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Bioecological characteristics of the family of beetles (*Coleoptera, cerambycidae*)

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Abstract
Today, forest zones have been created on more than 40,000 hectares of land in our republic, but measures to protect them from pests have not been developed. Representatives of the fauna (Coleoptera, Cerambycidae) are widespread in natural and anthropogenically transformed areas, from an ecological point of view, in the non-sunny moist parts of the forest zones. We all know that this is a serious, negative situation in our green groves, which have an important place for humanity.

Keywords: Beetles, territory, plants, forest zone, anthropogenic, natural, landscape

Introduction

Today, under the conditions of Uzbekistan, forest zones play an important role in the establishment of fertile land and its efficient use. We all know that natural forest zones are located in the direction of dry wind flow, high humidity is maintained, which ensures a small number of pests. In this place, it is important to grow agricultural crops around natural forest zones, because they are characterized by high productivity. origin, as a result of their destruction under the influence of pests. Today, forest zones have been created on more than 40,000 hectares of land in our republic, but the measures to protect them from pests have not been developed. Representatives of the fauna (Coleoptera, Cerambycidae) are widespread in natural and anthropogenically transformed areas, from an ecological point of view, in the non-sunny moist parts of the forest zones. We all know that this is a serious, negative situation in our green groves, which have an important place for humanity. Special protection of urban trees in anthropogenically transformed places is important, from this point of view, their care based on correct agrotechnical requirements will achieve high results in protection from pests. [1].

In our republic, the amount of damage caused to urban trees in anthropogenically transformed places is mainly caused by Coleoptera, Cerambycidae from long-horned beetles; city mustache beetle-Aeolestes sarta Solsk., mulberry long-king beetle-Trichotetus turkestanicus Heyd., juniper long-king beetle-Anaglyptus bicallosus Kr., poplar long-king beetle-Aeolestes sarta Solsk., willow long-king beetle-Oberea ruficeps Fisch., leader takes place. Among these species, the main pest-dominant species is the urban long-whiskered beetle-Aeolestes sarta, Solsk., which entered Central Asia from Afghanistan and Iron. Later, it gradually expanded its area to the southern part of Turkmenistan, Tajikistan, Kyrgyzstan and spread to all of Uzbekistan, that is, it was recorded in Tashkent in 1924. In this year, 61% damage to seedlings and 37% damage to pine trees was observed in the city. [1; 2].

In the natural conditions of the Southern Aral Sea region, representatives of the mustached beetle family (Coleoptera, Cerambycidae) were observed to cause a lot of damage mainly to desert plants in early spring. In this, it is determined by the high degree of folate of representatives of mustached beetles entering into the plant stems and damaging them mainly in May.

In general, representatives of the family of mustachioed beetles (Coleoptera, Cerambycidae), which are widespread in natural and anthropogenically transformed areas of the South Island coast, cause great damage to plants, and in field conditions, they enter the category of herbivorous insects and pose a serious threat to the flora of all plants in the desert. It should be noted that the location of natural ecosystems with historical and cultural advantages, including forest landscapes, causes a multifaceted negative impact of harmful insects on them and requires the development of integrated control measures for these insects. Accordingly, in areas with forest landscapes and anthropogenically transformed areas, the inventory of pest insects, identification of harmful dominant species, and development of improved measures to combat them are of scientific and practical importance.

Materials and Methods

The necessary materials for the research work in the period 2019-2023 in the natural conditions of the Southern Aral Sea - from the Nukus sandy areas of North-Western Kyzylkum and Kyzylkum, from the forest farms of the Republic of Karakalpakstan and Khorezm region, from the Lower Amudarya State Biosphere Reserve, from the Karakalpak region of the Ustyurt plain and the flora of Uzbekistan in anthropogenically transformed places. from plants Pinus silvestris (L.), Populus pruinosa (Schrenk.), Populus nigra (L.), Populus alba (L.), Picea abies (L.), Robinia pseudacacia (L), Salix alba (L.), Betula pendula (Roth.), Grataegus pontica (C. Koch.), Ulmus densa (Lith.), Caragana arborescens (Lam.), shrubs Elaeagnus angustifolia (L.), semi-shrubs Tamarix hispida (Willd.), Haloxylon aphyllum (Minkw.) and in desert places Alhagi pseudalhagi (MB.) Desv., Peganum harmala (L.), Scirpus affinis (Roth.), Salsola collina (Pall.), Salsola richteri ((Moq.) Kar. et Kir), Chenopodium album (L.), Haloxylon persicum (Bunge ex Buhse), Ammodendron conollyi (Bunge), Calligonium (L) were collected [6]. Fauna of all collected insect samples, systematic analysis of taxonomic species composition, general biological, entomological, zoological, ecological status were studied based on the methods of scientists [3, 4, 5].

Results and Discussion

In the process of observation, it was noted that in the natural biotopes of the South Island coast, among the representatives of the mustached beetle family (Coleoptera, Cerambycidae), there were many occurrences of the urban mustached beetle, Aeolestes sarta Solsk., as the dominant species. In this case, the levels of the pest's presence in the North-West Kyzylkum and Nukus sandy areas of Kyzylkum, forest farms of the Republic of Karakalpakstan and Khorezm region, Lower Amudarya State Biosphere Reserve, Ustyurt plain Karakalpakstan department and anthropogenically transformed places corresponded to different time units. For example, in the Nukus sandy areas of North-West Kyzylkum and Kyzylkum, the urban whiskered beetle Aeolestes sarta Solsk. occurs in the natural biotope in early spring, while the rest of the forest farms of the Republic of Karakalpakstan and Khorezm Region, Lower Amudarya State Biosphere Reserve, Ustyurt plain Karakalpakstan department and was observed in the beginning of the summer season in anthropogenically transformed places (Table 1).

Table 1: Southern Aral Sea region meeting levels of dominant species of representatives of the mustached beetle family (Coleoptera, Cerambycidae) in natural biotopes

№	Types of insects	Northwest Kyzylkum	Nukus sandy areas of Kyzilkum	Lower Amudarya State Biosphere Reserve	Ustyurt plain, Karakalpakstan department
1	Aeolestes sarta Solsk.	+++	++	+	++
2	Trichotetus turkestanicus Heyd.	-	+	++	+
3	Anaglyptus bicallosus Kr.	-	+	+++	-
4	Aeolestes sarta Solsk.	-	+	+++	+
5	Oberea ruficeps Fisch.	-	+	+++	-

Note: +- rare species, ++-average species, +++-dense species, - uncommon species

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