



EC302 Aug 2:1

Plant-Animal Interactions (Ecology, Behaviour and Evolution)

Instructor

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Department: Centre for Ecological Sciences

Course Time: Mon, 2:30 - 5:30 pm

Lecture venue: CES Class room

Detailed Course Page: <http://ces.iisc.ac.in/new/?q=courses#C2>

Announcements

First Meeting: Monday 7th August, 2017 at 2.30 pm, CES Class Room, Third Floor, New Biological Sciences

Building

Brief description of the course

The sensory biology of the interaction between plants, their animal mutualists and parasites: vision, chemoreception, olfaction and multimodal signalling; energetics of plant-animal interactions; nectar, floral and vegetative scents and pollen constituents; stable isotopes in the study of plant-animal interactions; mate choice in plants; evolution of floral and fruit traits; phenotypic plasticity and inducible defences in plants; behavioural and physiological processes in generalist and specialist herbivores, pollinators and seed dispersers; co-evolutionary dynamics of symbiosis, mutualisms and arms races

Prerequisites

None

Syllabus

The sensory biology of the interaction between plants, their animal mutualists and parasites: vision, chemoreception, olfaction and multimodal signalling; energetics of plant-animal interactions; nectar, floral and vegetative scents and pollen constituents; stable isotopes in the study of plant-animal interactions; mate

choice in plants; evolution of floral and fruit traits; phenotypic plasticity and inducible defences in plants; behavioural and physiological processes in generalist and specialist herbivores, pollinators and seed dispersers; co-evolutionary dynamics of symbiosis, mutualisms and arms races

Course outcomes

"Students are exposed to the state-of-the-art in concepts, methodologies, and controversies in the subject matter of the course. They will learn how to think critically about the subject and to critique published material as well as online material available on the internet."

Grading policy

50% Project

50% Final Examination

Assignments

Concept Based

Resources

Chittka, L. and Thompson, J. D. (Eds.), Cognitive Ecology of Pollination- Animal Behaviour and Floral Evolution. Cambridge University Press, 2001.

Herrera, C. M. and Pellmyr, O. (Eds.), Plant-Animal Interactions: An Evolutionary Approach. Blackwell Publishing, 2002.

Baluska, F., and Ninkovic, V. (Eds.), Plant Communication from an Ecological Perspective. Springer, 2010.

Schaeffer, H.M., and Ruxton, G.D. (Eds.). Plant-Animal Communication. Oxford University Press, 2011.