

Breeding Displays in An Arctic Wader: Who Does Them and How Display Intensity Relates to Mate Acquisition and Nesting Success

Richard B. Lanctot, Brett K. Sandercock, and Bart Kempenaers

Advances in Ethology, Volume 32 (Supplements to Ethology), (Aug. 1997), page 212.

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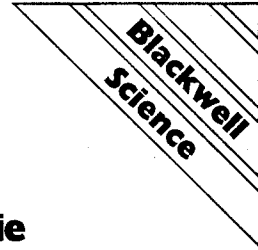
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Breeding displays in an Arctic water: who does them and how display intensity relates to mate acquisition and nesting success

RICHARD LANCTOT, B. SANDERCOCK & B. KEMPENAEERS
KLIVV, Savoyenstraße 1a, 1160 Vienna, Austria

Waders exhibit some of the most elaborate breeding displays of any avian group. Relatively little is known about the status of birds performing these displays and how display presence (or absence) relates to mate acquisition and nesting success. In 1996, we documented male display behaviour (aerial and ground) and breeding phenology/success in western sandpipers (*Calidris mauri*) near Nome, Alaska. Male aerial display rate (i.e. vocalisation rate) was correlated to male mating history with males from "experienced" pairs (i.e. male and female paired in previous year) vocalising less than males from "inexperienced" pairs (i.e. male and female not paired in previous years). Vocalisation rate was not affected by a male's prior breeding experience in an area (i.e. birds that used the same territory in previous years vocalised at similar rates as males establishing new territories). This suggests that male display is directed towards the social mate and that measures of display rate are unlikely to reflect male quality in a given year. In this population, pairs established feeding territories away from their nesting site. Males frequently chased other sandpipers (male and female western sandpipers as well as other species) from their feeding territories but showed little evidence of mate guarding (i.e. female - male distances did not change with nesting phenology). No extra-pair copulations (or attempts) were observed in this study. Experienced pairs began nesting significantly earlier than members of inexperienced pairs although no difference in nesting success (i.e. number of eggs hatched) was detected. Ongoing paternity analyses are investigating whether extra-pair paternity occurs, and if so, whether young from experienced pairs are more likely to be sired by the social father than young from inexperienced pairs.

Advances in Ethology
32



Supplements to Ethology
formerly Zeitschrift für Tierpsychologie

Contributions to the
XXV
International Ethological Conference
Vienna, Austria, 20-27 August, 1997

Edited by
Michael Taborsky and Barbara Taborsky

Konrad-Lorenz-Institut
für Vergleichende Verhaltensforschung
(KLIVV)
Austrian Academy of Sciences
Savoyenstrasse 1a, A-1160 Vienna, Austria

Blackwell Wissenschafts-Verlag Berlin · Vienna 1997
Oxford · Edinburgh · Boston · London · Melbourne · Paris · Tokyo