**Abstract**

Parental investment is a significant contributing factor to the offspring’s survival and fitness and has direct implications on the fitness of the parents’ as well. Parental investment is, in turn, under the influence of various genetic and non-genetic factors. Females and males employ different reproduction tactics, due to the inherent asymmetry of parental contribution toward producing offspring, to maximize their respective fitness. Therefore, it is essential to study these factors in order to understand how parental investment evolves and how fluctuating environmental conditions would shape parental investment. With inspiration from a few previous studies, I tried to study various components of egg investment in populations of Drosophila melanogaster adapted to larval-crowding. Apart from other interesting observations, I have found out that populations selected for larval crowding laid significantly larger eggs in comparison to their baseline populations (while laying few). I also observed that males of the selected lines significantly reduce their mates’ fecundity.