

SEEWIESEN

# LECTURE SERIES

FALL/WINTER 2018/19

Max Planck Institute  
for Ornithology



MAX-PLANCK-GESELLSCHAFT

THURSDAY | December 20th, 2018 | 13 P.M. | HOUSE 4 LECTURE ROOM

## MASAYO SOMA

Hokkaido University, Sapporo | Host: Department Gahr

### Messages of courtship dance displays in Estrildid finches: evolutionary and ethological aspects

Estrildid finches (family: Estrildidae) are characterised by great intraspecific and intersexual variations in sexual traits, which include courtship song, dance and ornamental colourations of plumage. These features are expected to help us answer some questions about the evolution of sexual signals: (1) why multiple ornaments evolve in socially monogamous species; and (2) why, in certain species, males and females share identical sexual traits. In particular, I have been trying to understand the evolution of courtship dance, relying on phylogenetic comparative approaches along with intraspecific behavioural experiments. The results from a series of phylogenetic comparative studies show that courtship dance and the other sexual traits evolved almost independently. However, it is possible that dance display can function as an “amplifier” of plumage colour patterns, such as dots or stripes that are often possessed by Estrildid finches. These two visual signals (dance and colour patterns) are conspicuous in species with intraspecific brood parasitism, suggesting that reproductive cost/effort should be a factor that explains the evolution of elaborative visual sexual signals. Supporting this idea, both comparative and behavioural studies also show that nest material holding display evolved for parental cooperation of nest building. Males and females of Estrildids often exchange an identical courtship dance, which presumably plays a crucial role in mutual mate choice, pair-formation and pair-bonding.

#### WHO IS MASAYO SOMA?

2007	PhD University of Tokyo, Japan
2007-2009	Lecturer, Rikkyo University / Tokyo Woman's Christian University, Japan
2007-2010	JSPS postdoc fellowship, Graduate University for Advanced Studies, Japan
2007-2010	Visiting researcher, Brain Science Institute, RIKEN, Japan
2010	Associate professor, Hokkaido University, Japan

#### SELECTED PUBLICATIONS

- Ota, N. Gahr, M. and Soma, M. 2018 Couples showing off: Audience promotes both male and female multimodal courtship display in a songbird. *Science Advances* 4(10): eaat4779.
- Soma, M and Garamszegi, L.Z. 2018 Evolution of patterned plumage as a sexual signal in estrildid finches. *Behavioral Ecology* 29: 676–685.
- Soma, M. and Iwama, M. 2017 Mating success follows duet dancing in the Java sparrow. *Plos One* 12(3): e0172655.
- Soma, M and Garamszegi, L.Z. 2015 Evolution of courtship display in Estrildid finches: dance in relation to female song and plumage ornamentation. *Frontiers in Ecology and Evolution* 3: 4.

CO-ORDINATOR Nicole Fritz | [nicole.fritz@orn.mpg.de](mailto:nicole.fritz@orn.mpg.de) | 08157 - 932 240