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The tale of two fish: intraspecific variation, evolutionary cascades, and secondary contact

LE JEUDI 28 MARS 2019 À 12 H 30

Pavillon Charles-Eugène-Marchand, salle Hydro-Québec (1210)

Human activity has profoundly shaped many aquatic ecosystems. In coastal ecosystems across eastern North America dams have blocked the migration of anadromous alewife, Alosa pseudoharengus, and created numerous landlocked populations. Alewife is an important species across eastern North America. The anadromous form moves between marine and freshwater ecosystems and is an important resource for communities and coastal predators, a species of conservation concern, and the target of considerable conservation and management activity. The landlocked form is resident in freshwater and is both an archetypal keystone species and an invasive species responsible for major changes in food web structure in lakes across eastern North America. Isolation of landlocked populations caused them to diverge from anadromous ancestors through an eco-evolutionary feedback. The resulting morphological and behavioral differences between landlocked and anadromous alewife initiated a cascade of ecological and evolutionary changes that propagated through lake food webs. Now management activities designed to provide anadromous alewife access to historic spawning grounds are allowing anadromous and landlocked alewife populations to come back into contact for the first time in centuries. This natural experiment is an opportunity to understand the ecological and evolutionary dynamics of secondary contact from the initiation of contact. The results highlight the importance of intraspecific variation and of simultaneously considering ecological and evolutionary processes for understand the response of aquatic ecosystems to environmental change.

Lunch et breuvages seront offerts. SVP confirmer votre présence sur : <u>https://doodle.com/poll/pehzuakxfs6ygk66</u> avant le mercredi 27 mars, 10 h

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