

Streszczenie pracy doktorskiej

Present dissertation focuses on the interaction of antlions and ants. These two organisms co-occur in sandy locations and are likely engaged in a coevolutionary arms race. Thesis consists of Introduction, General discussion and four main chapters in the form of four published papers investigating the apparent adaptations and counter adaptations which increase the efficiency of antlions' capture of ants and ants' evade of capture by antlions. In the first two chapters devoted to the hunting strategies of antlions, the connection between learning abilities, behavioural asymmetry, and efficiency of prey capture was investigated. In the next two chapters devoted to the rescue behaviours of ants, the conditions under which these behaviours are less likely expressed and the source of the signal eliciting them were studied. Present research demonstrates that antlions learn to associate vibrations with prey occurrence and that they master this task at different speed depending on the level of behavioural asymmetry. Further, it shows that the level of behavioural asymmetry is connected to the efficiency of prey capture. In case of ants, it was demonstrated that individuals of low value are rescued from antlion grasp less willingly than normal nestmates of high value. Additionally, the source of the "call for help" signal, responsible for rescue elicitation, was found not to originate from the mandibular glands of ants facing the threat of antlion predation. Overall, these results broaden our knowledge about the interaction of antlions and ants as well as, more generally, the interaction of predators and prey. Importantly, the thesis underlines the importance of learning abilities in the predator and secondary means of capture avoidance in the prey, both of which are highly plastic features, mostly overlooked in studies about predator-prey interactions.

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