

SEEWIESEN

Max Planck Institute  
for Ornithology

# LECTURE SERIES

FALL/WINTER 2018/19

THURSDAY | OCTOBER 11, 2018 | 13 P.M. | HOUSE 4 LECTURE ROOM

## RETO BURRI

Friedrich Schiller University Jena | Host: Küpper Research Group

### Interpreting genomic landscapes of differentiation in the light of long-term linked selection

The last decade has seen an unprecedented quest for genome regions involved in adaptation and speciation that was usually based on the assumption that such genome regions can be identified as ones exhibiting accentuated differentiation. In this presentation, I showcase how accumulating empirical evidence together with longstanding theory force us to reconsider such an approach. In particular, I illustrate how processes unrelated to adaptation or speciation may confound our quest for genomic regions underpinning adaptation and speciation, and argue that a comparative population genomics framework that exploits emergent features of long-term linked selection can help overcome shortcomings of traditional genome scans for adaptive evolution.

#### WHO IS RETO BURRI?

- 2010** PhD University of Lausanne, CH  
**2011-2012** SNSF postdoctoral fellow Uppsala University, SE  
**2012-2016** Postdoc/Researcher Uppsala University, SE  
**2016-present** Lecturer Friedrich Schiller University Jena, D

#### SELECTED PUBLICATIONS

- Burri R 2017. Interpreting differentiation landscapes in the light of long-term linked selection. *Evolution Letters*, 1(3):118-131
- Burri R 2017. Linked selection, demography, and the evolution of correlated differentiation landscapes in birds and beyond. *Molecular Ecology*, 26(15):3853-3856
- Burri R, Antoniazza S, Gaigher A, Ducrest A, Simon C, The European Barn Owl Network, Fumagalli L, Goudet J, Roulin A 2016. The genetic basis of color adaptation in a ring-like colonization around the Mediterranean. *Evolution*, 70(1):140-153.
- Burri R, Nater A, Kawakami T, Mugal CF, Olason PI, Smeds L, Suh A, Dutoit L, Bureš S, Garamszegi LZ, Hogner S, Moreno J, Qvarnström A, Ružic M, Sæther SA, Sætre GP, Török J, Ellegren H 2015. Linked selection and recombination rate variation drive the evolution of the genomic landscape of differentiation across the speciation continuum in *Ficedula* flycatcher. *Genome Research*, 25(11):1656-1665.
- Ellegren H, Smeds L, Burri R, Olason PI, Backström N, Kawakami T, Künstner A, Mäkinen H, Nadachowska-Brzyska K, Qvarnström A, Uebbing S, Wolf JBW 2012. The genomic landscape of species divergence in *Ficedula* flycatchers. *Nature* 491(7426):756-760.

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