



Australian
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PhD exit seminar: Parasite effects on fish swimming performance and behavioural lateralization

Thursday 7 November, 2013 1-1:45pm

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Slatyer Seminar Room R.N. Robertson Building, Bldg. 46, Linnaeus Way, ANU



Ectoparasites can reduce individual fitness by negatively affecting behavioural, morphological and physiological traits. In fishes, there are potential additional costs if ectoparasites decrease streamlining, thereby affecting activities that involve swimming. Few studies have examined the effects of ectoparasites on fish swimming performance and none distinguish between energetic costs imposed by changes in streamlining versus effects on host physiology. Asymmetrically attached parasites could also have important effects on the preferential use of one side of the body for behavioural tasks (lateralization).

Behavioural lateralization is common in many animals, including humans, but few studies have examined whether lateralization can vary depending on the ecological context. As part of my dissertation, I examined how the ectoparasitic isopod, *Anilocra nemipteri*, affects its fish host. This isopod attaches above the eye and can grow to one third of its host standard length. I will present data showing how this large, conspicuous isopod can directly influence swimming energetics by increasing drag and temporarily affect behaviour by altering an individuals' turning bias. Together, these findings show dramatic, direct effects of ectoparasites on whole organism performance and behaviour, and are among the first examples suggesting that lateralization is phenotypically plastic.

Presented by

Research School of
Biology

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