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# Evolutionary genetics, life history constraints and a long-term study of red deer

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Gould Seminar Room (Room 235) Gould building, 116 Daley Road, ANU



Evolutionary biology aims to explain biological diversity. However the observation of both abundant genetic diversity and strong selection pressures within populations represents a fundamental paradox, given that the effect of selection should be to erode genetic variation. Here I use data from a long-term study of red deer in Scotland to test possible explanations for this paradox. Analysis of the genetic architecture of key life history traits reveals evolutionary constraints, or trade-offs, not apparent at the phenotypic level. Our understanding of the dynamics of sexual selection on weaponry (antlers) also changes when we consider genetic rather than phenotypic associations. My aim is to illustrate the value of studies of populations in natural environments for investigating evolutionary processes.

Presented by

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