

**REVIEW ON THE BIOLOGY OF  
TURKISH CERAMBYCOIDEA (COLEOPTERA)  
PART I – VESPERIDAE AND CERAMBYCIDAE (PRIONINAE)**

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**ABSTRACT:** The present paper gives an integrative information on the biology of Turkish Vesperidae and Cerambycidae (for only the subfamily Prioninae). The main aim of this work is to clarify current status of the members of the superfamily in Turkey in terms of biological data. This work is the first attempt for this purpose.

**KEY WORDS:** Vesperidae, Cerambycidae, Prioninae, Coleoptera, Turkey.

Works on Turkish longicorn beetles began in late 19th century. Especially since the last century, they were increased as chiefly faunistic and taxonomic works. Recently, they continue with an increased speed. Knowledge about Turkish longicorn beetles, however, is far from satisfaction. Besides, the information on the biology of Turkish taxa have been given by some authors in piecemeal fashion. For example, as the most important work, Öymen (1987) studied the forest Cerambycidae of Turkey. He mentioned only the information on host plants for biology of species in Turkey in his work. Unfortunately, his work is so far from to reveal the real status in terms of faunistic, taxonomic and biological data. The other data were given by various authors in piecemeal fashion. A planned work on this subject is also absent. In any work, the recorded information has not also been reviewed yet. This scattered information can be obtained from cited references.

As known, Turkey that has continental properties, is origin of many taxons and is a refugium (an area where conditions have enabled a species or a community of species to survive after extinction in surrounding areas) for effected living creatures from geological and climatical changes has more biological importance than any land in the World.

As seen the whole World, an incredible variations have also been seen among the insects which are the most influenced living creatures from these changes occurred in the past in Turkey. Turkey appears a continental property changeable in very short distances in terms of climatical features and field structures. Therefore, biology of the species has a distinct importance. Hence, a serie work is planned that is aim to expose to the biology of Turkish Cerambycidae as possible as detailed by beginning from Vesperidae and Cerambycidae (Prioninae). The present study is attempted as the first step of this aim.

**SUPERFAMILY CERAMBYCOIDEA Latreille, 1802**

**FAMILY VESPERIDAE Mulsant, 1839: 214**

**SUBFAMILY VESPERINAE Mulsant, 1839**

**TRIBE VESPERINI Mulsant, 1839**

**GENUS *VESPERUS* Dejean, 1821: 111**

**SPECIES *V. ocularis* Mulsant & Rey, 1863: 172**

The species is not a forester. It is a harmful of cultivated or wild shrubs and herbaceous plants.

The species was described on the base of a male specimen from İzmir ("Smyrne") in W Turkey. It has been known only from the type locality until now. Because, it has not been collected by anybody since 1863. Therefore, some authors regard it as a doubtful species.

In this respect, Vives (2004) gave a photo of the species. However, Vives (2004) mentioned that accuracy of the type locality of the species can be under discussion. He stated "We could not locate the type of this species which had to be in the collection of Mulsant & Rey, in Lyons. Besides, there is no *Vesperus* there (pers. com. J. Clary). There is not more specimen in the collection of Pellet, in MHN of Perpignan (pers. com. R. Bourgat), where from the type comes. Finally in the material of old collection of Mulsant, in MNHN of Paris, *Vesperus* (Paulian 1944) exists, but we found no labelled specimen there as came from Smyrne". And "We studied a male specimen which corresponds to the present description, having labelled "Syria" in the collection of J. Negro (ex. coll. E. Baer). This ancient locality seems to be very suspicious for us since no *Vesperus* was collected from Syria. Besides, it is very curious that we can see a female labelled as Syria, (*Vesperus* in the collection of J. Thomson), in MNHN in Paris. This second specimen seems to be for us as an atypical female of *V. luridus*, with the more protruding prothorax and the very short elytra. Because of this, the Syrian locality could correspond to the species of Mulsant & Rey, which comes from Izmir. It is amazing in effect that no new capture from the type locality since in Turkey". Anyway, figure out the problem is based on to collect new specimens from the type locality, İzmir.

According to Vives (2004), biology of the species is unknown. However, Mulsant et Rey (1863) stated that the species is close to the species *V. xatarti* and *V. luridus*. So, **host plants** for the species can be most probably the grapevine (*Vitis vinifera*) and also potato (*Solanum tuberosum*), the tomato (*Solanum lycopersicum*), the garlic (*Allium sativum*) and other vegetables, especially grasses. **Adults and larvae** of the species can obtain most probably from the host plants in lowlands and foothills. **Life cycle** of the species probably is a few year. **Larvae** are most likely terricolous and can feed on roots of various plants (incl. *Vitis*). **Pupation** is most probably in the soil. **Adults** probably are crepuscular and nocturnal, attracted by light. **Adults fly** most likely in summer (between June-August) (Svacha & Danilevsky, 1987; Vives, 2000, 2001, 2004).

#### FAMILY CERAMBYCIDAE Latreille, 1802: 211

##### SUBFAMILY PRIONINAE Latreille, 1802: 212

##### TRIBE ERGATINI Fairmaire, 1864: 117

##### GENUS CALLERGATES Lameere, 1904: 47

##### SPECIES *C. gaillardoti* (Chevrolat, 1854: 481)

The species is a forester.

The **host plant** of the species is conifers (*Pinus* spp.). The **specimens** that were collected **from Turkey** were found on or in *Pinus brutia* and *Pinus pinea* as adults or larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 150-1467 m). **Life cycle** of the species is at least 3 years. **Overwintering stage** is larva. **Larvae live** in dead decaying trunk and in dead stumps of the host plant. **Pupation** seems to be in spring and summer in the wood (in pupal cell). **Adults** probably are crepuscular and nocturnal, attracted by light. **Adults fly** in summer (between May-August) (Demelt, 1963; Svacha & Danilevsky, 1987; Adlbauer, 1988; Jenis, 2001; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012; Sama, Rapuzzi & Özdikmen, 2012).

##### GENUS ERGATES Audinet-Serville, 1832: 143

##### SPECIES *E. faber* (Linnaeus, 1760: 187)

The species is a forester.

The **host plants** of the species are conifers (*Pinus*, *Picea*, *Abies*, *Cedrus* and *Larix*) and exceptionally deciduous trees (*Alnus*, *Populus*). *Pinus* spp., however, are preferred host plants. The **specimens** that were collected **from Turkey** were found on or in *Pinus brutia*, *Pinus nigra*, *Pinus pinaster*, *Picea orientalis*, *Abies bornmuelleriana* as adults or

larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 40-1670 m). **Life cycle** of the species is at least 3 years. **Overwintering stage** is larva. **Larvae live** in dead, rotten, dried wood and also in roots (in standing or fallen trunks and stumps) of the host plants. **Pupation** seems to be in spring and summer in the wood (in pupal cell). **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in summer-early autumn (between June-September) (Çanakçioğlu, 1956, 1983; Acatay, 1968; Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Yüksel, 1996; Alkan, 2000; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**TRIBE MACROTOMINI** Thomson, 1861: 312

**SUBTRIBE MACROTOMINA** Thomson, 1861: 312

**GENUS PRINOBIUS** Mulsant, 1842: 207

**SPECIES** *P. myardi* Mulsant, 1842: 207

The species is a forester.

The **host plants** of the species are many deciduous trees (*Quercus*, *Fraxinus*, *Pyrus*, *Acer*, *Alnus*, *Morus*, *Olea*, *Citrus*, *Populus*, *Platanus*, *Salix*, *Prunus*, *Robinia*, *Pistacia*, *Salix*) and occasionally conifers (*Pinus*, *Cedrus*, *Picea*). *Quercus* spp., however, are mostly recorded host plants. The **specimens** that were collected **from Turkey** were found on or in deciduous trees (*Quercus cerris*, *Quercus ilex*, *Quercus suber*, *Fraxinus dimorpha*, *Prunus armeniaca*, *Morus alba*) and conifers (*Picea orientalis*, *Cedrus libani*, *Pinus brutia*) as adults or larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 220-1120 m). **Life cycle** of the species is a few year. **Overwintering stage** is larva. **Larvae live** in living or dead deciduous trees, in rotting wood of dead stems and also in roots (both standing or fallen) of the host plants. **Pupation** is in the wood in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in summer-early autumn (between June-September) (Bodenheimer, 1958; Demelt & Alkan, 1962; Demelt, 1963; Ekici, 1971; Tosun, 1975; Gül-Zümreoğlu, 1975; Villiers, 1978; Öymen, 1987; Svacha & Danilevsky, 1987; Adlbauer, 1992; Bense, 1995; Yüksel, 1996; Alkan, 2000; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**TRIBE REMPHANINI** Lacordaire, 1868: 103

**SUBTRIBE REMPHANINA** Lacordaire, 1868: 103

**GENUS RHAESUS** Motschulsky, 1875: 153 [RN]

**SPECIES** *R. serricollis* (Motschulsky, 1838: 187)

The species is a forester.

The **host plants** of the species are many deciduous trees (*Fagus*, *Celtis*, *Platanus*, *Quercus*, *Castanea*, *Tilia*, *Juglans*, *Salix*, *Morus*, *Liquidambar*) and exceptionally conifers (*Pinus*). The **specimens** that were collected **from Turkey** were found on or in deciduous trees (*Juglans regia*, *Liquidambar orientalis*, *Platanus orientalis*, *Morus alba*) and conifers (*Pinus brutia*, *Pinus nigra*) as adults or larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands (between 5-1000 m). **Life cycle** of the species is at least 3 years. **Overwintering stage** probably is larva. **Larvae live** in rotten wood of large trunks (both standing or fallen) of the host plants. **Pupation** is in the wood in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in early spring-summer (between May-August) (Demelt, 1963; Acatay, 1971; Gül-Zümreoğlu, 1975; Erdem, 1977; Çanakçioğlu, 1983; Öymen, 1987; Svacha & Danilevsky, 1987; Adlbauer, 1988; Bense, 1995; Bahadıroğlu, Agrad & Salman, 2009; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**TRIBE AEGOSOMATINI** Thomson, 1861: 308

**GENUS AEGOSOMA** Audinet-Serville, 1832: 162

**SPECIES** *A. scabricorne* (Scopoli, 1763: 54)

The species is a forester.

The **host plants** of the species are many deciduous trees (*Salix*, *Populus*, *Acer*, *Quercus*, *Alnus*, *Fagus*, *Ulmus*, *Morus*, *Aesculus*, *Carpinus*, *Castanea*, *Malus*, *Juglans*,

*Prunus*, *Celtis*, *Hedera*, *Fraxinus*, *Platanus*, *Tilia*). *Populus* and *Salix* spp., however, are preferred host plants. The **specimens** that were collected **from Turkey** were found on or in deciduous trees (*Populus nigra*, *Salix nigra*, *Fagus orientalis*) as adults or larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 126-1680 m). **Life cycle** of the species is at least 3 years. **Overwintering stage** is larva. **Larvae live** in living or dead deciduous trees, in dead stumps, in moist decaying wood (both standing or fallen), often in dead parts of living trees of the host plants. **Pupation** is in the wood in spring and summer. **Adults** are nocturnal, attracted by light. **Adults fly** in late spring-early autumn (between May-September) (Sekendiz, 1974; Villiers, 1978; Öymen, 1987; Svacha & Danilevsky, 1987; Adlbauer, 1992; Bense, 1995; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Özdikmen & Şahin, 2006; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012; Sama, Rapuzzi & Özdikmen, 2012).

**TRIBE PRIONINI** Latreille, 1802: 212

**GENUS MESOPRIONUS** Jakovlev, 1887: 323

**SPECIES** *M. angustatus* (Jakovlev, 1887: 327)

The species probably is not a typical forester because of lives on/in brushes. It has not been recorded from Turkey with exact locality. It was reported only by Löbl & Smetana (2010) from Asian Turkey (=Anatolia). So, biology in Turkey is unknown.

The **host plants** of the species are *Haloxylon*, *Calligonum*. **Adults and larvae** of the species can obtain from separate trees in dry, almost semidesert open areas. **Larvae live** in roots of the host plants. **Pupation** is in the soil (in larval tunnels of mature larvae). **Adults** probably are nocturnal, attracted by light. **Adults fly** in summer (at least June) (Svacha & Danilevsky, 1987).

**SPECIES** *M. asiaticus* (Faldermann, 1837: 263)

The species probably is not a typical forester because of lives also on/in brushes. It has not been recorded from Turkey with exact locality. It was reported only by Löbl & Smetana (2010) from Asian Turkey (=Anatolia). So, biology in Turkey is unknown.

The **host plants** of the species are deciduous tree (*Ficus carica*, *Salix*) and brushe (*Tamarix*). **Adults and larvae** of the species can obtain from separate trees in dry, almost semidesert open areas. **Life cycle** of the species is at least 3 years. **Larvae live** in dead underground parts of trees or in roots of a brush. **Pupation** probably is in the soil. **Adults** probably are nocturnal, attracted by light. **Adults fly** in summer (between June-August) (Danilevsky & Miroshnikov, 1985; Svacha & Danilevsky, 1987).

**SPECIES** *M. besikanus* (Fairmaire, 1855: 318)

The species is a forester.

The biology of the species is not known well. The **host plants** of the species are deciduous trees (*Platanus*, *Ficus*, *Olea*). The **specimens** that were collected **from Turkey** were found on or in deciduous trees (*Ficus carica*, *Olea europaea*). **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 110-1680 m). **Life cycle** of the species is 2-3 years. **Larvae live** in roots of the host plants. **Pupation** probably is in the soil. **Adults** probably are nocturnal, attracted by light. **Adults fly** in summer (between June-August) (İyriboz, 1940; Bodenheimer, 1948; Demelt, 1963; İren & Ahmed, 1973; Gül-Zümreoğlu, 1975; Öymen, 1987; Svacha & Danilevsky, 1987; Bense, 1995; Database of Özdikmen, 2012).

**SPECIES** *M. lefeburei* (Marseul, 1856: 47)

The biology of the species is unknown, but probably similar to *M. besikanus*. The **host plants** of the species are unknown. **Life cycle** of the species is 2-3 years. **Adults** probably are nocturnal, attracted by light. **Adults fly** in summer (between June-August) (Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**SPECIES** *M. persicus* (Redtenbacher, 1850: 49)

The species is a forester. It has not been recorded from Turkey with exact locality. It was reported only by Löbl & Smetana (2010) from Asian Turkey (=Anatolia). So, biology in Turkey is unknown.

The **host plants** of the species are deciduous trees (*Quercus*). **Life cycle** of the species is unknown. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-July) (Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**GENUS** *PRIONUS* Geoffroy, 1762: 198**SPECIES** *P. coriarius* (Linnaeus, 1758: 389)

The species is a forester.

The **host plants** of the species are conifers (*Pinus*, *Picea*, *Abies*, *Cedrus*) and deciduous trees (*Quercus*, *Fagus*, *Alnus*, *Castanea*, *Malus*, *Salix*, *Fraxinus*, *Betula*, *Ulmus*, *Corylus*, *Carpinus*, *Acacia*, *Cerasus*). The **specimens** that were collected from Turkey were found on or in conifers (*Pinus brutia*, *Picea orientalis*, *Cedrus libani*) and deciduous trees (*Corylus avellana*, *Malus sylvestris*, *Cerasus avium*, *Cerasus vulgaris*) as adults or larvae. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 03-1700 m). **Life cycle** of the species is at least 3 years. **Overwintering stage** is larva. **Larvae feed** almost exclusively underground, rarely above ground level. **Larvae live** in dead, rotten wood especially at the base of dead stems, in stumps and roots of the host plants. **Pupation** is in the soil (in a cocoon) in late spring and early summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in summer-early autumn (between June-September) (Schimitschek, 1944; Ekici, 1971; Tosun, 1975; Erdem, 1977; Villiers, 1978; Öymen, 1987; Cherepanov, 1990; Bense, 1995; Yüksel, 1996; Lodos, 1998; Kanat, 1998; Vives, 2000, 2001; Jenis, 2001; Sama, 2002; Bahadıroğlu, Agrass & Salman, 2009; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**SPECIES** *P. komiyai* Lorenc, 1999: 13

The species probably is a forester. It has not been recorded from Turkey with exact locality. It was reported only by Löbl & Smetana (2010) from Asian Turkey (=Anatolia). The biology of the species is unknown. **Adults fly** in summer (at least July).

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