HOST PLANTS OF SEVERAL HERB-FEEDING 
CERAMBYCIDAЕ MAINLY FROM EAST 
MEDITERRANEAN REGION 
(FCOLEOPTERA : CERAMBYCIDAЕ)

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Abstract
Host plants of several Cerambycidae developing in herbaceous plants and occurring mainly in the East Mediterranean region are discussed.

Keywords
Coleoptera, Cerambycidae, bionomics, host plants, East Mediterranean region.

Résumé. Sur les plantes hôtes de quelques Cerambycides phytophages surtout de la région méditerranéenne orientale (Coleoptera : Cerambycidae).
Les auteurs traitent des plantes hôtes de nombreux Cérambycides de développant dans des plantes herbacées et vivant essentiellement en Méditerranée orientale.

Mots-clés
Coleoptera, Cerambycidae, biologie, plantes hôtes, Méditerranée orientale.

Introduction
Longhorn beetles (Cerambycidae) are phytophagous insects whose larvae usually develop in living or dead woody plants (xylophagous species), but some develop in living tissues of herbaceous plants (herb feeders). The herb feeders show varying host specificity (from monophagous to broadly polyphagous), but our knowledge of their host plants is frequently incomplete.

The information concerning host plants of Cerambycidae is spread throughout a great number of literature sources. It would be impossible to give each literary source mentioning host plants of a particular species. Therefore,

review articles and books summarising the data are cited here. In the case of species occurring in Europe (excluding the European part of the former Soviet Union and the European part of Turkey) BENSE (1995) provides such a review. The author summarised the biology of each species from the available literature into a concise form.

Although the work by DANILEVSKY and MIROSHNIKOV (1985) only covers the region of the Caucasus mountains it also deals with many species which occur in the Mediterranean region. In this book, where known, the authors give an outline concerning the biology of each particular species. In the case of several species, however, the authors do not mention the biology at all. We therefore assume that at the time of the book’s release there was no reliable data available.

Only two papers specialising in host plants of Cerambycidae and dealing more or less with the study area are known to us: ADELI (1972) dealing mainly with xylophagous and some herb-feeding species occurring in Iran and HALPERIN and HOLZSCHUH (1993) dealing primarily with xylophagous species of Israel.

Material and Methods

Adult beetles were collected individually (not by sweeping) on herbaceous plants. These plants were then photographed and samples collected together with the beetles. The locality description applies both to the plant and the beetles collected on it. All individuals mentioned in this work were collected on the plants mentioned at the front of each record. This method of identifying a host plant is certainly less reliable than rearing adults from larvae found in the plant tissues and therefore needs further confirmation.

Only a limited number of records in this work apply to beetles reared from larvae found in roots or stalks of herbaceous plants.

If not stated otherwise all plants dealt with here were determined by G. Alzarii, sometimes using samples of the plants lacking some of the most important determination characteristics or even photographs only; all the beetles were determined by G. Sama and M. Rejzek. The herbaria, pictures of plants, and the beetles are deposited in the collections of G. Sama and M. Rejzek.

All local names in this work are spelled according to ANONYMOUS (1990a) in the case of Turkey, ANONYMOUS (1990b) in the case of Lebanon, ANONYMOUS (1993/94) in the case of Iran, ANONYMOUS (1997a) in the case of Syria, and ANONYMOUS (1997b) in the case of Jordan.

PURPURICENUS WACHANRUI LEVRAT, 1858


According to ADELI (1972) the larvae of this species were found in wood of Quercus and fruit trees. DANILEVSKY and MIROSHNIKOV (1985) do not give any information regarding the biology of this species and moreover the species is not included in the key to the larvae of Purpuricenus spp. However, in table 1 on page 36 they mention Quercus (Fagaceae) and fruit trees as host plants, although with question marks.

Verbascum sp. (Seraphulariaceae) (MR) – SE. Turkey: Adiyaman, Nemrut Dağı mts., Karahut env., 4/8 VI.1995, 67 adults (MR); idem, 2 adults (M. Johanides leg.).

The larva of P. wachanrui is still unknown and moreover, to our knowledge until now the species has never been reared from any tree nor shrub species. The adult beetles are always collected on flowers of a Verbascum sp. and some flowering thistle species, frequently in areas with no trees. Therefore, unlike the majority of Purpuricenus spp., P. wachanrui seems to develop in herbaceous plants.

However, it is still possible that this species develops in an unknown tree or shrub and the adults are only attracted to the flowering herbaceous plants as in the case of P. budensis (Gütle, 1783) for example. Further data would be desirable to confirm this.

For an unknown reason the adults frequently tend to concentrate on just a few plants and completely ignore the rest. Such a mass concentration was observed several times in Nemrut Dağı mountains (SE. Turkey) always in late afternoon.

AGAPANTHIA COERULEIPENNIS FRIVALDSZKY, 1878

Agapantia coeruleipennis Frivaldszky, 1878, Term. Füzet., 2: 9. Type loc.: Asia Minor.

Gundelia tournefortii L. (Asteraceae) (Fig. 1) – E. Turkey: Muş, Buğlak Geçidi (1600 m), 21/23 VI.1998 (GS); Kahraman Maras, Gökşun env. (1300 m), 25 V.1986, many adults on leaves (GS); Gökşun, Torbuzek (1700 m), 30 V.1997, larvae, pupae and immature adults in pupal cells, in dry stems on the ground (GS); Adiyaman, Nemrut Dağı (1800 m), 14/2 V.1997, larvae in pupal cells (GS); S. Turkey: Arslanköy (1800 m), 27/28 VI.1995, many adults (MR).

This nice Agapanthia is apparently monophagous on Gundelia tournefortii (Fig. 1). Adults can be observed on the leaves of the host plant, nearly everywhere in S. and SE. Turkey. The species is frequently accompanied by Cortodera syriaca Pic, 1901.

AGAPANTHIA FRIVALDSZKYI GANGLBAUER, 1884

Agapantia frivaldszkyi Ganglbauer, 1884, Best. Tab., 8: 112. Type loc.: Asia Minor.

According to BENSE (1995) the development is unknown.

Serratula sp. (Asteraceae) - E. Turkey: Buğlak Geçidi (1640 m) 40 km NW. Muş, 38.56N 41.09E, 22/23 VI.1999, 30 adults (MR).

AGAPANTHIA LAIS REICHE & SAULEY, 1858


According to BENSE (1995) the development of this species is unknown.


AGAPANTHIA OSMANLIS REICHE & SAULEY, 1858


DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant of this species. According to BENSE (1995) the development is unknown.

Cephalaria sp. (Dipsacaceae) – NE. Turkey: Gümüşhane, pass S. Kelkit (2000 m), 12 VI.1998 (GS); Kars, 14 km SE. Sankamis (2200 m), 7/8 VI.1998, many adults (GS); Gemecik W. Refahiye, 2 VI.1998, 10 adults (MR); Erzurum, N. Ispir, (1800 m), 11 VI.1998, many adults (GS).


Unfortunately, there is a great deal of confusion within the group of blue Agapanthia species. The type locality of A. lais given in the original description ("Peloponese" = S. Greece) is very likely to be a mistake; the origin of the type material is more likely to be the Near East (maybe the former "Palestina" or "Syria") where this species is rather common. On the other hand, A. osmanlis, which is distributed from the Balkan Peninsula (Bulgaria env., Bulgaria, Romania), over the whole Pontic range to the Caucasus, probably doesn’t occur in the Near East. Although BYTINSKI - SALZ (1956) recorded A. osmanlis from the Near East, in our opinion this record was based on an inaccurate determination of A. lais (GS, in litteris).

Agapanthia pustulifera Pic, 1905


This species is rather common and widely distributed from S. Syria to Jordan and Israel. In our opinion the majority of records of A. asphodeli (Latreille, 1804), A. dahli (Richter, 1821), A. lateralis Ganglbauer, 1884, and A. muelhneri Reitter, 1898 from this area (cf. BYTINSKI - SALZ, 1956) will in fact belong to A. pustulifera (GS, in litteris).

Agapanthia Walteri Reitter, 1898

DANILEVSKY and MIROSHNIKOV (1983) give Carduus (Asteraceae), Heracleum (Apiaceae), and "others" as the host plants.

Cirsium sp. (Asteraceae) – E. Turkey: Söylemez 50 km SE. Erzurum, 39.45N 41.49E, 24.VI.1999, 6 adults (MR, P. Kabátek, M. Johanides and E. Hajdaj leg.).
**THROPHILEA CYLINDRICOLLIS** Pic., 1897
*Throphilea cylindricollis* Pic, 1897, E change, 11: 39. Type loc.: Turquie or., Bitlis.

According to DANILEVSKY and MIROSHNIKOV (1985) the species develops in stalks of *Elyttrigia repens* (*Poaceae*).


Previously this species was only recorded from the Caucasus (PIC, 1897 ; DANILEVSKY & MIROSHNIKOV, 1985 ; ADLBAUER, 1992) and E. Turkey (Bitlis, Bingöl, Kars).

**OBerea ressl* Demelt, 1963

According to DEMELT (1963) the beetle was collected: "in Anzahl auf einer Lithospermum Art". However, this record was most certainly based on an inaccurate determination of the plant (P. Schurmann, in littoritis).

*Vincetoxicum hirundinaria* Medicus (= officinalis Pobed.), (*Aselepiadaceae*) (GS) ; the plant was determined by dr. Leute, Landes Museum, Klagenfurt (P.Schurmann in littoritis) – Turkey : Ankara, Kızılcakhamam, VI.1964 and VI.1973 (CPS) ; 13.VI.1983, many adults on leaves and some pupae in pupal cells (GS).

**OXYLIA ARGENTATA** (Ménétrisies, 1838)
*Saperda argentata* Ménétrisies, 1832, Cat. rais.: 227. Type loc.: Transcaucasia, Zou vant.

DANILEVSKY and MIROSHNIKOV (1985) give *Echium* (*Boraginaceae*) as the host plant.


*Echium italicum* L. (*Boraginaceae*) (GS) - Turkey : Antalya, İrmason Geçidi (1300 m), 23.V.1997 (GS).

**PTEROMALLOSIA ALBOLINEATA** (Hampe, 1852)

According to DANILEVSKY and MIROSHNIKOV (1985) the species develops in *Echinops scovitzii* (*Asteraceae*).


*Echinops* sp. (*Asteraceae*) - E. Turkey : Buğlan Geçidi (1640 m) 40 km NW. Muş, 38.56N 41.09E, 22/23.VI.1999, 2 adults (MR).

**SEMNOSSA (EUMALLOSIA) HERMINAE** (Reitter, 1890)

According to ADELI (1972) larvae of this species are found in the wood of *Quercus persica*. DANILEVSKY and MIROSHNIKOV (1985) give *Ferula* (*Apiaceae*) as the host plant.

*Prangos* sp. (*Apiaceae*) – E. Turkey : Van, Kuskun Kırak Geçidi (2200 m), 4/6.VI.1998 (GS).

**SEMNOSSA (EUMALLOSIA) IMPERATRIX** (Abeille, 1885)
*Mallosia imperatrix* Abeille, 1885, Ann. Soc. Ent. France, 6 (Bull.): CCL. Type loc.: Syria, Blüdän (Antilibanon).

*Ferula hermonis* Boiss. (*Apiaceae*) (Fig. 2) - SW. Syria : Blüdän NW. Damascus, 21/22.V.1998, 6 adults (MR); idem, 5.VI.1997 (M. Formánek leg.) ; idem, 28/31.V.2000, many adults (GS).

**SEMNOSSA (s.str.) INTERRUPTA** (Pic, 1905)

For *Mallosia* (Semno*sa*) scovitzii (Falderman 1837) DANILEVSKY and MIROSHNIKOV (1985) give *Prangos* (*Apiaceae*) as the host plant.
**Prangos sp. (Apliaceae)** – E. Turkey: Van, Kuskun Kiran Geçidi (2200 m), 4/6.VI.1998 (GS).

**COPTOSIA BITHYNENSIS (Ganglbauer, 1884)**

*Phytoclea bithynensis* Ganglbauer, 1884, Best.Tab., 8: 573 (139). Type loc.: Kleinasien, Brussea.

**DANILEVSKY** and **MIROSHNIKOV** (1985) do not give any host plant of this species.


Like most of the other Coptosia spp., this species spends the major part of the day time hiding in the complex leaf system close to the lower section of the main stalk or even sitting on the ground in the vicinity of the Boraginaceae plants. Copulation also takes place here. The adults climb to the upper parts of the host only occasionally. This happens always at certain times in the morning and then later in the afternoon. At these times the beetles are very active and frequently fly.

**COPTOSIA COMPACTA (Ménétries, 1832)** s.l.

*Phytoclea compacta* Ménétries, 1832, Cat. rais.: 288. Type loc.: Baku.

According to ADELJ (1972) *Coptosia compacta* should be a pest of *Populus euphratica*. **DANILEVSKY** and **MIROSHNIKOV** (1985) give *Ferula* (Apliaceae) as the host plant.

**Solenanthus stamineus** (Desf.) Wettst. (Boraginaceae) (Fig. 3) – E. Turkey: Sarıkamış, 80 km NE. Horasan, 40.18N 42.29E, 25.VI.1999, 4 adults (MR); Tatvan env., Bitlis, 14.VI.1997, many adults (MR); SE. Turkey: Adıyaman, Nemrut Dağı mts., Karadut env., 3/10.VI.1995, about 50 adults (MR); Adıyaman, Nemrut Dağı mts., Karadut env., 3/10.VI.1996, 55 adults (M. Hospovec leg.).

The Caucasian populations of *Coptosia compacta* develop in *Ferula* whereas the populations occurring in E. Turkey (Nemrut Dağı, Bitlis, Sarıkamış) were recorded exclusively from *Solenanthus stamineus* (Fig. 3) and never from *Ferula*. Moreover, the Turkish specimens are of a generally bigger body size than the ones from the Caucasus region and therefore it is likely that two distinct subspecies are dealt with.

Similarly to other Coptosia spp., this species spends most of the day time hiding in the complex leaf system of the hosts. Moreover, the adults have frequently been collected in little hollows dug by the beetles in the ground in the vicinity of the stalks. To our knowledge this unique behaviour has never been observed before. Only very rarely have the adults been observed climbing up the plants.

**COPTOSIA GANGLBAUERI Pic, 1936**

*Coptosia ganglbaueri* Pic, 1936, Echange, 51(463): 3 (hors texte). Type loc.: Jerusalem.


**Anchusa sp. (Boraginaceae)** – SW. Syria: Blïdïn NW. Damascus, 5.VI.1997 (M. Formánec leg.).

The behaviour of this species is analogous to *Coptosia bithynensis*.

**COPTOSIA SCHUBERTI Fuchs, 1965**


**Anchusa barrelleri** (All.) Vitman (Boraginaceae) – S. Turkey: Antalya, 5 km N. Yarpuz (1500 m), 20.V.1997 (GS).

The behaviour of this species is analogous to Coptosia bithynensis.

**Pilemia annulata** (Hampe, 1862)

DANILEVSKY and MIROSHNIKOV (1985) mention family Boraginaceae as probable host plants of this species.

Nonea sp. (*Boraginaceae*) - E. Turkey: Sarıkamıs 80 km NE. Horasan, 40.18N 42.29E, 23.VI.1999, 6 adults (MR).
Nonea stenosolen Boiss. & Bal. (*Boraginaceae*) (Fig. 4) – NE. Turkey: Kurbağalıbeli Geçidi (1800 m) N. Zara, 3.VI.1998, 11 adults (MR).

The adult beetles were observed sitting on the ground hiding under the leaves of the relatively little Nonea plants.

**Pilemia griseomaculata** Pic., 1891 (det. S. Kadlec, 1999)
*Pilemia tigrina v. griseomaculata* Pic, 1891, Echange, 7(82): 102. Type loc.: Syrie.


The adults spend most of the day time hiding in the complex leaf system close to the ground or even sitting on the ground in the vicinity of the stalk. The adults mimic old dry leaves of the Boraginaceae plants and therefore are very difficult to see there. At certain times of the day (in the morning and then in the late afternoon) the adults climb up the plant and occasionally fly.

**Pilemia hirsutula** (Frölich, 1793)
*Saporta hirsutula* Frölich, 1793, Nat. F., 27: 141. Type loc.: Austria.

DANILEVSKY and MIROSHNIKOV (1985) mention Phlomis and Stachys (*Lamiaceae*) as the host plants. According to BENSE (1995) the species develops in herbaceous plants (primarily in Phlomis tuberosa, probably also in Ballota nigra, Marrubium *candidissimum*, and Marrubium vulgare), in Central Europe the development occurs primarily in Stachys recta

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Fig. 3: *Solenanthus stamineus* (Desf.) Wettst. (*Boraginaceae*): host plant of Coptosia compacta (Ménétries, 1832) s.l.

Fig. 4: *Nonea stenosolen* Boiss. & Bal. (*Boraginaceae*): host plant of Pilemia annulata (Hampe, 1862)
Salvia cf. hypoleuca Bent. (Lamiaceae) - N. Iran; prov. Mazandaran, 70 km SW. Çalús (pass - 2870 m), 36.09N 51.17E, 18.VI.1992, 4 adults (MR).

Lamiaceae gen. sp. - N. Iran; E. Azarbaygan-e, Kalisbar env. (1600-1700 m), 26.V.1999 (Saltini leg.).

Stachys patens Boiss. et Bal. (Lamiaceae) - NW. Syria: Şlînfah E. Latakia (1500 m), 26/29.V.1998, 12 adults (MR).

Phlomis longifolia Boiss. et Blanche (Lamiaceae) - NW. Syria: Şlînfah E. Latakia (1500 m), 26/29.V.1998, 1 adult (MR).

Phlomis tuberosa L. (Lamiaceae) - E. Turkey: Hakkâri, 10.VI.1997 (M. Formánek leg.).

Pilemia maculifera (Holzschuh, 1984)


All adults were observed in late afternoon sitting high up in the host plants and frequently even in the flowers of the host.

Pilemia serriventris (Holzschuh, 1984)


According to BENSE (1995) the development is unknown.

Cynoglossum officinale L. (Boraginaceae) - S. Bulgaria: Harmanci-Ljubimec, V.1998 (M. Formánek leg.).

Pygoptosis eugeniae (Ganglbauer, 1884)

Phytocia eugeniae Ganglbauer, 1884, Best. Tab., 8: 568. Type loc.: Persien.

Centaurea behen L. (Asteraceae) (Fig. 5) - W. Iran; prov. Lorestan, Dorud 52 km SE. Borüçer, 33.25N 49.06E (1740 m), 11.VI.1999, 40 adults (MR).

This rather striking species has been observed sitting on large leaves of the host in late afternoon. The beetles quickly flew away when disturbed. Attempts to find the beetles on the ground in the vicinity of the plant stalks outside of their active time failed.

Pygoptosis speciosa (Frivaldszky, 1884)

Phytocia speciosa Frivaldszky, 1884, Term. Füzet., 8: 5. Type loc.: Kurdistan, Diyarbakir.

Serratula cerinthifolia (Sm.) Boiss. (Asteraceae) (Fig. 6) - SE. Turkey: Adryaman, Nemrut Dağis mts., Karadut env. (lower than 1000 m), 4/8.VI.1995, 31 adults (MR); NW. Syria: Şlînfah E. Latakia (1500 m), 26/29.V.1998, 5 adults (M. Johanides leg.).


The behaviour of this species is analogous to Pygoptosis eugeniae.

Cardoria scutellata (Fabricius, 1792)

Saperda scutellata Fabricius, 1792, Ent. Syst., 1(2): 317. Type loc.: Germany.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant for this species. In 1989 KOVACS published a paper dealing with the biology of this species giving Falcaria vulgaris Bernh. (Apiaceae) as the host plant. The larvae of this species were also later collected and described (P. Švácha, in litt.) According to BENSE (1995) the development is unknown and adults are found in arid areas on grass, on Adonis vernalis, and on Reseda.


The adults can be found sitting on the ground in the vicinity of the host. During their active period the males fly occasionally, while the females can only be seen walking on the ground. The adult beetles mimic the colour of the ground very effectively.
HELLADIA ARMENIACA (Frivaldszky, 1878)
Phytoecia armeniaca Frivaldszky, 1878, Term. Füzet., 2: 10. Type loc.: Armenia, Diyarbakır.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant of this species.

Scorzonera subintegra (Boiss.) Thiébaut (Asteraceae) – M. Hermon (1300 m), 11/18.V.1996, many adults (GS).

A significant number of specimens collected on Scorzonera subintegra indicates that the plant might be its host in the above mentioned locality. However, in E. Turkey the beetle was frequently associated with different plant species.

HELLADIA FERRUGATA (Ganglbauer, 1884)
Phytoecia ferrugata Ganglbauer, 1884, Best.Tab., 8: 574 (140). Type loc.: Syrien, Chäifa.

In Israel Y. Dorchin and E. Orbach (in litteris) recorded this species from Centaurea procurrens Sieber ex Spreng (Asteraceae).


HELLADIA FLAVESCENS (Brullé, 1832)
Saperda flavescens Brullé, 1832, Exp. Morée, ins. 262, tav. 43, fig. 5. Type loc.: Morca.

According to BENSE (1995) the species probably develops in thistles.

Onopordon illyricum L. (Asteraceae) (GS) - Greece : Larissa, between Trikala and Larissa, 4.VI.1976, many specimens on stems of living plants, sometimes together with Agapanthia cynarae (Germar, 1817) (GS).

HELLADIA ORBICOLLIS (Reiche & Sauley, 1858)

Centaurea cf. hyalolepis Boiss. (Asteraceae) (GS) - Lebanon : Aakkar, Qoubaiyat, Qatlabe, ex larva, adults in pupal cells from VIII. (GS).

Although the type locality of Helladia orbicollis is Palestina, the species has not been collected in either Palestina nor Israel again.

HELLADIA ORBICOLLIS (Reiche & Sauley, 1858) sp. ADELPHA
(Ganglbauer, 1885)


HELLADIA HUMERALIS (Wahl. 1838)
Saperda humeralis Wahl. 1838, Isis, 31: 471. Type loc.: Turcia.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant for this species.


HELLADIA INSIGNATA (Chevrolat, 1854)
Phytoecia insignata Chevrolat, 1854, Rev. Mag. Zool., 7-8: 22, tav. 7, fig. 6. Type loc.: Saidia.


**Helladia paulusi** (Holzschuh, 1971)


*Helladia paulusi* spends most of the day time hidden in the *Cirsium* plants. When searching the plants the adults can be found there even under bad weather conditions. Only occasionally and just for a certain time period the beetles climb up the leaves and fly.

**Helladia pontica** (Ganglbauer, 1884)

*Phytoeca pontica* Ganglbauer, 1884, Best.Tab., 8: 574 (140). Type loc.: Pontus, Caucasus.


**Helladia plasoni** (Ganglbauer, 1884)

*Phytoeca plasoni* Ganglbauer, 1884, Best.Tab., 8: 570 (136). Type loc.: Persien.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant of this species.

**Gundelia tournefortii** L. (Asteraceae) (Fig. 1) – E. Turkey: Muş, Buğlan Geçidi (1400 m), 2.VI.1998, 4 specimens (GS).

Males and females of this highly interesting species have been observed sitting on big leaves of the host during the warmest hours of the day. The beetles very quickly flew away when disturbed. Attempts to find the beetles on the ground in the vicinity of the plant stalks outside of their active time failed.
**HELLADIA MILLEFOLI (Adams, 1817)**


*Asteraceae* - E. Turkey: Kōrsu 27 km N. Hınıs (2150 m), 39.31N 41.42E, 24.VI.1999, 2 adults (MR).

**HELLADIA MILLEFOLI (Adams, 1817) ssp. ALZIARI Sama, 1992**

Dittrichia viscosa (L.) Aiton *(Asteraceae)* (GS) - Cyprus: several localities - Paphos, Argaka, Pyrga, III.1986 (CFS); 10.IV.1992 many adults also in pupal cells (GS); Israel: several localities, adults fly from early II. to V. (GS, E. Orbach, and Y. Dorchin leg.).

This subspecies is usually of rather large body size and is distributed in the whole of the SE. Mediterranean region. Its development occurs in *Dittrichia viscosa*, a rather big plant. The smaller nominate form, *Helladia millefolii millefolii*, occurring around the Black Sea from Bulgaria to the Caucasus, develops on smaller species of *Inula*, genus related to *Dittrichia*.

**HELLADIA PRAETEXTATA (Steven, 1817)**
*Saperda praetextata* Steven, 1817, Syn. Ins., 1-3, app. 184. Type loc.: in Tauriae graminis in valle Sudak.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant of this species. According to BENSE (1995) the development is unknown.

*Lapsana communis* L. *(Asteraceae)* (Fig. 7) - NW. Syria: Shinfah E. Latakia (1500 m), 26/29.V.1998, 1 adult (MR).

**HELLADIA PRAETEXTATA (Steven, 1817) ssp. NIGRICOLLIS (Pic, 1891)**
*Phytoecia praetextata v. nigricollis* Pic, 1891, Echange, 7(82): 102. Type loc.: Aixes.

*Lapsana communis* L. *(Asteraceae)* (Fig. 7) - S. Turkey: Namrunkale, Çamlıyayla, Sebil v., 24/26.V.1995, 11 adults (MR).

**MUSARIA ARGUS (Frölich, 1793)**
*Saperda argus* Frölich, 1793, Naturf., 27: 155. Type loc.: Austria.

According to BENSE (1995) the development occurs in herbaceous plants (Seseli varium, Seseli annuum, and Seseli tommasinii). KOVACS and HEGYESSY (1995) mention *Seseli annuum* and *Seseli varium* as the hosts (Hungary). P. Švácha *(in litteris)* gives *Seseli devenyense* as host plant (Slovak Republic).

*Seseli tommasinii* Rchb. *(Apiaceae)* (GS) - Croatia: Istria, Plomin, many adults (CPS).

**MUSARIA RUBROPUNCTATA (Goeze, 1777)**

In Italy (Piemonte, Val di Susa, Borgone, Oulx, Salbertrand) the species develops in *Trinia glauca* (STURANI, 1981). According to BENSE (1995) the development occurs in herbaceous plants (probably exclusively in *Trinia glauca*).

*Trinia glauca* (L.) Dumort. *(Apiaceae)* - NE. France: Colmar, Bollingen, 8.V.1997, 3 adults (MR); Borgone, Val di Susa, XII.76; V.79 (R. Mouriglia leg.) (GS).

**MUSARIA CEPHALOTES (Küster, 1846)**

The development occurs in *Trinia dalechampii* (BASSETTI and GUDENZI, 1986).
Trinia dalechampii (Ten.) Janchen (Apiaceae) – Italy: Umbria, M. Cucco (1500 m), ex larva (GS); Marche, M. Neronne (800-1200 m), ex larva (GS).

MUSARIA ASTARTE (Ganibauer, 1885)

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant.

Cirsium sp. (Asteraceae) – SE. Turkey: Adana, Nurdağı Geçidi (1300 m), 10.VI.1983 (GS); idem, (1150 m), 29.V.-1.VI.1995, many adults (MR).

MUSARIA ASTARTE (Ganibauer, 1885) ssp. LEDERI (Pic, 1899)
Phytocelis (Musaria) astarte v. lederi Pic, 1899, Bull. Soc. ent. Fr.: 391. Type loc.: Caucase, vallée de l'Arax (Leder).


MUSARIA ASTARTE (Ganibauer, 1885) ssp. PERRINI (Pic 1891)
Phytocelis (sp. Musaria) perrini Pic, 1892, L'Échange, 8(88): 44. Type loc.: Liban.


MUSARIA BOEBERI (Ganibauer, 1884)
Phytocelis boeberi Ganibauer, 1884, Best.Tab., 8: 125 (559). Type loc.: Türkei, Caucasus.

DANILEVSKY and MIROSHNIKOV (1985) do not mention any host plant.

Chacrophylhum aureum L. (Apiaceae) – NE. Turkey: Trabzon, 20 km S. Maçka (Sumelas), (1780 m), 40.40N 39.41E, 28.VI.1999, 4 adults (P. Kabatek leg.).
**MUSARIA PUNCTICOLLIS** (Faldernann, 1837)


According to ADELI (1972) the larvae of *Musaria puncticollis* ssp. *persica* Ganglbauer, 1884 were found in dying branches of *Quercus*. DANILEVSKY and MIROSHNIKOV (1985) mention *Eryngium* (*Apiaceae*) as host plant of this species.


This very striking species is more frequently observed in flight or walking on the ground rather than sitting on the host.

**MUSARIA WACHANRUI** (Mulsant, 1851)


*Eryngium* sp. (*Apiaceae*) (GS) – Israel: several localities, adults on the host plants from late IV. to V. (GS).

The behaviour of this species is similar to *Musaria puncticollis*.

**MUSARIA TIRELLI** (Luigioni, 1913)


The development occurs in *Crepis lacera* (BASSETTI and GUDENZI, 1986).

*Crepis lacera* (Ten.) (*Asteraceae*) – Italy: Umbria, M. Cucco (1500 m), *ex larva* (GS); idem, Marche, M. Nerone (800-1200 m), *ex larva* (GS).

**NEOMUSARIA BALCANICA** (Frivaldszky, 1835)


According to BENSE (1995) the development probably occurs in *Salvia*.


*Neomusaria balcanica* exhibits a very typical behaviour. The adult beetles use those living leaves of *Salvia* spp. which touch the ground as shelter. Only occasionally and just for a short time period they leave the shelter and fly.

**NEOMUSARIA MERKLI** (Ganglbauer, 1884)


*Salvia* spp. (*Lamiaceae*) – Turkey: found in several localities on different species of *Salvia* (GS, CPS).


*Salvia sclarea* L. (*Lamiaceae*) – SE. Turkey: Erdemli, 25.VI.1997 (M. Formánék leg.).

**NEOMUSARIA SUVOROWI** (Pic, 1906)


DANILEVSKY and MIROSHNIKOV (1985) do not give any information regarding the biology.

*Salvia* sp. (*Lamiaceae*) – E. Turkey: 10 km SE. from Tatvan, 13.VI.1997, 5 adults (MR); Buğulan Gezidi (1640 m) 40 km NW. Muş, 38.56N 41.09E, 22/23.VI.1999, 4 adults (MR); Bitlis env., Mutki vill. 5 km NW, VI.1997, 19 adults (MR).

Behaviour similar to *Neomusaria balcanica*.
Neomusaria waltli Sama, 1991


Behaviour similar to Neomusaria balcanica.

Opsilia coerulescens (Scopoli, 1763)

Leptura coerulescens Scopoli, 1763, Ent. Carn., 49: 160. Type loc.: Carniola.

DANILEVSKY and MIROSHNIKOV (1985) mention plants of the families Boraginaceae (Lithospermum, Echium, Anchusa, Lycopsis, Lappula, Cynoglossum) and Lamiaceae as hosts. According to BENSE (1995) the development occurs in herbaceous plants (Boraginaceae such as Echium, Cerinthe, Cynoglossum, Anchusa, Symphytum, Lithospermum, Lappula, and Lycopsis).

Cynoglossum creticum Miller (Boraginaceae) – Lebanon: Choûf, Jabal el Barouk: pass W. Kefraou (1700 m), 7.VI.1999, ex larva (GS).

Phytoecia (s.l.) behen Sama & Rejzek, 1999


Centaurea urvillei DC. (Asteraceae) (Fig. 8) – NE Turkey: Gemecik W. Refahiye, 2.VI.1998, 14 adults (MR).

In SAMA and REJZEK (1999) the host plant of Phytoecia behen was determined as a Centaurea species belonging probably to the group behen. Here the determination is made more accurate - Centaurea urvillei DC. (Asteraceae) (Fig. 8). The behaviour of this species has been described in SAMA and REJZEK (1999).
PHYTOCIA GENICULATA Mulsant, 1863

According to BENSE (1995) the development is unknown.


PHYTOCIA MALACHTICA Lucas, 1849

This interesting and rare species was first reported from Cynoglossum cherififolium by PEYERIMHOFF (1911), and from Anchusa sp., and Cerinthe gymnandra by VILLIERS (1946). DUFFY (1957) and VIVES (1984) give Boraginaceae such as Cerinthe, Cynoglossum, Anchusa, and Echium as the host plants. According to SAMA (1988) the larval biology is unknown, it probably occurs in herbaceous plants of the family Boraginaceae.

Cerinthe major L. (Boraginaceae) – Morocco: Azemmour (Casablanca), 4.I.1989, many larvae found in stalks of living plants, adults in pupal cells from VIII. (GS); Algeria: Djurdjura (1700 m), V.1988, adults by sweeping (GS); Tunisia: Jendouba, IV.1990, two adults on the host plant (GS).

In North Africa Cerinthe major is the preferred host plant.

**PHYTOCIA ALGERICA Desbrochers, 1870**

Artemisia sp. (Asteraceae) – Algeria: Tizi Ouzou, Ft. d'Akfadou (1000-1400 m), 8.VI.1980, about 100 specimens on leaves (GS); idem, 15.IV.1988, 2 larvae and 1 pupa in the roots (GS).

PHYTOCIA PUSTULATA (Schrank, 1776)
*Ceranbyx pustulatus* Schrank, 1776, Böfr. Naturg., 66. Type loc.: Austria.

DANILEVSKY and MIROSHNIKOV (1985) mention Anthemis, Achillea, Tanacetum, Artemisia, and "others" as host plants of this species. According to BENSE (1995) the development occurs in herbaceous plants (especially in Achillea, also in Chrysanthemum, Pyrethrum, and Tanacetum).

Artemisia sp. (Asteraceae) – Iran: Silan, along the road Astara-Ardabil (1000 m), 25.V.1999 (L. Saltini leg.) (GS).

PHYTOCIA KABATEKI Sama, 1997

Ferula homonis Boiss. (Apiaceae) (Fig. 2) – SW. Syria: Bloudan NW. Damascus, 5.VI.1997 (M. Formánek leg.); idem, 21/22.V.1998, 58 adults (MR); idem, 28/31.V.2000, 9 adults (GS).

This species was regularly observed hiding in special pockets formed by the leaf base of the host. The beetles were observed sitting on the leaves of the host only during their active time.

PHYTOCIA RUFIPES (Olivier, 1795) ssp. Latiorn Pic, 1895

In the case of the nominate *Phytoecia rufipes* (Olivier, 1795) DANILEVSKY and MIROSHNIKOV (1985) mention Foeniculum (Apiaceae) as "one of the possible host plants." According to BENSE (1995) the development of the nominate *Phytoecia rufipes* (Olivier, 1795) occurs in herbaceous plants (*Foeniculum vulgare*, probably also in *Ferula galbanifera* and other Umbelliferae (means Apiaceae, note by the authors)). *Foeniculum vulgare* is the preferred host of *Phytoecia rufipes* (Olivier, 1795) in Crete, Sicily, Spain, Portugal, etc. (CPS, GS).

BLEPISANIS MELANOCEPHALA (Fabricius, 1787)

Development according to SAMA (1988) is unknown. DUFFY (1957) reported it from Cardhus.

*Lavandula multifida* L. (*Lamiaceae*) - Morocco: Haut Atlas, Tizi n'Test (2000 m), 15.VI.1986 and 22.VI.1991, several adults on stalks; at the same time several larvae were found in the stalks (GS).

**BLEPISANIS VITTIPENNIS** (Reiche, 1877)

*Achillea* sp. (*Asteraceae*) - SE. Turkey: Adana, Hasanbeyli env., Nurdağ Geçidi (1150 m), 29.V.-1.VI.1995, 2 adults (MR); Lebanon: Zgharta, Harsh Ehden Natural Reserve (1300-1500 m) (GS); idem, Chouf, Jabal el Barouk: pass W. Kesrâa (1700 m), 4.VI.1997 (GS).

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Literature


TRICOFERUS SAMAI, A NEW SPECIES FROM TURKEY
(COLEOPTERA : CERAMBYCIDAE)

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Abstract
Trichoferus samai n. sp. from Turkey is described and compared to related species. Data on its biology is given.

Keywords
Taxonomy, biology, Cerambycidae, Trichoferus samai, new species, Turkey.

Résumé. Trichoferus samai, une nouvelle espèce de Turquie (Coleoptera : Cerambycidae).
Trichoferus samai n. sp. de Turquie est décrite puis comparée avec les espèces voisines. Les auteurs donnent aussi des informations sur sa biologie.

Mots-clés
Taxonomie, biologie, Cerambycidae, Trichoferus samai, nouvelle espèce, Turquie.

In a faunistic work REJZEK & HOSKOVEC (1999) first reported on a new Trichoferus species collected in South-East Turkey. Here, a description of this Trichoferus species is given. The newly described species Trichoferus samai n. sp. is not closely related to any other hitherto described congeners.