Territoriality in *Odonata* and its Consequences on Behavioural Traits: A Phylogenetic Analysis

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Many, but not all, species of odonates (dragonflies and damselflies) exhibit territoriality. In species where it occurs, this territoriality is typically seen in males who defend oviposition sites from competitors and mate with females when they arrive. We describe the first systematic collation of the prevalence of territoriality in odonates. We follow it up with a phylogenetic analysis of its possible causes and consequences of territoriality. Our ancestral state reconstruction suggests that the common ancestor of all damselflies was non-territorial while the common ancestor of dragonflies was territorial. However, territoriality has been gained and lost several times throughout the phylogeny. Initial results indicate that, as expected, species with non-contact mate guarding tend to be territorial since this allows males to continue to defend their territories while ensuring paternity. However, contrary to our predictions, territoriality does not correlate with perching behaviour, which is energetically efficient and was predicted to have allowed more energy resources to be devoted to defending a territory. Additionally, territoriality does not correlate with exophytic oviposition, which is the faster oviposition method and was predicted to make territorial defence more cost-effective. Collectively, our results encourage a reassessment of our understanding of the ecological and evolutionary consequences of territoriality.