**Do groups really make better foraging decisions than individuals?**

**Shane Golden** and **Reuven Dukas** McMaster University

There are a number of advantages and disadvantages to group living. One obvious disadvantage is competition. You require the same resources as those around you and there is usually a limited pool to obtain them from. Fruit fly larvae raised with others actually show a slower development time and lower survival to adulthood. However, there are a number of advantages to living in a group. Groups of larvae can regulate beneficial yeast densities, and suppress the growth of harmful molds.  
Aside from regulation of their environment, groups can also more accurately assess and react to their environment. Groups tend to make fewer false positives, with larger groups making fewer errors. Collective decision-making is found in eusocial hymenopterans. Additionally, it is found in non-eusocial insects such as tent caterpillars and cockroaches. Groups are able to locate optimal food sources by individual differences in exploration followed by exploitation by the group. However, groups may become stuck on suboptimal food sources as once the group starts feeding on a suboptimal source, it is harder for a group to abandon it than an individual. We investigated the accuracy of groups of fruit fly larvae attempting to find high quality foraging spots compared to individuals. We found that overall, groups were more likely to find better foraging spots but only after they were given enough time to sample the environment extensively.