Abstract

Maternal nutritional status at larval stage or as adults affects their offspring's fitness. It was known that the male genotype affects his mate's reproductive investment. Two hypotheses are there for maternal investment with respect to their mates. (A) Females assess male's ability at the time of courtship and copulation and invest accordingly in their offspring. (B) Males manipulate females to invest more in offspring just after mating. In the light of these previous studies, I tried to focus on the maternal effects in populations of Drosophila melanogaster adapted to larval crowding. I have found that selected populations, MCUs despite of their smaller body-size laid significantly larger eggs when compared to their ancestral control line, the MBs. I also found that there exists phenotypic plasticity in terms of body-size with respect to selection as well as larval density.