Mad Honey Hunting in Nepal, Medicinal Properties and Its Rich History

Mad honey is a unique honey from an indigenous village of Nepal. The largest Himalayan honeybee produces mad honey by feed in on wildflowers and mainly rhododendron flowers. It is mainly found in countries like Nepal and Turkey.

The Gurungs, skilful local tribesmen use their mastery of ancestral honey hunting to collect the mad honey.

They dangle in the air between the towering cliffs, clutching to a rope and a ladder. The Gurungs have a rich history when it comes down to military service. And they show themselves with the same courageous spirit on the honey hunt.

Mad honey has been their staple diet, so they have grown up consuming it. Resultantly, they notice a surge in their physical and mental energies.

The Great Himalayan Giant Bees

Apis laboriosa, also known as the Himalayan giant honeybee or the Himalayan cliff honeybee, is the largest honeybee species in the world. The size can lead up to 3.0 cm (1.2 in) in length in adult bees.

It shows unique nesting habits, adaptations in high altitudes, and produces the rare mad honey with medicinal and psychoactive properties.

The bees like to grow and habitats in high altitudes, around elevations between 2500 and 3000 meters (8,200-9,800 feet).

They adapt to a unique nesting strategy to build their hives in trees or on buildings. They construct their large, single-comb nests under rock overhangs on the southwestern faces of vertical cliffs. In this way, they can protect the colony from predators and harsh weather conditions.

Apis laboriosa was once thought to be a subspecies of *Apis dorsata*, The giant honeybee. However, in 2020, researchers confirmed that it is a separate species. This was based on its unique behaviours and the fact that it does not interbreed with *Apis dorsata.*

Unlike *Apis dorsata*, which is known for nesting in a variety of locations, *Apis laboriosa* is strictly a cliff-dwelling bee.

These bees take care of their nests in a way that helps them survive tough conditions, and their swarming habits let them move when needed.

Mad Honey Properties

Mad honey has an array of medicinal benefits because of its chemical composition. One main compound that makes it stands out is the grayanotoxin.

Grayanotoxin

Grayanotoxins (GTXs) are a group of neurotoxins found in certain plants like species of Rhododendron and Leucothoe grayana. The nectar in rhododendron species naturally contain grayanotoxin, and this compound is found in mad honey.

The Rhododendron family have around 750 species, many of which contain grayanotoxins. These toxins are found in the leaves, nectar, flowers, and pollen. Five species of Rhododendron are known to grow in Turkey, with R. ponticum (purple flowers) and R. luteum (yellow flowers) being the most well-known.

These species can be seen from sea level up to altitudes of 3,200 meters. Mad honey history dates back to centuries in the past, where people immensely benefitted from its unique properties.

Rhododendron plants contain a natural toxin in their leaves, nectar, flowers, and pollen. The giant honeybee (*Apis dorsata laboriosa*) gathers nectar and pollen from these plants, which results in the production of mad honey.

Now there are 18 grayanotoxin forms, with their own distinct effects and benefits. Grayanotoxins I-IV are the most well-known variants, each varying in toxicity levels. Grayanotoxin I, in particular, affects the atrioventricular conduction and sinoatrial nodes, leading to serious heart problems. In 1912, German phytochemist Otto Tunmann isolated grayanotoxin I specifically because of its toxic properties.

Mad Honey History

The Nepal and Turkey share several mad honey related historical anecdotes. Historical references trace its impact back to ancient times. In Chronicle Anabasis, Xenophon mentioned about the dangerous aftermath effects of mad honey.

In 401 B.C.E, a Greek army stole the Turkish honey after they defeated Persians in Trabzon. They consume the mad honey to celebrate their victory. However, their amusement didn't last long. Soon they began vomiting, some faced diarrhoea and unconsciousness.

Similarly, there is also an ancient anecdote where the Persian used mad honey to their advantage.

In 67 B.C.E, the Romans almost defeated Persian in Trabzon, which was a Persian territory. The Persina King Mithridates came up with a plan, he was well-versed in poisons. So, he used his knowledge and offered mad honey to the Romans.

To their dismay, the Romans overconsumed the mad honey in excitement, without knowing the repercussions. Hours later, they turned feeble and couldn't even lift their finger. They soon died, and the Persians won.

During 18th century, about 25 tongs of mad honey were exported every year from the Black Sea Region to Europe. The French called it "miel fou" (crazy honey). And often they stirred it into beer or spirits to give their drinks an extra kick.

Back in the 1800s, beekeepers from Pennsylvania brewed a mix of mad honey and liquor and sold it in New Jersey as "metheglin," a kind of mead. At first, it gave a pleasant buzz, but it didn't take long for things to go south.

Botanists of the time took notice, warning about its risks. In fact, Gleanings in Bee Culture documented several cases of soldiers in the South getting sick from mad honey in 1875.

The Honey Hunting Process

One of the reasons mad honey is so special is because it's seasonal, it's only collected twice a year, in spring and autumn. And it required teamwork and coordination. Each hunter has a task to follow during the process so that they can collect mad honey smoothly.

Preparation

Before setting out, the community performs a ceremonial ritual to honor the cliff god or the bee spirit “Rangkemi” and seek blessing for a safe and successful hunt. They offer rice, flowers, and incense, sometimes a sheep at the base of the cliffs. Also, they chant their mantra to ask for forgiveness to the Rangkemi, if they have caused any disturbance to the bees knowingly or unknowingly.

Eventually, they assemble their essential tools for the hunt.

Parang (Rope Ladder): A bamboo ladder used to scale cliffs.
Tokari (Bamboo Basket): A hand-woven basket for collecting the honeycomb.
Uab (Bamboo Rope): A well-built rope to secure tools and baskets during the climb.
Koili Chho (Hook): A hook to tie up the rope ladder to the cliffside.
Saaton Stick: A tool to adjust the position of the bamboo basket during the harvest.
Tango (Bamboo Pole): A long pole cut the honeycomb from the hive.

With the tools on hand, they trek through dense forests in the evening to reach the cliffs, where they meet the wild honeybees.

They smolder thick smoke to calm down the bees, and they become more confident in getting near the beehive to protect themselves from the bee stings.

Ascent

With these tools in hand, the hunters start their climb up the steep cliffs where the wild honeybees build their hives. The cliffs are often over 200 meters high, which is a tough ascent both challenging and dangerous. They use rope ladder to scale the heights with precise and aligned movements.

When honey hunters move to cliffs far from their villages, they often hire locals to keep an eye on the hives. Once the wild bees arrive, it takes about 20 to 45 days for them to produce honey. They produce mad honey depending on their health and activity levels. This period coincides with the blooming of rhododendron flowers in April and May.

Harvest

The hunters use their tools to extract the honey at the edge of cliffs. They use long sticks to pierce the exposed honeycomb by carefully lowering it into bamboo baskets. Then they fill baskets and lower to the ground. The honey hunters squeeze the honeycombs, filter them through bamboo sieves, and store them in jars.

Modern Tools and Technology

Technological progress has introduced tools like plastic ropes, buckets, and modern beekeeping equipment for mad honey hunting for better safety and efficiency.

But some traditional hunters remain loyal to their traditional bamboo-based gear.
One hunter said, "The ropes available in the market nowadays may be stronger than those made from bamboo shoots, but they aren't as durable." To him, the bamboo ropes are what he needs for a secure and reliable hunt.

Conservation and Challenges

In recent years, honey hunters in Nepal have seen a concerning decline in the bee populations and a significant drop in honey productions. The experts identify several key factors causing this issue:

Pesticide Use

The broad use of chemical pesticides in agriculture has worsen the situation. These chemicals not only reduce bee populations but also repel them from fields, disrupting their foraging patterns.

Studies have shown that pesticides can harm bees both as larvae and adults, leading to decreased foraging activity and pollination services.

Climate Change

Shift in weather patterns have caused irregular rainfall, which disrupts the flowering cycles of rhododendrons. Research shows that climate change has caused rhododendrons in the Himalayas to bloom earlier than usual.

Now the flowers bloom somewhere from early February to mid-March, instead the traditional period in Falgun (February to March) This misalignment between bee foraging periods and flower blooming times weakens bee colonies, resulting in fewer hives and reduced honey production.

Deforestation and Habitat Loss

Due to the construction of roads and hydroelectric dams, there's a widespread destruction of forests that disrupts the natural habitats of these bees.

Sustainable Solutions

Sustainable Solutions Mad honeybees and honey hunters play a great role in keeping and preserving the ecosystem's biodiversity in the Nepalese Himalayas. Native honey hunters harvest honey in ways that do not destroy the environment significantly.

Ethical Harvesting Practices

Gurungs are always certain about ethical harvesting. They make sure there is enough honey left for the bees. This action portrays great respect for nature and an acceptance of bees' contributions to pollination and the ecosystem.

However, as demand keeps increasing and commercialization catches up, maintaining such ethical practices in check has proven challenging.

Medicinal Mad Honey co-founder Rashmi Kandel highlights that efforts must be made to keep the traditional mad honey-hunting persisting while the conservation is intact. "We try to stay traditional because it has lasted for so long. The Gurung honey hunters know how to take just what they need without killing the bees or their ecosystem," she states.

They are avoiding pesticides and minimizing modern farm machinery to allow nature to be in balance. Also, taking such measures allow bees to replenish the population and continue their pollination. "It's not about only harvesting honey; it's also about keeping this practice alive in a way that's good for both nature and community.

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