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 forest.

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-summer (between May-August) (Demelt & Alkan, 1962; Demelt, 1963; Tosun, 1975; Sekendiz, 1981; 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 (between May-September) (Schimitschek, 1944; Gül-Zümreoğlu, 1975; Tosun, 1975; Oymen, 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. 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. **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 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) (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).

**SPECIES** *A. tenuicorne* Kraatz, 1879: 97

The species is a forester.

Biology of the species is probably 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; Cherepanov, 1990; Bense, 1995; Jenis, 2001; Vives, 2000, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**GENUS** ASEMUM Eschscholtz, 1830: 66

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

The species is a forager.

**HOST PLANTS** of the species are conifers (*Pinus*). The **specimens** that were collected **from Turkey** were found on or in *Picea orientalis*, *Abies*

**GENUS** TETROPIUM Kirby, 1837: 174

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

The species is a forager.

**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) (Svacha & Danilevsky, 1987; Cherepanov, 1990; Bense, 1995; Jenis, 2001; Sama, 2002; Database of Özdikmen, 2012; Hoskovec & Rejzek, 2012).

**SUBFAMILY** SAPHANINAE Gistel, 1848: [1]

**TRIBE** ANISARTHRINI 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 forest.

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 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 forest.

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 forest.

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

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 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 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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