PARIS LODRON UNIVERSITÄT SALZBURG

Lecture Series Environment & Biodiversity

Covert courtship signals of wild house mice

Priv.-Doz. Dr. Dustin J. Penn and

Sarah Zala, PhD

Veterinärmedizinische Universität Wien

Host: Dr. Sophie von Merten

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NLW-Faculty, Room 421, 2nd floor

Research focus:

Animal communication

sexual selection

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Abstract

Males of most species are not brightly colored, and though they may appear drab to us, many animals have evolved highly elaborate secondary sexual signals, which are outside the range of human perceptual abilities. Male house mice (Mus musculus), for example, produce a variety of sexual signals, which humans cannot detect. They excrete large amounts of protein (major urinary proteins or MUPs) in their urinary scent marks, which bind and control the release of small, volatile pheromones. Males dynamically adjust their scent marking and the quantities of MUPs that they produce depending upon their social status and mating opportunities. Once males encounter females, they also begin to emit ultrasonic vocalizations (USVs), which are outside the range of human hearing. During courtship, males' USVs become increasingly complex, and just before mounting, females begin to vocalize in tight synchrony with the males, as with duetting songbirds. Some evidence indicates that such chemical and acoustic signals both enhance male mating success; however, how and why they influence females is still unclear.

About

Dustin Penn’s and Sarah Zala’s research is focused mainly on sexual selection, sexual conflict, and animal communication, and particularly the mechanisms and functions of courtship signals. They have studied the behavior of domesticated and wild house mice for many years, in the laboratory and also in seminatural conditions.