15
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Salle de formation du PRABI

SÉMINAIRE

Evolutionary causes and consequences of avian dispersal syndromes: the importance of individual variation in colonisation processes

Marion Nicolaus
Conservation Ecology, Groningen Institute for Evolutionary Life Sciences, University of Groningen, The Netherlands
Individual animals commonly leave their natal or current breeding patch to settle in a new breeding area ('dispersal'). These movements are essential for most species to persist in changing environments and/or expand their range. Strikingly, one recurrent finding in dispersal studies is that dispersers and non-dispersers of the same species or population differ consistently in a suite of morphological, behavioral and/or life-history traits ('dispersal syndromes'). Such covariation may emerge as a result of divergent selection on dispersers and non-dispersers or as plastic changes occurring during/after settlement.
Using a combination of descriptive and experimental data, my research investigates the evolutionary causes and consequences of dispersal syndromes in a wild pied flycatcher (Ficedula hypoleuca) of known pedigree. First, I show that dispersing individuals indeed possess distinct phenotypic attributes that may facilitate initial establishment in new habitats. Some of these phenotypic traits appeared to be correlated at the genetic level. Our population further shows a change in phenotypic means over time after initial establishment. I discuss that these changes more likely resulted from climate change than dispersal syndromes. Second, using a colonization experiment in combination with forced dispersal I show that newly established populations differ in aggression level and that this can be explain by adaptive plasticity. Overall, my research highlights that newly established populations are of non-random composition and that it is important to consider consistent individual differences and the architecture of phenotypes to better understand and predict population evolutionary potential, population response to selection and population dynamics.