

Weaver ants (*Oecophylla smaragdina*, Hymenoptera: Formicidae) as friends improving tree crops.

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Abstract:

Weaver ants are the social insects belong to order Hymenoptera and family Formicidae They are very famous for their unique nest building behavior, where the workers construct the nest by weaving together the leaves by larval silk. They feed on small insects and supplement their diet with carbohydrate- rich honeydew excreted by small insects. Adult ants are red brown in color. Body shows three distinct parts, head, thorax and abdomen. The ants live on trees, where it built a nest, in size between that of a man's head and his fist, by bending the leaves together, and gluing them with whitish substance, Eyes are rounded and bigger, antenna twelve segmented, Weaver ants are one of the most valued types of insects eaten by humans. Weaver ants have the potential to control agricultural pests, as *Oecophylla smaragdina* is found in Australia, India, and South-East Asia.

Keywords: Honey dew, silk, predators, nest,

Material and Methods:

I have observed total twenty nest in different farm areas in the Maharashtra and observed the behavior, ecology and daily routine of these ants with their different casts.

Discussion:

Weaver ants are predators when these feed on herbivorous pests, biological controls improved with to potential to increase crop yield. These ants have the potential to control the agriculture pests across many countries *Oecophylla smaragdina* has been recorded to control over 50 pest species in eight different horticultural crops. These ants successfully manage pests in some situations. These feed on their host plants, harvest honeydew producers, parasitoids and pollinators. Weaver ants use silk produced by their larvae to build their nests. this is very unique characteristics of these ants' behavior. This paper study deals with the behavioral study, ecology, morphological character of weaver ants. Weaver ants nest are always on the branches of the tress with leaves and shoots adhered to the silk nest, and generally soccer-ball size, spherical shaped. In the nest near about 60000 individuals are observed, many queens and workers are seen frequently in the nest. Larvae are very important in the nest formation by

producing the silk and one white layer of silk is present in the nest. Worker construct the nest by weaving together leaves using larval silk. Their colonies are very large. They use living leaves when they construct their nest. Colonies are very huge, large and polydomous. Colonies are usually single- Queened, Workers are polymorphic. Two main models have been proposed for understanding colony odor in social insects, the “Gestalt “model and the “Individualistic “Model (CROZIER & DIX 1979) (CROZER & PAMILO 1996). The Gestalt model is widely accepted. Weaver ants generally eaten by humans because they are the rich source of protein and fatty acids, they are recognized as biological control agents in tropical tree crops as they are able to protect a variety of crop against many different insects. in this way they are used indirectly as an alternative to chemical insecticides.

Fig. *Oecophylla smaragdina*



Fig. Nest on Lemon tree





Fig. Worker constructing the nest by larval silk

Result and conclusion:

Oecophylla smaragdina used in citrus as a fruit quality improver and a biological control agent they never effect on farmers’ income, use of these ants offers benefits in terms of a

better environment. They are best bio indicator for rain fall and recognize as a friend of farmer,

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