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A multidimensional view of weaver ant, *Oecophylla smaragdina***Deepak. S¹*, Rashmi M. A² and Abraham Verghese³**¹Directorate of Plant Protection, Quarantine & Storage Faridabad, India 121001²Regional Plant Quarantine Station, Bengaluru 560024, India³International Phytosanitary Research and Services, Former Director ICAR-National Bureau of Agricultural Insect Resources and Former Head, ICAR-Indian Institute of Horticultural Research, Hesaraghatta, Bangalore, 560089, Karnataka, India***Corresponding author: deepaksihimoge@gmail.com**

The red ant, *Oecophylla smaragdina* Fab. (Hymenoptera: Formicidae) is also known as the weaver ant, green ant, Kerengga red ant, emerald leaf dweller, Indian tree ant or orange gaster. These ants are distributed in the tropical Old World from India to Taiwan and across Southeast Asia to Australia (Wetterer, 2017). Ants are arboreal and build leafy nests in trees like mango, jamun and jackfruit. The workers construct the nest by glueing the edges of adjacent leaves using the sticky silk secreted by the larvae. (Verghese *et al.*, 2013). Weaver ants are highly territorial and workers aggressively defend their territories against intruders. Weaver ants vary in color from reddish to yellowish-brown depending on the species. Colonies are founded by one or more mated females (Queens) (Peng *et al.*, 1998). Colonies can be extremely large consisting of more than a hundred nests spanning numerous trees and containing more than half a million workers (Wiki, 2022).

Tangy relish of weaver ant

Weaver ants are one of the most valued types of insects eaten by humans. Weaver ants

can be utilized directly as a protein and a food source since the ants (especially the ant larvae) are edible for humans and high in protein and fatty acids.

The hilly region of Malnad (western and eastern slopes of the Western Ghats of Karnataka) is known for the unique *chigli chutney* (delicacy) made of the weaver ant, *Oecophylla smaragdina*. It is a unique recipe of food prepared in various parts of the country (Karnataka, West Bengal, Jharkhand, Bihar, Chhattisgarh, Andhra Pradesh, Assam, Himachal Pradesh, Manipur, Nagaland, Tripura and Meghalaya) also. The leafy nests are harvested before sunrise and the ants are roasted along with salt, grounded with garlic, bird-eye chili, onion, coconut and spices. This spicy and tangy relish is a winter delicacy that contains formic acid, protein, calcium, vitamin B₁₂, zinc and iron that boost the immune system (Deepak, 2022). Chutney is also relished by Gond tribals of Bastar (Chattisgarh) and sold in the local market of Jagadapur with name '*Chopada*' (Pers. Comm: Dr. Jayalakshmi). In Thailand, queen

and eggs of the ant are sold as canned products through ecommerce platform.

As medicine

The Indian healers in Chhattisgarh prepare oils in which they dip the collected ants. After 40 days, oils are used externally to cure rheumatism, gout, ringworm or other skin diseases, and also as an aphrodisiac (Oudhia, 2002).

As pedator

Records show that in China, *Oecophylla* nests were introduced in citrus orchards to control the pests of citrus since AD 300, and from then on are being utilized for biological control in fruit plantations in Australia and Asia. Further, it was also observed that, introducing *Oecophylla* ants in cashew reduces the menace of the tea mosquito

bug, *Helopeltis antonii* (Hemiptera: Miridae). Keeping this in view, methods of boosting *Oecophylla* nests in orchard plantations is gaining momentum in crops like cashew, mango, citrus, coffee, cocoa and coconut (Verghese *et al.*, 2013).

As pest



Studies indicate that the presence of *Oecophylla* colonies has negative effects on the performance of host plants by reducing fruit consumption by mammals and birds and thereby reducing seed dispersal and also lowering the flower-visiting rate of pollinators. Weaver ants protect sap-feeding insects from which they collect honeydew. Further, by protecting these insect pests from predators they increase their population and increase the infestation of tree/host (Donald, 1988 and Kazuki *et al.*, 2004)



Fig. 1 Nest of *Oecophylla smaragdina*
PC: Basile Morin (Wikipedia)



Fig. 2 Ant chutney
PC: Mangalore today (weaver ants)

	
<p>Fig. 3 Canned weaver ant eggs PC: Thailand unique</p>	<p>Fig. 4 Canned queen weaver ants PC: Thailand unique</p>

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