

**ALTICINAE OF ISRAEL AND ADJACENT AREAS:
SMALLER GENERA (COLEOPTERA: CHRYSOMELIDAE)**

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ABSTRACT

A list of 35 species in the 12 smaller genera of Alticinae from Israel and adjacent areas is given, together with synonymies, general and local distribution, food plants (formerly published and newly recorded in Israel) and local phenology/seasonality of each species. A key to adults of all 17 Israeli flea beetle genera is provided. A 'Remarks' section for each species refers to published sources for keys, genitalia figures and other pertinent information. *Blepharida arabica* Medvedev is a new synonym of *B. sacra* (Weise). There are 13 species newly recorded from Israel, 9 species newly recorded from Jordan and 2 new records from Egypt. All local food plants are basically new records for Israel and adjacent areas. This study brings the total Alticinae recorded from these areas to 139 species in 17 genera.

KEY WORDS: Chrysomelidae, Alticinae, flea beetles, Israel, food plants.

INTRODUCTION

The present work is the final part of the author's treatment of the Alticinae of Israel and serves as a checklist of those smaller genera (with Israeli species) not treated in the previous publications concerning the larger genera: *Plyllostreta* (Furth, 1979); *Longitarsus* (Furth, 1980a, b); *Altica* (Furth, 1981); *Psylliodes* (Furth, 1984); *Chaetocnema* (Furth, 1986). A preliminary (unpublished) version of this list was included at the end of the author's doctoral dissertation from Cornell University (Furth, 1976) which, although cited by authors over the intervening years, did not constitute a valid publication. The dates of publication of the six papers mentioned above are often improperly cited by other workers, since the date of the journal issue was actually different from the year of its publication (e.g. the two *Longitarsus* publications in the 1979 issue of the *Israel Journal of Entomology* were actually published in 1980; *Altica* was in the 1980 issue but published in 1981; *Psylliodes* was in the 1983 issue but published in 1984; and *Chaetocnema* in the 1985 issue but published in 1986.)

Bodenheimer (1937) listed 63 taxa (59 species and 4 variations) of Alticinae in 13 genera from Palestine (Israel and Jordan). Of these, 16 species, 3 variations and 1 combination were incorrectly recorded, because of incorrect determinations. In the above-mentioned six publications (concerning 5 genera), the author has recorded 104 species of Alticinae in Israel and adjacent areas as follows: *Plyllostreta* (23 species); *Longitarsus* (42 species); *Altica* (6 species); *Psylliodes* (20 species); *Chaetocnema*. (13 species). Out of these species, 11 were

new to science and described by Furth (1979, 1980a, 1984) and, partially using material from the author, 1 by Král (1979), 2 by Leonardi (1979) and 1 by Doguet (1984a). In the present paper 35 species recorded from 12 genera are listed. Therefore, there are 139 species of Alticinae in 17 genera from Israel and adjacent areas and, considering the small size of this region, this demonstrates a high level of biodiversity compared with other countries of different sizes, e.g. Cyprus with 60 species in 14 genera (Biondi, 1994, Gruev, 1995), Egypt with 46 species in 12 genera (Alfieri, 1976) and France with 300 species in 27 genera (Doguet, 1994). This is a large biodiversity also when compared with other insect groups from Israel such as the 140 butterfly species (Lepidoptera) (Benyamini, 1990), 112 species of Acridoidea (Orthoptera) (Fishelson, 1985), about 80 species of Trichoptera in the Levant (Botosaneanu, 1992) and 85 species of Tephritidae (Diptera) (Freidberg and Kugler, 1989).

I studied specimens from the following museum collections and was assisted by their curators (in parentheses): Naturhistorisches Museum Basel (NHMB, M. Brancucci); Museum für Naturkunde der Humboldt Universität zu Berlin (ZMHB, F. Hieke); The Natural History Museum, London (BMNH, R. Thompson, S. Shute); Field Museum of Natural History, Chicago (FMNH, H. Dybas); Museum G. Frey (MGF, G. Scherer); DGF/USNM (author's collection, deposited at the USNM); Bet Gordon (Kibbutz Deganya, A.S. Lulav); Museo Civico di Storia Naturale, Milano (MM, C. Leonardi); National Collection of Insects, Department of Zoology, Tel Aviv University (TAU, J. Kugler, A. Freidberg); University of Turku, Finland (MT, H. Hippa); National Museum of Natural History, Washington, D.C. (USNM, R. White); Museo Civico di Storia Naturale, Verona (MV, S. Ruffo, M. Daccordi).

For each species the following information is given: any pertinent synonymy; general distribution followed by the distribution within the local areas covered by this study; published food plants followed by the food plants in the areas covered in this study; adult phenology/seasonality in the areas covered in this study; and relevant remarks concerning the species.

In the present paper distribution records from the author's dissertation studies are listed as "new" if they were new at the time of that unpublished dissertation. There are no new species to science in these smaller genera; however, there are many new distribution records and all food-plant records are new for this region. A key to the Alticinae genera of Israel is provided; however, for a variety of reasons, the author has decided not to include keys to the species in these smaller genera, especially because most of them are included in the keys of previously or recently published works by other authors and are referred to in the 'Remarks' section of each species. Other appropriate information, including data from previously published papers (e.g. genitalia figures), is also given in the 'Remarks' section for each species. In the 'Food Plants' section for each species, only the genus name of previously recorded food plants is given with the appropriate reference, except for plant species which are also found in Israel and Israeli records from the author's field work.

The genera and species are arranged alphabetically in the interest of practicality. The non-alphabetical arrangements in catalogues and checklists (e.g. Heikertinger and Csiki, 1939,

1940; Seeno and Wilcox, 1982) do not reflect a true phylogeny but are based on unexplained external morphological similarities and are essentially carried over from old attempts at systems of relationships for the entire family Chrysomelidae and based on limited taxa (e.g. Chapuis, 1874; Jacoby, 1908). For each species and synonym, the author, year and page number of the description is given; this literature can be found either in Heikertinger and Csiki (1939, 1940) or in the 'References' section of this paper.

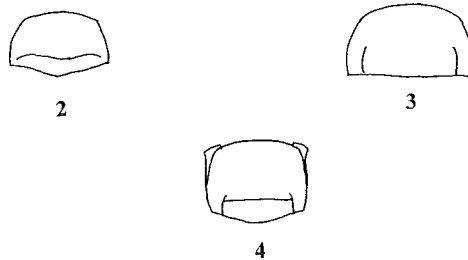
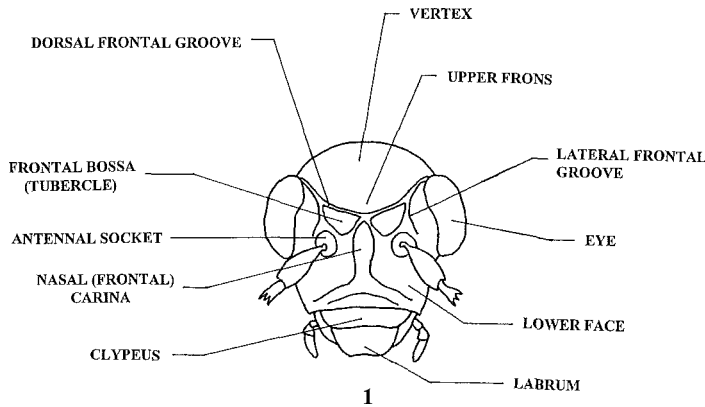
METHODS

The format generally follows the most recent of the author's above-mentioned publications (Furth, 1986). The synonymy is generally that from Heikertinger and Csiki (1939, 1940) and, unless otherwise indicated, the first use of a species name in a particular genus is from that catalogue. The general/recorded distribution is from Heikertinger and Csiki (1939, 1940), with each country set off by a semicolon, unless otherwise indicated by another reference between semicolons or the collection repository acronym. In some cases, a record of Syria in Heikertinger and Csiki (1939, 1940) actually referred to a locality now in Lebanon or Israel. In such cases, if the author was able to verify this through original literature, it is indicated in the 'Distribution' section as "Syria" (= Lebanon), "Syria" (= Israel), or "Syria" (= Lebanon, Israel). Likewise, records from parts of the Sinai Peninsula (formerly under Israeli occupation) are currently Egypt. "Israel (new), Jordan (new), Egypt (new)" is added in the 'Distribution' section when the author has recorded the species for the first time. Most specimens collected by the author are deposited at the Tel Aviv University, Department of Zoology, in the author's collection (which is part of the collection of the National Museum of Natural History, Washington, D.C.); some are deposited at the Peabody Museum of Natural History, Yale University. Distribution records reported as "new" may be followed by the acronym of the collection in which they are deposited (as listed above). The areas used for local distribution follow the geographical areas approved by the Israel Academy of Sciences and Humanities for use in the "Fauna Palaestina" series (e.g. Botosaneanu, 1992; see also Furth, 1979, 1980a). They are (north to south): ISRAEL: Mt. Hermon (highest altitude in meters); Golan Heights; Upper Galilee; Lower Galilee; Carmel Ridge; Yizre'el Valley; Samaria; Jordan Valley; Northern Coastal Plain; Central Coastal Plain; Southern Coastal Plain; Judean Foothills; Judean Mountains; Judean Desert; Dead Sea area; Arava Valley; Northern Negev; Central Negev; Southern Negev. EGYPT: Northern Sinai; Central Sinai Foothills; Sinai Mountains; Southwestern Sinai. Unless otherwise indicated, the local distribution records, phenology and the food-plant data covered in this study were mostly collected by the author during 1972–1974, 1977–1981, as well as from short visits in January 1984 and April 1989. In a few cases in the 'Food Plants' section there is an indication of allotrophy, the phenomenon of a beetle species feeding early in the season on a plant which is not its normal food plant, or of post-season aestivation, where a beetle species is regularly found in numbers on a particular plant but is apparently not truly feeding (see Furth, 1980b for detailed discussion of both concepts).

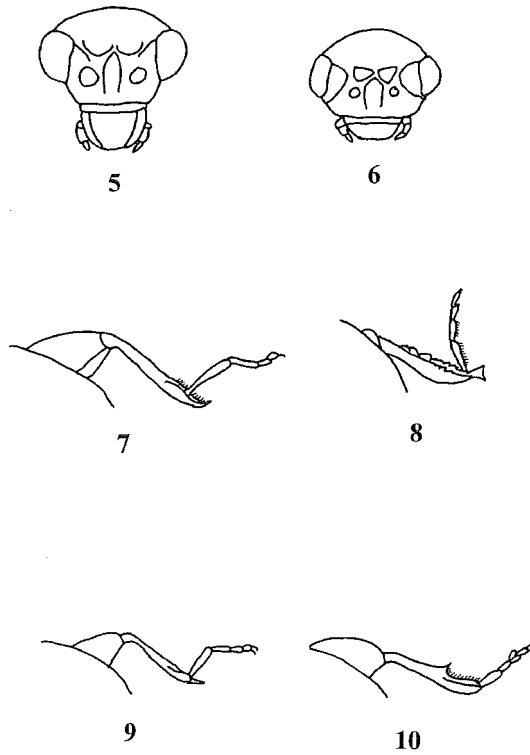
KEY TO ISRAELI GENERA OF ALTICINAE

All Israeli genera are also contained within the key to Palearctic Alticinae (Konstantinov and Vandenberg, 1996) and most of them can also be found in the key to the Alticinae of France (Doguet, 1994). Figure 1 illustrates the anterior surface of the Alticinae head with the various structures indicated. Some of these head structures have also been referred to in previous papers on Israeli Alticinae.

- 1. Antenna 10-segmented, segment 2 subequal to segment 1; metatarsus attached to metatibia subapically; first segment of metatarsus approximately half as long as metatibia (Fig. 7); elytral punctures usually distinctly striate *Psylliodes* Latreille, 1829
- Antenna 11-segmented, segment 2 usually noticeably shorter than segment 1; metatarsus attached to apex of metatibia, first segment variable in length 2



Figs. 1–4. 1. Head characters of Alticinae (*Derocrepis* sp., after Portevin, 1934). (Frons includes nasal carina, inter-antennal area, bossae, grooves and upper frons.) 2. Pronotum with transverse, prebasal impression/furrow, dorsal view (*Altica* sp., after Mohr, 1966). 3. Pronotum with basal, sublateral, longitudinal grooves/impression, dorsal view (*Mantura* sp., after Mohr, 1966). 4. Pronotum with transverse prebasal impression and sublateral longitudinal grooves, dorsal view (*Neocrepidodera* sp., after Mohr, 1966).



Figs. 5–10. 5–6. Front of head. 5. *Neocrepidodera* sp. (after Mohr, 1966). 6. *Ochrosis* sp. (after Mohr, 1966). 7–10. Hind tibia. 7. *Psylliodes* sp. (after Mohr, 1966). 8. *Dibolia* sp. (after Mohr, 1966). 9. *Longitarsus* sp. (after Mohr, 1966). 10. *Chaetocnema* sp. (after Mohr, 1966).

- 2 (1). Pronotum neither with distinctly impressed, basal, sublateral, longitudinal furrows (lines) nor with impressed, prebasal, transverse furrow, nor both 3
- Pronotum with either impressed, basal, sublateral, longitudinal furrows or impressed, prebasal, transverse furrows or both (Figs. 2–4) 10

- 3 (2). Head recessed into thorax and not (or only slightly) visible from above; metatibial spine large, broadened and forked apically (Fig. 8); antennal bases close together, nearer to each other than to the margin of eyes *Dibolia* Latreille, 1829
(A few species of *Psylliodes*, especially the *picina*-group, appear to have the head somewhat (but not completely) recessed and different metatibia)
- Head not completely recessed into thorax, normally partially visible from above; metatibia without apically broadened and forked spine; antennal bases usually not so close to each other 4

- 4 (3). First segment of metatarsus approximately equal to half the metatibial length (Fig. 9); frontal bossae usually not distinct, but when somewhat distinct, then usually long, narrow, laterally tapered and mesally forming a very oblique (obtuse) angle; their shape neither rounded, strongly triangular nor sharply angled mesally . . . 5
- First segment of metatarsus distinctly less than half the metatibial length; frontal bossae variable, if present, very distinct and rounded 6
- 5 (4). Frons without frontal bossae, but rather with a broad, somewhat shallow, depression in the center; front broad, broader than the vertex-antennal base length; disc of frons and vertex impunctate and with smooth or slightly alutaceous background surface texture; antennal segments 1–3 yellow, segment 4 distinctly darker (brown) and segments 5–11 black; antennae more than three quarters of the body length; humeral angles strong, distinct and forming a right angle, callus strong and projecting; pronotal punctation differently sized from fine to coarse, sparse and very irregular; elytral punctation medium to coarse and more or less arranged in striae; all parts of body concolorous yellow (light brown), except antennal segments 4–11, labrum, eyes and entire venter excluding prothorax dark brown *Anthobiodes* Weise, 1887
(One species, *A. angusta* (Allard); this genus is easily confused with *Longitarsus*)
- Not fitting the above combination of characters, especially antennal length, frontal depression, pronotal punctation and body coloration
. *Longitarsus* Latreille, 1829
- 6 (4). Metatibia spoon-shaped with a dorsal tooth and a densely pubescent, deep, subapical emargination or notch apicodorsally (Fig. 10); elytral punctation usually deep and distinctly striate, sometimes only distinctly so laterally 7
- Metatibia not spoon-shaped, without dorsal tooth or subapical emargination; elytral punctation not usually arranged in deep striae 8
- 7 (6). Body length 1.5–4.0 mm; usually dark metallic color (at least head and pronotum), sometimes elytra yellow with wide black suture and small lateral bands; pronotum with fine, sparse to dense punctation; eye round . . . *Chaetocnema* Stephens, 1831
- Body length 6.0–9.0 mm; elytra yellow with each stria ferrugineous or dark brown; disc of pronotum and head, antennae and legs ferrugineous to lighter brown; pronotum impunctate except usually a few sub-anterolateral coarse punctures apparently arranged in a short row (sometimes rather curved) or furrow; eye oblong
. *Blepharida* Chevrolat, 1836
(One species, *B. sacra* (Weise, 1900), on *Rhus tripartita*)
- 8 (6). Body form hemispherical and distinctly convex in cross section (coccinelli-form); pronotum two to three times wider than long; color entirely ferrugineous; body length 4.0 mm *Sphaeroderma* Stephens, 1831
(One species, *S. rubidum* (Graëlls, 1858))
- Body form oval or elongate oval, not distinctly convexed; pronotum approximately one and a half times wider than long, sometimes approaching two times wider; color not entirely ferrugineous as in *Sphaeroderma* 9

- 9 (8). Frontal bossae not at all evident, without dorsal frontal grooves; often with some larger punctures on frons and vertex; first antennal segment at least 1.5 times the distance between antennal bases; dorsum of metatibia, especially in apical half, somewhat raised or at least rounded off; apical spine of metatibia inserted in middle of apex; body length 1.5–3.2 mm *Phyllotreta* Chevrolat, 1836
- Frontal bossae usually very distinct and noticeably rounded (especially mesally) or subtriangular, often forming a subacute angle mesally; disc of frons and vertex apparently impunctate or very finely punctate; first antennal segment approximately equal to or only slightly longer than the distance between antennal bases; metatibia with dorsum of apical half with a flat groove; metatibial apical spine inserted on outer angle; body length 1.5–4.0 mm *Aphthona* Chevrolat, 1836
- 10 (2). Pronotum with transverse impressed line or furrow in its basal quarter (especially evident sublaterally) and without longitudinal grooves (Fig. 2) 11
- Pronotum without any trace of transverse line or furrow in basal quarter, but with short, sublateral, longitudinal grooves (Fig. 3) 16
(A few large *Chaetocnema* subgenus *Tlanoma* may key here because of very short, shallow, basal, longitudinal, sublateral impressions)
- 11 (10). Elytral punctation fine, shallow, confused; procoxal cavities open; pronotum with basal/prebasal impressions variable 12
- Elytral punctation usually deep and arranged in distinct striae, procoxal cavities variable; pronotum with both distinct transverse furrow and basal, sublateral, longitudinal grooves (Fig. 4) 13
- 12 (11). Pronotal transverse furrow as a distinct line, fading out gradually at sides (Fig. 2); frontal bossae large and distinctly delimited above; color entirely metallic blue, green or copper; feeds on *Epilobium hirsutum*, *Rubus sanguineus* or *Glycyrrhiza glabra*; body length 3.5–6.0 mm *Altica* Geoffroy, 1762
- Pronotal transverse furrow somewhat vague but ending sublaterally at longitudinal grooves which extend from base (Fig. 4); frontal bossae small, vague, not well delimited; color entirely yellow to light brown (sometimes with dark brown sutural stripe); feeds on species of *Chrozophora*; body length 2.0–2.5 mm
. *Hermaeophaga* Foudras, 1859
(One species, *H. (Orthocrepis) ruficollis* (Lucas, 1849))
- 13 (11). Elytra pubescent or with fine hairs; body small and very oval in shape; on Solanaceae; body length 1.2–1.8 mm *Epitrix* Foudras, 1859
- Elytra not pubescent; body often larger and elongate 14
- 14 (13). Frontal bossae with impressed groove (sometimes faint) above, flat and triangular in form (Fig. 6); vertex with distinctly shagreened surface and many punctures; elytra yellow to light brown; head and pronotum somewhat darker brown; body length 1.8–2.4 mm *Ochrosia* Foudras, 1860
(One species, *O. ventralis* (Illiger, 1807))
- Frontal bossae without distinctly impressed groove above, even though bossae are distinctly apparent, rounded and somewhat raised (Fig. 5); vertex smooth and mostly impunctate; body color entirely ferrugineous 15

- 15 (14). Each antennal segment narrow, approximately twice as long as wide; elytral striae with punctures unevenly lined up or with two or three punctures in each stria (not one puncture directly behind another); body length 4.0–5.5 mm
 *Neocrepidodera* Heikertinger, 1911
 (= *Asiolestia* Jacobson, 1925 *sensu* Konstantinov and Vandenberg, 1996)
 (= *Crepidodera auctororum nec* Chevrolat)
 (One species, *N. impressa* (Fabricius, 1801))
- Each antennal segment short, segments 2–4 globular, remaining segments only a little longer than broad; elytral striae normal with each puncture directly behind the other; body length 1.5–2.0 mm *Orestia* Chevrolat, 1836
- 16 (10). Body form elongate oval with elytra broadly rounded apically; pronotum basally narrower than elytra and not laterally compressed; elytral punctuation arranged in rather indistinct, confused striae; mesal-most row of elytral punctures, near scutellum, ending in anterior third of elytra; head entirely visible from above; color of elytra metallic blue, head and pronotum as in elytra or orange; body length 3.0–6.0 mm *Podagrira* Chevrolat, 1836
- Body form cylindrical; elytra parallel sided and somewhat tapered apically; pronotum base as broad as or broader than elytral base and strongly compressed laterally; elytral striae very distinct with row nearest scutellum extending almost over entire elytral length; head not completely visible from above; elytral color metallic brown, black or with yellow median stripe (sutural), head and pronotum dark colored; body length 2.0–2.5 mm *Mantura* Stephens, 1831

LIST OF SPECIES

Anthobiodes angusta (Allard, 1876)

Thyamis angusta Allard, 1876:24.

Anthobiodes simoni Weise, 1887:402.

DISTRIBUTION. Syria (= Israel, Haifa, Carmel).

LOCAL DISTRIBUTION. Carmel Ridge; Northern Coastal Plain; Upper Galilee; Lower Galilee.

FOOD PLANTS. *Pistacia lentiscus* L. (Anacardiaceae).

PHENOLOGY. 24 March–9 May.

REMARKS. This species is morphologically similar to species of *Longitarsus* Latreille because of the long first metatarsal segment. However, it can be distinguished from *Longitarsus* species by: a broad, shallow, median depression in the vertex; antennal segments 4–5 to 11 dark colored and antennae long (three quarters the body length); elytra distinctly flattened and stria-punctate, apical margin as well as apex of disc with sparse pubescence; vertex broad (eyes small) with large interocular distance (at least twice the ocular diameter); frontal bossae (antennal calli) absent; the metafemoral spring shape (Furth, 1980c; fig. 8); all body parts concolorous yellow, except apex of antennae, labrum and entire venter black. There are only two other species in the

genus, the dark-colored *A. heydeni* (Allard, 1870) from Spain and a black *A. turcica* Medvedev from Turkey, originally described by Medvedev (1975) as *Wittmeriana*, but synonymized by Konstantinov and Vandenberg (1996), who include a habitus figure of *A. angusta*.

Aphthona bonvouloiri Allard, 1861

Aphthona bonvouloiri Allard, 1861:333.

Aphthona sicelidis Weise (1888):892 (in Heikertinger, 1944 as a subspecies).

Aphthona tauricola Pic, 1910:26.

DISTRIBUTION. Central Italy (Biondi, 1990); Southern Italy, including Sicily; Bulgaria (Gruev, 1988); Greece (including Rhodes); Turkey; Syria; Lebanon; Israel; Jordan (new, MV); Egypt.

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Jordan Valley (BMNH); Carmel Ridge; Southern Coastal Plain.

FOOD PLANTS. Euphorbiaceae: *Euphorbia* (Heikertinger, 1944). Found in Israel at one locality regularly on Papilionaceae: *Dorycnium rectum* (L.), but not laboratory-tested for feeding.

PHENOLOGY. 20 January–27 May; 7–26 October.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Doguet (1994) has further information, including descriptions, key and genitalia figures.

Aphthona euphorbiae (Schrank, 1781)

Chrysomela euphorbiae Schrank, 1781:83.

Aphthona hilaris Allard, 1859:389, 399.

Aphthona virescens Foudras, 1860:101, 119.

Aphthona punctigera Mulsant and Rey, 1874:252.

DISTRIBUTION. Western Europe from Scandinavia to Spain; Balkans (Mohr, 1965); Turkey (BMNH); former USSR (Southern Russia, Crimea, Siberia) and Kazakhstan (Lopatin, 1984); Cyprus (MGF); Syria; Lebanon (MGF); Israel (MGF); Jordan (new, MV); Libya; Malta (BMNH); Morocco.

LOCAL DISTRIBUTION. Mt. Hermon (2000 m); Golan Heights; Upper Galilee; Lower Galilee; Carmel Ridge; Central Coastal Plain; Southern Coastal Plain; Jordan Valley; Judean Hills.

FOOD PLANTS. Euphorbiaceae: *Euphorbia usitatissimum* L. (Heikertinger, 1944); Linaceae: *Linum* (Mohr, 1966). Found in Israel on *Linum* sp. as well as post-season on Fagaceae: *Quercus* sp.

PHENOLOGY. All months.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Leonardi (1976) has spermathecae figures. Mohr (1966) has key and aedeagus figure. Doguet (1994) has further information, including descriptions, key and genitalia figures.

Aphthona flaviceps Allard, 1859

Aphthona flaviceps Allard, 1859:100.

Aphthona pallida Boieldieu, 1859:478.

Aphthona straminea Foudras, 1860:101, 107.

Aphthona flavipes Allard, 1866:221.

DISTRIBUTION. Southern Europe (north to Middle France, east to Eastern Europe and Balkans); former USSR (Southern Russia, Crimea, Kazakhstan, Turkestan, Turcmenistan, Uzbekistan, etc.) (Heikertinger, 1944; Lopatin, 1984); Afghanistan (Lopatin, 1963); Northern Iran (Warchalowski, 1973); Iraq; Turkey; Cyprus (Georghiou, 1977); Syria; Israel; Egypt (new); Jordan (new, MV); Western Mediterranean islands; Algeria; Tunisia (Heikertinger, 1944).

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Judean Hills; Northern Sinai (USNM).

FOOD PLANTS. Euphorbiaceae: *Euphorbia* (Heikertinger, 1944; Rapilly, 1978); Linaceae: *Linum* (Heikertinger, 1944).

PHENOLOGY. 18 March; 24–25 May (USNM); 2 June; 29 July; 3–12 September.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. See Mohr (1962) for comparison to *A. jordanica* and aedeagus figure. See Lopatin (1984) for a key and aedeagus figure. See Doguet (1984b) for spermatheca figure. Biondi (1993) has a key to some related species and figures of aedeagus and spermatheca. Doguet (1994) has further information, including descriptions, key and genitalia figures.

Aphthona franzi Heikertinger, 1944

Aphthona franzi Heikertinger, 1944:52.

DISTRIBUTION. Central Italy (Biondi, 1993); Austria; Romania; former Yugoslavia; Bulgaria (Gruev, 1970); Turkey; former USSR (Southern Russia); Syria; Israel.

LOCAL DISTRIBUTION. Mt. Hermon (1600 m); Upper Galilee; Carmel Ridge; Central Coastal Plain.

FOOD PLANTS. Unknown. Found in Israel post-season on Fagaceae: *Quercus* spp.

PHENOLOGY. 19 May–18 November.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Mohr (1966) has an aedeagus figure and key. Biondi (1993) has a key to some related species and figures of aedeagus and spermatheca.

Aphthona fuentei Reitter, 1901

Aphthona fuentei Reitter, 1901:202.

DISTRIBUTION. Spain; Italy; Greece; Turkey; Iran (Lopatin, 1990); Israel (new); Egypt; Sudan; Ethiopia, Chad, Guinea, Nigeria, Zaire, Burundi, Morocco (Jolivet, 1967).

LOCAL DISTRIBUTION. Upper Galilee; Jordan Valley.

FOOD PLANTS. Unknown.

PHENOLOGY. 15–17 June.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Biondi (1993) has a key to some related species and figures of aedeagus and spermatheca.

Aphthona gracilis Falderman, 1837

Aphthona gracilis Falderman, 1837:344.

Aphthona picipes Weise, 1888:894, nota 1.

Aphthona testaceicornis Weise, 1894:152 (in Heikertinger, 1944 as a species).

Aphthona flavofemorata Heikertinger, 1911:(8).

DISTRIBUTION. Former USSR (Southern Russia, Crimea, Kazakhstan); Romania (Lopatin, 1984); Iran; Iraq; Israel (new).

LOCAL DISTRIBUTION. Carmel Ridge (ZMHB).

FOOD PLANTS. Unknown.

PHENOLOGY. Unknown.

REMARKS. Aedeagus form similar to *A. armeniaca* Weise (Heikertinger, 1944) and Lopatin (1984) has figures of both.

Aphthona jordanica Mohr, 1962

Aphthona jordanica Mohr, 1962:316.

Aphthona flaviceps Allard, 1859:100 (? part).

DISTRIBUTION. Jordan (Mohr, 1962); Israel (new).

LOCAL DISTRIBUTION. Upper Galilee; Jordan Valley.

FOOD PLANTS. Unknown.

PHENOLOGY. 21 February; 13 July; 4 July (Mohr, 1962).

REMARKS. See Mohr (1962) for description and aedeagus figure.

Aphthona kuntzei Roubal, 1931

Aphthona kuntzei Roubal, 1931:116.

DISTRIBUTION. Balkans; Crete and Cyprus (Heikertinger, 1944); former USSR (Ukraine); Turkey (Gruev, 1995); Syria; Lebanon; Israel; Jordan (new, MV).

LOCAL DISTRIBUTION. Mt. Hermon (2000 m); Golan Heights; Upper Galilee; Lower Galilee; Carmel Ridge; Samaria; Jordan Valley; Judean Hills.

FOOD PLANTS. In Israel on Euphorbiaceae: *Euphorbia hierosolymitana* Boiss., *Euphorbia* sp. and post-season on Fagaceae: *Quercus* sp.; Platanaceae: *Platanus orientalis* L.

PHENOLOGY. 21 February; 25 April–31 October; 15 December.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure.

Aphthona lutescens (Gyllenhal, 1808)

Haltica lutescens Gyllenhal, 1808:546.

Aphthona praeclara Weise, 1906:434.

DISTRIBUTION. Western Europe, north to Scandinavia and England, south to Southern France, Sardinia, Italy (including Sicily), east to Balkans (Mohr, 1965); Madeira; former USSR (Southern Russia, Kazakhstan, Western Siberia) and Caucasus, Turkestan (Berti and Rapilly, 1973); Mongolia (Medvedev, 1982); Iran (Berti and Rapilly, 1973); Turkey; Cyprus; Israel (new).

LOCAL DISTRIBUTION. Upper Galilee; Central Coastal Plain.

FOOD PLANTS. Lythraceae: *Lythrum salicaria* L. (Heikertinger, 1944); *Lythrum* (Berti and Rapilly, 1973). Found in Israel on *Lythrum salicaria*.

PHENOLOGY. 20 April–17 June; 24 August; 20 October.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Mohr (1966) has an aedeagus figure and key. Lopatin (1984) has a key and aedeagus figure. Doguet (1994) has further information, including descriptions, key and genitalia figures.

Aphthona maculata Allard, 1876

Aphthona maculata Allard, 1876:23.

Aphthona suturella Weise, 1888:890, nota 1.

Aphthona pallida maculata Allard, 1876 (Heikertinger and Csiki, 1940:86).

DISTRIBUTION. Greece (including Rhodes) (Heikertinger, 1944); Cyprus (Biondi, 1994); Turkey; former USSR (Southern Russia, Tadjikistan, Kazakhstan) (see also Lopatin, 1984); Iran (Rapilly, 1978); Iraq; "Syria" (= Lebanon, Israel) (Heikertinger, 1944); Jordan (new, MV).

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Carmel Ridge; Samaria; Central Coastal Plain; Southern Coastal Plain.

FOOD PLANTS. Unknown. Found in Israel twice in numbers on Geraniaceae: *Erodium* sp. (possibly allotrophy) as well as at several localities sweeping citrus orchards, possible post-season aestivation.

PHENOLOGY. 16 November–17 June.

REMARKS. Aedeagus form similar to *pallida* Bach (Heikertinger, 1944). Lopatin (1984) has key and aedeagus figure.

Aphthona microcephala Weise, 1888

Aphthona microcephala Weise, 1888:896, nota 1.

DISTRIBUTION. "Syria" (= Israel).

LOCAL DISTRIBUTION. Carmel Ridge; Judean Hills (Heikertinger, 1944).

FOOD PLANTS. Unknown.

PHENOLOGY. 15 January (BMNH)–20 January; 12 February (MGF); 27 March (TAU).

REMARKS. See Heikertinger (1944) for description and key.

Aphthona pygmaea Kutschera, 1861

Aphthona pygmaea Kutschera, 1861:246.

Aphthona euphorbiae Foudras (not Schrank, 1781), 1860:101, 115.

Aphthona nigella Kutschera, 1861:247.

Aphthona orientalis Mulsant and Rey, 1874:253.

DISTRIBUTION. Mediterranean and Middle Europe, north to Southern Scandinavia and England, all coastal Adriatic countries (Heikertinger, 1944); Bulgaria (Gruev, 1988); Turkey; former USSR (Southern Russia, Crimea) (Heikertinger, 1944); Cyprus (Biondi, 1994); Syria; Israel (new); Jordan (new, MV); Libya.

LOCAL DISTRIBUTION. Mt. Hermon (2000 m); Golan Heights; Upper Galilee; Lower Galilee; Carmel Ridge; Jordan Valley; Samaria; Northern Coastal Plain; Central Coastal Plain; Southern Coastal Plain; Judean Hills; Judean Desert.

FOOD PLANTS. Euphorbiaceae: *Euphorbia* (Heikertinger, 1944). Found in Israel on *Euphorbia cybirensis* Boiss.; *E. helioscopia* L.; *Euphorbia* sp. Also found on Geraniaceae: *Erodium gruinum* (L.) (possible allotrophy), and post-season on Fagaceae: *Quercus* sp., Anacardiaceae: *Pistacia lentiscus*, Papilionaceae: *Dorycnium rectum*.

PHENOLOGY. 20 January–27 June; 7 October–15 December.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Mohr (1966) has key and aedeagus figure. Leonardi (1976) has spermathecae figures. Doguet (1994) has further information, including descriptions, key and genitalia figures. Döberl (1994) has aedeagus and spermatheca figures.

Aphthona semicyanea Allard, 1859

Aphthona semicyanea Allard, 1859:101.

Aphthona tenebrosa Ogloblin, 1927:294, 297.

Aphthona viridula Allard, 1866:491.

Aphthona melanopeza Jacobson, 1901:143.

Aphthona picipes Weise, 1892:208.

Aphthona heptapotamica Ogloblin, 1921:34.

Aphthona sundmani Jacobson, 1901:143.

Aphthona phrygia Weise, 1902:204.

DISTRIBUTION. Southern Europe, west to Southern France, east to Hungary and Balkans; Turkey; former USSR (Southern Russia, Kazakhstan to Siberia); Eastern China, Mongolia, Korea, Japan (Warchalowski, 1974); Syria; Israel (new); Morocco.

LOCAL DISTRIBUTION. Mt. Hermon (1900 m); Upper Galilee; Judean Hills.

FOOD PLANTS. Iridaceae: *Iris* (Heikertinger, 1944).

PHENOLOGY. 20 May–27 June.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure. Mohr (1966) has key and aedeagus figure. Doguet (1984b) has genitalia figures. Doguet (1994) has further information, including descriptions, key and genitalia figures.

Aphthona syriaca Heikertinger, 1944

Aphthona syriaca Heikertinger, 1944:93.

DISTRIBUTION. Turkey; Iraq; Syria; Israel (new) (Heikertinger, 1944).

LOCAL DISTRIBUTION. Carmel Ridge (MGF).

FOOD PLANTS. Unknown.

PHENOLOGY. No data.

REMARKS. See Heikertinger (1944) for description, key and aedeagus figure.

Asiolestia Jacobson (see *Neocrepidodera* Heikertinger)

Blepharida sacra (Weise, 1897)

Podontia sacra Weise, 1897:81.

Blepharida arabica Medvedev, 1996:254, **n. syn.**

DISTRIBUTION. "Syria" (= Israel); Sudan (Scherer, 1972); Egypt (Gebel Elba) (new, USNM); Saudi Arabia (Medvedev, 1996, NHMB).

LOCAL DISTRIBUTION. Judean Desert; Samaria. Probably in Jordan along the Jordan Valley opposite Jericho.

FOOD PLANTS. *Rhus tripartita* (Bernard. da Ucria) Grande (Anacardiaceae).

PHENOLOGY. May–July and September–October (for details see Furth, 1982).

REMARKS. The details of the life cycle and biology of this species (Sacred Sumac Flea Beetle) have been discussed by Furth (1982), including egg parasites (Hymenoptera: Eulophidae: *Tetrastichus* sp.) and larval parasites (Diptera: Tachinidae: *Meigenia mutabilis* Fallén). The population differences (i.e. relictual and refugium) of the beetle as well as of the food plant have been discussed in Furth (1985). The Gebel Elba record mentioned above is another relictual population of this species on the African continent, like the one in Sudan. Food preference testing has also been performed with its sibling species, especially *B. marginalis* Weise, from

Eastern Africa (Furth and Young, 1988). The type series in the Zoologisches Museum der Humboldt Universität (Berlin) consists of specimens labeled from both Jerusalem and Jericho. This is consistent with the type locality being from Wadi Qilt (Kelt), in the Judean Desert, which was the ancient (Roman) route between these two cities. Weise's type series (Berlin) is labeled as "sancta" but was published under the name of "sacra". There is a habitus figure of this species in Konstantinov and Vandenberg (1996). Examination of the single female holotype specimen (MNHB) of *B. arabica* Medvedev (1996) from Fayfa, Saudi Arabia, revealed that it is synonymous with *B. sacra*. This single specimen of *B. arabica* is only somewhat larger than most *B. sacra* examined; however, dissection of the ovipositor revealed identical morphology of the tignum and vaginal palpi (*sensu* Konstantinov and Vandenberg, 1996); the spermatheca is also identical. It is also identical in the elytral and pronotal pattern and all other external morphological aspects. Therefore, I consider *B. arabica* to be a synonym of *B. sacra*.

***Dibolia carpathica* Weise, 1893**

Dibolia carpathica Weise, 1893:1030.

DISTRIBUTION. Former USSR (southeastern Kazakhstan); Hungary (Lopatin, 1984); Israel (new).

LOCAL DISTRIBUTION. Mt. Hermon (1800 m).

FOOD PLANTS. In Israel on Lamiaceae: *Nepeta glomerata* Montb. and Auch.

PHENOLOGY. 26 April–2 August.

REMARKS. This species is probably within the range of variation of *D. carpathica* Weise, but varies slightly from the typical forms from former USSR localities. In the Israeli populations the vertex of the head is more coarsely and densely punctured obscuring any large, single ocular/setal puncture, and the apex of the spermatheca is shorter. For key and description see Lopatin (1984).

***Dibolia chevrolati* Allard, 1861**

Dibolia chevrolati Allard, 1861:338.

DISTRIBUTION. Italy–Sicily (Biondi, 1988); Greece (Rhodes) (Gruev, 1990); former USSR (Southern Russia); Syria; Israel; Egypt; Tunisia; Algeria.

LOCAL DISTRIBUTION. Carmel Ridge (MGF and Mohr, 1981).

FOOD PLANTS. Umbelliferae: *Eryngium* (Doguet, 1975).

PHENOLOGY. No data.

REMARKS. See Mohr (1981) for description, key and figures, including genitalia. Doguet (1975) has key and figures, including genitalia.

***Dibolia depressiuscula* Letzner, 1845**

Dibolia depressiuscula Letzner, 1845:83

Dibolia laevicollis Foudras, 1860:194, 201.

Dibolia marrubii Hering, 1924:36.

DISTRIBUTION. Middle and Eastern Europe, north to Southern Scandinavia, south to Italy; former Yugoslavia; Greece (Gruev, 1990); Hungary, Bulgaria, Turkey, former USSR (Southern Russia, Caucasus) and Turkestan (Gruev, 1990), Kazakhstan (Lopatin, 1984); Jordan (Mohr, 1981); Israel (recorded in Palestine by Bodenheimer, 1937, possibly by error).

LOCAL DISTRIBUTION. Mt. Hermon (1750 m); Upper Galilee; Lower Galilee; Samaria; Central Coastal Plain.

FOOD PLANTS. Lamiaceae: *Ballota nigra* L., *Eremostachys*, *Marrubium vulgare* L., *Stachys* and Scrophulariaceae: *Veronica* — larvae are leaf miners (Mohr, 1966; Doguet, 1994). Found in Israel on Lamiaceae: *Eremostachys* sp.; *Phlomis brevilabris* Ehrenb.; *P. brachydon* (Boiss.); *P. chrysophylla* Boiss.; *Prasium majus* L.; *Stachys cretica* L.; *S. distans* Benth.; *Stachys* sp.

PHENOLOGY. 8 January–31 May.

REMARKS. See Mohr (1981) for description, key and figures, including genitalia. Key and aedeagus figure in Lopatin (1984). Doguet (1994) has further information, including descriptions, key and genitalia figures.

***Dibolia phoenicia* Allard, 1866**

Dibolia phoenicia Allard, 1866:250, 256.

Dibolia orientalis Weise, 1893:1033 (*sensu* Mohr, 1981:451)

Dibolia cyanescens Weise, 1893:1033.

DISTRIBUTION. Eastern Europe; Southern Russia (Konstantinov, 1987); Balkans; Hungary, Turkey, Lebanon, Jordan (Mohr, 1981); "Syria" (= Lebanon); Israel (new).

LOCAL DISTRIBUTION. Mt. Hermon (1500 m); Golan Heights; Carmel Ridge; Samaria; Judean Foothills; Judean Hills (MM); Central Coastal Plain; Southern Coastal Plain.

FOOD PLANTS. In Israel on Lamiaceae: *Phlomis chrysophylla* Boiss.; Umbelliferae: *Eryngium creticum* Lam.

PHENOLOGY. 28 December–21 May.

REMARKS. See Mohr (1981) for description, key and figures, including genitalia.

***Dibolia rufofemorata* Reitter, 1896**

Dibolia rufofemorata Reitter, 1896:267.

Dibolia notatipes Pic, 1903:124.

Dibolia marginicollis Abeille, 1907:80 (Mohr, 1981:410).

DISTRIBUTION. Turkey; Cyprus (Biondi, 1994); Jordan (Mohr, 1981); Syria (questionable whether this includes Israel or Lebanon); Israel (Mohr, 1981).

LOCAL DISTRIBUTION. Carmel Ridge; Jordan Valley; Samaria (Mohr, 1981); Judean Hills (BMNH); Central Coastal Plain (MGF); Judean Desert; Northern Negev.

FOOD PLANTS. In Israel on Lamiaceae: *Salvia verbenaca* L.; *S. samuelsonii* Rech.; *Salvia* sp.

PHENOLOGY. 2 January–22 February; 1–27 April.

REMARKS. See Mohr (1981) for description, key and figures, including genitalia.

***Epitrix abeillei* (Bauduer, 1874)**

Crepidodera abeillei Bauduer, 1874:163.

Crepidodera judaea Allard, 1876:21.

Epithrix testaceipes Pic, 1909:226.

DISTRIBUTION. Romania; former USSR (Southern Russia to Kazakhstan); Afghanistan (Lopatin, 1963); Iran (Warchalowski, 1967); Iraq; Turkey (Král, 1967); Syria; Lebanon; Jordan; Israel; Egypt.

LOCAL DISTRIBUTION. Dead Sea area (MT); Sinai Mountains (DGF/USNM, USNM, MGF, FMNH).

FOOD PLANTS. Unknown.

PHENOLOGY. 5 March–31 May; 13–16 July; 5 November.

REMARKS. Not included in any keys; see Mohr (1968) for aedeagus figure.

***Epitrix dieckmanni* Mohr, 1968**

Epitrix dieckmanni Mohr, 1968:58.

DISTRIBUTION. Iran (Warchalowski, 1967); Jordan (Mohr, 1968); Israel (new); Saudi Arabia (Doguet, 1979).

LOCAL DISTRIBUTION. Mt. Hermon (800 m); Golan Heights; Upper Galilee; Jordan Valley; Southern Coastal Plain; Judean Foothills; Judean Desert; Northern Negev; Arava Valley (TAU).

FOOD PLANTS. In Israel on Solanaceae: *Hyoscyamus aureus* L.

PHENOLOGY. 16 January–2 February; 25 April–31 May; 2 August; 11 October–16 November (in Jordan, MV: 17 April–3 August, 17 October).

REMARKS. See Mohr (1968) for description and figure of aedeagus.

***Epitrix pubescens* (Koch, 1803)**

Haltica pubescens Koch, 1803:37.

Epithrix ferruginea Weise, 1886:710.

DISTRIBUTION. Western Europe (including England, Scandinavia) to Balkans; former USSR

(Crimea, Southern Russia, Kazakhstan, Western Siberia); Turkey; Cyprus (Biondi, 1994); Israel (new).

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Jordan Valley; Samaria; Judean Foothills; Northern Coastal Plain; Central Coastal Plain; Southern Coastal Plain.

FOOD PLANTS. Solanaceae: *Solanum dulcamara* L.; *S. nigrum* L.; *Lycium*; *Hyoscyamus* (Mohr, 1966). In Israel on Solanaceae: *Solanum luteum* Mill.; *S. ? nigrum*.

PHENOLOGY. 17 February; 25 April–20 June; 12 September–2 December.

REMARKS. For keys see Mohr (1966), Lopatin (1984), Doguet (1994). Aedeagus figures in Lopatin (1984) and Doguet (1994). Spermatheca figure in Doguet (1994).

Epitrix sp.

LOCAL DISTRIBUTION. Arava Valley (DGF/USNM).

FOOD PLANTS. Unknown.

PHENOLOGY. Unknown.

REMARKS. This is possibly an undescribed species. It is most similar to *dieckmanni*; however, its aedeagus and spermatheca differ greatly, the subbasal transverse impression on the pronotum is deeper, pronotal and elytral punctures coarser/deeper, dorsal frontal (supra antennal) sutures not as evidently impressed.

Hermæophaga (Orthocrepis) ruficollis (Lucas, 1849)

Haltica ruficollis Lucas, 1849:546.

Hermæophaga suturalis Brancsik, 1899:105.

DISTRIBUTION. Mediterranean Europe, including islands, east to Balkans; Turkey; former USSR (Turkmenistan, Kazakhstan) and Uzbekistan, Tadzhikistan (Lopatin, 1984); Afghanistan (Lopatin, 1963); Iran (Warchalowski, 1974); Iraq; Cyprus; Syria; Lebanon; Israel; Jordan (new, MV); Saudi Arabia, Yemen (Doguet, 1994); North Africa (Egypt to Morocco); Sudan, Chad, Nigeria, Guinea, Senegal, Mauritania (Scherer, 1972); India, Sri Lanka (Doguet, 1994).

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Lower Galilee; Jordan Valley; Northern Coastal Plain; Samaria; Yizre'el Valley; Central Coastal Plain; Southern Coastal Plain; Judean Foothills; Judean Hills (MT); Judean Desert; Dead Sea Area; Northern Negev; Central Negev.

FOOD PLANTS. Euphorbiaceae: *Chrozophora tinctoria* (L.); *C. plicata* (L.); *Andrachne rotundifolia* Mey. (Warchalowski, 1974); *Ricinus communis* L. (Doguet, 1994).

PHENOLOGY. Throughout the year, especially in summer months.

REMARKS. May often be mistakenly recorded on cotton because its food plant grows in cotton fields. Doguet (1994) has further information, including descriptions, key and genitalia figures. Konstantinov and Vandenberg (1996) has a habitus figure of this species.

Mantura judaea Heikertinger, 1951

Mantura judaea Heikertinger, 1951:22.

DISTRIBUTION. Israel (Heikertinger, 1951).

LOCAL DISTRIBUTION. Mt. Hermon (800 m); Golan Heights; Upper Galilee; Judean Hills (Heikertinger, 1951).

FOOD PLANTS. Unknown.

PHENOLOGY. 16 October–31 January; 27 April.

REMARKS. See Heikertinger (1951) for detailed descriptions and keys.

Mantura suturata Fairmaire, 1873

Mantura suturata Fairmaire, 1873:359.

Balanomorpha limbata Allard, 1876:24.

Mantura burlinii Codina-Padilla, 1961:51 (Biondi, 1979:61).

DISTRIBUTION. Israel; North Africa (Egypt to Morocco).

LOCAL DISTRIBUTION. Jordan Valley; Judean Hills (MGF, Heikertinger, 1951).

FOOD PLANTS. Unknown.

PHENOLOGY. 19 March.

REMARKS. See Biondi (1979) for synonymy, discussion and figures of related *Mantura*.

Neocrepidodera impressa (Fabricius, 1801)

Galeruca impressa Fabricius, 1801:496.

Crepidodera punctulata Allard, 1859:100.

Crepidodera impressa (Fabricius, 1801) (Heikertinger and Csiki, 1939:288).

Asiolestia impressa variety *obtusangula* J. Daniel, 1904:249 (Eastern Mediterranean).

Asiolestia impressa subspecies *peregrina* Harold, 1875:185 (northwestern Africa).

Generic Synonymy: *Asiolestia* Jacobson, 1925 = *Crepidodera* Chevrolat, 1837 (Bechyné, 1956:581). *Neocrepidodera* Heikertinger, 1910:34 = *Asiolestia* Jacobson, 1925:274 (synonymized by Konstantinov and Vandenberg (1996)).

DISTRIBUTION. Mediterranean Europe (including islands), north to Southern England, east to Balkans; Sweden (Silfverberg, 1992); Turkey; Cyprus; Syria; Lebanon; Israel (new); Morocco to Tunisia.

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Jordan Valley; Samaria.

FOOD PLANTS. Asteraceae: *Carduus*, *Cirsium* (Heikertinger, 1948); Plumbaginaceae: *Statice limonium* L. (Biondi, 1982).

PHENOLOGY. 27 April–6 May; 11–12 November (Bet Gordon).

REMARKS. The infra specific categories (*obtusangula* and *peregrina*) are not considered valid; therefore, they are lumped within the species *impressa*. See Biondi (1982) for aedeagus figure and other information. Doguet (1994) has further information, including descriptions, key and genitalia figures.

***Ochrosis ventralis* (Illiger, 1807)**

Haltica ventralis Illiger, 1807:58.

DISTRIBUTION. Middle and Southern Europe; Balkans; former USSR (Southern Russia); Turkey; Iran; Cyprus (DGF/USNM); Syria; Lebanon; Israel; North Africa (Egypt to Morocco); Canary and Madeira Islands.

LOCAL DISTRIBUTION. Mt. Hermon (2000 m); Golan Heights; Upper Galilee; Carmel Ridge.

FOOD PLANTS. Solanaceae: *Solanum dulcamara* L., Anacardiaceae: *Pistacia lentiscus* L., Primulaceae: *Anagallis arvensis* L. (Mohr, 1966); Betulaceae: *Carpinus betulus* L. (Heikertinger, 1925). In Israel post-season on Fagaceae: *Quercus* sp.

PHENOLOGY. 14 May–9 December.

REMARKS. Many geographical variations are known: the variety from the Eastern Mediterranean is known as *O. ventralis krueperi* Weise (1886). Mohr (1966) has a habitus figure. Doguet (1994) has further information, including descriptions, key and genitalia figures. Konstantinov and Vandenberg (1996) has a habitus figure of this species.

***Orestia bruleriei* Allard, 1876**

Orestia bruleriei Allard, 1876:23.

Orestia brevis Pic, 1909:226.

DISTRIBUTION. "Syria" (= Israel), Lebanon (Heikertinger, 1924); Jordan (new, MV).

LOCAL DISTRIBUTION. Upper Galilee; Lower Galilee; Carmel Ridge; Jordan Valley.

FOOD PLANTS. In Israel on Boraginaceae: *Symphytum palaestinum* Boiss.; Lamiaceae: *Salvia hierosolymitana* Boiss.; *Melissa officinalis* L. and post-season on Fagaceae: *Quercus* sp.

PHENOLOGY. 21 February–18 June; 26–31 October; 2 December.

REMARKS. See also Heikertinger (1924, 1950) for description and key.

***Orestia delagrangei* Pic, 1909**

Orestia parallela var. *delagrangei* Pic, 1909:155.

Orestia parallela Allard, 1876:22.

DISTRIBUTION. Syria; Lebanon, Jordan (Leonardi, 1977); Israel (new).

LOCAL DISTRIBUTION. Upper Galilee.

FOOD PLANTS. In Israel on Lamiaceae: *Eremostachys laciniata* (L.)

PHENOLOGY. 5 April.

REMARKS. Heikertinger (1910, 1924) synonymized this with *O. parallela* Allard, 1876, from Syria; however, Leonardi (1977) recognized *O. parallela* (from Turkey) as a valid species and *delagrangei* as a valid species. Leonardi (1977) has a habitus photo, aedeagus figures, descriptions and key.

***Podagrica fuscicornis* (Linnaeus, 1766)**

Chrysomela fuscicornis Linnaeus, 1766:595.

Altica rufipes Laicharting, 1781:199.

Haltica chrysomelina Waltl, 1835:83.

Podagrica meridionalis Weise, 1886:685.

DISTRIBUTION. All Western Europe, including islands, north to Scandinavia, east to Balkans; Turkey; former USSR (Crimea, Southern Russia); Syria; Lebanon; Israel; Tunisia to Morocco; Madeira Island (see also Heikertinger, 1951).

LOCAL DISTRIBUTION. Golan Heights; Upper Galilee; Carmel Ridge; Jordan Valley; Judean Hills.

FOOD PLANTS. Malvaceae: *Alcea*, *Althaea*, *Lavatera*, *Malope*, *Malva* (Heikertinger, 1951; Mohr, 1966; Doguet, 1994); *Kitaibelia* (Jolivet, 1967). In Israel on *Malva nicaeensis* All.; *Alcea* sp.

PHENOLOGY. 15 April–31 May.

REMARKS. The name *chrysomelina* (Waltl) is often used as a subspecies or variety name because of its larger body size. It is the southern form found in circum-Mediterranean countries, including Israel, but it is only a variety. Doguet (1994) has further information, including descriptions, key and genitalia figures.

***Podagrica malvae* (Illiger, 1807)**

Haltica malvae Illiger, 1807:63, 159.

DISTRIBUTION. All Western Europe (except northern part); east to Balkans (Mohr, 1965); Turkey; former USSR (Southern Russia); Iran (Warchalowski, 1974); Iraq; Cyprus; Syria; Lebanon; Israel; Jordan (new, MV); Tunisia to Morocco.

LOCAL DISTRIBUTION. Mt. Hermon (1750 m); Golan Heights; Upper Galilee; Lower Galilee; Carmel Ridge; Jordan Valley; Yizre'el Valley; Samaria; Northern Coastal Plain; Central Coastal Plain; Southern Coastal Plain; Judean Foothills; Judean Hills; Judean Desert; Dead Sea area; Northern Negev.

FOOD PLANTS. Malvaceae: *Alcea*, *Althaea*, *Hibiscus*, *Lavatera*, *Malope*, *Malva* (Mohr, 1966; Doguet, 1994); *Lavatera* (Jolivet, 1967); recorded on many other plants, but probably by error, i.e. not truly feeding (see Doguet, 1994). In Israel on *Alcea* sp.; *Althaea* sp.; *Lavatera cretica* L.; *L. punctata* All.; *Malva neglecta* Wallr.; *M. nicaeensis*; *Malva* sp. Probably allotrophy on Asteraceae: *Centaurea* sp. and *Chrysanthemum* sp.

PHENOLOGY. 16 November–27 June.

REMARKS. There are many aberrations and varieties of this species. There seem to be all intergrades among the varieties in Israel. The major varieties or aberrations known in Israel are (all originally described as species or varieties of *Podagrica*): var. *saracena* Reiche, 1858; ab. *nigricans* Demaison, 1903; ab. (var.) *cyanella* Reiche, 1858; var. *tristicula* Allard, 1860. *P. semirufa* (Küster, 1847), originally described as *Crepidodera*, is a subspecies of *P. malvae* and it has been recorded (MT) from Jerusalem (= Judean Hills), Jaffa (= Southern Coastal Plain), as well as Lebanon.

Sphaeroderma rubidum (Graëlls, 1858)

Argopus rubidum Graëlls, 1858:97.

Sphaeroderma nitidum Portevin, 1934:308.

Chrysomela testaceum ? Goeze, 1777:314.

Sphaeroderma ocularium Allard, 1859:415.

DISTRIBUTION. Western Europe, north to Scandinavia, Mediterranean Europe, including islands, east to Balkans; Israel; Algeria; Morocco; Madeira (Biondi, 1991).

LOCAL DISTRIBUTION. Central Coastal Plain; Southern Coastal Plain.

FOOD PLANTS. Asteraceae: *Centaurea*, *Cirsium*, *Carduus*, *Onoropordum*, *Carthamus*, *Arctium*, *Cynara* — larvae are leaf miners (Heikertinger, 1926; Doguet, 1994). In Israel on *Centaurea proccurens* Sieb.; *Cynara* sp.

PHENOLOGY. 3 April–7 May; 1 October–9 December.

REMARKS. Because of the similarity to *S. testaceum* Weise, the latter species was recorded in Israel (Palestine) by Bodenheimer (1937); however, to my knowledge, only *S. rubidum* exists in Israel. Mohr (1966) has a key and figures, including aedeagus. Biondi (1979) has a key and figures of aedeagus and spermatheca.

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