

INTERNATIONAL PHD COURSE

Impruneta, Florence, 1 – 6 November 2009

FROM SOLITARY TO SUPERORGANISM: THE EVOLUTION OF INSECT SOCIETIES

The societies of ants, bees, wasps, and termites range in size from a few individuals that form rather transient associations to huge and persistent colonies with millions of members that exemplify the most advanced forms of social life. They are characterized by sophisticated communication and cooperation among nestmates and, most fundamentally, some colony members specialize on reproduction, while others become sterile altruistic helpers. In the more advanced social species these reproductive and worker castes are morphologically and physiologically distinct, and this strict division of labour has ultimately contributed to the ecological dominance of social insects in many terrestrial ecosystems. At the same time, insect societies are vulnerable to exploitation by a wide range of social parasites, and reproductive conflicts between colony members can jeopardize social cohesion.

In this course we will explore the evolution of insect societies, from solitary and primitively social forms to complex and highly integrated "superorganisms".

The course combines lectures by renowned scientists in the field of social insect research with student presentations, paper discussion, group work and hands-on sessions on chemical communication and recognition. It will be mainly relevant to students working on social insects, but also to anybody with an interest in social behaviour and evolution.



Guest teachers

Prof. Jacobus J. Boomsma (*Univ. Copenhagen*)
Dr. Paul Eggleton (*Nat. His. Mus. London*)
Dr. Rita Cervo (*Univ. Florence*)
Prof. Laura Beani (*Univ. Florence*)
Dr. Donato Grasso (*Univ. Parma*)
Dr. Francesca R. Dani (*CISM – Univ. Florence*)
Dr. Leonardo Dapporto (*Univ. Florence*)

Organizers

Prof. Stefano Turillazzi (*Univ. Florence, Acc. Naz. It. Ent.*)
Dr. Patrizia d'Ettorre (*Univ. Copenhagen*)
Dr. Daniel Kronauer (*Harvard Univ.*)

Registration and fees

There will be a maximum of 20 participants.
Fees: € 500 (accommodation, coffee, tea, lunches, dinners and all course materials).
Credits: **5 ECTS**

To register send an e-mail to:
alessandro.cini@unifi.it

Deadline: 15 July 2009

The location is a residential conference centre near Firenze, not far from the Centre for Mass Spectrometry where part of the practical work will be carried out.
<http://www.villacesi.it>



Accademia Nazionale
Italiana di Entomologia



Università di
Firenze



Centro Spettrometria
di Massa
Univ. Firenze



Dept. of Biology
Univ. Copenhagen