



Seminar(i)

Evidence of a social tipping point in a colonial bird species

Dr. Josep Sardanyés

(Centre de Recerca Matemàtica; UAB)

How populations respond to both abiotic and biotic perturbations is a crucial issue in ecological systems, especially for social species. Furthermore, the long-term environmental and demographic data required to study such responses are scarce. Fitting dynamical models with an artificial intelligence algorithm to population fluctuations of the Audouin's gull over 40 years [1–4] reveals that feedbacks in dispersal after a cumulative perturbation driven by the presence of predators drive a population collapse. The collapse is well described by a non-linear function mimicking social copying, whereby dispersal made by a few individuals induces others to leave the patch in a behavioral cascade for decision-making to disperse. In providing the first evidence of copying for the emergence of feedbacks in dispersal in a social organism, our results suggest a broader impact of self-organized collective dispersal in complex population dynamics.

WHERE?	Seminar room – SS6 (Institutes bldg. floor -1) Presencial
WHEN?	Thursday 18/05/2023 – 12:00 h
LANGUAGE?	English