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Home > ELSC Seminar: Dr. Yossi Yovel

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January 7, 2016

On the topic of: ?From Sensory Perception to Foraging Decision Making, the Bat?s Point of View?

ELSC cordially invites you to the lecture given by:

Dr. Yossi Yovel

Department of Zoology & Sagol School of Neuroscience Tel-Aviv University

On the topic of:

?From Sensory Perception to Foraging Decision Making, the Bat?s Point of View?

The lecture will be held on Thursday January 7th at 17:15, at ELSC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus.

Light refreshments at 17:00

Abstract:

Bats are extreme aviator and amazing navigators. Studying them in the wild however has always been challenging because of their small size and agile nature. In the past three years we have developed the ability to GPS-tag small bats, thus opening a new window to study their behavior in the wild. We equipped our miniature GPS tag with an ultrasonic microphone which allows monitoring the sonar and social communication of freely behaving wild bats. Because echolocating bats rely on sound emission to perceived their environment, recording audio on-board a bat enables us to tap into their sensory ?point of view? and infer their fundamental behaviours such as their foraging and their interactions with conspecifics. The task of inferring behaviour from movement is extremely difficult to do with non-echolocating wild animals and makes bats ideal models.

I will present results from three different studies demonstrate the power of GPS and audio monitoring: (1) I will discuss how a social bat species (Rhinopoma microphyllum) that searches for ephemeral prey benefits
from a collective search. (2) I will compare two close (Myotis) bat species that exhibit very different foraging strategies, probably resulting from the nature of the prey they seek. (3) I will show a control-theory model which explains sensorimotor guidance in bat flight and will discuss its application in the field.

Finally I will present our current effort to include more on-board sensors for the study of bats’ movement ecology including acceleration, EEG and more.

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