

Symposium 13 Mating patterns and ecology

Introduction

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Ecology has a long-standing tradition in explaining the evolution of social mating systems. Earlier studies have shown that the social mating system of a population is determined primarily by the ability of individuals to control access to mates. Such control is, in turn, determined by whether mates and/or critical resources are economically defendable or not, depending on their spatial and temporal distribution. However, extra-pair fertilizations, i.e. matings outside the social pair bond, have turned out to be widespread among birds. The genetic mating system of a species is therefore rarely the same as the social mating system. To date, most studies of genetic mating systems have focused on aspects of sperm competition, such as the reproductive anatomy and physiology of males and females, paternity assurance behaviors, and the costs and benefits of multiple matings. Nevertheless, ecological factors can also influence the occurrence of extra-pair fertilizations, for example by affecting the opportunity for extra-pair copulations.

In this symposium, we review the current knowledge

of the interactions between ecology and genetic mating systems in birds. In particular, we examine how habitat structure and quality, as well as breeding dispersion, density and synchrony, may influence extra-pair behaviors and fertilizations. Two of the four papers, which centered on the effects of food availability on breeding synchrony, copulation behavior and paternity in the house sparrow and lesser gray shrike, were unavailable for publication. Their abstracts are published in the Abstract Volume of the Congress.

Of the two that are published here, the first, by Donald Blomqvist, Herbert Hoi and Ingrid Weinberger investigates the interaction of habitat structure, paternity guarding and extra-pair paternity across the class Aves, finding that increased habitat density facilitates extra-pair copulations and that paternity guarding may take more than one form. The second, from Arild Johansen and Jan Liftjeld, explores climatic influences on extra-pair paternity in Norwegian Bluethroats, finding that EPP is facilitated by warmer temperatures at peak fertile periods. These papers should stimulate further studies linking ecology with extra-pair behavior.