

**SPREADING, DAMAGE AND BIOECOLOGICAL CHARACTERISTICS OF
DERICORYS ALBIDULA AUD.-SERV. FOUND IN THE FOREST AREA
ESTABLISHED IN THE DRY BOTTOM OF THE ARAL SEA**

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Abstract

In 2020-2023, a project dedicated to identifying diseases and pests of forest trees in the dry bottom of the Aral Sea and developing measures to combat them was implemented. As part of the project, pests and diseases that harm Haloxylon were identified and their biological properties were studied.

Keywords: pest, disease, Aral Sea, haloxylon, Dericorys albidula

During the period of 2020-2023, the study was carried out to study the harmful entomofauna of haloxylon and other sand-retaining plants in the forest and pastures of Moynaq, which was established in the dry bottom of the Aral Sea, and during the monitoring observations, insect samples were collected were purchased and studies were conducted to determine their species composition in the laboratory of the Scientific Research Institute of Forestry. As a result of the research, 34 types of pests were identified, and it was noted that they belong to 14 families, 3 genus, and 1 class (Table 1).

Table 1 Types of pests found in forest and pasture plants in the dry bottom of the Aral Sea and their distribution

| No | Pests types | Spreading |
|-----------------------------|---|-----------|
| Genus: Ortoptera | | |
| Family: Acridoidea | | |
| 1 | Dericorus albidula Serv. | +++ |
| 2 | Dericorus annulata roseipennis Redt. | ++ |
| Genus: Coleoptera | | |
| Family: Scarabaeidae | | |
| 3 | Lethrus rosmarus Ball. | + |
| 4 | Oryctes punctipennis punctipennis Motsch. | + |
| Family: Elateridae | | |
| 5 | Agriotes meticulosus Cand. | ++ |

| | | |
|------------------------------|--|---|
| 6 | <i>Agriotes caspicus</i> Heyd. | + |
| 7 | <i>Aeoloides grisescens</i> Germ. | + |
| 8 | <i>Drasterius bimaculatus</i> Rossi. | + |
| 9 | <i>Melanotus acuminatus</i> Rtt. | + |
| 10 | <i>Cardiophorus longulus</i> Er. | + |
| Family: Buprestidae | | |
| 11 | <i>Lampetis argentata</i> Mnnh. | + |
| 12 | <i>Capnodis excisa</i> Men. | + |
| Family: Tenebrionidae | | |
| 13 | <i>Tentyria gigas</i> Fald. | + |
| 14 | <i>Trigonoscelis nodosa</i> Fisch. | + |
| 15 | <i>Ocnera pilicollis</i> Fald. | + |
| 16 | <i>Pisterotarsa gigantea</i> F.-W. | + |
| 17 | <i>Blaps heophila</i> F.-W. | + |
| 18 | <i>Blaps parvicollis subcordata</i> Seidl. | + |
| Family: Meloidae | | |
| 19 | <i>Mylabris frolovi</i> Germ. | |
| 20 | <i>Mylabris quadripunctata</i> L. | |
| Family: Chrysomelidae | | |
| 21 | <i>Theone costipennis</i> Kirsch. | + |
| Family: Curculionidae | | |
| 22 | <i>Megamecus variegatus</i> Gebl. | + |
| 23 | <i>Chromosomus fischeri</i> Fahrs. | + |
| 24 | <i>Baris memnonia</i> Boh. | + |
| Genus: Lepidoptera | | |
| Family: Zygaenidae | | |
| 26 | <i>Zygaena truchmena</i> Ev. | + |
| Family: Noctuidae | | |
| 27 | <i>Cucullia boryphora</i> F.-W. | + |
| 28 | <i>Aleucanitis flexuosa</i> Men. | + |
| Family: Arctiidae | | |
| 29 | <i>Phragmatobia fuliginosa</i> L. | + |
| 30 | <i>Arctia caja</i> L. | + |
| Family: Pieridae | | |
| 31 | <i>Colias erate</i> Esp. | + |
| 32 | <i>Zegris fausti</i> Chr. | + |
| Family: Lycaenidae | | |

| | | |
|----------------------------|---------------------|---|
| 33 | Lycaena icarus Rtt. | + |
| Family: Nymphalidae | | |
| 34 | Pyrameis cardui L. | + |

Among the 34 types of pests identified during the monitoring conducted to study the harmful entomofauna of haloxylon and other sand-trapping plants in the forest of Moynaq, the dominant species were analyzed and studied, mainly *D.albidula* *D.annulata* *roseipennis* was found to cause great damage to haloxylon. Therefore, chemical treatment was carried out mainly on these pests.

***Dericorys albidula* Aud.-Serv.**

Spreading. It is found in the sandy deserts and deserts of Uzbekistan, Turkmenistan, Tajikistan, Afghanistan, Iran, and North America. It can be found in all the lands where haloxylon grows in our republic. The largest historical foci are the lands where haloxylon grew between Karakum and Qizilkum (Qarakalpakistan, Khorezm, Bukhara, Navoi regions) in the North. Haloxylon, which exists in the deserts of Surkhan-Sherabad and Karshi of the southern regions, is also distributed in places where it grows [1; p. 35, 2; p. 336, 3; p. 28, 4; p. 352].

Morphological characteristics of the mature breed: The length of the female is 50-52 mm, the length of the male is 48-50 mm, the length of the wingspan of the female is 52-56 mm, the length of the male is 50-53 mm. The body is ash-gray, the wings are covered with dark spots and straight and transverse veins, the straight veins are dark, and the transverse veins are light. His mustache is stringy, yellow in color. The inside of the hind legs are blue, the tips are red, the spines are red, the tips are black and the bases are white. There are 3 bluish-black spots on the thighs of the hind legs (pic.1) [1; p. 35, 2; p. 336, 3; p. 28, 4; p. 352].

She lays her eggs on relatively hard ground where cattle walk. The egg pod is thick-walled, very long in appearance, slightly curved, and the lower part is slightly thickened. The length of the pod is 41-45 mm, there are 18-28 eggs inside. Eggs are almost oblong, 6.8 - 7.5 mm long, pink or yellowish in color [1; p. 35, 2; p. 336, 3; p. 28, 4; p. 352].

Living life. *Dericorys albidula* Aud.-Serv. lives in the sands where Haloxylon grows, in the barren areas, at the base of the twig-headed plants. Larvae hatch in early May and develop wings in early June. Adult locusts begin to reproduce by the end of June. It starts laying eggs in the second half of July. Locust larvae emerge from the egg pods, shed their skin, and quickly climb onto haloxylon branches. Until adulthood, the larvae feed on haloxylon leaves and soft young shoots, settle very quickly on haloxylon branches and do not descend from the branches until they grow wings [1; p. 35, 2; p. 336, 3; p. 28, 4; p. 352].



Picture 1. *Dericorys albidula* Aud.-Serv.

Harm. *Dericorys albidula* infests *Haloxylon* and *Calligonum* shrubs blocking shifting sands in its permanent habitats. This type of grasshopper feeds only on haloxylon and does not feed on agricultural crops. However, in the years of increased growth, if the fight against it is not carried out, it will damage the haloxylan trees on several thousand hectares and eventually lead to their drying [1; p. 35, 2; p. 336, 3; p. 28, 4; p. 352].

In short, during our monitoring observations on harmful entomofauna of haloxylon and other sand-trapping plants in the Moynaq area, established on the dry bottom of the Aral Sea, it was determined that the dominant species is *Dericorys albidula*.

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