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Τίτλος Διάλεξης:

Sexual Deception - Tricks in the
Pollination Biology of the
Mediterranean Orchid Genus
Ophrys

Ομιλητής:

Prof. Dr. Hannes F. Paulus, Head of
the Department of Integrative
Zoology, University of Vienna,
Austria

Ημερομηνία:

Παρασκευή 13 Φεβρουαρίου 2015

Ώρα:

11:00 πμ

Τόπος:

Αίθουσα Διαλέξεων ΙΓΕ

ΠΡΟΣΚΛΗΣΗ ΣΕ ΔΙΑΛΕΞΗ

Η διάλεξη θα δοθεί στην αγγλική γλώσσα

Abstract →



ΚΥΠΡΙΑΚΗ ΔΗΜΟΚΡΑΤΙΑ

ΥΠΟΥΡΓΕΙΟ
ΓΕΩΡΓΙΑΣ, ΦΥΣΙΚΩΝ ΠΟΡΩΝ
ΚΑΙ ΠΕΡΙΒΑΛΛΟΝΤΟΣ

ΙΝΣΤΙΤΟΥΤΟ ΓΕΩΡΓΙΚΩΝ ΕΡΕΥΝΩΝ
ΛΕΥΚΩΣΙΑ

Αρ. Φακ.: 5.29.01
Αρ. Τηλ.: 22 403 211
Ηλ. Ταχ.: loukia.vassiliou@ari.gov.cy

Τίτλος Διάλεξης: Sexual Deception –Tricks in the Pollination Biology of the Mediterranean Orchid Genus *Ophrys*
Ομιλητής: Prof.Dr.Hannes F. Paulus, Head of the Department of Integrative Zoology, University of Vienna, Austria
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Abstract

Orchids of the genus *Ophrys* (Orchidaceae) attract with their flowers in a species-specific manner flying males of wild bees (Apoidea), Scoliididae, some digger wasps (Sphecidae) and scarabaeid beetles by leading them to believe they are receptive females. The deluded males try to mate with the labellum of the flower as with a true bee female (pseudocopulation). To be successful in this kind of deception an *Ophrys* flower must imitate all relevant signals which are used by bee females to attract their males. Most important are imitations of optical, olfactory and tactile signals. As in the sexual behaviour of insects the most important signals are the olfactory compounds. In various analyzes and experiments it is shown that the smell of the *Ophrys* flower is a perfect imitation of the sexual pheromones of the pollinator's female. As this attraction is species specific pollinator males transfer *Ophrys* pollen only in a given *Ophrys* species. From an evolutionary point of view, the pollinator males act as pre-gamic isolation mechanisms. As there is a species rich diversity of wild bees, many *Ophrys* species could evolve, each specialized of a single bee species as pollinator. But bee males will learn very quickly to avoid these female like flowers. The presentation will show that an evolutionary answer to this learning behaviour is the high variability of the flower within a species and with further cleverness an *Ophrys* flower is working to get a maximum of pollination

Short scientific Curriculum vitae of Prof.Dr.Hannes F.Paulus

Place of Birth: Berlin, Germany
Nationality: Austrian and German
University: Department of Integrative Zoology, University of Vienna, Austria

- 1982-1991 German member of the European Committee for the “Conservation of Nature and Natural resources (Invertebrata)” of the Council of Europe in Strasbourg (France)
- 1996-1999 President of the Austrian Entomological Society
- 1999-now President of the Austrian orchid pollination working group (Vienna)

Education

- 1966-1971 Study of biology, chemistry and philosophy at the universities of Mainz (Germany) and Vienna (Austria)
- 1971 Doctoral thesis (Dr.phil.) at the University of Vienna (Austria): “Ultrastructures of the Collembolan Eyes (Insecta, Entognatha)”
Postdoctoral research on insect eye evolution in Vienna (DFG)
- 1972-1981 Assistant at Institute of Biology I (Zoology), University of Freiburg (Germany) (Prof.Dr.G.Osche, Evolutionary and Ecology Dep.)
- 1981-1991 Professor in Zoology, University of Freiburg (Germany); head of the Laboratory of electronic microscopy;
- 1991-2013 Full Professor in Zoology, Head of the Dep. of Evolutionary Biology at the University of Vienna (Austria); emeritus since Oct.2013.

Field work in Columbia, Nigeria, Kenya (bat pollination) and yearly comprehensive scientific field studies in many parts of the Mediterranean area (Greece, Italy, Spain, Tunisia, Cyprus, Turkey, Israel): pollination biology and systematics of the orchid genus *Ophrys* and other orchids, ecology and systematics of bees and beetles.

Several projects (Deutsche Forschungsgemeinschaft and FWF-Austria): Functional morphology, neurobiology and phylogeny of the arthropd eye; DFG- and FWF projects: Evolution of the mimicry system in the sexually deceptive orchid genus *Ophrys*.

Ophrys projects: -

- Evolution of the sexual deceiving genus *Ophrys* (FWF-project)
- Molecular phylogeny of the genus *Ophrys*, species problems, pollination biology, island biogeography, DNA fingerprinting -analyses of species of *Ophrys fusca*-aggr. (Orchidaceae) in Crete and Rhodos (Project of the Academy of Sciences in Austria)
- Visual ecology of sexually deceptive orchids (FWF, together with Johannes Spaethe, now Univ.Würzburg).

Scientific work:

1. Pollination biology: Sexually deceptive orchids of the genus *Ophrys*: pollination mechanisms (olfactory compounds, visual cues), pollinators as pre-mating isolation factors, systematics.
2. Pollination of European orchids: mainly *Ophrys*, *Epipactis*, *Dactylorhiza*, *Cephalanthera*, *Spiranthes*
3. Bumblebees as pollinators in phytocoenoses
4. Phylogeny, biology and systematic of beetles and bees

Η διάλεξη θα γίνει στην αγγλική γλώσσα

Προσκαλείστε να παρακολουθήσετε τη διάλεξη