



Patterns of rarity in social parasites, and their implications for conservation

Author(s): David R. Nash, David R. Nash

Institution(s): avidCentre for Social Evolution, University of Copenhagen, Denmark ; Centre for Social Evolution, University of Copenhagen, Denmark

Many species of social insect have evolved to exploit the resources and workforce of other social insects, becoming social parasites. In most cases, these associations are host-specific, which means that social parasite population sizes are constrained by those of their specific hosts. In inquiline social parasites in particular, social parasites have often evolved from their host, and remain specific (the strict form of Emery's rule). Such parasites typically evolve within a single host population, and may have difficulties transmitting to other populations, which means that they are some of the rarest social insects on earth. Here I will review patterns of evolution, host specificity and transmission across a range of social parasites, and their consequences for the rarity and extinction vulnerability of the parasites. This inevitably leads to complex questions about biodiversity within the social insects and how best to conserve it, which I will discuss.