

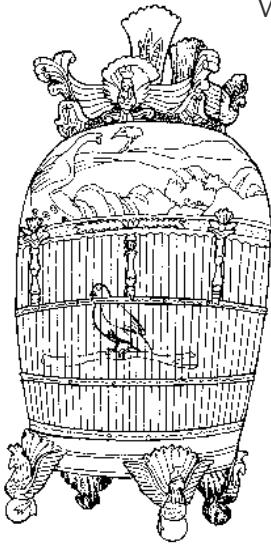
Oecophylla smaragdina Fabricius

Kroto, ant larvae and pupae

Indonesian case by Nicolas Césard and Irdez Azhar

Singing praise for kroto: The bird food delicacy

'Kroto' is the Javanese name given to a combination of larvae and pupae from the Asian weaver ant (mainly *Oecophylla smaragdina*). This mixture is well known to Indonesian bird lovers and local fishermen, with the ant larvae being popular as a fishing bait and also, as a dietary supplement to improve the performance of songbirds. Bird fanciers treat their favourite pets with the protein and vitamin rich kroto for the satisfaction of listening to their enhanced warbling or when preparing them to challenge other birds in singing competitions.



Throughout Java, caged birds sing beautiful songs, creating an atmosphere of peace and happiness within their owners' households. The breeding of songbirds also brings social recognition to the owners.

and competition for kroto has increased in recent years, some areas are being over-harvested and as a result collectors are finding fewer larvae. To fill their baskets they then work on a much shorter rotation of host trees, which in turn, affects the ability of the ant populations to recover. With less intense harvesting, the ants normally rebuild and recoup quite quickly.

Weaver ants are found from India to Australia and throughout the Indonesian archipelago, within a wide range of habitats* including coastal areas, secondary forests* and plantations. They are well known for being aggressive predators and for building nests in trees. These ants can invade almost any type of tree but tend to prefer fruit trees, such as the jackfruit or mango. A given colony may occupy various nests in a single tree or even several trees. Located in one of the highest nests is the queen, whose eggs are distributed to the other colony sites nearby. Weaver ants' nests are among the most complex of ant nests, with the *Oecophylla* species using the well developed silk glands of their larvae to weave together a nest of living leaves – hence their name.

Ant nest harvesting

Throughout the year, kroto is harvested and sold on the islands of Java and Sumatra. Collecting kroto is a solitary job, which begins with the identification of host trees*. During the dry season, the resource is less abundant but during the wet season, the 'rice like' smaller larvae are more common, of a better quality and more highly valued. Because demand



As the ants are very active during the day, collection tends to take place early in the morning, with a collector harvesting perhaps 6-8 trees within a 1 hectare area. A large nest of fresh leaves may contain 30-60 gm of larvae and during the high season (July-August), collectors may harvest up to 2 kg per person.

Nests that are too small, too high or otherwise difficult to access are likely to be left alone. However, collectors remember the locations for future expeditions, waiting a couple of weeks for the ants to change to more accessible sites or build new nests.

Off to market

Have you ever sat next to a passenger on a bus holding a mass of wriggling larvae?

As kroto can only be kept fresh for two days, traders often transport boxes into the city on a daily basis. Due to increasing demand and economic necessity, a local trader may take 10-30 kg a day to the markets. They also take some dried kroto, which is produced by collectors and can be kept for six months, but it sells at half the price of fresh supplies.



A bamboo stick more than 5 m long is used to pierce and burst open a nest, and the larvae are then shaken into a conic paddy bag hanging beneath the stick. Being careful not to be stung, the collector then repeats this process at several host trees.



Up to 60% of the initial collection may be lost during transportation from the field to the house or during sorting. The fresh kroto requires little processing other than cleaning and grading.

The rapid deterioration of fresh produce and the need for immediate transport represent the biggest hurdles in marketing kroto. During the high season, traders pay collectors US\$ 1.20–1.40 per kg and then sell to merchants at US\$ 1.60–1.70 per kg, leaving little profit after transport costs. The Jakarta markets sell around 100 kg of kroto a day at US\$ 3.50–5.00 per kg, making the merchants the main beneficiaries in the kroto trade. To make more money, some collectors sell their daily harvests directly to small retailers, who are often willing to pay more for fresh kroto.

According to Muslim law, kroto might be regarded as a repulsive resource that should not be eaten either by people or animals and the money obtained from its sale is considered as 'dirty money'. However, for many collectors, kroto represents an important or principal source of income and is regarded as one of the few ways poor people can earn money from a free resource. Collectors use the money for subsistence needs (to buy food, clothes, school books, etc.) or to save for harder times. Farmers often collect the resource as well, as a way of earning some extra money in between the two rice harvesting seasons.

At the homes of local traders, who buy most of the harvest, collectors separate the remaining ants and debris from the larvae and pack the kroto into a 1 kg bamboo box.

