

**Biological study of *Melanophila* (= *Trachypteris*) *picta*
(Col.: Buprestidae) in Karaj**

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ABSTRACT

Melanophila picta is one of the most important pests of poplar trees in Karaj. From 1993 to 1995, biology and natural enemies of the pest were studied with weekly samplings of poplar trees, and rearing of insects on poplar trees and cutting stems of poplar under controlled conditions in Alborz Research Complex, Karaj. The adults appeared on poplar trees from early May to the end of June. Peak of adults population was observed in early June. After mating the females were frequently laied their eggs in bark crevices or around lateral buds of poplar trees. The average number of eggs per female was 108.08 ± 56.30 , and the average ovipositions and the incubation period of eggs were 15.29 ± 7.02 and 7.14 ± 1.21 days, respectively. Following the hatching of the eggs, the larvae feed superficially inside the bark, inner phloem and the cambial layer just beneath the bark. They bore the sapwood and construct larval tunnels with the lengths up to 10 centimeters. *M. picta* overwintere as last instars larvae inside sapwood. Overwintering larvae re-start their activity in early spring of the following year. The first pre-pupa and pupa were observed in pupal chambers from mid April and mid or late April, respectively. The average pupal period is about 15.18 ± 6 days in Karaj area and the insect had 1 generation per year. Sex ratio ($\text{♀}:\text{♂}$) was observed 1.14:1. During this study, 4 species of parasitoid wasps belonging to families Encyrtidae, Braconidae, Ichneumonidae and Chalcididae, as well as 1 species of predatory ant (*Lasius alinus*) were reared on the *M. picta* Pall. larval parasitization by Braconidae and Ichneumonidae families was estimated 4.21 and 17.72 percent, respectively in 1995.

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Key words: Poplar (*populus*), *Melanophila (Trachypteris) picta*, Biology, Damage, Natural enemies, Predators, Parasitoids.

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