NRESi

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RESEARCH COLLOQUIUM SERIES

Dr. Erin O'Brien

Ecosystem Science & Mgmt. Prog.
UNBC

Friday

Nov. 18, 2011

3:30 - 4:30

LECTURE THEATRE

7 - 158

DO FINE FEATHERS MAKE FINE BIRDS?

SEXUAL SELECTION AND THE EVOLUTION OF PLUMAGE ORNAMENTATION IN MALE BIRDS

Sexual selection is hypothesized to be the mechanism underlying the evolution of elaborate traits in many animals. This often takes the form of female mate preference driving the evolution of extravagant male displays, a pattern that appears to be particularly common in birds. Male ornamentation, however, frequently covaries with territory quality, such that observational studies cannot isolate male display quality from territory quality as objects of female social mate preference. Broods of many socially monogamous bird species also contain at least some offspring fathered by a male other than the social father. The high frequency of this extra-pair paternity, particularly among songbirds, suggests that to understand the evolution of elaborate male plumage displays we must consider selection acting *within* as well as *outside* of the social pair bond. Finally, the production of male plumage displays may be temporally and spatially disconnected from the expression of female preference for those displays. If displays signal the fit of a male's genotype to a specific environment, this creates the potential for signal unreliability, which may constrain the evolution of female preference. We would therefore predict male dispersal patterns that maintain signal reliability within ecological constraints. I will present results from experimental work on mountain bluebirds, conducted as part of my PhD research at UNBC, as well as preliminary findings of my postdoctoral research on great tits in Wytham Wood, UK, that address these questions.

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