

Ecological characteristics of capsid bugs (Hemiptera, Miridae) distributed in Southern Uzbekistan

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The Heteroptera, or true bugs, is a highly various insect taxon with about 50, 000 described species in worldwide, separated into 75 families. The 1250 species from 32 families belong to Kazakhstan as well as Central Asian countries [3]. The fauna of true bugs is rich in diversity in Asia, including Uzbekistan, endemic and listed in the Red Book.

The research was conducted in 2015-2020 in clusters, farms and private farms in the districts of Surkhandarya and Kashkadarya regions of Southern Uzbekistan. It is important to study the capsid bugs of Southern Uzbekistan in groups by lifestyle. A lot of scientific research has been showed in foreign countries in this regard. Half-winged organisms are divided into 9 groups according to their life form (dendrobionts, dendro-tamno-hortobionts, tamnobionts, hortobionts, herpeto-hortobionts, geo-herpetobionts, epigeobionts, godrobionts, ectoparasites) [2].

Capsid bugs in Southern Uzbekistan belong to 4 main and 3 intermediate groups according to lifestyle.

1. Hortobionts-the species recorded on perennial plants. This group divided 3 intermediate groups such as Dicotyledones, cereal and *Scirpus* hortobionts.

2. Dendrobionts-adaptations to live on trees.

3. Tamnobionts-adaptation to live on trees and bushes.

4. Tamno-hortobionts- to live on bushes and grasses

Since most species of the Miridae family are phytophilous (living in the vegetation cover), they are herbivorous hortobionts according to their way of life. On this basis, 86.0% (49 species) of the 57 species of capsid bugs identified in our study were hortobionts (Dicotyledones hortobionts, cereal hortobionts, and *Scirpus* hortobionts). Zoophagous and zoophytophagous capsid bugs specialize mainly in feeding on small pest insects (aphids, thrips, spiders, etc.). For example, *Camptobrochis punctulatus* has been shown to benefit with eating up to 100 aphids a day. Today, there are 3,400 species of capsid bugs in worldwide and 19 beneficial entomophagous species are recorded in Kazakhstan [1].

According to the lifestyle of the capsid bugs identified in the southern regions of Uzbekistan, research showed that the 49 species (85.9%) to hortobionts, 4 species (7%) to dendrobionts, 3 species (5.3%) to tamnobionts, 1 type (1.8%) belong to tamno-hortobionts.

References

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- 3) Schuh R.T. Plant bugs of the world (Insecta: Heteroptera: Miridae): systematic catalog, distributions, host list, and bibliography. New York Entomological Society. –New York, 1995. – 1329 pp