



Main pests affecting to the foreign pistachio varieties growing in Uzbekistan

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ABSTRACT

Pistachio is consumed as a valuable fruit around the world. But saving his harvest is not always an easy task. Identifying its pests and developing measures to combat them is one of the main issues facing scientists today.

Keywords:

pistachio, anapulvinaria pistaciae, geoca utricularia, apteroma crenulella, sciaphobus squalidus.

In 2021-2022, the economy of the pistachio-growing countries has made a huge profit. During these years, the United States alone produced 2/3 of the world's pistachios. Its share was 67%, followed by Iran with 17% and Turkey with 11% [2]. In the conditions of Uzbekistan, the work of establishing plantations of foreign pistachio varieties has gained momentum in recent years, the area of plantations consisting mainly of Akhmadiy, Akbariy and Fandugi varieties of Iran continues to expand. However, there are many difficulties

in maintaining its harvest. The main reason is pests that fall on pistachio fruit and leaves. These pests pose a serious threat to all pistachio growing countries. Below is the biology of some pests is introduced.

Anapulvinaria pistaciae – is a pest belonging to the family of coccidians, which can be called a pillowy mite. It is found throughout the plantations of Iran. It collects in a group on the top and bottom of the leaf and on young branches that secrete a honey-like liquid (fig. 1).



Fig. 1. *Anapulvinaria pistaciae* on the pistachio leaves

It spreads to the Eastern Mediterranean countries, Iraq and other countries. In California, there are 4 species of this pest: *Coccus hesperidum* (Linnaeus), *S. oleae*, *Parthenolecanium pruinosum* (Coquillett) and *Parthenolecanium corni* (Bouché) [3].

The first nymphs appear in June and feed on leaf fluid and pistachio twigs. Second instar larvae emerge in early fall and overwinter in tree branches. This parasite gives birth once. When it spreads strongly, it leads to deterioration of the general condition of the plant, the tree becomes stunted. Two species of wasps have been identified in Iran as its medical

partner: *Blastothrix sericea* (Dalman) and *Coccophagus piceae* Erdös (Hym.: Aphelinidae). [1].

Geoica utricularia - galls caused by the founders are a spherical or oblong protruding reddish formation on the underside of the leaf blade, along its midrib (fig. 2). In such chambers there are only one, less often two larvae. Upon reaching the adult stage, they proceed to live birth. Larvae of the second generation, the so-called gall-forming larvae. Galls on pistachio leaves form in mid-April.



Fig. 2. *Geoica utricularia* on pistachio leaves

***Sciaphobus squalidus* Gyll.** - polyphage. As noted in the scientific literature, it harms many fruit and berry crops, grapes, ornamental plants, and deciduous forest species. The homeland of this species is the forests of the mountainous Crimea, the Caucasus and Northern Iran (Fig. 3) [4].

Usually, beetles and larvae hibernate in the soil. With the onset of positive temperatures of + 10 °C in early spring, the beetles that emerged after wintering start feeding at the beginning of bud swelling. The buds eat completely or gnaw holes in them, which subsequently leads to deformation of the leaves.



Fig.3. *Sciaphobus squalidus*

The average body size of an adult beetle is 6 mm. The surface of the beetle is covered with gray and pink scales. Wings membranous, underdeveloped. There is no ability to fly. With mass development, buds and flowers are most

damaged. When feeding on flowers, beetles eat pistils and stamens in them.

Apteroma crenulella - belongs to the *Psychidae* family (Fig. 4.). Males are winged, females are wingless.



Fig. 4. *Apteroma crenulella* on the pistachio leaves

The caterpillar is a larval form of a butterfly that feeds intensively, storing nutrients for subsequent development. Caterpillars are very thermophilic, live in snail-like cases or in bags, which corresponds to the name of the family. Appear in plantations in April-May. Caterpillars feed on leaves. Winters are usually caterpillars of middle age. Pupation of caterpillars occurs in the cap.

Literatures:

1. Gholamreza Tavakkoli Korghond, Hossain Lotfalizadeh. //Pistachio Mealybug, *Anapulvinaria pistaciae* (Bodenheimer) (Hem.:Coccidae) New Host Record for *Coccophagus piceae*Erdös (Hem.: Chalcidoidea, Aphelinidae). Iranian Plant protection Research. Volume 32, Issue 3, January 2019, Pages 445-448
2. <https://worldpopulationreview.com/country-rankings/pistachio-production-by-country>
3. Mohammad Reza Mehrnejad. //Arthropod pests of pistachios, their natural enemies and management. Plant Protection Science, 56, 2020 (4): 231-260
4. www.Pesticidyru.com/gray bud weevil