# ON TURKISH *CERAMBYX* LINNAEUS, 1758 WITH ZOOGEOGREPHICAL REMARKS (COLEOPTERA: CERAMBYCIDAE: CERAMBYCINAE)

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ABSTRACT: All taxa of the genus *Cerambyx* Linnaeus, 1758 in Turkey and the whole world are evaluated. The genus is also discussed in detail. The main aim of this catalogic work is to clarify current status of the genus in Turkey. New faunistical data are given in the text. A key for Turkish *Cerambyx* species is also given in the text.

KEY WORDS: *Cerambyx,* Cerambycinae, Cerambycini, Cerambycidae.

## Subfamily CERAMBYCINAE Latreille, 1802

## Tribe CERAMBYCINI Latreille, 1802

= Cerambycina Latreille, 1804
= Cérambyçaires Mulsant, 1839
= Cérambycitae verae Thomson, 1860
= Cerambycites Fairmaire, 1864
= Cerambycina Thomson, 1866
= Cérambycides virais Lacordaire, 1869
= Sphallotrichina Martins & Monné, 2002

**Type genus:** *Cerambyx* Linnaeus, 1758

The size is large in general. It has brown reddish coloration, slightly brilliant. Head is more or less salient. It is projecting, with very pronounced furrows. Antennae are variable length and long in general, the segments are either smoothed and hornlike or flattened or streamlined. The eyes are large, strongly cut away. They present strong necklines and very rude facets. The maxillary palpus has triangular last segment; tongue membranous, strongly bilobed. The protorax is rugulose, in general it has conspicuous teeth laterally. It is wrinkled or pleated from side to side. The elytra are long, subparallel or cuneiform and they are covered with a thin hairiness. Front femora globulose, angled or not outside. Intermadiate coxal cavity opened. The claws are long and robust. The tribe is wide in distribution, almost cosmopolitan or subcosmopolitan, more abundant in the tropical regions (Villiers, 1978; Vives, 2000).

The tribe includes currently at least 77 genera as *Aeolesthes* Gahan, 1890; *Allodisus* Schwarzer, 1926; *Amphelictus* Bates, 1884; *Atiaia* Martins & Monné, 2002; *Bolbotritus* Bates, 1871; *Bothrocerambyx* Schwarzer, 1929; *Butherium* Bates, 1870; *Caloceramb*yx Heller, 1905; *Calpazia* Pascoe, 1857; *Cerambolbus* Quentin & Villier, 1979; *Cerambyx* Linnaeus, 1758; *Cevaeria* Tavakilian, 2003; *Coelodon* Audinet-Serville, 1832; *Coelodoniella* Adlbauer, 2005; *Coleoxestia* Aurivillius, 1912; *Criodion* Audinet-Serville, 1833; *Cyriopalus* Pascoe, 1866;

*Derolus* Gahan, 1891; *Derolydnus* Hüdepohl, 1989; *Dialeges* Pascoe, 1856; *Dissopachys* Reitter, 1886; *Djabiria* Duvivier, 1891; *Dymasius* Thomson, 1864; *Elydnus* Pascoe, 1869;*Falsoxoanodera* Pic, 1923; *Gibbocerambyx* Pic, 1923; *Hamaticherus* Audinet-Serville, 1834; *Hirtobrasilianus* Fragoso & Tavakilian, 1958; *Hoplocerambyx* Thomson, 1864; *Imbrius* Pascoe, 1866; *Ischionorox* Aurivillius, 1922; *Jebusaea* Reiche, 1877; *Juiaparus* Martins & Monné, 2002; *Jupoata* Martins & Monné, 2002; *Lachnopterus* Thomson, 1864; *Macrambyx* Fragoso, 1982; *Margites* Gahan, 1891; *Massicus* Pascoe, 1867; *Melathemma* Bates, 1870; *Metacriodion* Fragoso, 1970; *Micrambyx* Kolbe, 1893; *Mimosebasmia* Pic, 1946; *Nadezhdiella* Plavilstshikov, 1931; *Neoceramb*yx Thomson, 1860; *Neoplocaederus* Sama, 1991; *Ochrodion* Fragoso, 1982; *Opsamates* Waterhouse, 1879; *Pachydissus* Newman, 1838; *Paracriodion* Fragoso, 1982; *Parasphallenum* Fragoso, 1982; *Peruanus* Tippmann, 1960; *Plocaederus* Megerle in Dejean, 1835; *Pneumida* J.Thomson, 1864; *Poeciloxestia* Lane, 1965; *Potiaxixa* Martins & Monné, 2002; *Prosphilus* Thomson, 1864; *Pseudaeolesthes* Plavilstshikov, 1931; *Ptycholaemus* Chevrolat, 1858; *Rhytidodera* White, 1853; *Sebasmia* Pascoe, 1859; *Sphallambyx* Fragoso, 1982; *Sphallenopsis* Fragoso, 1981; *Sphallenum* Bates, 1870; *Sphallopterus* Fragoso, 1982; *Sphallotrichus* Fragoso, 1982; *Tapinolachnus* Thomson, 1864; *Taurotagus* Lacordaire, 1869; *Teraschema* Thomson, 1860; *Trachylophus* Gahan, 1888; *Trirachys* Hope, 1841; *Utopia* Thomson, 1864; *Xenopachys* Sama, 1999; *Xestiodion* Fragoso, 1981; *Xoanodera* Pascoe, 1857; *Xoanotrephus* Hüdepohl, 1989; *Zatrephus* Pascoe, 1857 and *Zegriades* Pascoe, 1869. *Diorthus* Gahan, 1891 is a synonym of *Tapinolachnus* Thomson, 1864. The tribe is represented by only one genus, *Cerambyx* Linnaeus, 1758 in Turkey.

## Genus *CERAMBYX* Linnaeus, 1758

= *Hamaticherus* Dejean, 1821 (Type sp.: *Cerambyx heros* Scopoli, 1763)
= *Hammaticherus* Germar, 1824
= *Hammaticherus* Redtenbacher, 1845
= *Hammatochaerus* Bach, 1856
= *Microcerambyx* Miksic & Georgijevic, 1973
= *Mesocerambyx* Zagaikevitch, 1991

**Type species:** *Cerambyx cerdo* Linnaeus, 1758

Body length is large generally. It is approximately between 17 and 56 mm.

Head is large, robust, elongated and deeply grooved medially. Eyes very distant from mandibules, into rude facets, deeply incurved. Antennae are long to very long, basal antennal segments swollen apically, distal segments somewhat flattened laterally with a feeble carina. Pronotum is transverse with lateral tooth, transversely wrinkled or ridged on disc, anteriorly narrower than the base. The prosternum expands to the apex. Elytra are long, slightly tapering posteriorly, with or without sutural spines. Femora are long, flattened laterally. First segment of hind tarsi is almost so long as following two segments (Villiers, 1978; Bily & Mell, 1989; Vives, 2000).

Larval and pupal developments are in broadleaf trees (e.g. *Prunus, Crateagus, Quercus, Juglans, Ceratonia, Platanus, Fagus, Castanea, Carpinus, Betula, Ulmus, Salix, Populus, Syringa, Tilia, Corylus, Malus, Amygdalus, Pyrus, Vitis, Acer* etc.) (Bense, 1995; Sama, 2002).

Larva characterized by large body, inconspicuous hairy cover on abdominal pleura, large spiracles laterally on abdominal segment I, which are not smaller than on mesothorax (Cherepanov, 1990).

Pupation is in wood. Life cycle is 2-4 years (Bense, 1995; Sama, 2002; Hoskovec & Rejzek, 2009).

The main aim of this work is to clarify current status of the genus in Turkey and the world. 26 species have been known in the world fauna as *Cerambyx apiceplicatus* Pic, 1941; *C. bifasciatus* Linnaeus, 1767; *C. carinatus* (Küster, 1846); *C. castaneus* Voet, 1778; *C. cerdo* Linnaeus, 1758; *C. clavipes* Forster, 1771; *C. dux* (Faldermann, 1837); *C. elbursi* Jurecek, 1924; *C. fasciatus* Voet, 1778; *C. ferrugineus* Goeze, 1777; *C. heinzianus* Demelt, 1976; *C. juvencus* Linnaeus, 1767; *C. klinzingi* Podany, 1964; *C. lucidus* Olivier, 1790; *C. miles* Bonelli, 1823; *C. multiplicatus* Motschulsky, 1859; *C. nodulosus* Germar, 1817; *C. paludivagus* (Lucas, 1842); *C. petechizans* Voet, 1778; *C. praepes* Voet, 1778; *C. quadripunctatus* Fabricius, 1801; *C. rufus* Voet, 1806; *C. scopolii* Füsslins, 1775; *C. surinamensis* Voet, 1778; *C. umbraticus* Olivier, 1795 and *C. welensii* (Küster, 1846). However, Monné & Hovore (2002, 2005), Monné et al., (2007) and Monné & Bezark (2009) stated the species, *C. castaneus* Voet, 1778 (America); *C. clavipes* Forster, 1771 (North America); *C. ferrugineus* Goeze, 1777 (America); *C. lucidus* Olivier, 1790 (America); *C. praepes* Voet, 1778 (America); *C. rufus* Voet, 1806 (America) and *C. umbraticus* Olivier, 1795 (Fr Guiana), as uncertain identity. According to Monné & Bezark (2009), *C. bifasciatus* Linnaeus, 1767 is a synonym of *Hileolaspis auratus* (Linnaeus, 1758) in the tribe Mallaspini. Also, Monné & Bezark (2009) never includes the species, *Cerambyx fasciatus* Voet, 1778; *C. juvencus* Linnaeus, 1767; *C. petechizans* Voet, 1778; *C. quadripunctatus* Fabricius, 1801 and *C. surinamensis* Voet, 1778. With the same approach, Vives (2000) mentioned that the tribe Cerambicini is missing in North America. Since, the taxa names of Voet (1778) are incertae sedis.

As the same above, Newman (1850)'s Australian taxa names, *Cerambyx lativitta* and *C. subserratus*, given by Aurivillius (1912) and Zicha (2009) are also incertae sedis.

So, as mentioned by Vives (2000), we can say that *Cerambyx* Linnaeus, 1758 is a genus distributed in Western Palaearctic Region. It is represented by thirteen species there.

In addition to this, 3 more or less wide spread species have subspecies. These are: *Cerambyx cerdo cerdo* Linnaeus, 1758; *C. cerdo acuminatus* Motschulsky, 1852; *C. cerdo iranicus* Heyrovský, 1951; *C. cerdo mirbecki* (Lucas, 1842); *C. cerdo pfisteri* Stierlin, 1864; *C. welensii welensii* (Küster, 1846); *C. welensii centurio* Czawallina, 1841; *Cerambyx scopolii scopolii* Füsslins, 1775 and *C. scopolii nitidus* Pic, 1892.

The endemic species are *Cerambyx apiceplicatus* Pic, 1941 to Iraq, *C. elbursi* Jurecek, 1924 to Iran, *C. heinzianus* Demelt, 1976 to Turkey, *klinzingi* Podany, 1964 to Caucasus and *C. paludivagus* (Lucas, 1842) to North Africa. Recently, *C. scopolii paludivagus* (Lucas, 1842) was raised by Sama (2008) to species level again. Sama (2008) stated that "*C. paludivagus was originally described as a distinct species (Lucas, 1842), then (Lucas, 1846) regarded as "une varieté du C.*

*cerdo" [very likely C. cerdo Scopoli (not Linnaeus), currently C. scopolii Fuesslins, 1775]. It is, in facts, a distinct species, more similar to C. multiplicatus Motschulsky, 1860 than to C. scopolii, not a variety of the latter as stated by Pic (1893, 1896), Normand (1937), Vives (2000) or an aberration (Plavilsthsikov, 1931), or a subspecies (Villiers, 1946)*". He also mentioned that this species is only known from Tunisia and Algeria, not in southern Spain. Other species in this genus are more or less wide spread in Western Palaearctic Region.

In Europe, this genus includes seven species as *C. carinatus* (Küster, 1846); *C. cerdo* Linnaeus, 1758; *C. dux* (Faldermann, 1837); *C. miles* Bonelli, 1823; *C. nodulosus* Germar, 1817; *C. scopolii* Füsslins, 1775 and *C. welensii* (Küster, 1846). All species occur also in Turkey.

Demelt (1976) presented a key for Anatolian *Cerambyx* species with the description of the species *Cerambyx heinzianus*. He gave 8 species (6 species plus 2 subspecies) without any exact locality in his key for Anatolia as *Cerambyx cerdo acuminatus, C. dux, C. heinzianus, C. miles, C. multiplicatus, C. nodulosus, C. scopolii nitidus* and *C. velutinus* (= *C. welensii*).

The first record of *Cerambyx carinatus* (Küster, 1846) in Turkey was given by Demelt (1963). Surprisingly, the species was not present for Turkey in Demelt (1976). Demelt (1976) included *C. multiplicatus* Motschulsky, 1859 but any record of this species has been known for Turkey. *C. multiplicatus* is distributed only in Caucasus (Azerbaijan, Georgia) and Iran.

As seen in the present text, however, 8 species (6 species plus 4 subspecies) are known to occur in Turkey in real as *Cerambyx carinatus* (Küster, 1846); *C. cerdo cerdo* Linnaeus, 1758; *C. cerdo acuminatus* Motschulsky, 1852; *C. dux* (Faldermann, 1837); *C. heinzianus* Demelt, 1976; *C. miles* Bonelli, 1823; *C. nodulosus* Germar, 1817; *C. scopolii scopolii* Füsslins, 1775; *C. scopolii nitidus* Pic, 1892 and *C. welensii welensii* (Küster, 1846).

The present zoogeographical characterization is based on the chorotype classification of Anatolian fauna, recently proposed by Vigna Taglianti et al. (1999). In the text, as far as possible as one chorotype description can be identified for each taxon.

It is widely accepted that the genus includes currently 2 subgenera as *Cerambyx* Linnaeus, 1758 and *Microcerambyx* Miksic & Georgijevic, 1973. The subgenus *Microcerambyx* includes three species as *C. elbursi* Jurecek, 1924; *C. multiplicatus* Motschulsky, 1859 and *C. scopolii* Füsslins, 1775. Other species belong to the nominative subgenus. Both subgenera are represented in Turkey.

## Subgenus *CERAMBYX* Linnaeus, 1758

**Type species:** *Cerambyx cerdo* Linnaeus, 1758

The subgenus is represented by 7 species in Turkey.

### *carinatus* Küster, 1846

Original combination: *Hammaticherus carinatus* Küster, 1846

Material examined: Ankara prov.: Güdül, 17.05.2002, 1 specimen, leg. H. Batur; Ankara prov.: Beytepe, 850 m, 07.07.2002, 2 specimens, leg. Y. Durmuş [These materials has never been published, but they mentioned in Özdikmen et al. (2009) under the title records in Ankara wrongly].
Records in Turkey: Denizli prov. (Schimitschek, 1944); Aydın prov.: Germencik (Demelt, 1963; Gül-Zümreoğlu, 1972); Denizli prov.: Sarayköy (Gül-Zümreoğlu, 1975); Turkey (Lodos, 1998; Alkan & Eroğlu, 2001; Özdikmen et al., 2005); Manisa prov.: Muradiye, İzmir prov.: Kemalpaşa (Tezcan & Rejzek, 2002).

Range: Europe (Croatia & Bosnia-Herzegovina, Serbia, Macedonia, Montenegro, Crete, Bulgaria, Malta), Turkey, Iran.

Chorotype: Turano-Mediterranean (Turano-Balkan)

Remarks: The species is distributed only from Croatia to Iran. Generally rare but locally it may be quite abundant. The first record of this species in Turkey was given by Demelt (1963). Surprisingly, the species was not present for Turkey in Demelt (1976).

***cerdo*** Linnaeus, 1758
ssp. ***cerdo*** Linnaeus, 1758
?ssp. ***mirbecki*** Lucas, 1842
?ssp. ***acuminatus*** Motschulsky, 1852
?ssp. ***pfisteri*** Stierlin, 1864
?ssp. ***iranicus*** Heyrovský, 1951

Original combination: *Cerambyx cerdo* Linnaeus, 1758

Other names. *heros* Scopoli, 1763; *luguber* Voet, 1778; *manderstjernae* Mulsant & Godart, 1855.

Material examined: Konya prov.: Taşkent-Alanya road: 80 km to Alanya, 1482 m, N 36 46 E 32 27, 19-28.07.2006, 1 specimen, Hadim, Beyreli village env., 1322 m, N 36 47 E 32 26, 14.06.2007, 1 specimen, Hadim-Alanya road, 70 km to Alanya, 1298 m, N 36 45 E 32 27, 30. 07. 2007, 1 specimen; Osmaniye prov.: Mitisin plateau, N 36 58 E 36 21, 1402 m, 08.2006, 2 specimens, 07.07.2007, 1 specimen.

Records in Turkey: Hatay prov.: Akbez as *C. cerdo acuminatus* (Fairmaire, 1884); İçel prov.: Bolkar Mountains (Bodemeyer, 1906); İstanbul prov.: Belgrad forest (Acatay, 1943); İstanbul prov.: Bosphorus region (Belgrad Forest), Sinop prov.: Ayancık (Schimitschek, 1944); Turkey as *C. heros* (Alkan, 1946); Turkey (Acatay, 1948, 1961, 1963, 1968; Erdem, 1968; Danilevsky & Miroshnikov, 1985; Önder et al., 1987; Althoff & Danilevsky, 1997; Sama, 2002); Bursa prov.: near Soğukpınar (Çanakçıoğlu, 1956); Sakarya prov.: Sapanca (Nizamlıoğlu, 1957); Antalya prov.: near Aspendos (Belkıs) as *C. cerdo acuminatus* (Demelt & Alkan, 1962); Antalya prov.: Aspendos, İstanbul prov.: Polonez village as *C. cerdo acuminatus* (Demelt, 1963); İstanbul prov. as *C. cerdo acuminatus* (Villiers, 1967; Sama, 1982); Muğla prov.: Milas (Gül-Zümreoğlu, 1972); Kocaeli prov.: İzmit (Sapanca) (İren & Ahmed, 1973); Muğla prov.: Milas, İzmir prov.: Bergama / Bornova (Gül-Zümreoğlu, 1975); İstanbul prov.: Belgrad Forest, Sinop prov., Bursa prov., Muğla prov., İzmir prov. (Erdem & Çanakçıoğlu, 1977;

Çanakçıoğlu, 1983); İstanbul prov.: Belgrad Forest (Öymen, 1987); Tunceli prov., İstanbul prov.: Üsküdar as *C. cerdo acuminatus* (Adlbauer, 1988); İstanbul prov., Kastamonu prov., Sinop prov., Bursa prov., Muğla prov., İzmir prov., Kahramanmaraş prov. (Kanat, 1998); İstanbul prov.: Belgrad Forest, Bursa prov., Kastamonu prov., Sinop prov.: Ayancık, İzmir prov.: various parts, Muğla prov.: Milas (Lodos, 1998); Niğde prov.: Ulukışla, Adana prov.: Pozantı (Ulusoy et al., 1999); Adıyaman prov.: Karadut village as *C. cerdo acuminatus* (Rejzek & Hoskovec, 1999); Tunceli prov. as *C. cerdo acuminatus* (Tauzin, 2000); Artvin prov.: Ardanuç (Tepedüzü village) (Alkan & Eroğlu, 2001); İzmir prov.: Kemalpaşa (Armutlu) as *C. cerdo acuminatus* (Tezcan & Rejzek, 2002); Antalya prov.: Alanya (Çayarası), Kırklareli prov.: İğneada-Saka lake (Sivriler village) (Özdikmen & Çağlar, 2004); Ankara prov.: Hacıkadın, Kayseri prov. (Özdikmen et al., 2005); Kahramanmaraş prov.: Pazarcık, Kırklareli prov.: Demirköy / İslambeyli, İstanbul prov.: Şile, Sinop prov. as *C. cerdo acuminatus* (Malmusi & Saltini, 2005); Çanakkale prov.: Central (Kordonboyu), Sinop prov.: Türkeli as *C. cerdo acuminatus* (Özdikmen, 2006); Samsun prov.: Central (Çobanlı village), Ankara prov.: Kayaş (Bayındır dam env.), Osmaniye prov.: Mitis's plateau (Özdikmen & Demir, 2006); Kahramanmaraş prov.: Pazarcık (Bağdınısağır) (Özdikmen & Okutaner, 2006); Denizli prov., Bartın prov.: Gafhar district (Özdikmen & Şahin, 2006); Artvin prov.: Şavşat, Şırnak prov.: Central (Özdikmen, 2007); Manisa prov.: Kırkağaç (Tezcan & Can, 2009); Ankara prov.: Kayaş (Özdikmen et al., 2009).

Range: Europe (Portugal, Spain, France, Corsica, Italy, Sicily, Sardinia, Malta, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Macedonia, Greece, Bulgaria, European Turkey, Romania, Hungary, Austria, Switzerland, Belgium, Netherlands, Denmark, Germany, Luxembourg, Czechia, Slovakia, Poland, Sweden, Latvia, Lithuania, Belorussia, Ukraine, Crimea, Moldavia), North Africa (Algeria, Morocco, Tunisia), Caucasus, Transcaucasia, Near East, Turkey, Iran, Iraq, Israel, Palestine, Syria, Lebanon, Jordan.

Chorotype: Turano-Europeo-Mediterranean

Remarks: It is the most wide spread species of the genus *Cerambyx*. It is also widely distributed in Turkey. The species is represented by two subspecies in Turkey as *C. cerdo cerdo* Linnaeus, 1758 and *C. cerdo acuminatus* Motschulsky, 1852. Materials of this work belongs to the nominative subspecies. It is the first record for Konya province. The species has 5 subspecies in the world as *C. cerdo acuminatus* (Motschulsky, 1852) (in Turkey, Lebanon, Syria, Iran, Crimea, Armenia), *C. cerdo pfisteri* Stierlin, 1864 (in Sicily, ?Italy, ?Malta, ?Greece), *C. cerdo mirbecki* Lucas, 1842 (Portugal, Spain, Algeria, Morocco, Tunisia), *C. cerdo iranicus* Heyrovský, 1951 (Iran) and the nominative *C. cerdo cerdo*. In Sama (2002), he did not accept as distinct subspecies *C. cerdo acuminatus* (Motschulsky, 1852) and *C. cerdo pfisteri* Stierlin, 1864 due to large variability of *C. cerdo* in the size and body shape. We share the same idea, as seen above because of the known data of *C. cerdo acuminatus* (Motschulsky, 1852) in Turkey is unavailable to the allopatric distribution rule of subspecies theoretically. Vives (2000) mentioned that in the whole Iberian peninsula, the species *C. cerdo* is represented by the subspecies *C. cerdo mirbecki* (Lucas, 1842) that was described in North Africa. According to Sama (2002), the status and distribution of *C. cerdo mirbecki* is unclear. He stated that "*specimens from central Morocco as well as specimens from Spain*

*which I have seen are indistinguishable from C. cerdo cerdo from central and western Europe*". So, we share the approach of Danilevsky (2009a) on this subject. According to this approach, "Different populations of *Cerambyx cerdo* do not show distinct differentiations on subspecies level in real. Since the species, *C. cerdo,* has a large variability in the size and body shape".

### ***dux*** Faldermann, 1837

Original combination: *Hammaticherus dux* Faldermann, 1837

Other names: *orientalis* Küster, 1846; *thirki* Küster, 1846; *intricatus* Fairmaire, 1848; *nodosus* Mulsant, 1863.

Material examined: Osmaniye prov.: Central, 150 m, 19.05.2006, 1 specimen; Kahramanmaraş prov.: Pazarcık, Bağdınısağır district, N 37 35 E 36 46, 787 m, 29.06.2006, 2 specimens, Pazarcık, Central, 07.06.2007, 4 specimens, 20.06.2007, 8 specimens.

Records in Turkey: Hatay prov.: Akbez (Fairmaire, 1884); Antalya prov.: Toros Mountains, Niğde prov.: Çamardı (Bodemeyer, 1900); İçel prov.: Bolkar Mountains (Bodemeyer, 1906); İstanbul prov.: Belgrad Forest (Acatay, 1943); Turkey (Alkan, 1946; Erdem, 1968; Avidov & Harpaz, 1969; Çanakçıoğlu, 1983; Danilevsky & Miroshnikov, 1985; Önder et al., 1987; Sama & Rapuzzi, 2000 Özdikmen & Şahin, 2006); Central Anatolia, Hatay prov.: Dörtyol (Bodenheimer, 1958); İzmir prov.: Bornova, Kayseri prov. (Demelt, 1963); Kahramanmaraş prov., Hatay prov.: Dörtyol (Nizamlıoğlu & Gökmen, 1964); Denizli prov.: Sarayköy (Tuatay et al., 1972); İzmir prov.: Bornova (Gül-Zümreoğlu, 1972); Southern Anatolia, Northern Anatolia, Marmara Region (İren & Ahmed, 1973); Denizli prov.: Sarayköy (Gül-Zümreoğlu, 1975); Van prov.: Tatvan, Bingöl prov.: Kuruca pass (Adlbauer, 1988); İzmir prov., Denizli prov., Kayseri prov., Mediterranean Region, Aegean Region (Lodos, 1998); Niğde prov.: Ulukışla, Adana prov.: Pozantı (Ulusoy et al., 1999); Adıyaman prov.: Karadut village (Rejzek & Hoskovec, 1999); Tunceli prov.: Pülümür, Hatay prov.: Antakya (Tauzin, 2001); Antalya prov.: Central / Gazipaşa, Bilecik prov.: Central, Bingöl prov.: Central / Solhan (Buğlan pass), Burdur prov.: Central, Bursa prov.: Central / Uludağ, Elazığ prov.: Central, Erzincan prov.: Kemaliye (Sandıklı), Erzurum prov.: İspir, Hatay prov.: Cırtıman / İskenderun (Denizciler), Isparta prov.: Eğirdir, İçel prov.: Anamur, İzmir prov.: Kemalpaşa, Kars prov.: Sarıkamış (Karakurt), Kastamonu prov.: Central, Konya prov.: Güneysınır (Gürağaç) / Seydişehir, Malatya prov.: Central, Niğde prov.: Bor, Osmaniye prov.: Çiftmazı / Olukbaşı, Tokat prov.: Central (Tozlu et al., 2002); Adana prov., Ankara prov. (Özdikmen et al., 2005); Gaziantep prov.: Kuşçubeli pass / Islahiye (Kabaklar village / Köklü village), Hatay prov.: İskenderun (entry of Kurtbağı village, Üçgüllük) (Özdikmen & Demirel, 2005); Kahramanmaraş prov.: Pazarcık (Bağdınısağır / Sakarkaya village, Kısık / Botaş) / Çağlayancerit (Bozlar) / Nurhak (Nurhak-Malatya road, Tatlar) (Özdikmen & Okutaner, 2006); Kırklareli prov.: İğneada (Özdikmen & Demir, 2006); Niğde prov.: between Balcı-Aktaş villages (Özdikmen, 2006); Erzincan prov.: Kemaliye, Muğla prov.: Marmaris and Fethiye (Özdikmen, 2007).

Range: Europe (Macedonia, Bulgaria, Crimea), Caucasus, Transcaucasia, Turkey, Iran, Syria, Israel, Lebanon, Jordan.

Chorotype: Turano-Mediterranean (Turano-Balkan).

Remarks: It distributes widely in Turkey.

***heinzianus*** Demelt, 1976

Original combination: *Cerambyx heinzianus* Demelt, 1976

Records in Turkey: Type loc.: Turkey, Bingöl prov.: Solhan (Demelt, 1976); Bitlis prov.: Tatvan, Bingöl prov.: Solhan (Adlbauer, 1988); Bitlis prov.: Reşadiye (Tauzin, 2001); Bitlis prov.: Güroymak (Malmusi & Saltini, 2005).

Range: Turkey.

Chorotype: Anatolian.

Remarks: It is endemic to Turkey. It is distributed in east Turkey. According to some authors, it may be a synonym of *C. klinzingi* Podany, 1964. Danilevsky (2009a,b) mentioned that *C. cerdo klinzingi* Podany, 1964 described from Caucasus. Danilevsky (2009a) stated that "*According to J. Vorisek (personal communication, 1992), C. cerdo klinzigi, described from Caucasus is a good species, described later as C. heinzianus from Turkey. I do not know Caucasian C. klinzigi, but I've got two pairs of Turkish C. heinzianus including one paratype. It is evident, that C. heinzianus is not close to C. cerdo because of rather short antennae: hardly longer than body in male and much shorter than body in female*". Consequently, we think that *C. heinzianus* Demelt, 1976 and *C. klinzingi* Podany, 1964 are separate and distinct species of the genus *Cerambyx*. Anyway, the species *C. heinzianus* was placed by Demelt (1976) into the *Cerambyx dux-miles-nodulosus* group. He never discussed it with *C. cerdo* rightly. Nevertheless, the species *C. klinzingi* was described by Podany from Caucasus at infraspecific rank of *C. cerdo* as *C. cerdo klinzingi* Podany, 1964. So, we accept both are separate and distinct species now and not synonym. *C. heinzianus* Demelt, 1976 is endemic to Turkey and *C. klinzingi* Podany, 1964 is endemic to Caucasus. *C. heinzianus* is very close to *C. dux*. *C. miles* and *C. nodulosus* are other related species to it.

***miles*** Bonelli, 1812

Original combination: *Cerambyx miles* Bonelli, 1812

Other names: *militaris* Latreille, 1829; *rufescens* Pic, 1933.

Material examined: Antalya prov.: Alanya, Sarımut-Karapınar, 1092 m, N 36 37 E 32 24, 09.07.2007, 1 specimen; Osmaniye prov.: Düziçi, between Böcekli-Hıdırlı, N 3718 E 36 20, 266 m, 28.06.2006, 2 specimens.

Records in Turkey: İçel prov.: Bolkar Mts. (Bodemeyer, 1906); Diyarbakır prov. (Ex. Gül-Zümreoğlu, 1975); Denizli prov. (Gül-Zümreoğlu, 1975); Edirne prov.: Yerlisu (Sama, 1982); Turkey (Danilevsky & Miroshnikov, 1985; Lodos, 1998; Sama, 2002); İstanbul prov.: Belgrad forest (Öymen, 1987); European Turkey (Althoff & Danilevsky, 1997); Niğde prov.: Ulukışla, Adana prov.: Pozantı (Ulusoy et al., 1999); Adıyaman prov.: Karadut village env. (Rejzek & Hoskovec,

1999); Uşak prov.: Ulubey (Ovacık village), Konya prov.: Taşkent (Özdikmen & Çağlar, 2004); Kahramanmaraş prov.: Pazarcık (Özdikmen & Okutaner, 2005); Bitlis prov.: Güroymak, İçel prov.: Güzeloluk (Malmusi & Saltini, 2005); Afyon prov.: Akkale hill (Özdikmen, 2006); Bitlis prov.: Reşadiye (Özdikmen & Demir, 2006).

Range: Europe (Spain, Portugal, France, Italy, Sicily, Malta, Slovenia, Croatia and Bosnia and Herzegovina, Serbia, Macedonia, Albania, Greece, Bulgaria, Romania, Hungary, ?Austria, Slowakia, Switzerland, Crimea), Caucasus, Transcaucasia, Turkey, Syria, Lebanon, ?North Africa (Morocco).

Chorotype: S-European. According to Sama (2002), the records of Morocco appear rather doubtful.

Remarks: It distributes rather widely in Turkey (especially west half of Turkey and south Anatolia). The present materials are the first record of Antalya and Osmaniye provinces. Danilevsky (2009a) stated "*according to A. Miroshnikov (2004), Cerambyx miles Bonelli was described in 1812, but not in 1823*".

### ***nodulosus*** Germar, 1817

Original combination: *Cerambyx nodulosus* Germar, 1817

Other names: *nodicornis* Küster, 1846.

Records in Turkey: Asia Minor as *C. nodulosus nodicornis* Küster, 1846 (Winkler, 1924-1932); İstanbul prov.: Belgrad Forest as *Cerambyx nodicornis* (Acatay, 1943); İstanbul prov.: Bosphorus region (Bahçeköy) (Schimitschek, 1944); Turkey (Acatay, 1948, 1961, 1968; Erdem, 1968; Çanakçıoğlu, 1983; Danilevsky & Miroshnikov, 1985; Lodos, 1998); Bursa prov.: Gürsü Forest (Çanakçıoğlu, 1956); İstanbul prov. (Villiers, 1967); İçel prov.: Namrun, İstanbul prov.: Alem Mountain (Demelt, 1967); Manisa prov.: Demirci (Gül-Zümreoğlu, 1972); İzmir prov.: Bornova (Gül-Zümreoğlu, 1975); Erzurum prov. and near (Özbek, 1978); Bingöl prov.: Central, Osmaniye prov.: Nurdağı pass, Mardin prov.: Hop pass (Adlbauer, 1992); European Turkey (Althoff & Danilevsky, 1997); Adıyaman prov.: Karadut village env. (Rejzek & Hoskovec, 1999); Isparta prov.: Eğirdir (Tauzin, 2000); Adana prov.: Seyhan, Antalya prov.: Manavgat, Artvin prov.: Yusufeli, Erzurum prov.: Tortum (Kaledibi), İçel prov.: Tarsus (Bağlarbaşı) (Tozlu et al., 2002); Manisa prov.: Muradiye (Tezcan & Rejzek, 2002); Uşak prov.: Ulubey (Ovacık village, Gökgöz hill), Muğla prov.: Kemer (Ceylan village), Konya prov.: Taşkent (İshaklı village, Gevne valley), Antalya prov.: Alanya (Çayarası plateau-Sarımut bridge), İçel prov.: Gözne (Özdikmen & Çağlar, 2004); İçel prov.: from Tarsus to Çamlıyayla (Malmusi & Saltini, 2005); Kahramanmaraş prov.: Pazarcık (Botaş) (Özdikmen & Okutaner, 2006); Bitlis: Nemrut Mountain (Özdikmen, 2007).

Range: Europe (Italy, Malta, Albania, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Macedonia, Greece, Bulgaria, European Turkey, Romania, Crimea), Caucasus, Transcaucasia, Turkey, Syria.

Chorotype: Turano-Mediterranean (Turano-Apenninian) + Turano-European (Turano-Sarmato-Pannonian).

Remarks: It distributes Italy to Caucasus and rather widely in Turkey. It occurs very likely in Iran.

***welensii*** Küster, 1846
ssp. ***welensii*** Küster, 1846
ssp. ***centurio*** Czawallina, 1841

Original combination: *Hammaticherus welensii* Küster, 1846

Other names: *velutinus* Brullé, 1832; *tuniseus* Pic, 1891; *tunisicus* Pic, 1892; *minor* Pic, 1926.

Material examined: Antalya prov.: Alanya: Sarımut env., 1113 m, N 36 37 E 32 23, 09.07.2007, 2 specimens; Akseki, Yarpuz env., 1615 m, N 37 13 E 31 55, 10.07.2007, 1 specimen; Kahramanmaraş prov.: Pazarcık, Bağdınısağır district, 2005, 2 specimens; Konya prov.: Beyşehir-Akseki road, Huğlu env., 1398 m, N 37 28 E 31 37, 11.07.2007, 1 specimen; Taşkent: Avşar, 1556 m, N 36 54 E 32 30, 09.07.2007, 1 specimen; Osmaniye prov.: Düziçi, between Böcekli-Hıdırlı, N 37 18 E 36 20, 266 m, 28.06.2006, 1 specimen.

Records in Turkey: İçel prov.: Bolkar Mts. as *C. velutinus* (Bodemeyer, 1906); İstanbul prov.: Belgrad Forest as *C. velutinus* (Acatay, 1943); İstanbul prov.: Polonez village, Alem Mountain as *C. velutinus* (Demelt, 1963); Turkey as *C. velutinus* (Erdem, 1968; Çanakçıoğlu, 1983; Lodos, 1998); İstanbul prov.: Belgrad forest as *C. velutinus* (Öymen, 1987); Adıyaman prov.: Karadut village env. (Rejzek & Hoskovec, 1999); Turkey (Sama & Rapuzzi, 2000; Sama, 2002); Antalya prov., Karaman prov. (Tozlu et al., 2002); Antalya prov.: Alanya (Çayarası plateau-Sarımut bridge) (Özdikmen & Çağlar, 2004); Kahramanmaraş prov.: Pazarcık, İçel prov.: Ortagören-Mut (Malmusi & Saltini, 2005); İstanbul prov.: Çamlıca (Özdikmen & Demir, 2006); İzmir prov.: Kınık (Tezcan & Can, 2009).

Range: Europe (Spain, Portugal, France, Italy, Sicily, Malta, Slovenia, Croatia and Bosnia and Herzegovina, Serbia, Greece, Crete, Bulgaria, Romania, Hungary, Ukraine), Caucasus, Turkey, Middle East (Syria, Jordan, Lebanon, Israel), Iran.

Chorotype: S-European.

Remarks: It distributes rather widely in Turkey (especially west half of Turkey and south Anatolia). The present materials are the first record of Konya and Osmaniye provinces. The species is represented by the nominative subspecies in whole Turkey. Other subspecies of the species, *C. welensii centurio* Czawallina, 1841 only known from Syria. *Cerambyx velutinus* Brullé, 1832 (nec F., 1775) was replaced with *C. welensii* Küster, 1846 by Sama (1991).

## Subgenus *MICROCERAMBYX* Miksic & Georgijevic, 1973
= *Mesocerambyx* Zagaikevitch, 1991

**Type species:** *Cerambyx scopolii* Füsslins, 1775

The subgenus is represented by 1 species in Turkey.

***scopolii*** Füsslins, 1775
ssp. ***scopolii*** Fusslins, 1775
ssp. ***nitidus*** Pic, 1892

Original combination: *Cerambyx scopolii* Füsslins, 1775

Other names: *cerdo* Poda, 1761 (preocc.); *heros* Bergstraesser, 1778; *gallicus* Voet, 1778; *piceus* Geoffroy, 1785; *helveticus* Stierlin, 1879.

Material examined: Osmaniye prov.: Zorkun road, Fenk plateau, N 36 59 E 36 20, 1049 m, 24.06.2006, 7 specimens; 22.07.2006, 2 specimens.

Records in Turkey: İçel prov.: Burna, Antalya prov.: Toros Mountains, Niğde prov.: Çamardı, Sakarya prov.: Sapanca (Gökdağ) (Bodemeyer, 1900); İstanbul prov.: Belgrad Forest (Acatay, 1943); İstanbul prov.: Bosphorus region (Belgrad Forest), Sinop prov.: Ayancık, Trabzon prov.: Meryemana Forest (Schimitschek, 1944); Turkey (Acatay, 1948, 1961, 1968; Erdem, 1968; Çanakçıoğlu, 1983; Danilevsky & Miroshnikov, 1985; Althoff & Danilevsky, 1997; Lodos, 1998; Sama, 2002); İstanbul prov.: Polonez village (Demelt & Alkan, 1962; Demelt, 1963); Samsun prov.: Bafra, Rize prov.: Fındıklı (Villiers, 1967); İstanbul prov.: Polonez village (İren & Ahmed, 1973); Artvin prov.: Saçinka (Sekendiz, 1981); İstanbul prov.: Belgrad Forest (Öymen, 1987); Osmaniye prov.: Nurdağı pass as *C. scopolii nitidus* (Pic, 1892) (Adlbauer, 1988); Tokat prov.: Topçam Mountain (Adlbauer, 1992); Kars prov.: Sarıkamış (Tozlu, 2001); Artvin prov.: Arhavi (Kireçli), Bingöl prov.: Central, Kars prov.: Sarıkamış (Tozlu et al., 2002); Kırklareli prov.: İğneada-Saka lake (Sivriler village) / İğneada (Pedina lake) (Özdikmen & Çağlar, 2004); Kırklareli prov.: Demirköy, Bolu prov.: Abant (Malmusi & Saltini, 2005); Artvin prov.: Hopa, İçel prov.: Çamlıyayla as *C. scopolii nitidus* (Pic, 1892) (Malmusi & Saltini, 2005); Kırklareli prov.: İğneada (Özdikmen & Demir, 2006); Edirne prov. (Özdikmen & Şahin, 2006).

Range: Europe (Portugal, Spain, France, Corsica, Italy, Sicily, Sardinia, Malta, Albania, Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Macedonia, Greece, Crete, Bulgaria, European Turkey, Romania, Hungary, Austria, Switzerland, Belgium, Netherlands, Denmark, Germany, Luxembourg, ?Great Britain, Czechia, Slovakia, Norway, Poland, Sweden, ?Estonia, Latvia, ?Lithuania, Belorussia, Ukraine, Crimea, Moldavia, European Russia), Caucasus, Transcaucasia, Near East, Turkey.

Chorotype: European.

According to Sama (2002), records from North Africa are belonging to *C. paludivagus* Lucas, 1846.S-European.

Remarks: It distributes widely in Turkey. The species is represented by two subspecies in Turkey. *C. scopolii nitidus* (Pic, 1892) occurring only in South Turkey and the nominative *C. scopolii scopolii* occurring in other parts of Turkey. According to Sama (2002 and 2008), *C. paludivagus* Lucas, 1846 is a distinct species in North Africa and not a form of *C. scopolii*. The present materials belong to the subspecies *C. scopolii nitidus* Pic, 1892.

**A short key for Turkish *Cerambyx* species**

**1.** Apex of each elytron extended into a sutural spine.....**2**

**-** Apex of each elytron rounded or blunt.....**4**

**2.** Second antennal segment in the shape of a ring, nearly three times as wide as long.....***carinatus*** Küster, 1846

**-** Second antennal segment at the inner edge as long as wide, not in the shape of a ring.....**3**

**3.** First and second segments of hind tarsus with a smooth glabrous furrow on the underside. Abdomen with a very fine and thin pubescence, macroscopically shining..... ***cerdo*** Linnaeus, 1758
**-** Only first segment of hind tarsus with a smooth glabrous furrow on the underside. Abdomen with dense pubescence, macroscopically grey and dull..... .....***welensii*** Küster, 1846

**4.** Second antennal segment at the inner edge as long as wide, not in the shape of a ring.....**5**
**-** Second antennal segment in the shape of a ring, nearly three times as wide as long.....**3**

**5.** Elytra totally black, with fine grey pubescence. Relatively small body..... .....***scopolii*** Füsslins, 1775
**-** Elytra black or blackish onlt at the base, becoming paler, reddish brown towards the apex.....**6**

**6.** Antennae reaching beyond the elytral apex or hardly longer than the body in males. Eyes large, the lower edge nearly reaching to the underside of the head.....**7**

**-** Antennae in males more longer than the body. Eyes smaller, the lower edge well removed from the underside of the head.....**8**

**7.** 3 to 5 antennal segments in males very knobbly thickened.....
.....***dux*** Faldermann, 1837

**-** 3 to 5 antennal segments in males longer and less knobbly thickened.....
.....***heinzianus*** Demelt, 1976

**8** Front tarsus with very broad segments, second segment wider than its median length. In females, antennae only reaching to the middle of the elytra.....
.....***miles*** Bonelli, 1812
- Front tarsus with less broad segments, second segment not wider than its median length. In females, antennae reaching to the last quarter of the elytra.....
.....***nodulosus*** Germar, 1817

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## LITERATURE CITED

**Acatay, A.** 1943. İstanbul çevresi ve bilhassa Belgrad ormanındaki zararlı orman böcekleri, mücadeleleri ve işletme üzerine tesirleri. T. C. Ziraat Vekaleti Yüksek Ziraat Enstitüsü Çalışmaları, Ankara, 142: 163 pp.

**Acatay, A.** 1948. Zararlı orman böcekleri, Teşhis anahtarı. T. C. Tarım Bakanlığı Orman Genel Müdürlüğü Yay., İstanbul, 76: 113 pp.

**Acatay, A.** 1961. Zararlı orman böcekleri, Teşhis anahtarı. İstanbul Üniversitesi Yay., İstanbul, 938: 152 pp.

**Acatay, A.** 1963. Tatbiki orman entomolojisi. İstanbul Üniversitesi Yay., İstanbul, 1068: 169 pp.

**Acatay, A.** 1968. Zararlı orman böcekleri, Teşhis anahtarı. İstanbul Üniversitesi Yay., İstanbul, 1358: 153 pp.

**Adlbauer, K.** 1988. Neues zur Taxonomie und Faunistik der Bockkäferfauna der Türkei (Coleoptera, Cerambycidae). Entomofauna, 9 (12): 257-297.

**Adlbauer, K.** 1992. Zur Faunistik und Taxonomie der Bockkäferfauna der Türkei II (Coleoptera, Cerambycidae). Entomofauna, 13 (30): 485-509.

**Alkan, B.** 1946. Tarım Entomolojisi. T. C. Tarım Bakanlığı Ankara Yüksek Ziraat Enstitüsü Ders Kitabı 31, Ankara, 232 pp.

**Alkan, H. & Eroğlu, M.** 2001. A contribution to the knowledge of Cerambycidae (Insecta: Coleoptera) species oft he eastern Black Sea region in Turkey. Türk. Entomol. Derg., 25 (4): 243-255.

**Althoff, J. & Danilevsky, M. L.** 1997. A Check-List of Longicorn Beetles (Coleoptera, Cerambycoidea) of Europe. Slovensko Entomološko Društvo Štefana Michielija. Ljubljana, 64 pp.

**Aurivillius, C.** 1912. Coleopterorum Catalogus, pars 39 [vol. 22], Cerambycidae: Cerambycinae. Berlin. W. Junk & S. Schenkling. 574 pp.

**Avidov, Z. & Harpaz, I.** 1969. Plant pests of Israel. Israel Universities Press, Jerusalem, 266-273.

**Bense, U.** 1995. Illustrated key to the Cerambycidae (excl. Dorcadionini) and Vesperidae of Europe. Margraf Verlag, Germany, 512 pp.

**Bílý, S. & Mehl, O.** 1989. Longhorn beetles (Coleoptera, Cerambycidae) of Fennoscandia and Denmark. Fauna Entomologica Scandinavica, 22: 203 pp.

**Bodemeyer, H. E. V.** 1900. Quer durch Klein Asien, in den Bulghar Dagh; Eine Naturvissenschafliche studien-Reise. Coleopterologisches, 196 pp.

**Bodemeyer, H. E. V.** 1906. Beitrage zur Käferfauna von Klein Asien - Deutsche Entomologische Zeitschrift, 2: 417-437.

**Bodenheimer, F. S.** 1958. Türkiye'de ziraate ve ağaçlara zararlı olan böcekler ve bunlarla savaş hakkında bir etüt. Bayur Matbaası, Ankara, 347 pp.

**Çanakçıoğlu, H.** 1956. Bursa ormanlarında entomolojik araştırmalar. İstanbul Üniversitesi Yay., Orman Fakültesi Yay. No: 690, İstanbul, 9-13.

**Çanakçıoğlu, H.** 1983. Orman Entomolojisi: Özel bölüm. İstanbul Üniversitesi Orman Fakültesi Yay. No: 349, İstanbul, 535 pp.

**Cherepanov, A. I.** 1990. Cerambycidae of Northern Asia. Cerambycinae 2 (1). Brill publ., New Delhi, 292 pp.

**Danilevsky, M. L.** 2009a. A check-list of Longicorn Beetles (Coleoptera, Cerambycoidea) of Europe. Available from: http://www.cerambycidae.net/ (Updated 29.01.2009).

**Danilevsky, M. L.** 2009b. Systematic list of Longicorn Beetles (Cerambycoidea) of the territory of the former USSR. Available from: http://www.cerambycidae.net/ (Updated 29.01.2009).

**Danilevsky, M. L. & Miroshnikov A. I.** 1985. Timber-Beetles of Caucasus (Coleoptera, Cerambycidae). The Key. Krasnodar, 419 pp.

**Demelt, C. V. & Alkan, B.** 1962. Short information of Cerambycidae Fauna of Turkey. Bitki Koruma Bülteni, 2 (10): 49-56.

**Demelt, C. V.** 1963. Beitrag zur Kenntnis der Cerambycidenfauna Kleinasiens und 13. Beitrag zur Biologie palaearkt. Cerambyciden, sowie Beschreibung einer neuen Oberea-Art. Entomologische Blatter, 59 (3) : 132-151.

**Demelt, C. V.** 1967. Nachtrag zur Kenntnis der Cerambyciden-Fauna Kleinasiens. Entomologische Blatter, 63 (2): 106-109.

**Demelt, C. V.** 1976. Eine neue Cerambyx-Art aus Ost-Anatolien. Zeitschrift der Arbeitsgemeinschaft Österr. Entomologen, 28 (1-3): 65-67.

**Erdem, R.** 1968. Ormanın faydalı ve Zararlı böcekleri. İstanbul Üniversitesi Orman Fakültesi Yay., İstanbul, 43-58.

**Erdem, R. & Çanakçıoğlu, H.** 1977. Türkiye odun zararlıları. İstanbul Üniversitesi Orman Fakültesi Yay., İstanbul, 113-134.

**Fairmaire, M. L.** 1884. Liste des Coleopteres recueillis par M. l'abbe David a Akbes (Asie-Mineure) et Descriptions des Especes Nouvelles. Annales de la Societe entomologique de France, Octobre (1884): 165-180.

**Gül-Zümreoğlu, S.** 1972. Catalogue of Insect and common pests (1928-1969). T. C. Publications of Agriculture Ministry, Bornova, İzmir, 119 pp.

**Gül-Zümreoğlu, S.** 1975. Investigations on taxonomy, host plants and distribution of the Longhorned Beetles (Cerambycidae-Coleoptera) in Aegean Region. T. C. Ministry of Food, Agriculture and Stockbreeding, No : 28, , İstiklal Press, İzmir, 208 pp.

**Hoskovec, M. & Rejzek, M.** 2009. Cerambycidae. Longhorn beetles (Cerambycidae) of the West Palaearctic Region. Available from: http://www.cerambyx.uochb.cz/(last update 20 March 2009).

**İren, Z. & Ahmed, M. K.** 1973. Microlepidoptera and pests of fruit-trees in Turkey. Bitki Koruma Bülteni, Ankara, Turkey, 1: 41-42.

**Kanat, M.** 1998. Kahramanmaraş ormanlarında önemli zararlı böceklerin araştarılması. Yüksek Lisans Tezi, Karadeniz Teknik Üniversitesi, Fen Bilimleri Enstitüsü, Trabzon, 41-127.

**Lodos, N.** 1998. Entomology of Turkey VI (General, Aplied and Faunistic). Ege Ü. Ziraat Fak. Yayınları No: 529, E. Ü. Faculty of Agriculture Press, İzmir, 300 pp.

**Malmusi, M. & Saltini, L.** 2005. Cerambycidae raccolti dai componenti del Gruppo Modenese Scienze Naturali durante escursioni in Turchia tra il 1987-2003 (Contributo alla Fauna dei Cerambycidae di Turchia). Quaderno di studi e notizie di storia naturale della Romagna, n. 21, 28 pp. (unpublished).

**Monné, M. A. & Hovore, F. T.** 2002. Checklist of the Cerambycidae and Disteniidae (Coleoptera) of the Western Hemisphere. Part One: Parandrinae through Lepturinae. Available from: *www.cerambycoidea.com/titles/monnehovore2002b.pdf*

**Monné, M. A. & Hovore, F. T.** 2005. Checklist of the Cerambycidae, of the Western Hemisphere. Electronic Version 2005 (updated through 01 January 2006). Available from http://www.cerambycids.com/checklist/Monne&Hovore_2005.pdf

**Monné, M. A., Bezark, L. G. & Hovore, F. T.** 2007. Checklist of the Cerambycidae, or longhorned beetles (Coleoptera) of the Western Hemisphere. Available from: *http://www.cerambycoidea.com/papersEl.asp?Id=&Lett=M&NPag=4*

**Monné, M. A. & Bezark, L. G.** 2009. Checklist of the Cerambycidae, or longhorned beetles (Coleoptera) of the Western Hemisphere. Available from: *http://www.cerambycoidea.com/papersEl.asp?Id=&Lett=M&NPag=4*

**Nizamlıoğlu, K.** 1957. Türkiye meyve ağacı zararlıları ve mücadelesi. Koruma Tarım İlaçları A. Ş. Neşriyatı, 5: 134, 146, 153-154.

**Nizamlıoğlu, K. & Gökmen, N.** 1964. Damaging insects on olive in Turkey. Institute of Agriculture of Göztepe, İstanbul, 51-56.

**Önder, F., Karsavuran, Y., Tezcan, S. & Önder, P.** 1987. Scientific and Turkish names of some useful and harmful species of Agricultural, Forestic and Domestic Animals in Turkey. T. C. Ministry of Agriculture, Ankara (Turkish with English summary).

**Öymen, T.** 1987. The Forest Cerambycidae of Turkey. İ. Ü. Forest Faculty, İstanbul, 146 pp.

**Özbek, H.** 1978. *Hylotrupes bajulus* (L.) Serville in Erzurum and the near, and some others longhorn beetles. Atatürk Üniversitesi Ziraat Fakultesi Dergisi, 9 (1): 31-44 (in Turkish).

**Özdikmen, H.** 2006. Contribution to the knowledge of Turkish longicorn beetles fauna (Coleoptera: Cerambycidae). *Munis Entomology & Zoology*, 1 (1): 71-90.

**Özdikmen, H.** 2007. The Longicorn Beetles of Turkey (Coleoptera: Cerambycidae) Part I - Black Sea Region. Munis Entomology & Zoology 2 (2): 179-422**.**

**Özdikmen, H. & Çağlar, Ü.** 2004. Contribution to the knowledge of longhorned bettles (Coleoptera, Cerambycidae) from Turkey, Subfamilies Prioninae, Lepturinae, Spondylidinae and Cerambycinae. *J. Ent. Res. Soc.,* 6 (1): 39-69.

**Özdikmen, H. & Demir, H.** 2006. Notes on longicorn beetles fauna of Turkey (Coleoptera: Cerambycidae). *Munis Entomology & Zoology*, 1 (1): 157-166.

**Özdikmen, H. & Demirel, E.** 2005. Additional Notes to the Knowledge of Longhorned Beetle Collection from Zoological Museum of Gazi University, Ankara, Turkey (GUZM) for Turkish Fauna (Coleoptera, Cerambycidae). *J. Ent. Res. Soc.*, 7 (3): 13-38.

**Özdikmen, H. & Okutaner, A. Y.** 2006. The longhorned beetles fauna (Coleoptera, Cerambycidae) of Kahramanmaraş province. G. U. Journal of Science 19 (2): 77-89.

**Özdikmen, H., Özdemir, Y. & Turgut, S.** 2005. Longhorned Beetles Collection of the Nazife Tuatay Plant Protection Museum, Ankara, Turkey (Coleoptera, Cerambycidae). *J. Ent. Res. Soc.,* 7 (2): 1-33.

**Özdikmen, H. & Şahin, Ö.** 2006. İç Anadolu Ormancılık Araştırma Müdürlüğü, Entomoloji Müzesi (Türkiye, Ankara) Teke Böcekleri Koleksiyonu (Coleoptera, Cerambycidae). *G. U. Journal of Science*, 19 (1): 1-8.

**Özdikmen, H., Turgut, S. & Güzel, S.** 2009. Longhorned beetles of Ankara region in Turkey (Coleoptera: Cerambycidae). Munis Entomology & Zoology, 4 (1): 59-102.

**Rejzek, M. & Hoskovec, M.** 1999. Cerambycidae of Nemrut Dağı National Park (Anatolia, South-East Turkey). Biocosme Mésogéen, Nice, 15 (4): 257-272.

**Sama, G.** 1982. Contributo allo studio dei coleotteri Cerambycidae di Grecia e Asia Minore. Fragmenta Entomologica, Roma, 16 (2): 205-227.

**Sama, G.** 1991. Note sulla nomenclatura dei Cerambycidae della regione Mediterranea (Coleoptera). Bollettino della Società italiana di Entomologia, Genova, 123 (2): 121-128.

**Sama, G.** 2002. Atlas of the Cerambycidae of Europe and the Mediterranean Area, Volume I, Kabourek, Zlin, 173 pp.

**Sama, G.** 2008. Preliminary note on the cerambycid fauna of north Africa with the description of new taxa (Insecta: Coleoptera: Cerambycidae). Quaderno di studi e notizie di storia naturale della Romagna, 27: 217-245.

**Sama, G. & Rapuzzi, P.** 2000. Note Preliminaire pour une faune des Cerambycidae du Liban (Coleoptera, Cerambycidae). Lambillionea, 100 (1): 7-23.

**Schmitschek, E.** 1944. Forstinsekten der Türkei und Ihre Umwelt Grundlagen der türkischen Forstentomologie, Volk und Reich Verlag Prag, 125-141 pp.

**Sekendiz, O. A.** 1981. Doğu Karadeniz bölümünün önemli teknik hayvansal zararlıları üzerine araştırmalar. K. T. Ü. Orman Fakültesi Yayınları no: 12, Trabzon, 114 pp.

**Taglianti, A. V., Audisio, P. A., Biondi, M., Bologna, M. A., Carpaneto, G. M., De Biase, A., Fattorini, S., Piattella, E., Sindaco, R., Venchi, A. & Zapparoli, M.** 1999. A proposal for a chorotype classification of the Near East fauna, in the framework of the Western Palaearctic Region. Biogeographia 20: 31-59.

**Tauzin, P.** 2000. Complement a l'inventaire des Coleopteres Cerambycidae de Turquie. L'Entomologiste, 56 (4): 151-153.

**Tauzin, P.** 2001. Correctif a la note: Complement a l'inventaire des Coleopteres Cerambycidae de Turquie. L'Entomologiste, 57 (2): 51.

**Tezcan, S. & Can, P.** 2009. A note on bait trap collected Longhorn Beetles (Cerambycidae) of western Turkey. Munis Entomology & Zoology, 4 (1): 25-28.

**Tezcan, S. & Rejzek, M.** 2002. Longhorn beetles (Coleoptera: Cerambycidae) recorded in cherry orchards in Western Turkey. Zoology in the Middle East, 27: 91-100.

**Tozlu, G.** 2001. Determination of Damaging Insect Species on *Populus tremula* L. in Sarıkamış (Kars) and Studies on Biology of Some Important Species. Türkiye Entomoloji Dergisi, 25 (2): 133-146.

**Tozlu, G., Rejzek, M. & Özbek, H.** 2002. A contribution to the knowledge of Cerambycidae (Coleoptera) fauna of Turkey. Part I: Subfamilies Prioninae to Cerambycinae. Biocosme Mèsogèen, Nice, 19 (1-2): 55-94.

**Tuatay, N., Kalkandelen, A. & Aysev, N.** 1972. Bitki Koruma Müzesi Böcek Kataloğu (1961-1971). T. C. Tarım Bakanlığı, Ankara, 53-55.

**Ulusoy, R., Vatansever, G. & Uygun, N.** 1999. The cherry pests, their natural enemies and observations on some important species in Ulukışla (Niğde) and Pozantı (Adana) provinces of Turkey. Türkiye Entomoloji Dergisi, 23 (2): 111-120.

**Villiers, A.** 1967. Coléoptéres Cérambycides de Turquie (1. Partie) - L' Entomologiste, 23 (1): 18-22.

**Villiers, A.** 1978. Faune des Coleopteres de France, 1. Cerambycidae. Paris, 636 pp.

**Vives, E.** 2000. Coleoptera, Cerambycidae. Fauna Iberica, Vol. 12. Museo Nacional de Ciencias naturales. CSIC. Madrid, 715 pp.

**Vives, E.** 2000. Coleoptera, Cerambycidae. Fauna Iberica, Vol. 12. Museo Nacional de Ciencias naturales. CSIC. Madrid, 715 pp.

**Winkler, A.** 1924-1932. Catalogus Coleopterorum regionis palaearcticae. Verlag von Albert Winkler, 1135-1226.

**Zicha, O.** (ed.) 1999-2009. BioLib. From: http://www.biolib.cz/en/taxon/id170330/

Tablo 1. Undoubted taxa of the genus *Cerambyx* Linnaeus, 1758.

| SPECIES | PRE-SENCE IN TURKEY | CHOROTYPE |
|---|---|---|
| *Cerambyx apiceplicatus* Pic, 1941 | – | Iraqi endemic |
| *C. carinatus* (Küster, 1846) | + | Turano-Mediterranean (Turano-Balkan) |
| *C. cerdo* Linnaeus, 1758 | + | Turano-Europeo-Mediterranean |
| *C. dux* (Faldermann, 1837) | + | Turano-Mediterranean (Turano-Balkan) |
| *C. elbursi* Jurecek, 1924 | – | Endemic for Iran |
| *C. heinzianus* Demelt, 1976 | + | Anatolian endemic |
| *C. klinzingi* Podany, 1964 | – | Caucasusian endemic |
| *C. miles* Bonelli, 1823 | + | S-European |
| *C. multiplicatus* Motschulsky, 1859 | – | SW-Asiatic |
| *C. nodulosus* Germar, 1817 | + | Turano-Mediterranean (Turano-Apenninian) + Turano-European (Turano-Sarmato-Pannonian) |
| *C. paludivagus* (Lucas, 1842) | – | North African endemic |
| *C. scopolii* Füsslins, 1775 | + | European |
| *C. welensii* (Küster, 1846) | + | S-European |

Tablo 2. Doubtful taxa of the genus *Cerambyx* Linnaeus, 1758.

| SPECIES | CHOROTYPE | REMARKS |
|---|---|---|
| *Cerambyx castaneus* Voet, 1778 | Nearctic | incertae sedis |
| *C. clavipes* Forster, 1771 | Nearctic | incertae sedis |
| *C. fasciatus* Voet, 1778 | Nearctic | incertae sedis |
| *C. ferrugineus* Goeze, 1777 | Nearctic | incertae sedis |
| *C. juvencus* Linnaeus, 1767 | Neotropic | incertae sedis |
| *C. lativitta* Newman, 1850 | Australian | incertae sedis |
| *C. lucidus* Olivier, 1790 | Neotropic | incertae sedis |
| *C. petechizans* Voet, 1778 | Nearctic | incertae sedis |
| *C. praepes* Voet, 1778 | Nearctic | incertae sedis |
| *C. quadripunctatus* Fabricius, 1801 | Neotropic | incertae sedis |
| *C. rufus* Voet, 1806 | Nearctic | incertae sedis |
| *C. subserratus* Newman, 1850 | Australian | incertae sedis |
| *C. surinamensis* Voet, 1778 | Neotropic | incertae sedis |
| *C. umbraticus* Olivier, 1795 | Neotropic | incertae sedis |

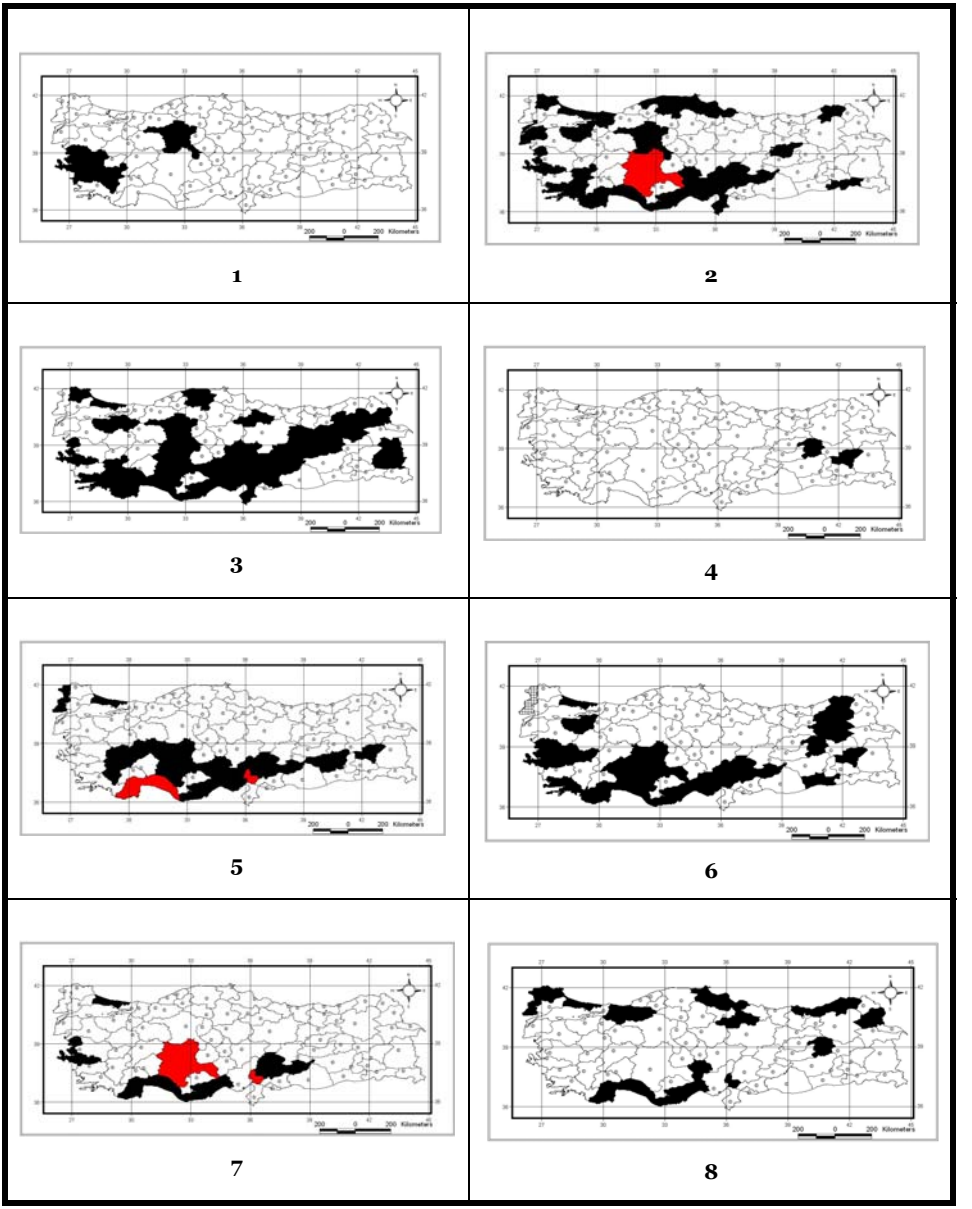


Plate I. Distributional map in Turkey of 1. *Cerambyx carinatus*, 2. *C. cerdo*, 3. *C. dux*, 4. *C. heinzianus*, 5. *C. miles*, 6. *C. nodulosus*, 7. *C. welensii*, 8. *C. scopolii*.