

Výzkumný ústav živočišné výroby v Praze Uhřetěvsi

Oddělení etologie (budova: „zámeček“)

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Behavioral and physiological responses to parasite-induced energetic stress in the honeybee



Energetic stress from a parasite could be a general mechanism that leads to significant behavioral alterations in infected individuals. Because the energetic state of an animal is a fundamental driver of its behavior, studying the effects of energetic stress on the physiology underlying behavioral alterations sheds light on how it can have a significant impact on host life history and the transmission dynamics of a disease. In addition, by understanding how mechanisms respond to energetic stress we can then begin to explain why animals may perform what seems like maladaptive behavioral decisions, such as risky and impulsive foraging behavior. I will discuss how parasite induced energetic stress affects behavioral decisions that impacts survival for the individual host as well as the society in which it lives. The results I have found also suggest that a parasitic infection leading to energy depleted bees going out to forage can provide a plausible simple common underlying mechanism that explains the recent observations of bees disappearing from their colonies.