LASI: The Laboratory of Apiculture & Social Insects

LASI studies honey bees, ants, and other insects that live in colonies with queen and workers including stingless bees and wasps. LASI is located on the campus of the University of Sussex and is part of the School of Life Sciences. LASI facilities include lab rooms, offices, workshop, hives and apiaries.

a, b. Honey bee workers; c. *Cephalotes* ant, Brazil; d. Nest entrance of Jatai stingless bees.

LASI moved to the University of Sussex in 2008. The University of Sussex has invested over £350,000 in providing facilities for LASI. The LASI director is Francis Ratnieks, the UK's only Professor of Apiculture. He received his PhD at *Dyce Laboratory for Honey Bee Studies*, part of Cornell University in the USA.

Research is carried out by the whole LASI team including professor, post-doctoral scientists, doctoral and masters students, undergraduates doing final year projects or summer bursaries, volunteers and visitors—over 25 people in total. LASI is the UK's largest honey bee and social insect research group.

a. The beautiful University of Sussex campus, in the South Downs on the edge of Brighton.

b. Lunch break one summer day in 2010 in the LASI garden with some of the LASI team. Good people who are committed to what they do are vital in science.

c. LASI's main lab with apiary and workshop behind. Coloured designs on the wall mark entrances of observation hives inside the building, & help reduce bees drifting between hives.

LASI carries out both basic and applied research. In basic research the aim is to understand how the animals themselves live. LASI basic research focuses on how workers coordinate their activities and use information so that foraging and colony life are well organized, how conflicts among colony members over who works and who lays eggs are resolved by worker and queen policing, and how guards recognize and react to intruders such as robber bees or wasps.

LASI's applied research is aimed at helping bees and beekeepers and is called *The Sussex Plan for Honey Bee Health & Well Being*. The *Sussex Plan* is breeding disease resistant hygienic bees that naturally remove infected individuals from their colony, decoding bee dances to find out where honey bees collect pollen and nectar and how this changes seasonally, determining which garden plants are good for bees, and helping design better urban apiaries.

a. Undergraduate students carrying out a final year research project on honey bee guarding.

b. Visit of St. Joseph's Primary School, Brighton, to LASI to learn about bees and ants.

c. TV chef Aynsley Herriott learning about honey bees from Professor Ratnieks using an observation bee hive as part of the 2011 BBC TV program *The Great British Food Revival*.

In addition to research, LASI trains the next generation of honey bee and social insect scientists. LASI has links to the wider community via the communication of science, to schools, beekeepers, the general public, and to educators and policy makers. LASI researchers run training workshops, give talks and write articles. LASI is a resource for the whole UK and overseas.

LASI Goals

* Research: to carry out basic and applied research on honey bees and social insects.
* Teaching: to train the next generation of honey bee and social insect scientists.
* Community: to extend knowledge via outreach to beekeepers and others, and to play an active role in the public communication of science.
* Conservation: to help conserve honey bees and other social insects.

University of Sussex
Life Sciences

LASI does research on honey bees and social insects, trains students, and provides outreach to beekeepers, schools, and the public. This Information Sheet was written by Francis Ratnieks, Professor of Apiculture. ©2011

www.sussex.ac.uk/lasi

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