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Sebastian Schreiber* (sschreiber@ucdavis.edu), University of California, Davis, **Reinhard Bürger**, University of Vienna, and **Dan Bolnick**, University of Texas, Austin. *The community level effects of phenotypic variation within a predator population.*

Natural populations are heterogeneous mixtures of individuals differing in physiology, morphology, and behavior. Despite the ubiquity of phenotypic variation within natural populations, its effects on the dynamics of ecological communities are not well understood. Here, we use a quantitative genetics framework to examine how phenotypic variation in a predator affects the outcome of apparent competition between its two prey species. Classical apparent competition theory predicts that prey have reciprocally negative effects on each other. The addition of phenotypic trait variation in predation can marginalize these negative effects, mediate coexistence, or generate positive indirect effects between the prey species. Long-term coexistence or facilitation, however, can be preceded by long transients of extinction risk whenever the heritability of phenotypic variation is low. Greater heritability can circumvent these ecological transients, but also can generate oscillatory and chaotic dynamics. These dramatic changes in ecological outcomes, in the sign of indirect effects, and in stability suggest that studies which ignore intraspecific trait variation may reach fundamentally incorrect conclusions regarding ecological dynamics. (Received September 21, 2011)