

SEEWIESEN

# LECTURE SERIES

FALL/WINTER 2019/20

Max Planck Institute  
for Ornithology

MAX PLANCK  
GESELLSCHAFT



THURSDAY | November 28th, 2019 | 13.00 | HOUSE 4 LECTURE ROOM

## DAN MENNILL

University of Windsor | Host: Brumm Research Group

### Vocal learning in wild birds: the dynamics of vocal learning in nature

In eight groups of animals, including humans and songbirds, juveniles are understood to learn vocalizations by listening to adults. Experimental studies of laboratory-reared animals support this hypothesis but we lack experimental evidence of vocal learning in wild animals. I developed an innovative playback technology involving automated loudspeakers that broadcast songs with distinctive acoustic signatures. My collaborators and I used this technology to simulate vocal tutors in the wild and conducted year-long tutoring sessions to five cohorts of free-living migratory Savannah Sparrows. We confirm that wild birds learn songs by listening to adult conspecific animals, and we show that they pass these songs on to subsequent generations. Further, we provide the first experimental evidence in the wild that the timing of exposure to tutor song influences vocal learning: wild Savannah Sparrows preferentially learn songs heard during both their natal summer and at the outset of their first breeding season. This research provides direct experimental evidence of song learning by wild animals and shows that wild birds learn songs during two critical stages of development early in life.

#### WHO IS DAN MENNILL?

Dan's Twitter: @dmennill

Dan's website: [www.uwindsor.ca/dmennill](http://www.uwindsor.ca/dmennill)

2003	NSERC Post-doctoral Fellow, Cornell Lab of Ornithology, Cornell University, USA
2005	Assistant Professor of Biology, University of Windsor, Canada
2018	Professor of Biology, University of Windsor, Canada
2017	Associate Dean of Science for Graduate Studies and Research, University of Windsor, Canada

#### SELECTED PUBLICATIONS

- Mennill DJ et al (2019) Eavesdropping on adult vocal interactions does not enhance juvenile song learning: an experiment with wild songbirds. *Animal Behaviour* 155:67-76.
- Mennill DJ et al (2018) Wild birds learn songs from simulated tutors: the dynamics of vocal learning in nature. *Current Biology* 28:3273-3278
- Mennill DJ et al (2012) Field test of an affordable, portable, wireless microphone array for spatial monitoring of animal ecology and behaviour. *Methods in Ecology and Evolution* 3:704-712.
- Mennill DJ & Vehrencamp SL (2008) Context-dependent functions of avian duets revealed through microphone array recordings and multi-speaker playback. *Current Biology* 18:1314-1319.
- Mennill DJ et al (2002) Female eavesdropping on male song contests in songbirds. *Science* 296:873-873.

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