**Sperm characteristics in three male morphs of ruffs**

The ruff *Calidris pugnax*, a lek-breeding shorebird, has unique mating system where three physiologically and behaviorally different male morphs compete for females (Taylor and Campagna 2016). Independent males (80 to 95% of the population) are dominant holders of display sites. Satellite males (5 to 20%) do not defend display sites, but their presence on the lek assists with female attraction and allows satellite males to “steal” copulations. Faeder males (<1%) mimic females in their plumage and smaller size and also “steal” copulations. Given these different mating strategies, it is likely that the sperm characteristics of the three morphs will differ as well. We thus wish to investigate sperm morphology and motility of ruffs, using captive populations in Vancouver (Canada) and Seewiesen (Germany).

We will first attempt sperm collection using abdominal massage (Vancouver, end of May 2018) to find out whether such samples contain plenty of sperm for biometry and motility measurements. In parallel, we will collaborate with prof. Lierz (University of Giessen) to test whether the novel sperm collection method (Lierz *et al.* 2013) is applicable in ruffs by attempting sperm collection on ruffs in Seewiesen (as soon as the birds are in breeding condition in 2018). We will then evaluate the two methods. In case the ‘novel’ method is superior, we will collaborate with prof. Lierz to collect sperm in Vancouver or Seewiesen ruffs.

Parties involved

Leading investigator: Marin Bulla (Seewiesen)

Seewiesen: Bart Kempenaers

Giessen: Michael Lierz

Vancouver: David Lank

Motility measurements: Tomas Albrecht (Czech University of Life Sciences)

Lierz M, Reinschmidt M, Muller H, Wink M, Neumann D. 2013. A novel method for semen collection and artificial insemination in large parrots (Psittaciformes). Sci Rep. 3:2066. 10.1038/srep02066.

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