

Poster abstract for Conference Biology 23

Title: Comparative and experimental evidence that sticklebacks cause benthic trophic cascades in Southern Greenland ponds

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Abstract: Trophic cascades occur when predators indirectly affect primary producers via effects on the abundance and trait distribution of prey. Obtaining evidence for trophic cascades in natural populations is challenging due to multiple confounding factors that can influence food web structure. Here, we describe efforts to obtain both comparative and experimental evidence for the cascading effects of three-spined sticklebacks (*Gasterosteus aculeatus*) on freshwater pond ecosystems in Southern Greenland. We use both a survey of 24 ponds with different food web configurations and a manipulative experiment of 6 ponds to investigate the effect of a stickleback-mediated trophic cascade. Specifically, our work focuses on the direct predation effect of sticklebacks on the local benthic macroinvertebrates, and how to obtain evidence for trophic cascades in natural populations.