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A contribution to knowledge of Dermestidae (Coleoptera) from Kazakhstan with description of one new species

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Abstract

Research on skin beetles of tugai forests with use of passive window traps was performed in Almaty region in Kazakhstan in 2013. *Ctesias* (*Decemctesias*) *yuliyae* **sp. nov.** is described, illustrated, and compared with similar species of the genus *Ctesias* subgenus *Decemctesias* Háva, 2004. The new species differs by the structure of antennae and male genitalia. Eighteen other dermestid species from Kazakhstan were also recorded in this study.

Key words: taxonomy, new species, faunistics, tugai forest, window trap, Coleoptera, Dermestidae, *Ctesias*, Almaty region, Kazakhstan

Introduction

The tugai forests are intrazonal forest formations which grow along bottom of river valleys in arid regions. These forests are called intrazonal forests because they are not separate zones (Prochorov 1982). They belong to a special relic type of vegetation which preserves archaic features of tertiary flora, and its center of origin is Central Asia (Treshkin 2011). They do not form continuous forest areas along the rivers.

They look like separate groves, ribbons alternating with meadows, tangles of bulrush or sand dunes that are covered with thorny bushes. The tugai forests are characterized by the shallow level of fresh groundwater, periodic summer flooding of the floodplain, moist microclimate in the tugai zone, and high temperatures in summer. Due to frequent changes in river courses, and the accumulation of new sediments, changes occur in groundwater levels, which lead to a natural change of the vegetation. Thickets of shrubby willows usually grow as narrow strips along the river sediments, as well as lower flat floodplains, flooded by spring floodwaters. Stands of oleaster (*Elaeagnus angustifolia* L.) are situated in higher places of the first terrace. Sparse turanga or Asiatic poplar forests characterized by *Populus diversifolia* Schrenk and *Populus pruinosa* Schrenk, are located at the second terrace with undulating relief. Groundwater is found here at depths of 2–3 meters. Impassable thickets of tamarisk (*Tamarix* sp.) and salt trees (*Halimodendron* sp.) grow along the second terrace. Relic stands of the hygrophilous ash *Fraxinus sogdiana* Bunge, which grow in alluvial-meadow soil near the floodplain of the Charyn River in Almaty region, have a special place among the tugai forests (Baizakov *et al.* 2007).

The Dermestidae (Coleoptera) currently contains about 1480 species worldwide, of which 65 species are known from Kazakhstan (Háva 2007). The Dermestidae of Kazakhstan have been studied previously by Sokolov (1972, 1973, 1974), Zhantiev (1960, 1976), and Háva (2013). The present article summarizes nineteen species recently collected in the tugai forests of the Almaty region of Kazakhstan. The aim of our study was to examine species diversity of the skin beetles (Dermestidae) associated with *Populus diversifolia, Populus pruinosa* and *Fraxinus sogdiana*, which are the primary tree species found in these tugai forests.

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Speight (1989) suggested that that many of the species of Dermestidae can be considered saproxylic, for which there are other more effective collecting methods (Bußler *et al.* 2004). Despite only using passive window traps and only in tugai forests in the Almaty region, we nonetheless recovered 29% of all dermestids known from Kazakhstan.

Although it is relatively easy to record species visiting flowers, it is much more difficult to collect species associated with old trees. We observed that flowers of *Tamariscus* sp. and Asteracea were visited by more species of *Attagenus* and *Anthrenus* and in higher numbers during 2013 at all localities. *Ctesias yuliyae* sp. nov was recorded only from a single locality but despite this fact is the 3rd the most common species in our study. This species was never observed on flowers.

In spite of a very short season in the tugai forests, we collected 500 specimens from 80 window traps, suggesting that using window traps may be a convenient method for capturing skin beetles. Of course, one major disadvantage of the use of passive window traps in such arid regions as those where the tugai forests are found is that the killing agent evaporates very quickly, thus reducing trap efficacy.

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