

**IDENTIFICATION OF SPECIES LIXINI TRIBE
FROM SOUTH OF KERMAN REGION, IRAN
(COLEOPTERA: CURCULIONIDAE: LIXINAE: LIXINI)**

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[Shahriyari-Nejad, S., Fathi, S. A. A. & Asadi, M. 2013. Identification of species Lixini tribe from South of Kerman region (Coleoptera: Curculionidae: Lixinae: Lixini). Munis Entomology & Zoology, 8 (1): 199-202]

ABSTRACT: During 2010-2011 tribe of Lixini was investigated in South of Kerman region. In total 9 species belonging to 3 genera were determined. Among them identified for first time in world main host plant of species *Larinus affinis* that this species completed its generation on this host plant.

KEY WORDS: Curculionidae, Lixinae, Lixini, *Echinops aucheri*, Kerman.

Kerman is a wide region in Iran (with total area 175069 km²) that including 16 towns. This is area linked with six provinces including Southern Khorasan, Yazd, Sistan and Baluchistan, Hormozgan and Fars. Curculionidae is currently the largest family of insects in the world with at least 3600 genera and 41000 species (Spangler, 1982). Lixinae is a subfamily of true weevils, including two tribes Cleonini and Lixini (Ter-Minassian, 1967). Main characteristics of the subfamily include tarsal claws are fused at the base, and labial palps are short and telescoping. In addition, their body is elongated shape as for some other weevils, tibiae bear and uncus on its distal end and the rostrum is forwardly directed (Boothe et al., 1990). The species of Lixinae are mainly root feeder and thus several of those are used in biological control of invasive weeds, namely Knapweeds (Zwolfer et al., 1971; Coombs et al., 2004). Main characteristic of tribe of Lixini that separate it from tribe of Cleonini is antennary groove. Antennary groove in tribe of Cleonini extending almost to the apex of rostrum but in tribe of Lixini antennary groove is not usually reaching the apex of rostrum (Ter-Minassian, 1967). Several species from tribe of Lixini to make trehala that used as drug (Gultekin, 2008). The objective of this study is the identification of Lixini species in South of Kerman region.

MATERIALS AND METHODS

The material was collected during 2010-2011 on the different host plants in the pastures, agriculture field and grass land. The specimens were collected either directly by hand. All samples were lodge in killing jar (Ethanol 75%) and transferred to the laboratory and then pinned as well labeled. The specimens were sent to Dr. Levent Gultekin in Ataturk University in Erzurum-Turkey to identify or confirm. All species are deposited in the Entomology collection of Plant Protection Department college of Agriculture, Mohaghegh Ardabili university of Ardabil-Iran.

RESULTS

In the research 9 species belonging to 3 genera and from Lixini tribe are presented. In this research reported for first time in world distribution and main host plant of *Larinus affinis* weevil that this species showed by an aster.

Family Curculionidae Laterille, 1802

Subfamily Lixinae Schonherr, 1823

Tribe Lixini Schonherr, 1823

Genus *Larinus* Dejean, 1821

***Larinus nidificans* Guibourt, 1858**

Material: Baft, 1 sample, June 2010; Dehsard, 3 sample, April 2011.

Host plant: *Echinops longipenicillatus* Mozaff. & Ghahr.

Literatures: Hanbury, 1859; Csiki, 1934; Voss, 1960; Ter-Minassian, 1967; Fremuth, 1987; Modarres Awal, 1997; Gultekin, 2008; Modarres Awal, 2010; Legalove, 2010.

Iranian distribution: Birjand.

General distribution: Turkey, Syria, Turkmenistan, Transcaucasia, Afghanistan.

***Larinus onopordi* Fabricius, 1787**

Material: Baft. 1 sample, July 2010.

Host plant: *Echinops lalesarensis* Bornm.

Literatures: Adnani et al., 2004; Gultekin, 2006; Legalove, 2010.

Iranian distribution: Ardabil, Bushehr, East Azarbaijan, Fars, Guilan, Isfahan, Kermanshah, Lorestan, Kohkiluyeh & Boyer-Ahmad, Khuzestan, Markazi, mazandaran, Qom, Semnan, Tehran, West Azarbaijan.

General distribution: Western Palaearctic.

****Larinus affinis* Fremuth, 1987**

Material: Dehsard-baft, 2 samples, June 2010, 9 samples, July 2010, 15 samplee, April 2011, Dalfard-Jiroft, 4 samples, May 2011, 6 samples, June 2011.

*Host plant: *Echinops aucheri* Boiss.

Literature: Fremuth, 1987.

Iranian distribution: Chashmeh-ye Sargaz.

General distribution: Unknown.

***Larinus syriacus* Gyllenhal, 1835**

Material: Dehsard, 5 samples, May 2011, Baft, 8 samples, May 2011.

Host plant: *Carthamus oxyachantha* M. Bies.

Literatures: Winkler, 1930-1932; Csiki, 1934a; Ter-Minassian, 1946-1967; Broumand, 1976-1998, Modarres Awal, 1997.

Iranian distribution: Ardabil, Fars, Golestan, Kermanshah, Mazandaran, West Azarbaijan.

General distribution: Southern Europe, Caucasus, Middle Asia, Asia minor.

***Larinus grisescens* Gyllenhal, 1835**

Material: Dehsard, 3 samples, May 2011, Baft, 4 samples, May 2011.

Host plant: *Carthamus oxyachantha* M. Bieb.

Literatures: Csiki, 1934a; Ter-Minassian, 1967; Legalov, 2010.

Iranian distribution: Iran.

General distribution: Southern Europe, Asia minor.

***Larinus liliputanus* Faust, 1890**

Material: Dehsard-Baft, 3 samples, April 2011.

Host plant: *Cousinia stocksii* Winkler.

Literatures: Broumand, 1976; Modarres Awal, 1997; Broumand, 1998, Nematollahi, 2010.

Iranian distribution: Esfahan, Fars, Kohkiluyeh & Boyer-Ahmad, Golestan, Ilam, Khuzestan, Mazandaran, Tehran, West Azarbaijan.

General distribution: Middle Asia, Iran, China.

Genus *Lixus* Fabricius, 1801***Lixus cardui* Olivier, 1801**

Material: Dehsard-Baft, 10 samples, April 2011, Baft, 16 samples, May 2011.

Host plant: *Onopordon leptolepis* DC.

Literatures: Winkler, 1930-1932; Csiki, 1934a; Ter-Minassian, 1946; Afshar, 1994; Broumand, 1998; Modarres Awal, 1997-2010; Legalove, 2010.

Iranian distribution: Ardabil, East Azarbaijan, Fars, Golestan, Esfahan, Kermanshah, Khorasan, Khuzestan, Kohkiluyeh & Boyer-Ahmad, Mazandaran, Qom, Tehran, West Azarbaijan.

General distribution: Western & Central Palaearctic.

***Lixus albomarginatus* Boheman, 1843**

Material: Dehsard-Baft, 2 samples, April 2011.

Host plant: *Onopordon leptolepis* DC.

Literatures: Dieckman, 1980, 1983; Broumand, 1998.

Iranian distribution: East Azarbaijan, Sistan & Baluchestan, Tehran.

General distribution: Western and Central Palaearctic.

Genus *Bangasternus* Gozis, 1882***Bangasternus planifrons* Brulle, 1843**

Material: Dehsard- Baft, 5 samples, April 2011.

Host plant: *Carthamus oxychantha* M. Bieb.

Literatures: Ghahari et al., 2010; Modarres Awal & pour Hossain, 2010a.

Iranian distribution: Khorasan, Chaharmahal & Bachtari.

General distribution: Southern Europe, Middle Asia, Asia Minor.

ACKNOWLEDGEMENTS

I am really appreciated Dr. Levent Gültekin in Atatürk University Turkey for identification of weevil samples, Dr. Seyed Mansur Mirtajaddini in Shahid Bahonar University Iran for identification of plants.

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