

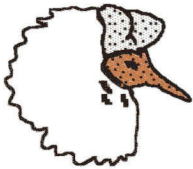


## Seewiesen Colloquia

Speaker invited by: Küpper Research Group

Thursday, December 01, 2016, 13h, in House 4, Lecture Room

## Evolutionary Ecology of Alternative Inversion Alleles and Reproductive Strategies of Ruff Sandpipers



David B. Lank  
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The maintenance of ecologically significant genetic polymorphisms remains a challenging field within evolutionary ecology. I will present genetic, physiological, ethological, and behavioural ecological mechanisms involved in maintaining three behavioural male morphs and individually distinctive breeding plumage polymorphism in the ruff, *Philomachus pugnax*, a lekking sandpiper. I will concentrate on: behavioural mating tactics of male morphs based on field and captive studies, field estimates of annual morph-specific mating success, and factors maintaining equilibrium levels among morphs, including considerations of lek size, differential fitness of female morphs, and potential mate-specific sex allocation by females. I conclude that strong sexually antagonistic intralocus conflict is likely operating at the morph-determining inversion.

### Who is David B. Lank

- 1980 PhD Cornell University, USA
- 1980 postdoctoral fellowship University of North Dakota, USA
- 1984 postdoctoral research The Ohio State University, USA
- 1984 Research Associate, Queen's University, Canada
- 1993 University Research Associate and Adjunct Professor, Simon Fraser University, Canada

### Selected publications:

- Bulla, M., M. Valcu, (13 authors), D.B. Lank, (59 authors), and B. Kempenaers. 2016. Defying the 24-h day: Unexpected diversity in socially synchronized rhythms of shorebirds. *Nature*.
- Küpper, C., M. Stocks, J. E. Risse, N. dos Remedios, L.L. Farrell, S.B. McRae, T.C. Morgan, N. Karlionova, P. Pinchuk, Y.I. Verkuil, A.S. Kitaysky, J.C. Wingfield, T. Piersma, K. Zeng, J. Slate, M. Blaxter, D.B. Lank and T. Burke. 2016. A super-gene determines highly divergent male reproductive morphs in the ruff. *Nature Genetics* 48: 79–83. doi: 10.1038/ng.3443
- English, W.B., D. Schamel, D.M. Tracy, D.F. Westneat and D.B. Lank. 2014. Sex ratio varies with egg investment in the red-necked phalarope (*Phalaropus lobatus*). *Behavioral Ecology and Sociobiology* 68:1939–1949. doi: 10.1007/s00265-014-1800-1
- Jamieson, S.E., R.C. Ydenberg and D.B. Lank. 2014. Does predation danger on southward migration curtail parental investment by female western sandpipers? *Animal Migration* 2:34–43. doi: 10.2478/ami-2014-0004
- Thomson, R.L., V.-M. Pakanen, D. Tracy, L. Kvist, D.B. Lank, A. Rönkä and K. Koivula. 2014. Providing parental care entails variable mating opportunity costs for male Temminck's stints. *Behavioral Ecology and Sociobiology* 68:1261–1272. doi: 10.1007/s00265-014-1737-4