**Factors affecting male mate choosiness in fruit flies**

**Carling M. Baxter** and **Reuven Dukas**, McMaster University

Male mate choosiness has been examined in many species, including fruit flies (*Drosophila melanogaster*). Traditionally, male fruit flies used in courtship experiments are isolated until they are four or five days old. However, inexperienced young (one-day-old) males also court and mate with females and are significantly choosier than inexperienced mature (four-day-old) males. We wished to determine what differences between young and mature males could contribute to this difference in choosiness. We specifically tested males’ fertility, competitive courtship ability and attractiveness to females. We found that young and mature males were equally fertile in their first mating, but that mature males were more fertile in subsequent matings. When alone with a female, both young and mature males spent similar proportions of time courting, however, when in direct competition with another male, mature males spent significantly more time courting than young males. Finally, mating latencies for young males were longer than those for mature males, indicating females more readily mate with mature males and thus may be more attracted to mature than young males. Thus, mature males are more fertile, more competitive and are potentially more preferred by females. These results indicate that many age-related factors could affect a male’s mate choosiness. Therefore, experiments that only use males of a specific age may miss crucial information about male mate choice and as a result may underestimate males’ contributions to sexual selection and incipient speciation.