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# Curculionoidea (Insecta: Coleoptera) Species Detected on Some Weeds in Kahramanmaraş Province, Türkiye Part I

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## ABSTRACT
This study was conducted to determine the Curculionoidea species on weeds found in non-agricultural areas in Kahramanmaraş Province between 2021 and 2022, weekly from late March early April until the end of September after the weeds begin to germinate, and at fifteen-day intervals when the weeds start to dry towards the end of September. Studies were carried out. As a result of this study two genera belonging to the family Curculionidae, Lixinae Schoenherr, 1823 subfamily of the superfamily Curculionoidea, and fourteen species belonging to these genera. *Larinus cinerascens* Capiomont, 1874, one of the identified species, is a new record for the Curculionoidea fauna of Türkiye. A total of five species, including *Lixus algirus* L., *Lixus vilis* (Rossi, 1790), *Larinus cinerascens* Capiomont, 1874, *Larinus hedenborgi* Boheman, 1845, *Larinus turbinatus* Gyllenhal, 1835, are new records for Kahramanmaraş Province. In addition, twelve weed species were identified as new host plants for the identified Curculionoidea species.

**Entomology**

**Research Article**

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**Anahtar Kelimeler**
Curculionoidea
Curculionidae
Weed
Host Plant
Kahramanmaraş

# Kahramanmaraş İlindeki Bazı Yabancı Otlar Üzerinde Saptanan Curculionoidea (Insecta: Coleoptera) Türleri Kısım I

## ÖZET
Bu çalışma Kahramanmaraş İlinde 2021-2022 yılları arasında tarım dışı alanlarda bulunan yabancı otlar üzerindeki Curculionoidea türlerini belirlemek amacıyla yabancı otların çimlenmeye başlamasını takiben mart sonu-nisan ayı başlarından eylül ayının sonuna kadar haftalık olarak, eylül ayının sonuna doğru yabancı otların kurumaya başlamasıyla 15 günlük aralıklarla arazi çalışmaları yürütülmüştür. Yürütülen bu çalışma sonucunda Curculionoidea üst familyasının Curculionidae familyası, Lixinae Schoenherr, 1823 alt familyasına bağlı 2 cins ve bu cinslere ait 14 tür tespit edilmiştir. Tespit edilen türlerden *Larinus cinerascens* Capiomont, 1874 Türkiye Curculionoidea faunası için yeni kayıttır. *Lixus algirus* L., *Lixus vilis* (Rossi, 1790), *Larinus cinerascens* Capiomont, 1874, *Larinus hedenborgi* Boheman, 1845, *Larinus turbinatus* Gyllenhal, 1835 olmak üzere toplam 5 tür ise Kahramanmaraş İli için yeni kayıt niteliğindedir. Ayrıca belirlenen Curculionoidea türleri için 12 yabancı ot türü yeni konukçu bitki olarak belirlenmiştir.

**Entomoloji**

**Araştırma Makalesi**

**Makale Tarihçesi**
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## INTRODUCTION
One of the most important factors affecting crop production is weeds. Weeds survive in the same environment as crops and compete with them for water, nutrients, and light, negatively affecting the quality of agricultural products, and also causing a loss of approximately $ 7.6 billion worldwide (Pacanoski, 2007).

The order of Coleoptera is important among the insects used for biological weed control (Kısmalı & Madanlar,

1990). Within this order, the superfamily Curculionoidea has more weed hosts than other species (Oberprieler et al., 2007). Larvae mostly prefer the root collar and roots of plants as feeding habitat, and they feed on the root parts by forming galls (Volovnik, 2010) within the plant tissue (Trnka et al., 2015) or by moving freely in the soil. This group of insects is also important for biological control of weeds, depending on their specific nutritional characteristics (Stinson et al., 1994; Story et al., 2006; Gültekin et al., 2019).

Studies on the species of the superfamily Curculionoidea began in the 1700s, and many foreign and local researchers contributed by carrying out systematic, taxonomic, and faunistic studies. Some of them; Winkler (1924-1932), Emden (1944), Lodos (1960; 1971; 1972), Voss (1962), Altay et al. (1972), Lodos et al. (1978; 2003), Dieckmann (1980), Alonso-Zarazaga & Lyal (1999), Gültekin (2001), Marvaldi & Lanteri (2005), Pehlivan et al. (2005a; 2005b), Keskin (2005), Gültekin (2006c), Davidian & Gültekin (2006), Wanat (2007), Bolu & Legalov (2008), Erbey (2010), Uzun & Tezcan (2011), Avgın & Colonnelli (2011), Gültekin & Podlussany (2012), Aydın (2013), Talamelli (2014), Gürler (2014), Yılmaz (2015), Aydın & Hacet (2016), Özgen et al. (2016), Erdem (2016), Güven (2019), Kapucu (2019), Hacet & Colonnelli (2019), Erbey & Bolu (2021).

In this study, weeds are plants adapted to different climatic conditions and soil structures. They serve as intermediate hosts for many living organisms due to their ability to withstand difficult ecological conditions and create population diversity in the ecosystem. For this reason, two genera belonging to the subfamily Lixinae Schoenherr, 1823 of the superfamily Curculionoidea, the family Curculionidae, which has a very important place among the weeds found in non-agricultural areas of Kahramanmaraş Province, and fourteen species belonging to these genera were identified.

## MATERIAL AND METHOD

This study was conducted on the weeds found in non-agricultural areas in Kahramanmaraş Province during 2021-2022.

### Material

The primary material of this study consists of species belonging to the superfamily Curculionoidea found in Kahramanmaraş Province, Türkiye, and the weeds these species feed on. In the study, a trap, killing jar, culture containers, sample containers, polyethylene bags, suction tube, 70% ethyl alcohol, forceps, insect needle, petri dish, cotton, soft-tipped brush, tulle, rubber, and GPS device were used.

### Method

#### Field and Laboratory Studies

The study was carried out in weekly intervals, starting from the end of March or early April and till the end of September, after the germination of the weeds in the non-agricultural areas of Kahramanmaraş Province, and at fifteen-day intervals when the weeds started to dry up towards the end of September. In the samples, all the weeds were examined because the species of the superfamily Curculionoidea were found in the roots, stems, leaves, and generative organs of the weeds. The phenological period of each weed in which the species was found, the part where the insect feeds and the locations of the weed species were determined by GPS.

Weeds belonging to the superfamily Curculionoidea were observed in the wild, with large species collected by hand, small species collected with a suction tube, and a trap used for collection. Some life stages of Curculionoidea species such as egg, larva, pupa, and adult from the collected samples were brought to the laboratory conditions and cultured with the plant whether they fed on. To maintain the humidity of the cultured samples, water was sprayed at regular intervals, and nutrients were replaced as necessary. Cultured weedy plant samples were checked at regular intervals, and egg, larva, pupa, and adult emergence dates were recorded.

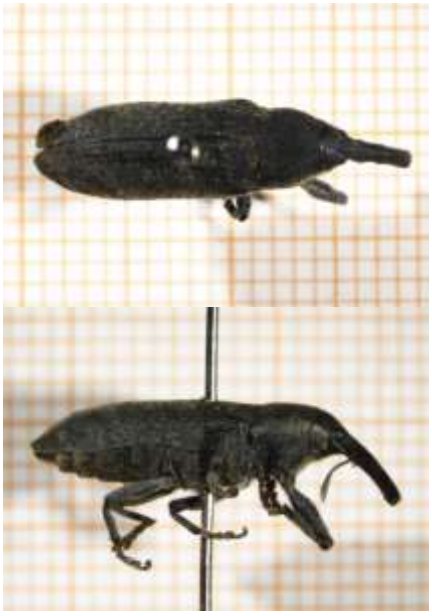
Adult insect species samples collected during field works were killed with the help of the killing jars or directly brought to the laboratory in separate sample containers with their label information. The location where the samples were collected, latitude and longitude, was recorded using GPS. With this information, the samples were labeled and prepared for expert identification. Herbaria of weed species belonging to the superfamily Curculionoidea were also designed and made available for identification.

Dieckman (1977), Gültekin (2008a), and Erbey (2010) were used to determine the morphological characteristics of the species belonging to the superfamily Curculionoidea. Identifications of insect specimens belonging to the superfamily Curculionoidea. Associate. Prof. Dr. Mahmut ERBEY (Kırşehir Ahi Evran University, Faculty of Science and Letters, Department of Molecular Biology and Genetics) and identifications of weeds by Associate. Prof. Dr. Tamer ÜSTÜNER (Kahramanmaraş Sütçü Imam University Faculty of Agriculture, Department of Plant Protection) was done.

## RESULT AND DISCUSSION

In this study conducted in Kahramanmaraş Province, two genera belonging to the family Curculionidae of the superfamily Curculionoidea and the Lixine subfamily and fourteen species belonging to these genera were identified. Among the species identified,

*Larinus cinerascens* Capiomont, 1874 was determined as a new record for the Türkiye fauna. A total of five species belonging to the genera *Lixus* Fabricus, 1801 and *Larinus* Dejean, 1821, including *Lixus algirus* L., *Lixus vilis* (Rossi, 1790), *Larinus cinerascens* Capiomont, 1874, *Larinus hedenborgi* Boheman, 1845, *Larinus turbinatus* Gyllenhal, 1835, are new records for Kahramanmaraş Province. Furthermore, 12 weed species were identified as new host plants for the identified Curculionoidea species (Table 1).



*Lixus algirus* L.

*Lixus cardui* Olivier, 1808

*Lixus circumcinctus* Bohemann, 1836

*Lixus elongatus* Goeze, 1777

*Lixus scolopax* Bohemann, 1836

*Lixus vilis* (Rossi, 1790)

*Larinus cinerascens* Capiomont, 1874

*Larinus hedenborgi* Boheman, 1845

*Larinus latus* (Herbst, 1874)

*Larinus minutus* Gyllenhal

*Larinus onopordi* (Fabricius, 1787)

*Larinus sturnus* Schaller, 1873

*Larinus turbinatus* Gyllenhal, 1835

*Larinus rudicollis* Petri, 1907

Figure 1. Curculionoidea (Insecta: Coleoptera) species detected in the weeds in Kahramanmaraş Province
*Şekil 1. Kahramanmaraş İli yabancı otlar üzerinde tespit edilen Curculionoidea (Insecta: Coleoptera) türleri*

Table 1. Curculionoidea (Insecta: Coleoptera) species and their host plant detected in Kahramanmaraş Province
*Çizelge 1. Kahramanmaraş İlinde tespit edilen Curculionoidea (Insecta: Coleoptera) türleri ve konukçu bitkileri*

| Species | Host Plant | References |
|---|---|---|
| *Lixus algirus* | *Circium arvense* | Pierre, 1901 |
| | *Cirsium palustris* | Krauss, 1963 |
| | *Echinops orientalis** | Bardner, 1983 |
| | *Euphorbia spinosa* | |
| | *Gundelia tournefortii** | |
| | *Vicia faba* | |
| *Lixus cardui* | *Amygdalus communis* | Hofmann, 1954 |
| | *Carduus nutans** | Lodos et al., 1978; 2003 |
| | *Carduus* sp. | Ter-Minasyan, 1978 |
| | *Centaurea* sp. | Gültekin et al., 2000 |
| | *Cirsium* sp. | Swirepik & Smyth, 2002 |

| | | |
|---|---|---|
| | *Cynara scolymus* | Huwer et al., 2004 |
| | *Crataegus* sp. | Pehlivan et al., 2005a |
| | *Echinops orientalis*[*] | Kluge & Zachariades, 2006 Gültekin, 2007; 2008c |
| | *Hypericum* sp. | |
| | *Juglans regia* | Harizanova et al., 2010 |
| | *Onopordum acanthium* | Gültekin & Perrin, 2011 |
| | *Onopordum alexandrinum* | Shahriyari-Nejad et al., 2013 |
| | *Onopordum bracteatum* | Bolu, 2016 |
| | *Onopordum carduiforme* | Güven, 2019 |
| | *Onopordum heteracanthum* | Alewi et al., 2019 |
| | *Onopordum illyricum* | |
| | *Onopordum leptolepis* | |
| | *Onopordum palaestinum* | |
| | *Onopordum* sp. | |
| | *Planatus* sp. | |
| | *Prunus avium* | |
| | *Prunus domestica* | |
| | *Pyrus elaeagrifolia* | |
| | *Salix* sp. | |
| | *Solanum esculentum* | |
| | *Triticum* sp. | |
| | *Verbascum* sp. | |
| | *Vicia cracca* | |
| | *Vicia faba* | |
| *Lixus circumcinctus* | *Amygdalus communis* | Ter-Minasyan, 1978 |
| | *Crambe orientalis* | Gültekin & Korotyev, 2011 |
| | *Crambe* sp. | Bolu, 2016 |
| | | Korotyaev et al., 2016 |
| *Lixus elongatus* | *Beta* sp. | Hoffmann, 1954 |
| | *Carduus acanthoides* | Balachowsky, 1963 |
| | *Carduus nutans* | Ter- Minasyan, 1978 |
| | *Carduus* sp. | Eber et al., 1999 |
| | *Centaurea* sp. | Lodos et al., 2003 |
| | *Circium lanceolatum* | |
| | *Circium* sp. | |
| | *Cretaegus* sp. | |
| | *Onopordum* sp. | |
| | *Prunus armenica* | |
| | *Sinapis* sp. | |
| | *Sisybrium* sp.[*] | |
| | *Tamarix* sp. | |
| | *Triticum* sp. | |
| | *Verbascum* sp. | |
| *Lixus scolopax* | *Centaurea solstitialis* | Lodos et al., 1978; 2003 |
| | *Centaurea* sp. | Gültekin, 2007 |
| | *Echinops orientalis*[*] | |
| | *Echinops sphaerocephalus* | |
| | *Medicago sativa* | |
| | *Onopordum* sp. | |
| | *Prunus amygdalus* | |
| | *Quercus* sp. | |
| *Lixus vilis* | *Carduus nutans*[*] | Stierlin, 1883 |
| | *Centaurea* sp. | Dieckman, 1983 |
| | *Erodium cicutarium* | Lodos et al., 2003 |
| | *Erodium* sp. | Pehlivan et al., 2005a Heijerman, 2007 |
| | *Fraxinus* sp. | Ghahari et al., 2009 |
| | *Malus sylvestris* subsp. mitis | Stejskal & Trnka, 2013 |

| | | |
|---|---|---|
| | *Onopordum* sp. | Stejskal et al., 2014 |
| | *Pistacia lentiscus* | Forbicioni et al., 2019 |
| | *Salix* sp. | |
| | *Sisybrium* sp.* | |
| *Larinus cinerascens* | *Carthamus dentatus** | Alphonse, 1934 |
| | *Centaurea lugdunensis* | |
| *Larinus hedenborgi* | *Echinops cephalotes* | Gültekin, 2006b; 2008a |
| | *Echinops* sp. | Skuhrovec et al., 2022 |
| | *Echinops sphaerocephalus Echinops orientalis** | |
| *Larinus latus* | *Acacia* sp. | Hoffman, 1954 |
| | *Carduus nutans* | Zwölfer et al., 1971 |
| | *Carduus onopordioides* | Lodos et al., 1978; 2003 |
| | *Carduus* sp. | Karaat et al., 1986 |
| | *Carthamus lanatus* | Briese & Sheppard, 1992 Michalakis & |
| | *Centaurea* sp. | Olivieri, 1992 |
| | *Cirsium haussknechtii* | Rosenthal et al., 1994 |
| | *Cirsium* sp. | Briese et al., 1995 |
| | *Cirsium vulgare* | Briese, 2000 |
| | *Cynara cardunculus* | Gültekin et al., 2000 |
| | *Cynara scolymus* | Abdel-Moniem, 2002 |
| | *Cynara* sp. | Briese et al., 2002 |
| | *Echinops sphaerocephalus* | Gültekin, 2004 |
| | *Onopordum acanthium* | Pehlivan et al., 2005a |
| | *Onopordum bracteatum* | Ottai & Abdel-Moniem, 2006 |
| | *Onopordum candidum Onopordum* | Gültekin, 2008c |
| | *carduchorum* | Yardibi & Tozlu, 2013 |
| | *Onopordum* sp. | Abad et al., 2016 |
| | *Onopordum tauricum* | Bozdoğan & Uygur, 2019 |
| | *Quercus* sp. | Güven, 2019 |
| | *Silybum marianum* | |
| | *Silybum* sp. | |
| | *Verbascum* sp. | |
| *Larinus minutus* | *Astragalus* sp. | Groppe et al., 1990 |
| | *Carduus nutans* | Kashefi & Sobhian, 1998 |
| | *Carduus* sp. | Lodos et al., 2003 |
| | *Centaurea diffusa* | Seastedt et al., 2003 |
| | *Centaurea maculosa* | Lejeune et al., 2005 |
| | *Centaurea solstitialis** | Smith & Mayer, 2005 |
| | *Centaurea* sp. | Myers et al., 2009 |
| | *Centaurea stoebe* | Knochel et al., 2010 |
| | *Centaurea stoebe* subsp. *micranthos* | Bourchier & Crowe, 2011 Stephens & |
| | *Centaurea virgata* | Myers, 2013 |
| | *Cirsium* sp. | Bolu, 2016 |
| | *Echium* sp. | Hoebeke & Spichiger, 2016 Güven, 2019 |
| | *Elaeganus angustifolia* | |
| | *Genista* sp. | |
| | *Medicago sativa* | |
| | *Onopordum* sp. | |
| | *Quercus* sp. | |
| | *Rosa* sp. | |
| | *Rubus* sp. | |
| | *Vincetoxicum* sp. | |
| | *Vitis vinifera* | |
| *Larinus onopordi* | *Carduus* sp. | Ter-Minasyan, 1967 |
| | *Centaurea* sp. | Lodos et al., 1978; 2003 |
| | *Cirsium* sp. | Pehlivan et al., 2005a |

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|---|---|---|
| | *Echinops* sp. | Gültekin, 2006b |
| | *Echinops lalesarensis* | Mathesona et al., 2008 |
| | *Echinops sphaerocephalus* | Gültekin, 2008c |
| | *Echinops pungens* | Shahriyari-Nejad et al., 2013 |
| | *Onopordum* sp. | Özgen et al., 2016 |
| | *Onopordum cynarocephalum* | Güven, 2019 |
| | *Pinus* sp. | |
| | *Echinops orientalis** | |
| *Larinus sturnus* | *Arctium* sp. | Zwölfer et al., 1971 |
| | *Carduus crispus* | Zwölfer, 1974; 1979b |
| | *Carduus* sp. | Koch, 1992 |
| | *Centaurea* sp. | Lodos et al., 2003 |
| | *Cirsietum rivularis* | Ghahari et al., 2009 |
| | *Onopordum* sp. | Skuhrovec & Gosik, 2011 |
| | *Cirsium oleraceum* | |
| | *Cirsium* sp. | |
| | *Cirsium spinosissimum* | |
| | *Cirsium vulgare* | |
| | *Solanum melongena* | |
| | *Echinops orientalis** | |
| *Larinus turbinatus* | *Arrhenatheretum elatioris* | Rabaud, 1913 |
| | *Carduus* sp. | Zwölfer, 1975b |
| | *Carduus acanthoides* | Batra et al., 1981 |
| | *Carduus crispus* | Zwölfer & Brandl, 1989 |
| | *Carduus hamulosus* | Koch, 1992 |
| | *Carduus nervous* | Skuhrovec et al., 2008 Balalaikins et al., |
| | *Carduus nutans* | 2011 |
| | *Carduus nutans* subp. *nutans* | Gosik & Skuhrovec, 2011 Yegorenkova et |
| | *Carduus thoermeri* | al., 2011 |
| | *Carduus uncinatus* | Delbol, 2012 |
| | *Centaurea behen* | Ghahari & Arzanov, 2012 Gültekin, 2004 |
| | *Centaurea solstitialis* | Bolu, 2016 |
| | *Cirsium arvense* | Maciejowski & Petryszak, 2017 |
| | *Cirsium eriophorum* | Dumont & Tonnancour, 2019 |
| | *Cirsium heterophyllum* | Güven, 2019 |
| | *Cirsium incanum* | |
| | *Cirsium oleraceum* | |
| | *Cirsium setosum* | |
| | *Cirsium* sp. | |
| | *Cirsium tuberosum* | |
| | *Cirsium ukrainicum* | |
| | *Cirsium vulgare* | |
| | *Onopordum acanthium* | |
| | *Picnomon acarna** | |
| *Larinus rudicollis* | *Carduus* sp. | Lodos et al., 2003 |
| | *Centaurea* sp. | Pehlivan et al., 2005a |
| | *Cirsium* sp. | Gültekin, 2008c |
| | *Cistus* sp. | Ghahari et al., 2010 |
| | *Echinops orientalis** | Bolu, 2016 |
| | *Echinops pungens* | Korotyaev et al., 2016 |
| | *Echinops* sp. | Szenası et al., 2019 |
| | *Echinops sphaerocephalus* | |
| | *Lactuca scariola* | |
| | *Medicago sativa* | |
| | *Onopordum* sp. | |
| | *Pinus* sp. | |
| | *Sinapis* sp. | |

*****New host plant

**Superfamily:** Curculionoidea

**Family:** Curculionidae

**Subfamily:** Lixinae Schoenherr, 1823

**Tribus:** Lixini Schoenherr, 1823

**Genus:** *Lixus* Fabricus, 1801

**Species:** *Lixus algirus* L.

**Material examined:** Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, May 11, 2022 (number of insect samples: 2), on *Gundelia tournefortii* L. (new host plant); Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, May 31, 2022 (number of insect samples: 2), on *Echinops orientalis* Trautvetter (new host plant).

**Distribution in Türkiye:** Içel, Kırşehir, Kocaeli, Samsun, Zonguldak (Lodos et al., 1978; Pehlivan et al., 2005a; Erbey, 2010; Yılmaz, 2015), Kahramanmaraş (new record).

**Species:** *Lixus cardui* Olivier, 1808

**Material examined:** Kahramanmaraş, Onikişubat, Üngüt Neighbourhood, N37°35'43,613/E36°50'34,120, August 5, 2021 (number of insect samples: 24); March 29, 2022 (number of insect samples: 12), on *Carduus nutans*; Kahramanmaraş, Pazarcık, Akçalar Village, N37°31'29,326/E37°26'14,770, May 11, 2022 (number of insect samples: 6), on *Carduus nutans*; Kahramanmaraş, Türkoğlu, Kızıleniş Village, N37°20'48,6/E36°46'40,7, April 8, 2022 (number of insect samples: 13), on *Carduus nutans*; Kahramanmaraş, Dulkadiroğlu, Hacımustafa Village, N37°28'29,776/E36°53'7,2773, April 25, 2022 (number of insect samples: 18); May 5, 2022 (number of insect samples: 6), on *Carduus nutans*; Kahramanmaraş, Dulkadiroğlu, Ayaklıcaoluk Village, N37°36'29,314/E37°2'38,830, August 7, 2021 (number of insect samples: 6); March 29, 2022 (number of insect samples: 3), on *Carduus nutans*; Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, May 31, 2022 (number of insect samples: 5), on *Echinops orientalis* (new host plant); Kahramanmaraş, Dulkadiroğlu, Sekamer, N37°35'28,975/E37°3'30,066, 28.04.2022 (number of insect samples: 6), on *Carduus nutans* (new host plant).

**Distribution in Türkiye:** Adana, Ankara, Antalya, Aydın, Bartın, Balıkesir, Bilecik, Burdur, Bursa, Çanakkale, Çankırı, Denizli, Diyarbakır, Edirne, Eskişehir, Gaziantep, Isparta, Iğdır, Içel, Izmir, Kahramanmaraş, Karaman, Karabük, Kastamonu, Kayseri, Kırklareli, Kırşehir, Kütahya, Konya, Manisa, Mersin, Muğla, Niğde, Osmaniye, Sakarya, Uşak, Yozgat (Lodos et al., 1978; 2003; Sert, 1995; Pehlivan et al., 2005a; Erbey, 2010 ; Yardibi & Tozlu, 2013; Gürler, 2014; Bolu, 2016; Güven, 2019).

**Species:** *Lixus circumcinctus* Bohemann, 1836

**Material examined:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 2, 2019 (number of insect samples: 3); May 15, 2019 (number of insect samples: 8); May 16, 2019 (number of insect samples: 3); May 23, 2019 (number of insect samples: 3); April 14, 2022 (number of insect samples: 3), on *Crambe orientalis*.

**Distribution in Türkiye:** Ankara, Diyarbakır, Kayseri, Kırşehir, Mardin (Sert, 1995; Sert & Çağatay, 1999; Pehlivan et al., 2005a; Bolu, 2016), Kahramanmaraş (new record).

**Species:** *Lixus elongatus* Goeze, 1777

**Material examined:** Kahramanmaraş, Onikisubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 9, 2019 (number of insect samples: 2), on *Sisybrium* sp. (new host plant); May 9, 2019 (number of insect samples: 13), on *Carduus nutans*.

**Distribution in Türkiye:** Adana, Antalya, Ankara, Aydın, Bilecik, Bursa, Denizli, Düzce, Gaziantep, Hatay, Içel, Kahramanmaraş, Karaman, Kayseri, Kırklareli, Kırşehir, Konya, Manisa, Nevşehir, Niğde, Uşak (Lodos et al., 1978; 2003; Altınayar, 1981; Sert, 1995).

**Species:** *Lixus scolopax* Bohemann, 1836

**Examined material:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, December 11, 2017 (number of insect samples: 3), on *Echinops orientalis*; Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°39'31,17/E36°82'53,69, July 8, 2021 (number of insect samples: 2), on *Echinops orientalis* (new host plant).

**Distribution in Türkiye:** Adana, Antalya, Denizli, Edirne, Gaziantep, Kahramanmaraş, Mersin, Niğde, Osmaniye, Tekirdağ, Karabük (Lodos et al., 1978; 2003; Erbey, 2010; Yardibi & Tozlu, 2013; Bolu, 2016).

**Species:** *Lixus vilis* (Rossi, 1790)

**Material examined:** Kahramanmaraş, Onikişubat, Şehit Abdullah Çavuş Neighborhood, N37°34'55,825/E36°53'10,106, April 21, 2022 (number of insect samples: 2), on *Sisybium* sp. (new host plant); Kahramanmaraş, Pazarcık, Akçalar Village, N37°31'29,326/E37°26'14,1770, May 11, 2022 (number of insect samples: 2), on *Carduus nutans* (new host plant).

**Distribution in Türkiye:** Adana, Afyonkarahisar, Aksaray, Ankara, Aydın, Balıkesir, Bursa, Çanakkale, Edirne, Hatay, Izmir, Kastamonu, Kırklareli, Kütahya, Manisa, Mardin, Muğla, Niğde, Osmaniye (Lodos et al., 1978; 2003; Fremuth, 1983; Pehlivan et al., 2005; Erbey, 2010; Avgın & Colonnelli, 2011),

Kahramanmaraş (new record).

**Genus:** *Larinus* Dejean, 1821

**Species:** *Larinus cinerascens* Capiomont, 1874

**Material examined:** Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, July 8, 2021 (number of insect samples: 2); July 2, 2022 (number of insect samples: 3); June 6, 2022 (number of insect samples: 6), on *Carthamus dentatus*; Kahramanmaraş, Pazarcık, Akçalar Village, N37°31'29,326/E37°26'14,770, July 6, 2022 (number of insect samples: 6), on *Carthamus dentatus* (new host plant).

**Distribution in Türkiye:** A new record for Türkiye.

**Species:** *Larinus hedenborgi* Boheman, 1845

**Material examined:** Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, August 2, 2022 (number of insect samples: 7), on *Echinops orientalis* (new host plant).

**Distribution in Türkiye:** Adıyaman, Balıkesir, Gaziantep, Malatya, Siirt, Sivas, Şanlıurfa (Gültekin, 2008a; Gültekin & Podlussany, 2012), Kahramanmaraş (new record).

**Species:** *Larinus latus* (Herbst, 1874)

**Material examined:** Kahramanmaraş, Dulkadiroğlu, Hacımustafa Village, N37°28'29,776/E36°53'7,2773, April 25, 2022 (number of insect samples: 12), on *Carduus nutans*; Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 17, 2022 (number of insect samples: 3), on *Carduus nutans*.

**Distribution in Türkiye:** Adana, Adıyaman, Afyonkarahisar, Amasya, Ankara, Antalya, Aydın, Balıkesir, Bitlis, Burdur, Bursa, Çankırı, Çanakkale, Çorum, Denizli, Diyarbakır, Erzurum, Eskişehir, Hatay, Isparta, Iğdır, Içel, Izmir, Kahramanmaraş, Karaman, Karabük, Kayseri, Kırşehir, Kırklareli, Konya, Manisa, Mersin, Nevşehir, Niğde, Osmaniye, Siirt, Sivas, Yozgat (Lodos et al., 1978; 2003; Sert & Çağatay, 1994; Sert, 1995; Pehlivan et al., 2005a; Gültekin, 2008b; Erbey, 2010; Yardibi & Tozlu, 2013; Gürler, 2014; Yılmaz, 2015; Güven, 2019).

**Species:** *Larinus minutus* Gyllenhal

**Material examined:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 17, 2022 (number of insect samples: 2), on *Centaurea solstitialis*; Kahramanmaraş, Onikişubat, Bulutoğlu Village, N37°38'17,7/E37°46'02,9, June 25, 2022 (number of insect samples: 3), on *Centaurea solstitialis* (new host plant).

**Distribution in Türkiye:** Adana, Adıyaman, Ankara, Antalya, Balıkesir, Bitlis, Burdur, Çanakkale, Çorum, Diyarbakır, Edirne, Eskişehir, Gaziantep, Hakkari, Iğdır, Içel, Izmir, Karaman, Kahramanmaraş, Kayseri, Kırşehir, Kırklareli, Kilis, Malatya, Mardin, Mersin, Muğla, Nigde, Osmaniye, Şanlıurfa, Yozgat (Lodos et al., 1978; 2003; Pehlivan et al., 2005a; Sert, 1995; Erbey, 2010; Gürler, 2014; Yılmaz, 2015; Bolu, 2016 ; Güven, 2019).

**Species:** *Larinus onopordi* (Fabricius, 1787)

**Material examined:** Kahramanmaraş, Türkoğlu, Kızıleniş Village, N37°20'48,6/E36°46'40,7, April 8, 2022 (number of insect samples: 8), on *Echinops orientalis*; Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°23'33,557/E36°50'16,226, March 29, 2022 (number of insect samples: 10); March 8, 2022 (number of insect samples: 11); May 24, 2022 (number of insect samples: 9); May 11, 2022 (number of insect samples: 7); May 31, 2022 (number of insect samples: 8); August 8, 2022 (number of insect samples: 3); August 11, 2022 (number of insect samples: 6), on *Echinops orientalis*; Kahramanmaraş, Pazarcık, Salmanıpak Village, N37°43'0,782/E37°21'5,700, May 26, 2022, on *Sorghum halapense*; Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 24, 2022 (number of insect samples: 8); April 27, 2022 (number of insect samples: 4), on *Echinops orientalis*; Kahramanmaraş, Dulkadiroğlu, Hacımustafa Village, N37°28'29,776/E36°53'7,2773, April 25, 2022 (number of insect samples: 11), on *Echinops orientalis*; Kahramanmaraş, Pazarcık, Sarıerik Village, N37°20'50,503/E37°6'16,540, May 11, 2022 (number of insect samples: 12), on *Echinops orientalis* (new host plant).

**Distribution in Türkiye:** Adana, Adıyaman, Afyonkarahisar, Antalya, Artvin, Aydın, Balıkesir, Bingöl, Bitlis, Burdur, Bursa, Çanakkale, Diyarbakır, Edirne, Elazığ, Erzurum, Erzincan, Gaziantep, Hakkari, Hatay, Isparta, Iğdır, Içel, Izmir, Kahramanmaraş, Karaman, Karabük, Kars, Kırşehir, Kırklareli, Kilis, Malatya, Manisa, Mardin, Mersin, Nevşehir, Niğde, Osmaniye, Sivas, Şanlıurfa, Şırnak (Lodos et al., 1978; 2003; Pehlivan et al., 2005a; Gültekin, 2006c; Göktürk, 2009; Erbey, 2010; Yardibi & Tozlu, 2013; Bolu, 2016; Özgen et al., 2016; Güven, 2019; Sert & Özdemir, 2019).

**Species:** *Larinus sturnus* Schaller, 1873

**Material examined:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, July 18, 2018 (number of insect samples: 2), on *Echinops orientalis* (new host plant).

**Distribution in Türkiye:** Adana, Ankara, Artvin, Cankırı, Isparta, Içel, Izmir, Kars, Kastamonu, Kırçehir, Konya, Mersin, Niğde (Lodos et al., 1978; 2003; Sert & Çağatay, 1994; Sert, 1995; Pehlivan & al., 2005a; Erbey, 2010; Gürler, 2014; Yılmaz, 2015), Kahramanmaraş (new record).

**Species:** *Larinus turbinatus* Gyllenhal, 1835

**Material examined:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, May 9, 2022 (number of insect samples: 2), on *Carduus nutans*; May 24, 2022 (number of insect samples: 2), on *Picnomon acarna*; Kahramanmaraş, Türkoğlu, Uzunsöğüt Village, N37°39'66,15/E36°84'84,06, July 8, 2021 (number of insect samples: 3), on *Picnomon acarna*; Kahramanmaraş, Pazarcık, Sarıerik Village, N37°20'50,503/E37°6'16,540, on *Carduus acanthoides*; Kahramanmaraş, Dulkadiroglu, Hacımustafa Village, N37°28'29,776/E36°53'7,2773, April 25, 2022 (number of insect samples: 2), on *Carduus nutans*; Kahramanmaraş, Türkoğlu, Damobası Village, N37°39'92,03/E36°81'95,65, July 8, 2021 (number of insect samples: 2), on *Picnomon acarna* (new host plant).

**Distribution in Türkiye:** Afyonkarakisar, Ankara, Antalya, Artvin, Balıkesir, Bayburt, Bingöl, Bitlis, Burdur, Çankırı, Diyarbakır, Düzce, Hakkari, Iğdır, Karaman, Kastamonu, Kırşehir, Mardin, Mersin, Niğde (Lodos et al., 1978; Pehlivan et al., 2005a; Erbey, 2010; Gürler, 2014; Yılmaz, 2015), Kahramanmaraş (new record).

**Species:** *Larinus rudicollis* Petri, 1907

**Material examined:** Kahramanmaraş, Onikişubat, Kahramanmaraş Sütçü Imam University Avşar Campus, N37°35'14,400/E36°48'42,179, July 4, 2017 (number of insect samples: 2); July 6, 2017 (number of insect samples: 5); July 13, 2017 (number of insect samples: 3); September 12, 2017 (number of insect samples: 4); October 25, 2019 (number of insect samples: 7); December 11, 2017 (number of insect samples: 4), on *Echinops orientalis* (new host plant).

**Distribution in Türkiye:** Adana, Adıyaman, Antalya, Bayburt, Bingöl, Bitlis, Elazığ, Erzincan, Gaziantep, Hatay, Içel, Kahramanmaraş, Kilis, Malatya, Muş, Osmaniye, Van (Lodos et al., 2003; Pehlivan et al., 2005a; Gültekin, 2008c; Bolu, 2016; Korotyaev et al., 2016).

## CONCLUSION

As a result of this study, It was found that the Curculionoidea fauna feeding on weeds in non-agricultural areas of Kahramanmaraş Province is quite rich. In addition to investigating the relationship between Curculionoidea and weeds, this study has provided new data that will form the basis for future biological control and other regional studies.

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### Contribution of the Authors as Summary

Authors declare the contribution of the authors is equal.

### Statement of Conflict of Interest

Authors have declared no conflict of interest.

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