iomE · Faculty of Biology

Organismic and Molecular Evolution

Invitation to the Seminar series in Evolutionary Biology

Wednesday, 10. June 2026

Prof. Adele Mennerat

(Animal Ecology, University of Bergen, Norway)

Aquaculture-induced evolution of salmon lice: the effects of high host density on the life history and behaviour of a parasite

Abstract:

Human activities are creating novel environments that can drive evolutionary change. For parasites, one of the most dramatic examples is intensive agriculture, where hosts are maintained at high densities and in large, predictable populations. Such conditions can alter the selection experienced by parasites. The salmon louse (*Lepeophtheirus salmonis*) provides a powerful system for investigating these questions. The expansion of Atlantic salmon aquaculture has transformed the availability of hosts for this marine ectoparasite, creating conditions that differ markedly from those experienced on wild salmonids. In this seminar, I will present research examining how salmon lice respond to this anthropogenic change. Common-garden studies indicate that lice associated with aquaculture systems have evolved increased investment in early reproduction and greater virulence, consistent with the virulence-transmission trade-off hypothesis. I will also present recent experimental work showing how host density influences parasite performance, as well as new findings revealing extensive male movement among hosts and increased adult dispersal under high-density conditions. Together, these results show how intensive aquaculture can shape the life history and behaviour of parasites. More broadly, they highlight the potential for human-induced environmental change to influence host–parasite interactions and the evolutionary trajectories of infectious organisms.

(hosted by Prof. H. Kokko)

Please mind that this lecture takes place on Wednesday at 12:15 in the BZ 1 lecture hall (HS 00.187).

Talks are given in English. Everyone interested is welcome!

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