

Faunistic Study of pomegranate fruit crown and population fluctuations of parasitoids and predators of the carob moth, *Ectomyelois ceratoniae* Zeller (Lep.: Pyralidae) in Qom

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The carob moth, *Ectomyelois ceratoniae*, is recognized as the most economically damaging pest of pomegranate fruit in Iran and many other countries in dry regions. This pest can cause up to 80% damage of a crop during the fruiting season under harvest conditions in pomegranate production within Iran. Identifying natural enemies and their potentials as biocontrol agents is the first step in the development of a biological control program. In order to study present arthropod fauna in fruit crown of pomegranate, regular sampling was carried out from three regions of Qom province during 2013 and 2014. Three regions of Qom, including Jafariye, Seiro village of Kahak city and Tayqan village of Salafchegan city. In each region ten trees was selected randomly and from each tree, 4 pomegranate fruit was selected from four direction in 1.5 m height and all of living organisms within crown were collected with aspirator. Sampling height was different related to age and height of tree and was from one two meter above ground. Sampling from different gardens was carried out from early June until the end of October in two weeks interval. Samples were placed for short time in refrigerator and then were transferred in plastic petri dishes. After transferring samples to laboratory and their morphological separation, they were preserved in 75% ethanol and then they were primarily identified using morphological characteristics and identification keys. Then specimens were sent to taxonomist for species confirmation. In this research in addition to Aranea, some specimens from 13 families of Hymenoptera, 8 families of Heteroptera (bugs), 8 families of Coleoptera, 2 families of Thysanoptera (thrips), 4 families of Diptera, 2 families of Homoptera (aphids and mealybugs), one species of green lacewing, *Chrysoperla carnea* and one species of earwig were collected. Also ten species of Coccinellidae were collected which 9 polymorphs of ladybird beetle, *Hippodamia variegata* were present. Population fluctuation of natural enemies showed that hymenoptern parasitoid activity in the end of season, during August and September months was the highest in compare to other months. Also the coccinellids activity in the first and end of season was higher in compare to warm months of summer. For predator bugs and green lacewing, the similar results were obtained.

Keywords: Pomegranate fruit crown, parasitoid, predator.