

## Beekeeping in Yunnan

云南养蜂

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I have been studying beekeeping in China since 1990, and this May I visited Yunnan to find out more about the bees there, and the way they are managed, and the different honeys they collect.

There are six different races of bees in Yunnan:

1. First, there are the Italian Bees (意大利蜜蜂) *Apis Mellifera Ligustica Spin.* These are the bees which are used in Europe, America and Japan. In the case of Yunnan, they transport the hives into the province at the end of November or early December for breeding purposes during the blooming period of the early maturing Oilseed Rape (油菜). At the end of January or in early February, the hives are all moved out to the Chengdu (成都) Plain of Szechuan (四川省) to forage the Rape fields there. (When I visited Yunnan in May there were no Italian Bees there at all.) At the end of March, the hives are transported up to Shaanxi (陕西) to forage the Rape, Linden and Purple Alfalfa. In June they are in Qinghai (青海) for the rape, or Ningxia (宁夏) or Gansu (甘肃省) for the mountain flowers, or in Inner Mongolia (内蒙古) for the Komarov Swallowwort (老瓜头). During the summer they are in Xinjiang (新疆) for the cotton. At the end of the year trainloads of bees are transported back to Yunnan. This is known as the Western Route of Chinese migratory beekeeping (中国转地养蜂).

2. Second, there are the Giant Bees (大蜜蜂) *Apis Dorsata Fabricus* which live in the mountains of South Yunnan, between 1000 and 2000 metres above sea level. They are also found in North Vietnam, Laos and Thailand. These bees live in trees, often with hundreds of colonies in the same area. One colony can make up to 65 kilograms of honey in a year. To harvest the honey the village people climb the tree with a bucket and a sharp knife and a cigarette. (The smoke from the cigarette calms the bees.)

3. Next there are the Giant Black Bees (黑大蜜蜂) *Apis Laboriosa Smith* in West and South Yunnan, which build their nests on cliffs 1000 to 3600 meters above sea level. These are beautiful bees. The villagers, or "honey hunters", climb the cliffs to harvest the honey, in the same way as with the *Dorsata*.

4. Fourthly, there are the Little Bees (小蜜蜂) *Apis Florea Fabricus* which make only a small amount of honey but which are important as pollinators of *Amomum Villosum*, a herb that is used in Chinese medicine.

5. Fifthly, there are the Little Black Bees (黑小蜜蜂) *Apis Andreniformis Smith*, which are similar to the Little Bees.

6. And last, and most important in Yunnan there are the Chinese Bees (中华蜜蜂) *Apis Cerana Cerana Fabricus* which are kept in hives, but are not

transported out of the province. These bees have a longer foraging period than Italian Bees, a shorter tongue length which means they visit different flowers, and they are good at foraging scattered nectar resources. They are also particularly resistant to disease. They do not make any Royal Jelly.

Most of the honey they collect in Yunnan comes from Milkvetch (紫云英) called れんげ in Japanese, and from the flowers of Rubber Trees (三叶橡胶树). The most delicious honey in Yunnan comes from Yebazi (野坝子) *Elsholtzia Rugulosa Hemsl* which grows on grasslands and roadsides, especially near to the town of Chuxiong (楚雄) in Western Yunnan. The Yebazi blooms from early September for 60 days and in a good year a colony can make 40 to 50 kilograms of honey. Strange to say, it blooms on the higher mountain slopes before it blooms on the lower slopes, and it blooms in the north before it blooms in the south.

On this trip I visited the famous Botanical Garden at Ganlanba in Xishuangbanna (西双版纳的橄榄坝的热带植物园) Here, there were Rubber trees with cups attached, collecting the sap. I think that the honey flow may have come to an end. In the tropical forest I could hear the hum of bees and smell the honey. Later in the market in Jinghong (景洪) I bought some lychee honey which was well on the way to becoming wine.

Back in Kunming (昆明) I visited the Cerana Bee Research Institute at the Agricultural University of Yunnan (云南农业大学中蜂研究所) where they were very kind. The head of the institute Prof Kuang Bangyu (匡邦郁) was from Szechuan. His assistant Tan Ken (谭垦) spoke English well and is due to attend the Apitherapy (Bee sting therapy) Conference at Tamagawa University this October. Members of the Research Team included Zhang Xuewen (张学文), a member of the Yi minority people from Chuxiong where the Yebazi comes from, Liu Yiqiu (刘意秋) from Hunan, and Prof. Kuang's son. The next time I visit Yunnan I would like to harvest the honey from the *Apis Dorsata*!

The wild bees in Japan are a little bit smaller than the Chinese Bees. Nevertheless there is a theory (based on the work of Hiromi Sasagawa of Tsukuba University) that they may originally have come from Yunnan. This is because the Honeybee Orchid (金稜边) from Yunnan, attracts the Japanese bees not with its nectar, but by mimicing their Nasanov Pheromone (the pheromone which leads bees to come together.) This is a very unusual case. It could however be that the honeybee orchid came from somewhere else.... (爱知大学教養部助教授)