African bees are causing irreversible damage to this once deity among bees.

However, growing global awareness of climate issues and the increasing level of recognition of the role of pollinators has prompted local organizations and associations to take steps towards a better understanding and protection of bees.

Mexico has some 1,900 bee species, 46 of which are meliponas, all of which are endangered.

In 2021, the Federal Beekeeping Law was passed, which recognizes the bee as a priority protection species. In addition, public policy initiatives such as the National Strategy for the Conservation and Sustainable Use of Pollinators, which will regulate the extraction, entry, purchase and sell of pollinators in Mexico came into operation.

More recently, a government-founded national forum entitled "Honey bees and beekeeping" was held last May 18 to educate beekeepers in new and beneficial practices and to educate laymen in the appreciation and value of bees, particularly melipona bees. This forum will continue to be held annually during World Bee Day.

Public action has been one of the most impactful factors in the defense of the melipona bee. Civic associations and NGOs have taken on the task of educating the public and protecting bees more directly. Some of them,

like the *Iniciativa para la Naturaleza* or *INANA*, have developed localized networks of melipona beekeepers and promoted the construction of meliponariums throughout the country. These structures, based on traditional Mayan hives but modernized with modern knowledge, have gained popularity as sanctuaries for melipona bees in urban and rural regions.

Within cities, associations like *La abeja del barrio* promote "apitourism" to teach ordinary people the basics of apiculture and develop new beekeepers. *Abeja Negra SOS* helps relocate swarms and hives inside of cities to safer areas and to help develop their new homes.

All of these organizations, among many others, exist on a not-for-profit basis and rely on the support of monetary donations and the sale of honey-based products. They, as the Mayas once did, assume the mantle of the modern protectors of the regal lady bee. **BC**