

than for females. Traditionally, females are thought to be the choosy sex, but the results of this study suggest that males could benefit more than females if they choose a partner that carries fewer parasites. These results are in accordance with the idea that females are not uniquely the choosy sex, at least in some species. Instead, it proposes that males may have an active role choosing their mates, especially if parasitism is the price that individuals end up paying. The article appears in the June issue of *The American Naturalist* (<http://www.jstor.org/stable/10.1086/665664>).

Population Regulation and Character Displacement in a Seasonal Environment

Emma E. Goldberg (University of Illinois at Chicago), Russell Lande (Imperial College London, UK), and Trevor D. Price (University of Chicago)



Pallas's warbler *Phylloscopus proregulus* (photograph by Thor Veen ©)



Greenish warbler *Phylloscopus trochiloides* in a mist net in Langtang, Nepal (photograph by Darren E. Irwin ©).

Sustained competition can cause species to evolve to use different portions of the resources that are available to them. But what happens when competition is regularly disrupted? For animals that migrate with the seasons, all the different habitats and competitors they encounter within year can affect their ecological niches. Trevor Price and his colleagues have studied one group of migratory birds, the Old World leaf warblers, for over three decades. Pairs of similar species spend winters together in India, with individuals of one species seeking food in the treetops while those of the other species forage in the bushes. “We see very strong competition for food in the winter,” says Price, “but paradoxically, the abundances of these species seem to depend more on the conditions in their summer breeding ranges,” which are either confined to the Himalayas or extend far into Siberia. To understand how ecological and evolutionary forces together affect this seasonal system, key aspects are cast as a mathematical model in a recent study. “The analysis shows that the species with the greater summer range and reproductive output, all else being equal, evolves to claim a more desirable portion of niche space in the winter,” summarizes Emma Goldberg, who executed the modeling work. As for the roles of ecology and evolution, removing one species from the model shows that these forces can have similarly-sized impacts. The remaining species gains immediately from freed-up resources, as well as over longer timescales, as it evolves to better use the food the other species previously usurped. The article appears in the June issue of *The American Naturalist* (<http://www.jstor.org/stable/10.1086/665649>).
