

SEASONAL PATTERN IN THE TERRITORIAL DYNAMICS OF THE ARBOREAL ANT  
*OECOPHYLLA SMARAGDINA* (HYMENOPTERA: FORMICIDAE)<sup>1</sup>

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A 30-month field study on territorial dynamics of *Oecophylla smaragdina* (Fabricius) (Hymenoptera: Formicidae) colonies in Varanasi, India, revealed a regular seasonal pattern in territorial organisation. Each colony exhibited a circannual rhythm pertaining to the size of the central territory (nesting trees) and the secondary territory (ground area). Incorporation of new nesting trees in the central territory showed a major peak in September and a smaller peak during March-April. In each colony, only one tree, located near the centre of the territory, was used continuously for a maximum duration (28 and 30 months in colony I and II respectively). In both the colonies, trees located at a distant from the centre of the colony territory were found to be incorporated in the central territory, during March-April and/or September each year. Ground area used by each colony was largest during September. The circannual rhythm of territorial organization may be related to the brood development and food requirements of the *Oecophylla smaragdina* colony. Thus, territorial expansion during September, each year, may be a fine-tuned evolutionary adaptation of the growing colony to the availability of insect prey during the southwest monsoon rains.

**Key words:** Arboreal ant, *Oecophylla smaragdina*, territorial dynamics, circannual rhythm, polydomous nest organization