

RAGHAVENDRA GADAGKAR, PhD

SOCIAL REGULATION OF REPRODUCTION IN A TROPICAL INSECT SOCIETY

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Photo: Souvik Mandal

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Social insects such as ants, bees, wasps and termites live in colonies consisting of one or a small number of reproductive kings and queens, and a large number of non-reproductive workers. On the one hand such reproductive caste differentiation is an evolutionary paradox. But on the other hand, it is also a unique example of the social regulation of reproduction. In this talk I will focus on the latter phenomenon and illustrate our attempts to understand the regulation of reproduction in the tropical primitively eusocial wasp *Ropalidia marginata*. This model system is especially interesting because the regulation of reproduction is mediated by behavioural interactions and is rapidly reversible. It is also interesting because such regulation appears to happen with surprisingly little overt conflict.

Raghavendra Gadagkar is DST Year of Science Chair Professor at the Centre for Ecological Sciences and Founder Chair of the Centre for Contemporary Studies at Indian Institute of Science, Bangalore, India. He is the Non-Resident Permanent Fellow, Wissenschaftskolleg (Institute for Advanced Study) zu Berlin. He has established an active school of research in the area of Animal Behaviour, Ecology and Evolution at the Indian Institute of Science. The evolution of cooperation in social insects, such as ants, bees and wasps, is a major goal of his research. He has published 330 research papers & articles and two books - *Survival Strategies* (Harvard University Press, USA, 1997) which explains advances in behavioural ecology and sociobiology for non-specialists and *The Social Biology of Ropalidia marginata* (Harvard University Press, USA, 2001) which summarizes two decades of his research. He has received numerous awards and fellowships. He is an elected member of all three science Academies in India, the Academy of Sciences for the developing world (TWAS), the National Academy of Sciences USA, The American Academy of Arts and Sciences and the German National Science Academy, Leopoldina.