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A FAUNISTIC STUDY ON THE FAMILY CURCULIONIDAE (COLEOPTERA) FROM SEMNAN PROVINCE, IRAN

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[Гхари Г., Легалов А.А. Фаунистическое изучение семейства Curculionidae (Coleoptera) провинции Семнан, Иран]
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***Key words**: Coleoptera, Curculionidae, fauna, Semnan*

***Ключевые слова**: Coleoptera, Curculionoidea, фауна, Семнан*

Summary. This paper deals with the species diversity of Curculionidae (Coleoptera) from Semnan province. In total 24 species from 9 genera and 4 subfamilies Lixinae, Baridiidae, Curculioninae, Entiminae were collected and identified.

Резюме. В статье рассмотрено разнообразие жуков семейства Curculionidae (Coleoptera) провинции Семнан. Выявлено 24 вида из 9 родов 4 подсемейств: Lixinae, Baridiidae, Curculioninae, Entiminae.

INTRODUCTION

With about 4 600 genera and 51 000 described species, the family Curculionidae is an order of magnitude larger than any other in weevils and comprises in excess of 80% of all weevil species. Curculionidae occur all over the world, from the arctic zone in the north to the subantarctic islands in the south, from beaches to mountain tops, from deserts to rainforests. They feed on virtually all plants, mainly angiosperms but also gymnosperms, pteridophytes, bryophytes and lichens and occasionally they even browse on algae and cyanobacteria [Marvaldi et al., 2002; Oberprieler et al., 2007]. The fauna of Iranian Curculionidae was studied rather well and the main work is the checklist of Iranian Curculionoidea [Legalov et al., 2010]. After that many other works have been published [Ghahari, Legalov, 2011; Ghahari et al., 2011; Ghahari, Arzanov, 2012a, 2012b; Ghahari, Colonelli, 2012; Eshraghi, Sadeghi, 2012; Fathi et al., 2013; Sanaei et al., 2014]. The aim of this research is a faunistic work on the Curculionidae of Guilan province, northern Iran.

The province of Semnan covers an area of 96,816 square kilometers and stretches along the Alborz mountain range and borders to Dasht-e Kavir desert in its southern parts. The province is divided into two parts: a mountainous region, and the plains at the foot of the mountains. Neighbours are in the north Golestan, Mazandaran, at the west Tehran, Qom, at the South Isfahan and at the East Razavi Khorasan. Abr forest (Jangal-e Abr or Cloud forest) which is located in this province lies in the central province of Semnan, near its border with Golestan province. It is one of the oldest forests in Iran which is a remnant of the third geological age. Cloud forest usually has subtropical temperature with constant hanging fog, or clouds, that sit at canopy level. Due to its unique position of being always covered in moisture by low hanging clouds, tropical montane cloud forests have special, unique microclimates.

MATERIALS AND METHODS

Materials were collected by sweeping, beating tray, canopy fogging, leaf litter sifting and processing the samples through Berlese funnels, Malaise and flight intercept traps, and of course hand collecting by locating suitable hosts and searching for weevils (e.g. under the barks). When available, information concerning the date of collection, locality, coordinates, and number of specimens in brackets are also given. In this paper we follow the classification and the nomenclature of weevils as suggested by Gratshev and Legalov [2014], Legalov [2010], Legalov et al. [2010], Alonso-Zarazaga and Lyal [1999] and Colonnelli [2004]. Both genera and species of the recorded insects have been listed in alphabetical order, whereas the order of families follows that by Zherichin and Egorov [1991].

RESULTS

In total 24 species of Curculionidae from 9 genera and 4 subfamilies were collected and identified from different regions of Semnan province. The list of species is given below alphabetically with distribution data.

Family **Curculionidae** Latreille, 1802
Subfamily **Lixinae** Schoenherr, 182**3**
Tribe **Lixini** Schoenherr, 1823

Genus ***Lixus*** Fabricius 1802

Lixus elegantulus Boheman, 1843
Material: Semnan province, Damghan, Dibaj, 35°30′N 54°20′E, (2), May 2010; Sorkheh, Biabanak, 35°27′N 53°13′E, (1), July 2012.

Lixus juncii Boheman**,** 1836
Material: Semnan province, Jangal-e Abr, 36°42′N 55°05′E, (1), June 2011.

Lixus pulverulentus (Scopoli, 1763)
Material: Semnan province, Garmsar, Cheshme-Nadi, 35°00′N 52°20′E, (1), April 2011.

Lixus subtilis Boheman**,** 1836
Material: Semnan province, Mahdishahr, Roodbar, 35°42′N 53°21′E, (1), May 2010; Shahrud, Abbas-Abad, 35°30′N 55°30′E, (2), June 2011.

Lixus umbellatarum (Fabricius, 1787)
Material: Semnan province, Mahdishahr, Dasht-Sefid, 35°42′N 53°21′E, (1), May 2010.

Genus *Larinus* Dejean, 1821

Larinus bardus Gyllenhal**,** 1836
Material: Semnan province, Mahdishahr, Dehsofian, 35°42′N 53°21′E, (3), May 2010.

Larinus elegans Desbrochers**,** 1897
Material: Semnan province, Garmsar, Ivanaky, 35°00′N 52°20′E, (2), April 2011; Shahrud, Rezvan, 35°30′N 55°30′E, (1), June 2011.

Larinus liliputanus Faust**,** 1890
Material: Semnan province, Sorkheh, Asad-Abad, 35°27′N 53°13′E, (1), July 2012.

Larinus onopordi (Fabricius, 1787)
Material: Semnan province, Jangal-e Abr, 36°42′N 55°05′E, (2), June 2011.

Larinus rudicollis Petri**,** 1906
Material: Semnan province, Shahrud, Ali-Abad, 35°30′N 55°30′E, (2), June 2011.

Larinus vitellinus Gyllenhal**,** 1835
Material: Semnan province, Damghan, Dehkhoda, 35°30′N 54°20′E, (1), May 2010; Jangal-e Abr, 36°42′N 55°05′E, (1), June 2011.

Subfamily **Baridinae** Schoenherr, 1836
Supertribe **Ceutorhynchitae** Gistel, 1856
Tribe **Ceutorhynchini** Gistel, 1856

Genus ***Ceutorhynchus*** Germar, 1824

Ceutorhynchus languidus Schultze, 1902
Material: Semnan province, Jangal-e Abr, 36°42′N 55°05′E, (3), June 2011.

Ceutorhynchus sulcicollis (Paykull, 1800)
Material: Semnan province, Damghan, Seyd-Abad, 35°30′N 54°20′E, (2), May 2010; Shahrud, Namadmal, 35°30′N 55°30′E, (1), June 2011.

Genus ***Hadroplontus*** Thomson, 1859

Hadroplontus trimaculatus (Fabricius, 1775)
Material: Semnan province, Jangal-e Abr, 36°42′N 55°05′E, (3), June 2011.

Genus ***Stenocarus*** Thomson, 1859

Stenocarus ruficornis (Stephens, 1831)
Material: Semnan province, Damghan, Varkyan, 35°30′N 54°20′E, (1), May 2010.

Subfamily **Curculioninae** Latreille, 1802
Tribe **Curculionini** Latreille, 1802

Genus ***Curculio*** Linnaeus, 1758

Curculio elephas (Gyllenhal, 1836)
Material: Semnan province, Semnan, Delazian, 35°20′N 53°20′E, (1), April 2010.

Tribe **Tychiini** Thomson, 1859

Genus ***Tychius*** Germar, 1817

Tychius argentatus Chevrolat, 1859
Material: Semnan province, Mahdishahr, Roodbar, 35°42′N 53°21′E, (3), May 2010; Sorkheh, 35°27′N 53°13′E, (2), July 2012.

Tychius festivus **(**Faust, 1884)
Material: Semnan province, Damghan, Dehkhoda, 35°30′N 54°20′E, (2), May 2010.

Tychius hirtellus Tournier, 1873
Material: Semnan province, Semnan, Keyr-Abad, 35°20′N 53°20′E, (1), April 2010; Jangal-e Abr, 36°42′N 55°05′E, (1), June 2011.

Tychius stephensi Schoenherr, 1836
Material: Semnan province, Garmsar, Dehnamak, 35°00′N 52°20′E, (1), April 2011.

Subfamily **Entiminae** Schoenherr, 1823
Tribe **Hyperini** Lacordaire, 1863

Genus ***Hypera*** Germar 1817

Donus fasciculatus (Herbst, 1795)
Material: Semnan province, Jangal-e Abr, 36°42′N 55°05′E, (2), June 2011; Sorkheh, Sofi-Abad, 35°27′N 53°13′E, (1), July 2012.

Hypera postica (Gyllenhal, 1813)
Material: Semnan province, Damghan, Ghosheh, 35°30′N 54°20′E, (5), May 2010; Shahrud, Mighan, 35°30′N 55°30′E, (6), June 2011.

Tribe **Otiorhynchini** Schoenherr, 1826

Genus *Otiorhynchus* Germar, 1822

***Otiorhynchus* (*Misenatus*) *lugens* (Germar, 1817)**
Material: Semnan province, Shahrud, Jilan, 35°30′N 55°30′E, (2), June 2011.

Otiorhynchus* (*Podonebistus*) *bleusei Faust, 1899
Material: Semnan province, Semnan, Abkhory, 35°20′N 53°20′E, (1), April 2010.

DISCUSSION

In this paper totally 24 curculionid species were collected from different regions of Semnan province. Subfamilies Lixinae and Curculioninae with 11 and 7 species respectively, are more diverse than the Baridinae and Entiminae (both 4 species). Among the 9 genera, *Larinus* with 6, *Lixus* with 5 and *Tychius* both with 4 species are more diverse than other genera. In this research, a few localities of Semnan province were covered for sampling; surely continuing sampling in other regions (especially Jangal-e Abr with rich flora) will result in new data. Additionally identification of host plants of Curculionidae is a very valuable work which was poorly studied in Iran.

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