Since Darwin first wondered about sterile castes in ants, the study of social evolution remains, in many respects, synonymous with the study of ants, bees, and termites. There have been efforts in recent years to broaden the scope, by including such ‘non-traditional insects’ as aphids and thrips. The argument for studying these groups is that they directly address the issue of generality in our conceptual understanding of a major thematic problem in evolutionary biology (How do groups suppress conflict such that cooperative integration emerges?) while offering opportunities for novel insights. Experimental work can thus focus precisely on comparing the traits that vary across a ‘major transition’ in evolution. Our research capitalizes on experimental opportunities to broadly test general themes in social evolution, using galling aphids as a model system. Aphids offer key experimental advantages for studying social behavior, such as varying degrees of sociality in closely-related species, clonality, which permits genotype-specific manipulations, and herbivory, which allows us to examine how sociality emerged at the plant-animal interface. By integrating ecological, behavioral, and molecular approaches to compare three aphid species in the genus *Pemphigus*, which vary in sociality, we have begun to 1) Understand the functional basis of defense, which is the defining feature of sociality in aphids, 2) Explore other features of sociality, like communal housekeeping behaviors, and 3) Examine the cost of cheaters. We found that for many ecological and behavioral traits there seems to be a continuum, with the social species on one end, the weakly-social species in the middle and the non-social species on the other end. We will discuss these results in the common light of sociality with the goal of understanding what factors are key in the evolution of advanced sociality in aphids and how this disparate taxa has converged on the phenotype of sociality.