

**REVIEW ON THE BIOLOGY OF
TURKISH CERAMBYCOIDEA (COLEOPTERA)
PART II – CERAMBYCIDAE (ASEMINAE-DORCASOMINAE)**

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ABSTRACT: The present paper gives an integrative information on the biology of Turkish Cerambycidae (from the subfamily Aseminae to the subfamily Dorcasominae). 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 second attempt for this purpose.

KEY WORDS: Cerambycidae, Aseminae, Saphaninae, Spondylidinae, Dorcasominae, Coleoptera, Turkey.

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) (Özdikmen, 2013). The present study is the second part of the planned work.

SUBFAMILY ASEMINAE Thomson, 1861: 139

TRIBE ASEMINI Thomson, 1861

GENUS ARHOPALUS Audinet-Serville, 1834: 77

SPECIES A. ferus (Mulsant, 1839: 64)

The species is a forester.

The **host plants** of the species are conifers (*Pinus*, *Picea*). Besides, adults have been reported by Gül-Zümreoğlu (1975) and Lodos (1998) on deciduous trees (*Prunus cerasus*, *Cerasus avium*, *Cerasus vulgaris*) from Turkey. These records, however, seem to be wrong. Because host plants of the species are known as only conifers. The **specimens** that were collected **from Turkey** were found on or in *Pinus halepensis*, *Pinus sylvestris*, *Pinus brutia*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 300-1700 m). They occur also in mountainous areas according to Jenis (2001). **Life cycle** of the species is 2-4 years. **Overwintering stage** is larva. **Larvae live** in dead trees especially basal parts, in stems, stumps and also often penetrating into surface of roots (fallen or standing) of the host plants. Young larvae are under the bark, soon penetrate into the wood. **Pupation** is in the wood or in thick bark in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-early autumn (between June-September) (Gül-Zümreoğlu, 1975; Öymen, 1987; Lodos, 1998; Villiers, 1978; Svacha & Danilevsky, 1987; Cherepanov, 1990; Bense, 1995; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SPECIES A. rusticus (Linnaeus, 1758: 395)

The species is a forester.

The **host plants** of the species are conifers (*Pinus*, *Picea*, *Abies*, *Larix*). Besides, adults have been reported by Gül-Zümreoğlu (1975) on *Prunus cerasus* from Turkey. The record, however, seems to be wrong. Because host plants of the species are known as only conifers. The **specimens** that were collected **from Turkey** were found on or in *Pinus brutia*, *Pinus sylvestris*, *Pinus pinea*, *Pinus nigra*, *Picea orientalis*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 05-1700 m). They occur

also in mountainous areas according to Jenis (2001). **Life cycle** of the species is 2-3 years. **Overwintering stage** is larva. **Larvae live** in dead trees especially basal parts, in stems, stumps and also often penetrating into surface of roots (fallen or standing) of the host plants. Young larvae are under the bark, soon penetrate into the wood. **Pupation** is in the wood in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-early autumn (between May-September) (Schimitschek, 1944; Gül-Zümreoğlu, 1975; Tosun, 1975; Öymen, 1987; Villiers, 1978; Svacha & Danilevsky, 1987; Cherepanov, 1990; Bense, 1995; Yüksel, 1996; Alkan, 2000; Tozlu, 2001; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SPECIES *A. syriacus* (Reitter, 1895: 86)

The species is a forester.

Biology of the species is similar to that of the other *Arhopalus* species. The **host plants** of the species are conifers (*Pinus*). The **specimens** that were collected **from Turkey** were found on or in *Pinus brutia*, *Pinus sylvestris*, *Pinus halepensis*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 100-1100 m). **Life cycle** of the species is 2-3 years. **Overwintering stage** is larva. **Larvae live** in dead trees especially basal parts, in stems, stumps and also often penetrating into surface of roots (fallen or standing) of the host plants. Young larvae under the bark, soon penetrate into the wood. **Pupation** is in the wood in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-August) (Demelt & Alkan, 1962; Demelt, 1963; Tosun, 1975; Sekendiz, 1981; Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Jenis, 2001; Vives, 2000, 2001; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

GENUS ASEMUM Eschscholtz, 1830: 66

SPECIES *A. striatum* (Linnaeus, 1758: 396)

The species is a forester.

The **host plants** of the species are conifers [*Pinus* (preferred), *Picea*, *Abies*, *Larix*]. The **specimens** that were collected **from Turkey** were found on or in *Pinus sylvestris*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 800-1415 m). **Life cycle** of the species is 2-3 years. **Overwintering stage** is larva. Habits generally similar to *Arhopalus* species, but **larvae live** in dead trees especially in parts near to the ground, in stems, stumps and also in roots of the host plants. Young larvae are under the bark, soon penetrate into the wood. **Pupation** is in the wood in spring and summer. **Adults** are diurnal, predominantly crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-August) (Villiers, 1978; Svacha & Danilevsky, 1987; Cherepanov, 1990; Bense, 1995; Tozlu, 2001; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SPECIES *A. tenuicorne* Kraatz, 1879: 97

The species is a forester.

Biology of the species probably is similar to that of *A. striatum*. The **host plants** of the species are conifers (*Pinus*). **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (~ up to 1400 m). **Life cycle** of the species is 2-3 years. **Overwintering stage** is larva. **Larvae** attack freshly dead trees. **Adults** are diurnal, predominantly crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-August) (Svacha & Danilevsky, 1987; Bense, 1995; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

GENUS TETROPIUM Kirby, 1837: 174

SPECIES *T. castaneum* (Linnaeus, 1758: 396)

The species is a forester.

The **host plants** of the species are conifers [*Picea* (preferred), *Abies*, *Pinus*, *Larix*]. The **specimens** that were collected **from Turkey** were found on or in *Picea orientalis*, *Abies*

bornmuelleriana. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (~ up to 1250 m). **Life cycle** of the species is 1-2 years. **Overwintering stage** is larva. **Larvae live** often under bark of relatively freshly dead trees (standing or fallen), mostly in stems, occasionally in roots of the host plants. **Pupation** is in the wood or more rarely under the bark in spring and summer. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in spring-summer (between April-August) (Defne, 1954; Öymen, 1987; Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Yüksel, 1996; Alkan, 2000; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SPECIES *T. fuscum* (Fabricius, 1787: 154)

The species is a forester.

The **host plants** of the species are conifers [*Picea* (preferred), *Pinus*]. The **specimens** that were collected **from Turkey** were found on or in *Picea orientalis*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (~ up to 1510 m). They occur also in mountainous areas according to Jenis (2001). **Life cycle** of the species is 1 year. **Overwintering stage** is larva. **Larvae live** under the bark of sick, dying or freshly dead trees (standing or fallen), mostly in trunks, only occasionally in roots of the host plants. **Pupation** is in the wood or rarely under the bark in spring. **Adults** are diurnal, crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-July) (Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Yüksel, 1996; Alkan, 2000; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

TRIBE NOTHORHININI Zagajkevich, 1991: 110

GENUS *NOTHORHINA* Redtenbacher, 1845: 109

SPECIES *N. muricata* (Dalman, 1817: 193)

The species has been reported as *N. punctata* by Lobanov et al., 1981 and Svacha & Danilevsky, 1986; Löbl & Smetana (2010) from Turkey without any exact locality. So, any information on biology of the species in Turkey is unknown.

The species is a forester.

The **host plants** of the species are conifers (*Pinus*). **Adults and larvae** of the species can obtain only from the host plants in lowlands, foothills and mountainous areas. **Life cycle** of the species is 1-2 years. **Overwintering stage** is larva. Habits are rather unusual. **Larvae live** in the bark of large, living, mostly sun-exposed trees of the host plants. **Pupation** is in outer bark in spring and summer. **Adults** are diurnal and crepuscular, sometimes attracted by light. **Adults fly** in summer (between June-August) (Villiers, 1978; Svacha & Danilevsky, 1987; Cherepanov, 1990; Bense, 1995; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SUBFAMILY SAPHANINAE Gistel, 1848: [1]

TRIBE ANISARTHINI Mamaev & Danilevsky, 1973: 1260

GENUS *ALOCERUS* Mulsant, 1862: 127

SPECIES *A. moesiacus* (Frivadszky, 1837: 177)

The species is a forester.

The **host plants** of the species are deciduous trees (*Populus*, *Ficus*, *Ulmus*, *Platanus*, *Acacia*, *Quercus*). **Adults and larvae** of the species can obtain only from the host plants in lowlands. **Life cycle** of the species is at least 2 years. **Overwintering stage** is larva. **Larvae live** in moist, rotten wood of dead trunks, barkless parts of living trunks and in dead branches of the host plants. **Pupation** is in the wood or rarely under the bark in spring. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in summer-early autumn (between June-September) (Svacha & Danilevsky, 1987; Bense, 1995; Jenis, 2001; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

TRIBE SAPHANINI Gistel, 1848: [1]

GENUS *DRYMOCHARES* Mulsant, 1847: 518

SPECIES *D. starcki* Ganglbauer, 1888: 398

The species is a forester.

The **host plants** of the species are deciduous trees (*Fagus*, *Betula*, *Buxus*, *Quercus*, *Carpinus*, *Salix*, *Prunus*). **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (~ up to 1500 m). **Life cycle** of the species is at least 3 years. **Larvae live** in dead standing trees or in stumps, always at the ground level or usually underground, in wet rotting wood of the host plants. **Pupation** is at the top of a longer vertical gallery in the wood in spring and summer, pupal cell usually just above the ground. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-July) (Svacha & Danilevsky, 1987; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

GENUS SAPHANUS Audinet-Serville, 1834: 81

SPECIES *S. piceus* (Laicharting, 1784: 56)

There is no published record from Turkey. However, Danilevsky (2012) stated that this species collected from Turkey is preserved in collection of Stanislav Kadlec (Czechia). Besides, the species has been reported by Löbl & Smetana (2010) only from European Turkey as *S. piceus ganglbaueri* without any exact locality. So, any information on biology of the species in Turkey is unknown.

The species is a forester.

The **host plants** of the species are deciduous trees (*Corylus*, *Alnus*, *Fagus*, *Quercus*, *Carpinus*, *Salix*, *Betula*, *Prunus*, *Crataegus*) and occasionally conifers (*Picea*, *Abies*). **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills. **Life cycle** of the species is at least 3 years. **Overwintering stage** is larva. **Larvae live** in dead standing trees or in stumps, always at the ground level or usually underground, in wet rotting wood of the host plants. **Pupation** is at the top of a longer vertical gallery in the wood in spring and summer, pupal cell is usually just above the ground. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-summer (between May-August) (Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

GENUS OXYPLEURUS Mulsant, 1839: 57

SPECIES *O. nodieri* Mulsant, 1839: 57

The species is a forester.

The **host plants** of the species are conifers (*Pinus*). The **specimens** that were collected **from Turkey** were found on or in *Pinus halepensis*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills. **Life cycle** of the species is 2 or more years. **Overwintering stage** is larva and adult (in pupal cells). **Larvae live** in dry dead wood, barkless parts of living trees, also in freshly dead branches, trunks and stumps of the host plants. **Pupation** is in the wood, shallow pupal cells in sapwood in spring. **Adults** are crepuscular and nocturnal, attracted by light. **Adults fly** in spring-winter (between April-December) (Demelt, 1963; Villiers, 1978; Svacha & Danilevsky, 1987; Bense, 1995; Vives, 2000, 2001; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SUBFAMILY SPONDYLIDINAE Audinet-Serville, 1832: 123

TRIBE SPONDYLIDINI Audinet-Serville, 1832: 123

GENUS SPONDYLIS Fabricius, 1775: 159

SPECIES *S. buprestoides* (Linnaeus, 1758: 388)

The species is a forester.

The **host plants** of the species are conifers [*Pinus* (preferred), *Picea*, *Abies*, *Larix*]. The **specimens** that were collected **from Turkey** were found on or in *Pinus sylvestris*, *Pinus nigra*, *Picea orientalis*. **Adults and larvae** of the species can obtain only from the host plants in lowlands and foothills (between 500-1500 m). **Life cycle** of the species is 2-3 years. **Overwintering stage** is larva. **Larvae live** in roots in dead trees or stumps of the host plants, almost always underground or at least at the ground level. Young larvae are under the bark. Older larvae are in the wood. **Pupation** is in the wood near ground level in

late spring and early summer. **Adults** are diurnal, crepuscular and nocturnal, attracted by light. **Adults fly** in late spring-early autumn (between May-September) (Erdem, 1947; Çanakçıoğlu, 1956; Villiers, 1978; Öymen, 1987; Svacha & Danilevsky, 1987; Bense, 1995; Yüksel, 1996; Alkan, 2000; Vives, 2000, 2001; Tozlu, 2001; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

SUBFAMILY DORCASOMINAE Lacordaire, 1868: 456

TRIBE DORCASOMINI Lacordaire, 1868: 456

GENUS APATOPHYSIS Chevrolat, 1860: 95

SUBGENUS APATOPHYSIS Chevrolat, 1860: 95

Biology of this group is not well known. According to Danilevsky (2008), most of species are connected with desert and semi-desert landscapes. Only 1 species, *A. pavlovskii*, is known as inhabitant of broadleaf forests. So, Turkish species are not forester. All known larvae feed in roots of shrubs and trees. Known host plants of the species are shrubs (*Haloxylon*, *Kalidium*, *Salsola*, *Calligonum*, *Armeniaca*, *Ephedra*) and deciduous trees (*Ulmus*, *Crataegus*, *Juglans*) for *A. pavlovskii*.

SPECIES *A. anatolica* Heyrovsky, 1938: 93

The **host plants** of the species are unknown. **Adults and larvae** of the species can obtain from dry foothills and sandy deserts (~ 1000-1100 m). **Larvae probably live** in roots of the host plants. **Pupation** probably is in the soil. **Adults** are nocturnal, attracted by light. **Adults fly** in summer (between July-August) (Danilevsky, 2008; Database of Özdikmen, 2012).

SPECIES *A. kadleci* Danilevsky, 2008: 29

The **host plants** of the species are unknown. **Adults and larvae** of the species can obtain from dry mountain landscapes. **Larvae probably live** in roots of the host plants. **Pupation** probably is in the soil. **Adults** probably are nocturnal, attracted by light. **Adults fly** in late spring (May) (Danilevsky, 2008; Database of Özdikmen, 2012).

SPECIES *A. karsica* Danilevsky, 2008: 28

The **host plants** of the species are unknown. **Adults and larvae** of the species can obtain from dry mountain landscapes (up to 2400 m). **Larvae probably 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 July-August) (Danilevsky, 2008; Database of Özdikmen, 2012).

SPECIES *A. vedica* Danilevsky, 2008: 26

The **host plant** of the species is *Salsola*. **Adults and larvae** of the species can obtain from fixed sandy landscapes, clay deserts and also dry bush mountain landscapes (up to 2400 m). **Larvae live** in roots of the host plant. **Pupation** probably is in the soil. **Adults** are nocturnal, attracted by light. **Adults fly** in summer-early autumn (between June-September) (Danilevsky, 2008; Database of Özdikmen, 2012).

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