Mating Behavioral Preferences and Its Reproduction of the Housefly, *Musca domestica*

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The housefly, *Musca domestica* is one of insects that most have been studied for a long time with together the cockroach, however, there is little data of preference behavior and reproductive differences according to mating experiences. We observed a series of mating behavior after emergence from pupae and compared the number of eggs of each female.

In a series of mating behavior, male of housefly climbed a back of female, then scratched metathorax and ventral area by metapade. It was supposed that its behavior might be not courtship but searching behavior for suitable female, that is to say she might or could perceive the mating with developmental level of female oviposition. We observed that it took a short time to happen first mating as the number of individual increased. The males had a preference to mate with virgin female. Most females just after mating repeatedly protruded their ovipositor for several minutes.

The male without mating experienced preferred a virgin female after 7 days from pupa. There were no significant differences with a number of laying eggs of female from 5 to 10 days after emergence. Otherwise, when virgin female was mated with male without sexual experience, average number of laying eggs were 136.5 which was significantly higher than any other partnership.