



Escape strategies in co-occurring calanoid copepods

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ABSTRACT: We show how four co-occurring calanoid copepod species modulate their responses to two contrasting hydrodynamic stimuli. Species-specific patterns in escape behavior included quantitative differences in performance to each stimulus type. Using high-speed video, we compared escape reactions in *Acartia hudsonica*, *Centropages hamatus*, *Tortanus discaudatus*, and *Temora longicornis*. Responses to a flow field created by a suction tube involved reorientation away from the source of suction followed by a series of vigorous power strokes. Responses to brief computer-controlled hydrodynamic stimuli had short latencies (a few milliseconds) and consisted of a reorientation followed by a few pereopod power strokes. Two species responded to this stimulus with higher escape speeds. The other two species gave a larger response to the suction stimulus by producing long escape trajectories. Each species perceived the magnitude of the threat in a different way and employed a different strategy in the escape response.

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