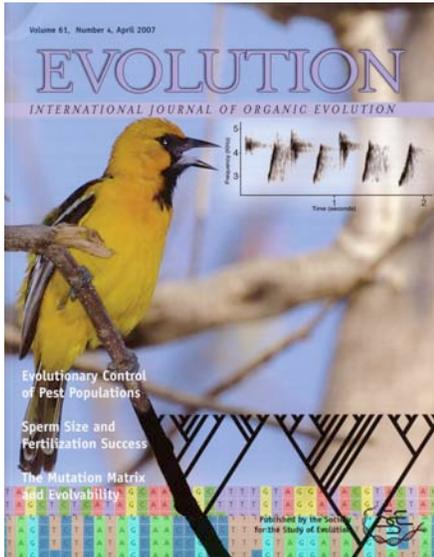


ALL STAFF AND STUDENTS ARE WELCOME TO ATTEND



# A.N.U. Seminar

S C H O O L   O F   B O T A N Y   A N D   Z O O L O G Y



Thursday 9 August 2007, 1pm

## Phylogenetic approaches to the evolution of plumage colouration in birds

Dr Kevin Omland

University of Maryland,  
Baltimore County

### Description

Detailed molecular phylogenies of closely related species provide an unprecedented opportunity to study how elaborate ornaments have evolved over time. Through reconstruction of ancestral character states, phylogenies enable us to separate convergence from similarity due to shared ancestry, and gains of plumage ornaments from losses. We have used these approaches in a series of studies on plumage evolution and speciation in New World orioles (*Icterus*). A genus-wide study of 44 individual plumage patches revealed evidence of repeated convergence and reversal. More recent work shows that specific colours and pigments are also gained and lost repeatedly, including a switch from using carotenoids to using phaeomelanin pigments. Finally, our data suggest that the ancestral oriole had elaborate coloration in both sexes, and that sexual dichromatism has repeatedly evolved due to LOSS of elaborate female coloration.

### Speaker

Kevin Omland is an Associate Professor at the University of Maryland. He uses molecular phylogenies to study the evolution of plumage colouration and speciation in birds.

Omland, K. E. and Hofmann, C. 2006. Adding color to the past: ancestral state reconstruction of bird coloration. Pp. 417-454. in G. E. Hill and K. J. McGraw eds. **Bird Coloration Volume 2: Function and Evolution**. Harvard University Press.

For further info about this Seminar please contact:  
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Seminars are held in the Botany & Zoology Seminar Room, Building 116, Daley Rd, ANU