

Středa 3. 2. 2010, 15:00, zasedací místnost Entomologického ústavu

Interference competition among foraging waders; a foraging-based approach to studying population dynamics

Wouter K. Vahl

Department of Biological and Environmental Science, Division of Ecology and Evolution, PO Box 65, University of Helsinki, 00014 Helsinki, Finland

Abstract: Competition is among the most studied topics in ecology, both theoretically and empirically. Nevertheless, understanding of competition is still rudimentary. We strive to contribute by studying the mechanisms of interference competition among waders (Charadrii) foraging in intertidal areas. We extend previous work by applying an experimental approach to the empirical study of interference competition and an evolutionary approach to its theoretical study. The laboratory experiments indicate that both small-scale variation in the distribution of food and variation in the social status of individual foragers are essential ingredients for models of interference competition among foraging waders. Theoretically, we suggest that previous approaches to model the evolution of interference competition can be unified through a systematic event-based description of the foraging process that relies on techniques from Adaptive Dynamics theory. We discuss how our results relate to a foraging-based approach to population dynamics and conclude that it still is premature to base models of population dynamics on presumed knowledge of the interference process.