



Seewiesen Colloquia

Speaker invited by: Küpper Research Group

Thursday, March 09, 2017, 13h, in House 4, Lecture Room

Breeding system evolution in light of demographic sex-bias

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Sex ratio variation is a fundamental component of life history evolution. At conception, birth, and adulthood, the ratios of males to females have long been recognized by evolutionary biologists and human demographers as catalysts for social behaviour and population dynamics. Throughout human and wild animal populations, variation in the adult sex ratio is remarkable and has been shown to predict divorce, sexual aggression, and parental cooperation. Causality is unclear, but clues may become apparent through understanding the life history origins of the adult sex ratio. Join me as I attempt to unravel the demographic pathways that shape sex biases and assess their evolutionary consequences on parental and mating strategies. I will present recent results from a detailed demographic analysis across several species of *Charadrius* plover – a small ground-nesting shorebird found in a variety of ecosystems worldwide. Plovers exhibit a remarkable diversity in breeding behaviour: sex roles during courtship, mating, and parental care vary considerably among populations both between and within species. This behavioural variation, coupled with their extreme tractability in the field, allow the opportunity to confidently explore the sources and significance of demographic sex-biases among wild populations in light of breeding system evolution.

Who is Luke Eberhart-Phillips?

- 2013 – present Ph.D. candidate, University of Bielefeld, Germany
- 2012 Shorebird Biologist, US Fish and Wildlife Service, Alaska, USA
- 2010 – 2012 M.Sc. Wildlife Management, Humboldt State University, California, USA
- 2006 – 2010 B.Sc. Wildlife Ecology and Conservation, Humboldt State University, California, USA

Selected publications:

- Eberhart-Phillips LJ, Cruz-López M, Fernández G, Beamonte-Barrientos R, Székely T, Serrano-Meneses MA, Küpper C. The plight of a plover: viability of an important snowy plover population with flexible brood care in Mexico. *Biological Conservation*, (in print).
- Eberhart-Phillips LJ (2016) Dancing in the moonlight: evidence that killdeer foraging behaviour varies with lunar cycle. *Journal of Ornithology*, doi:10.1007/s10336-016-1389-4.
- Eberhart-Phillips LJ, Hoffman JI, Brede EG, Zefania S, Kamrad MJ, Székely T, Bruford MW (2015) Contrasting genetic diversity and population structure among three sympatric Madagascan shorebirds: parallels with rarity, endemism, and dispersal. *Ecology and Evolution*, 5:997–1010.
- Colwell MA, Pearson WJ, Eberhart-Phillips LJ, Dinsmore SJ (2013) Apparent survival of snowy plovers (*Charadrius nivosus*) varies with reproductive effort and year and between sexes. *Auk*, 130:725–732.