

Project name
Host behavior modification by parasites
Project description
<p>The ability of parasites to manipulate the behavior of hosts has fascinated the scientific community for several decades. Manipulating parasites use mind control to steer infected hosts to become much more vulnerable to predation by a suitable next host. Although many cases of host behaviour manipulation are known, surprisingly little is known about the mechanisms behind this fascinating phenomenon. We study the proximate causes of behavioural modification using the lancet fluke <i>Dicrocoelium dendriticum</i> and its ant host <i>Formica rufa</i> as model system. The larval stage of the lancet fluke migrates to and lodges itself at the subesophageal ganglion and makes the infected ant climb the vegetation and latch itself on a grass blade (a process called tetania) primarily at times when the herbivorous next host is foraging.</p> <p>An interesting feature of this system is that ants also harbour a parasitic fungus with similar behavioural effects, which allows for comparative studies of the mechanisms involved among very different parasite groups.</p>
Collaborators
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