

Sitonini (Curculionidae: Entiminae) of Israel

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ABSTRACT

The weevil tribe Sitonini was surveyed in Israel. A total of 23 species in four genera are recorded. Five species of *Sitona*: *S. brucki* Allard, 1870, *S. demoflysi* Normand, 1949, *S. fairmaieri* Allard, 1869, *S. lepidus* Gyllenhal, 1834, *S. puncticollis* Stephens, 183 and *Schelopius planifrons* Fähræus, 1840 are recorded for Israel for the first time. *Sitona aliciae* Velázquez de Castro n. sp. and *S. wahrmani* Velázquez de Castro and Friedman n. sp. are described. The genitalia of new and less-known species are figured for the first time: for *S. brucki* (spermatheca, spiculum ventrale), *S. syriacus* Stierlin, 1884 (aedeagus), *S. fairmaieri* (hamuli of internal sac) and *S. demoflysi*, (spermatheca, spiculum ventrale, sclerites of internal sac). Data on the distribution and host plants of the species and determination keys are provided.

Key words: Sitonini, *Charagmus*, *Coelositona*, *Schelopius*, *Sitona*, Israel, new species, identification key, taxonomy, zoogeography.

INTRODUCTION

Sitonini is a tribe within the broad-nosed weevils (Entiminae), widely distributed in the Palaearctic and Nearctic regions and in parts of the Palaetropic region (South Africa, Madagascar, south-east Asia). Sitonini are originally absent from South America, Australasia and tropical Africa, but a few pest species of *Sitona* are introduced into these regions and are spread there recently. The tribe Sitonini is distributed in a wide range of ecosystems, mainly mesophilic and xerophilic, and usually possess large populations. The Palaearctic fauna of Sitonini comprises six genera, of which *Andrion* and *Schelopius* include one species each, *Velazquezia* comprises three species, *Charagmus* comprises six species, *Coelositona* comprises ten species, and *Sitona* includes around 100 species. The most characteristic morphological features of the Sitonini tribe are: mandibles covered by scales, deciduous appendages of mandibles modified and united to mandible or absent, and therefore mandible is lacking the typical scar on its dorsal surface, present in all other Entiminae weevils; maxillae with galea and lacinia broadly separated by the stipes, prementum narrow towards distal border; the eighth female sternite in Sitonini has a short spiculum ventrale, while in most Entiminae the spiculum ventrale is much longer. However, four species of *Charagmus* have an exceptionally flat and long spiculum ventrale.

All Sitonini are associated with leguminous plants (Fabaceae, Mimosaceae) both in adult and immature stages. Larvae feed on roots and root nodules; adults feed on green parts of plant, mainly on the same host plant as the larvae. Many species are considered severe agricultural pests of cultivated pulses. Therefore, this group of species is considerably well studied, both in the taxonomic and bio-ecologic aspects, particularly in Europe and North America.

The damage is caused both by adults and larvae. Adults are particularly harmful at the time of germination, injuring young shoots and causing their degradation and death. Adults feeding on adult plants make U-form notches on the leaves and in the case of heigh infestation

cause strong to total defoliation of adult plants (Schegolev, 1941, Wiech and Clements, 1992). Larvae devour roots, causing open sores, and particularly consume the contents of nitrogen root nodules, causing strong reduction of the content of the nitrogen in roots, which leads to the decrease of the yield to 12-14% (Schegolev, 1941).

The weevil fauna of Israel is generally still not sufficiently studied (Friedman, 2009), although *Sitonini* are studied better than most other groups of weevils, due to their agricultural importance. Thirteen species of *Sitonini* were recorded so far from Israel: nine by Bodenheimer (1937) three additional by Melamed-Madjar (1966b) and one by Velázquez de Castro *et al.* 2010. The ecology, phenology and host preferences of the pest species in Israel were studied and reported by Melamed-Madjar (1966a, b), Plaut (1960a, b, 1961, 1973, 1976), Peled (2007) and Rivnay (1962).

The present study was inspired by a request for identification of the *Sitona* pests in legume fields in 'Emeq Yizre'el (the Jesreel Valley) by Dr. David Ben-Yakir and Mr. Lior Peled, the Volcany Center, Bet Dagan, and Ms. Dganit Sade, the 'Emeq Yizre'el Research and Development Center. The project soon expanded beyond fields of legumes. The examination of the material deposited in the National Collection of Insects, Tel Aviv University (TAUI), the collection of Plant Protection and Inspection Services, Ministry of Agriculture (PPIS), including the materials used by F. S. Bodenheimer and V. Melamed-Madjar for their publications on *Sitona* of Israel (Bodenheimer, 1937; Melamed-Madjar, 1966a, b), together with the newly-accumulated material, showed that the previous publications were largely influenced by the agricultural orientation of the research. Some of determinations were found erroneous. The material new and old was studied carefully; as a result the number of species recorded from Israel increased nearly twice.

MATERIALS AND METHODS

Following are the other institutions and private collections (listed by acronym) holding the rest of the studied material:

CBOR Private collection of Roman Borovec, Czech Republic;

CKOS Private collection of M. Košťál, Czech Republic;

CORB Private collection of Eylon Orbach, Qiryat Tiv'on, Israel;

COSL Collection of G. Osella, Italy;

CPEL Private collection of Jean J. Pelletier, France;

CVC Private collection of Antonio Velázquez de Castro, Valencia, Spain;

DEI Deutsches Entomologisches Institut, Münchenberg, Germany;

MNCN Museo Nacional de Ciencias Naturales, Madrid, Spain.

MNHN Museum National d'Histoire Naturelle, Paris, France;

PPIS Collection of Plant Protection and Inspection Services, Ministry of Agriculture, Bet Dagan, Israel;

TMA Természettudományi Múzeum Állatara, Budapest.

TAUI National Collection of Insects, National Museum of Natural History, Department of Zoology, Tel Aviv University, Tel Aviv, Israel.

ZIN Zoological Institute of the Russian Academy of Sciences, St. Petersburg.

The body length was measured in profile from the front margin of the eye to the elytral apex.

Nomenclature of structures of internal sac follows Velázquez de Castro *et al.* (2007).

Biological data are from Velázquez de Castro *et al.* (2007), except those for Israel from Melamed-Madjar (1966a, b).

Transliterated names of localities in Israel are according to the “Israel Touring Map” (1:250,000) and “List of Settlements”, published by the Israel Survey, Ministry of Labour. Where names of localities have changed, the most recent transliterated Hebrew names are given together with the old names cited in brackets, for example: ‘En Hemed [Aquabella]. Erroneous spellings are also included in brackets following the corrected spelling.

Nomenclature of the plants follows Feinbrun-Dothan and Danin (1991).

Regional subdivision of Israel follows Theodor (1975).

Identification key to genera of tribe Sitonini in Israel

1. Stout, bulky weevils, body length 8.5-9.5 mm; apex of rostrum abrupt in dorsal view; dorsal surface of rostrum flat, laterally limited by thick longitudinal carina, scrobes angulate; pronotum and elytra without distinct longitudinal stripes**Schelopius**
 only one species, *S. planifrons* (Figs. 26, 49, 74)
- Body usually oblong, body length 2.6-8.0 mm, only in *Ch. gressorius* and *C. limosus* may be longer, but they are easily recognized by the characters in the key; apex of rostrum incised in dorsal view, dorsal surface of rostrum variable, laterally not limited by thick carina, scrobes variable.....2
2. Scutellum with upstanding scales, which are divided into two bunches or tufts, each radiating laterally (Fig.1); odd elytral interstices raised (this character is obsolete to invisible in *S. gressorius*); scrobes weakly curved (Figs. 27-29); body length 4.5-9.5 mm
**Charagmus**
- Scutellum with recumbent scales, all elytral interstices frequently flat; size and scrobes variable3
3. Rostrum with two dorsal longitudinal keels (Figs. 7-9) and linear or slightly curved scrobes (Figs. 30-32); eyes protruding (Figs. 30-32); pronotum strongly contracted anteriorly and posteriorly (Figs. 7-9); fore coxae reaching the prosternal line (Fig. 2); body length 4.5-10.0 mm..... **Coelositona**
- Rostrum without distinct dorsal keels, with angulated scrobes (Figs. 33-48); rest of characters variable; body length usually 2.8-5.0 mm, only *S. demoflysi* and *S. lepidus* can reach 6.5-7.0 mm **Sitona**

Genus *Charagmus* Schoenherr, 1826

Identification key to genus *Charagmus*

1. Pronotum dark-grey with narrow median longitudinal bright-white strip, 0.12-0.16 times as wide as pronotum, comprised of white semiopalescent scales; elytral interstices, hardly raised, at most at base of elytra; elytra evenly colored, elytral pubescence comprised of delicate pale round scales, thin pale semierect setae present mostly on odd interstices and/or on apex of elytra (Figs. 4, 27, 75); body length 8-10 mm
**gressorius**
- Pronotum with wide median longitudinal pale strip, 0.6-0.8 times as wide as pronotum; odd interstices distinctly raised, elytra unevenly colored, elytral pubescence different; 6-8 mm2
2. Pronotum as long as wide, laterally slightly convex, apex of rostrum with longitudinal keel (Figs. 5, 28, 76); elytral pubescence comprised of delicate round white and yellow

scales and appressed setae: thick black setae on 3rd interstice and narrow white setae over elytra; coloration of elytra: 1st-2nd interstices pale gray, 3rd interstice black, at least partly, 4th interstice yellow, at least medially, lateral interstices gray (Fig. 76); interstices without row of erect setae; 8th sternite of female with short spiculum ventrale; body length 6-8 mm..... *intermedius*

- Pronotum 0.8 times as long as wide, laterally distinctly convex, apex of rostrum without longitudinal keel (Figs. 6, 29, 77); elytral pubescence comprised of coarse pale yellow-whitish round scales and thick erect white and brown setae; coloration of elytra: 1st-2nd interstice yellowish, other interstices brownish, occasionally with dark and pale patches (Fig. 77); all interstices but particularly 3rd, 5th and 7th with longitudinal row of dense erect scales; 8th sternite of female with long spiculum ventrale; body length 6,5-8 mm *stierlini*

***Charagmus gressorius* (Fabricius, 1792)**

(Figs. 1, 4, 27, 75)

Material examined

ISRAEL: [Palestine], F. S. Bodenheimer (1♂; TAUI); **Hermon:** Har Hermon [Mt. Hermon], 1600 m, 20.vi.1979, D. Furth (1♂; TAUI); **Golan Heights:** Majdal Shams 16.vi.1999 L. Friedman (1♀; TAUI); **Upper Galilee:** Margaliyot, 20.vi.1961, Katzenelson (1♂; TAUI); Ziv'on, recent woodland, 773 m, 33°02'N 35°25'E, 4.vi.2005, A. Timm & T. Assmann, pitfall (1♂; TAUI); **Lower Galilee:** Tur'an Peak, 555 m, 32°47.8'N 35°22.5'E, 18.iv.2010, A. Freidberg (1♀; TAUI); **Northern Coastal Plain:** Hadera [Chederah], 10.i.1927, F. S. Bodenheimer (1♂, 1♀; PPIS), 27.i.1927, F. S. Bodenheimer (1♀; PPIS); **Samaria:** Zur Natan, xi., Y. Yefenov (1♀; TAUI); **Central Coastal Plain:** Avihayil [Avichail], 8.iii.1939, A. Shulov (1♂, 1♀; TAUI); Even Yehuda, 25.iii.1935, Hall (1♂; TAUI); Ra'anana, 18.xi.1940, H. Bytinski-Salz (1♀; TAUI), 25.iii.1948, H. Bytinski-Salz (1♀; TAUI); Herzliyya, 18.xii.2000, A. Freidberg & L. Friedman (1♂; TAUI); Herzliyya Hill, 32°11'N 34°49'E, 21.iii.2009, A. Friedberg (1♂; TAUI); Petah Tiqwa [Petach Tikwah], 18.iv.1929, F. S. Bodenheimer, on Citrus (1♀; PPIS); Park haYarqon, 10.ii.2009, A. Nir, on *Lupinus* (1♀; TAUI); **Southern Coastal Plain:** Bet Dagan, 12.xii.1957, on *Trifolium* (1♀; PPIS), 29.iii.1959, on *Trifolium* (1♂; TAUI); Palmahim [Rubin], iii-iv, I. Aharoni (1♂; TAUI); Nes Ziyona [Sarafand], on apples, R. Gabrielith, S. D. (E) 89 (1♂, 5♀; PPIS); Ramle, 1.i.1921, I. Aharoni (1♀; TAUI); Rehovot, ii-iii, I. Aharoni (1♀; TAUI), [Rechoboth], 8.v.1927, F. S. Bodenheimer (1♀; PPIS).

Distribution

Euromediterranean, Middle Asia (Dieckmann, 1980), Macaronesia (Machado & Oromí, 2000, Borges *et al.*, 2005). Recorded from Israel by Bodenheimer (1937), Melamed-Madjar (1966b) and Gaedike (1971).

Host Plants

Genisteae (*Cytisus*, *Genista*, *Lupinus*), Loteae (*Ornithopus*). In Israel: collected on *Trifolium* spp., observed in Park haYarqon in Ramat Gan feeding on *Lupinus* (A. Nir, pers. com.)

***Charagmus intermedius* (Küster, 1847)**

(Figs. 5, 28, 76)

Material examined

ISRAEL: **Hermon:** Har Hermon, 1800 m, 25.vi.1998, V. Chikatunov (1♀; TAUI); 1700 m, 7.v.2009, L. Friedman, on *Astragalus* (1♂; TAUI); 1600 m, 33°18.1'N 35°46.2'E, 20.vii.2009, L. Friedman, on *Astragalus* (1♀; TAUI); **Upper Galilee:** 'Akko [Ako], 9.v.1957, E. Rivnay, on alfalfa (1♂; PPIS); 'En Zetim, 15.v.1996 (1♀; TAUI); **Northern Coastal Plain:** Ma'agan Mikha'el, 4.v.1998, A. Freidberg (1♀; TAUI); Hadera, 28.iv.1979, D. Furth (1♂; TAUI); **Southern Coastal Plain:** Holon, dunes, 1992, L. Friedman (1♀; TAUI); Bet Dagan, 32°0'N 34°50'E, 10.v.2009, W. Kuslitzky; **Judean Hills:** Yerushalayim [Jerusalem], 7.ii.1957 (1♂; TAUI).

Distribution

Euromediterranean (Dieckmann, 1980). Recorded from Israel by Melamed-Madjar (1966b) and Dieckmann (1980).

Host Plants

Genisteae (*Cytisus*), Loteae (*Hippocrepis*). In Israel: *Medicago sativa* (Melamed-Madjar, 1966b), found on *Astragalus* sp. on Mount Hermon.

Charagmus stierlini (Reitter, 1903)

(Figs. 6, 29, 77)

Material examined

ISRAEL: 28.ii.1931, I. Aharoni (1♂; TAUI); [Palestine], A. Shulov (1♂; TAUI); **Upper Galilee:** Hurfeish, batha, 675 m, 33°01'N 35°21'E, 12.xii.2005, A. Timm & T. Assmann, pitfall (1♀; TAUI); Regba, 17.vi.1954, H. Bytinski-Salz, on *Pisum* (1♂; 1♀; PPIS); **Lower Galilee:** Nazeret [Nazareth], 30.ix.1982, Q. Argaman (1♀; TAUI); **Carmel Ridge:** Haifa [Syrien, Kaifa], E. Reitter, 1♂; 3♀; TAUI); Hefa, 22.v.2001, Y. Ptashkovsky (1♀; TAUI); Zikhron Ya'aqov [Siehron], 14.xii.1927, F. S. Bodenheimer (1♀; PPIS); **Samaria:** Zur Natan, 26.viii.1981, Q. Argaman (1♂, 1♀; TAUI); **Northern Coastal Plain:** Qishon Harbour, 13.vii.1956, J. Wahrman (2♂, 1♀; TAUI), 14.vii.1956, J. Wahrman (1♂; TAUI); 'Atlit [Atlith], 22-27.viii.1935, A. Rabinovich (1♀; TAUI); Qesarya, 23.iv.1998, L. Friedman (1♂, 1♀; TAUI); Binyamina [Benjamina], coast dunes, 16.xi.1940, H. Bytinski-Salz (1♀; TAUI); Giv'at Olga, 22.vi.1981, Q. Argaman (1♀; TAUI); Pardes Hanna [Pardess Channa], 2.vi.1946, H. Bytinski-Salz (1♂; TAUI); Pardes Hanna, 30.vi.1961, on *Eucalyptus*, J. Halperin (4♀; TAUI), 3.v.1997, R. Hoffman (1♀; TAUI); Hadera [Chederah R?], 20.vi.1951, F. S. Bodenheimer (1♀; PPIS); Hadera, 28.iv.1979, D. Furth (1♂, 1♀; TAUI), 24.ii.1997, R. Hoffman (1♂; TAUI), 3.v.1997, R. Hoffman (1♀; TAUI); **Central Coastal Plain:** Nahal Alexander, 8.ii.1997, R. Hoffman (1♀; TAUI), 15.iii.1997, R. Hoffman (2♀; TAUI); Netanya (Nataniah), 19.iii.1949, H. Bytinski-Salz (1♀; TAUI); Netanya, 1.iii.1997, R. Hoffman (1♀; TAUI), 2.v.1997, R. Hoffman (1♂; 2♀; TAUI), 9.vi.1997, R. Hoffman (1♂; TAUI); Ilanot, Sharon, coastal Plain, 13.vii.1967, on *Populus*, J. Halperin (1♀; TAUI); Ilanot, 24.iv.1981, Q. Argaman (1♀; TAUI); Ra'anana, 16.iv.1941, H. Bytinski-Salz (1♀; TAUI), 25.iii.1948, H. Bytinski-Salz (1♂; TAUI); Herzliyya, 18.xii.2000, A. Freidberg & L. Friedman (1♂, 2♀; TAUI); Herzliyya, hill, 32°11'N 34°49'E, 1.xii.2007, A. Freidberg (1♂; TAUI), 15.ii.2008, A. Freidberg, on *Senecio vernalis* (1♀; TAUI); Hod haSharon, Ramatayim [Ramataim], 4.vi.1939, F. S. Bodenheimer, on citrus (2♀; TAUI; 1♀; PPIS); Petah Tiqwa [Petach Tikwah], 8.v.1949 (1♂; PPIS); Tel Aviv beach 1.vi.1983, A. Freidberg (1♂; TAUI); Tel Aviv, 20.v.1940, H. Bytinski-Salz (1♀; TAUI), iii.2000, G. Passi (1♀; TAUI); Tel Aviv, Abu Kabir, 12.i.1958, L. Fishelsohn (1♀; TAUI); **Southern Coastal Plain:** Miqwe Yisrael [Mikve Israel, Palestine], F. S. Bodenheimer (1♂ CVC), Miqwe Yisrael, 8.v.1941, H. Bytinski-Salz (1♀; TAUI), 27.iv.-2.v.2006, M. Vonshak (1♂, 2♀; TAUI); Bat Yam, 24.iii.1944, H. Bytinski-Salz (1♂; TAUI); Holon Sand Dunes, nr, slaughters' house, 24.iv.2010, O. Rittner, on light trap (1♂, 1♀; TAUI); Bet Dagan [Bet Dagon], 11.iv.1957, on alfalfa (1♂; PPIS); Bet

Dagan, 12.xii.1958, on *Medicago* (2♀; PPIS), 16.i.1959, E. Rivnay, on *Beta vulgaris* (1♀; PPIS), 17.xii.1959, on *Medicago* (1♂; PPIS); Rishon leZiyon, 20.ii.1981, D. Furth (1♀; TAUI), 23.iii.2006, W. Kuslitzky (1♀; TAUI); Rehovot, 3.v.1932, I. Aharoni (1♂; 3♀; TAUI), [Rechoboth], 1924, F. S. Bodenheimer, on *Citrus* (1♀; PPIS), 25.4.1989, on *Ononis* sp., J. Halperin (1♀; TAUI); Ashdod, 16.ix.1980, on timber, J. Halperin (1♀; TAUI); 28.vi.1997, R. Hoffman (1♂; TAUI); Nizzanim, 9.vi.1999, V. Chikatunov (1♂; TAUI); 22.ii.2007, A. Freidberg (1♂; TAUI), 23.iv.2007, a. Freidberg (1♀; TAUI); Nizzanim Reserve, 21.iv.2008, A. Freidberg (1♀; TAUI); Bitronot Ruḥama, 31°31.883'N 34°42.275'E, 5.iv.2005, L. Friedman (1♀; TAUI).

SYRIA: Lectotypus and paralectotypus, coll. Reitter (TMA).

Distribution

Spain, Morocco, Algeria (Velázquez de Castro 2004, 2009), Greece, Syria, Lebanon (Gaedike, 1971), Turkey, Cyprus (Lodos, 1978). Recorded from Israel by Bodenheimer (1937), Melamed-Madjar (1966b) and Gaedike (1971, Tel-Aviv, Haifa).

Host Plants

In Israel: collected on *Medicago sativa*, *Ononis* spp., *Pisum* spp.

Genus *Coelositona* González, 1971

Identification key to genus *Coelositona*

1. Dorsal surface covered only with setae: sparse long erect setae and dense shorter appressed setae (Figs. 32, 80); body length 5.0-6.5 mm **villosus**
- Dorsal surface covered with scales, without long erect setae, with or without small appressed setae. 2
2. Vertex without tufts of yellow or white hairs, pronotum without spots or pattern very diffuse (Figs. 7, 30); elytra rounded and widening at apical half (Fig. 78); body length 5.0-10.0 mm..... **limosus**
- Vertex with two tufts of yellow or white hairs, pronotum with two dorsal rows of four clear spots, comprised of white scales (Figs. 8, 31); elytra parallel laterally (Fig. 79); body length 4.5-7 mm..... **ocellatus**

Coelositona limosus (Rossi, 1792)

(Figs. 7, 30, 78)

Material examined

ISRAEL: **Golan Heights:** Merom Golan, 17.iv.1973, D. Furth (1♂, 1♀; TAUI), 12.vi.2000, V. Chikatunov (1♂, 3♀; TAUI); Yehudiya Forest Nature Reserve [Qusbiye], 18.iii.1973, M. Kaplan (1♂; TAUI), 22.ii.1978, D. Furth (1♂; 1♀; TAUI); **Upper Galilee:** Nahal 'Iyyon, 10.iii.1982, Y. Nussbaum (1♂; TAUI); 'Iyyon Nature Reserve, 1.v.2006, L. Friedman (1♀; TAUI); Amir, 20.xii.1945, H. Bytinsky-Salz (4♀; TAUI); **Lower Galilee:** Bet Alfa 23.xii.2001 D. Ben-Yaqir, on *Vicia* sp. (2♂, 3♀; 1♂ CVC), 10.i.2002, D. Ben-Yaqir, on *Vicia* sp. (1♂, 4♀; TAUI), 25.i.2002, D. Ben-Yaqir, on *Pisum sativum* (1♂, 5♀; TAUI); Kokhav haYarden [Belvoir], 22.ii.1979, D. Furth (1♂; TAUI), 16-30.i.2002, V. Kravchenko (4♂, 3♀; TAUI), 10.ii.2002, V. Kravchenko (1♂, 2♀; TAUI); **Northern Coastal Plain:** Haifa Bay, 'Ir-Ganim, 2.iii.2001, E. Orbach (2♂; CORB); Qiryat Harošet, 14.ii.2000, T.

Orbach (1♂; ORB); Dor, Haifa province, 5.iv.1995, E. Colonnelli (1 ex.; CVC); **Jordan Valley:** 'En Gev [Ein Gev], 8.i.1978, D. Furth (1♂; TAUI); Gesher, 20.ii.1974, D. Furth (1♂, 1♀; TAUI); Hawat Shemuel (near Newe Ur, Rt. 90), 16.iii.1973, D. Furth (1♀; TAUI); Bet She'an, 20.ii.1974, D. Furth (1♂; TAUI); **Yizre'el Valley:** Yizre'el Valley, 21.ii.2001, Q. Argaman, on *Vicia* sp. (1♂, 15♀; TAUI), i-ii.2003, L. Peled (10♂, 11♀; TAUI); Sha'ar ha'Amaqim [Schaar Emek], 2.iii.1948, H. Bytinsky-Salz (1♀; TAUI); Merhavva, 23.xii.2001, D. Ben-Yaqir, on *Vicia* sp. (3♀; TAUI), 24.xii.2001, D. Ben-Yaqir, on *Pisum sativum* (3♂, 3♀; TAUI), 8.i.2003, L. Peled (2♂, 7♀; TAUI), 19.i.2003, L. Peled (9♂, 15♀; TAUI), 2.ii.2003, L. Peled (2♂, 4♀; TAUI); 'En Harod, 9.i.2003, L. Peled (1♂; TAUI), 19.i.2003, L. Peled (9♂, 11♀; TAUI), 2.ii.2003, L. Peled (6♂, 7♀; TAUI); Rt. 71, S Tel Yosef, gas station, 27.xii.2008, M. Vonshak, aggregation in WC (5♀; TAUI); **Central Coastal Plain:** Nahal Poleg [Wadi Falik], 20.i.1970, M. Kaplan (1♀; TAUI); Tel Aviv, Ramat Aviv, 9.iii.2001, V. Chikatunov (2♂; TAUI); **Southern Coastal Plain:** Bet Dagan, 19.x.2003, E. Kozodoy (1♀; TAUI); Rehovot, 23.ii.2007, W. Kuslitzky (1♀; TAUI); Sharsheret, 2.iii.1973, D. Furth (1♀; TAUI); Gat, 27.ii.19??, H. Bytinsky-Salz (1♀; TAUI); **Samaria:** Kokhav Ya'ir, Ya'ar Sappir, 160 m, 32°13.9'N 34°59.5'E, 16.ii.2010, L. Friedman (1♀; TAUI); **Foothills of Judea:** Kefar Victoria forest, S. El'ad, 28.ii.2001, H. Ackerman (1♀; TAUI); Ben Shemen, 22.ii.1924, on *Vicia faba* (1♀; TAUI); 'En Hemed [Aqua Bella], 11.i.1952, J. Wahrman (1♀; TAUI); **Northern Negev:** N. Negev, Hazerim, iv.1995, E. Orbach (1♀; CORB).

Distribution

Mediterranean (Hoffmann, 1950). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966b).

Host Plants

Vicieae (*Vicia*, *Pisum*). This species is probably the most severe *Sitona* pest in Israel, particularly damaging vetch (*Vicia faba*, *V. narbonnensis*, *V. sativa*, *V. villosa*), but also feeding on *Pisum* spp. and *Trifolium* spp. (Plaut, 1961, 1973, 1976; Peled, 2007; Rivnay, 1962).

Coelositona ocellatus (Küster, 1849)

(Figs. 8, 31, 79)

Material Examined

ISRAEL: **Northern Coastal Plain:** Ma'agan Mikha'el, 4.v.1998, A. Freidberg (1♀; TAUI); **Central Coastal Plain:** Antipatris, 11.ii.1984, Q. Argaman (1♀; TAUI); **Southern Coastal Plain:** Gat, 2-3.v.19??, H. Bytinski-Salz (1♀; TAUI); **Northern Negev:** Nahal Besor, 25.xii.2007, O. Rittner (1♀; TAUI); Deqel, 19.x.2005, G. Wizen (2♂, 1♀; TAUI); Haluza, 29.iii.1971, Y. Yefenov (1♂; TAUI); Ze'elim, 15.v.1987, Y. Zvik (1♂, 1♀; TAUI); Hazerim, 10.v.1991, E. Orbach (1♂; CORB); Be'er Sheva area, road 40- [Nakhal Shakhar] Nahal Sekher, 300 m, 28.iii.1995, E. Colonnelli (2 ex.; CVC); Bor Mashash, 14.iv.2003, L. Friedman (1♀; TAUI); Negev, Ramat Beq'a, 300m, 28.iii.1995, E. Colonnelli (2 ex.; CVC); Retamim, 12.vi.2002, V. Kravchenko, light trap (6♂, 4♀; TAUI), 1.viii.2002, V. Kravchenko, V. Chikatunov, light trap (1♂, 1♀; TAUI), 28.xi.2002, V. Kravchenko, V. Chikatunov, light trap (1♂, 2♀; TAUI), 5.vi.2003, V. Kravchenko, V. Chikatunov, light trap (3♂, 2♀; TAUI); N. Negev, Retamim, Fenix, 5.v.2002, V. Kravchenko, V. Chikatunov, light trap (2♂, 2♀; TAUI); Revivim, 2.viii.1958, J. Krystal (1♂, 1♀; TAUI), 2.viii. ?1958, H. Bytinski-Salz (5♂, 20♀; TAUI), 10.v.1961, on sugar beet (2♀; PPIS); **Central Negev:** Hazaz, v.2003, E. Groner (1♂; TAUI); Haluqim Ridge, W. Sede Boqer, 30.i.2007, L. Friedman (1♂; TAUI); Sede Boqer, Nahal haRoa, 4.xii.2007, G. Wizen (1♀; TAUI); Sede Boqer, 23.iv.1973 D. Furth (1♂; TAUI); 'En 'Avedat, 5.vi.2003, V. Kravchenko, V. Chikatunov, light trap (1♂, 2♀; TAUI); 'Avedat, 15.xi.2003, V. Kravchenko, V. Chikatunov, light trap (1♀; TAUI); 'Ezuz,

28.xi.2002, V. Kravchenko, V. Chikatunov, light trap (4♀; TAUI), 15.iii.2003, V. Kravchenko, V. Chikatunov, light trap (4♂, 2♀; TAUI), 5.vi.2003, V. Kravchenko, V. Chikatunov, light trap (4♀; TAUI); Yeroham, 4.iv.1957, J. Wahrman (12♂, 8♀; TAUI); **Arava Valley: Hazeva**, 20.iv.2001, I. Yarom & V. Kravchenko, light trap (4♂, 9♀; TAUI; 1♀; CVC); Hazeva Field School, 30°43'N 35°15'E, E. Ashkenazi, Malaise trap, 21.iv.1998 (1♂; TAUI), 2.v.1998 (1♀; TAUI), 9.v.1998 (1♂; TAUI); Qetura, iv-vi.2003, E. Topel, V. Chikatunov (1♂, 1♀; TAUI); Gerofit, iv-vi.2003, D. Uchitel, V. Chikatunov (2♂; TAUI), 3.v.2004, E. Topel, V. Chikatunov (1♀; TAUI); Yotvata, 11.iv.1958, Y. Werner (1♀; TAUI), 21.iii.1982, on sugar bet, M. Goral (1♀; TAUI); 'En Yotvata ['Ein Ghadian], 1.v.1954, J. Wahrman (1♂; TAUI); Elifaz, iii-vi.2003, E. Topel, V. Chikatunov (1♂, 1♀; TAUI), 11.xii.2003, E. Topel, V. Chikatunov (1♂; TAUI); **Southern Negev: Timna**, 12.iv.1958, Y. Werner (1♀; TAUI); Elat [Eilat], 24.iv.1962, J. Wahrman (2♂; TAUI).

EGYPT: Sinai, Nahel, 25.iv.1968, A. Shulov (1♂; TAUI).

Distribution

South Mediterranean. Canary Islands (Machado & Oromí, 2000), S. E. Spain, Balearic Islands, Portugal (Velázquez de Castro, 2004); Algeria, Tunisia, Libya and Greece (Crete) (Velázquez de Castro, 2009). Egypt (El Awady, 1974); Turkey (Lodos, 1971); Cyprus (Alziar, 2007); Iran (Boroumand, 1975). Recorded from Israel by Melamed-Madjar (1966b) and Halperin & Fremuth (2003).

Host Plants

Unknown, in Tunisia collected on *Retama* and *Ononis*. In Israel probably associated with *Retama raetam* (Forssk.) Webb & Berthel.

Coelositona villosus (Allard, 1869)

(Figs. 9, 32, 80)

Material Examined

ISRAEL: [Palestine], F. S. Bodenheimer (1♀; TAUI); **Upper Galilee: Hurfeish**, batha, 675 m, 33°01'N 35°21'E, 10.i.2006, A. Timm & T. Assmann, pitfall (1♀; TAUI); **Ziv'on**, batha, 712 m, 33°01'N 35°25'E, 21.v.2005, A. Timm & T. Assmann, pitfall (1♀; TAUI), 5.iii.2006, A. Timm & T. Assmann, pitfall (1♀; TAUI); **Carmel Ridge: Haifa** [Syrien, Kaifa], coll. Reitter (1 ex.; TMA); **Nahal Oren**, 30.iv.1974, D. Furth (1♀; TAUI); **Nir 'Ezyon** [Nir Elion], 31.vii.1951, N. Plaut, Div. Plant Prot. Dept. Agric. Israel. on *Vicia* [on Bakiah] (1 ex.; CVC); **Southern Coastal Plain: Bet Dagan**, 26.xii.1956, on *Trifolium* (2♀; TAUI), 10.iii.1959, on *Trifolium* (1♀; PPIS); **Judean Hills: 'Adullam**, 15.v.2008, O. Skutelsky (1♀; TAUI).

Distribution

Turkey, Syria (Emden & Emden 1939), Cyprus (Alziar, 2007). Recorded from Israel by Bodenheimer, 1937

Host Plants

In Israel: collected on *Vicia* spp., *Trifolium* spp, although it is unlikely that it is a common host. *C. villosus* belongs to the species group of *cambricus-cinerascens-puberulus*, which is monophagous on Loteae and do not feed normally on Viciaeae or Trifolieae. The collecting on *Trifolium* or *Vicia* could be therefore occasional.

Genus *Sitona* Germar, 1817

Identification key to genus *Sitona*

1. Acetabula of fore coxae touching prosternal line (Fig. 2).....2
 - Acetabula of fore coxae not touching prosternal line (Fig. 3); if fore coxae touch prosternal line, elytra covered by erect setae.....5
2. Elytra not covered by erect peg-like setae; body length 2.8-4.8 mm.....3
 - Elytra covered by erect setae; body covered dorsally by coarse pale round scales; body length 2.9 mm (Figs. 24, 47, 88) *Sitona* sp.
..... (Currently under description by B. Korotyaev and A. Velázquez de Castro)
3. Body laterally with wide, distinct, entire stripe of pale scales (white, yellowish or with slight greenish shine), stretching from base of rostrum, via lateroventral part of pronotum, lateral parts of meso- and metanotum and lateral side of abdominal sternites 1-4, not on elytra; dorsal part of head pronotum and entire elytra evenly dark brown, pronotum with pair of round patches of pale scales medially; legs testaceous or reddish; body length 4-4.5 mm (Figs. 20, 43, 81) *lividipes*
 - Body laterally without stripe of pale scales, or stripe incomplete; coloration variable, same of appendages as of body, pronotum with longitudinal stripes of pale scales; body length 2.8-6.0 mm.....4
4. Body and elytra covered by creamy or brown, small round scales, not comprising pattern of longitudinal stripes; body length 2.8-3.5 mm (Figs. 10, 33 82)
 - *aliciae* n. sp.
 - Body and elytra covered by white, yellow, creamy and testaceous scales of two shapes: oblong and round, often comprising pattern of longitudinal stripes on pronotum and elytra; body length 3.5-5.2 mm (Figs. 19, 42)..... *lineatus*
5. Head at eyes at least as wide as anterior part of pronotum or wider (Figs. 15, 16, 21, 23)6
 - Head at eyes narrower than anterior part of pronotum (11-14, 17, 18, 22).....12
6. Frons deeply excavated; eyes bulging; pronotum cylindrical, slightly longer than wide; elytra with slight transversal sub-basal concavities, covered with oblong pale whitish scales and groups of appressed brown setae; body length 4.0-7.0 mm (Figs. 15, 38, 85) *demoflysi*
 - Frons flat or slightly concave; eyes concave or flat; pronotum cylindrical or conical, transverse or as long as wide; elytra not concave sub-basally, pubescence different7
7. Elytra with erect setae.....8
 - Elytra without erect setae11
8. Eye convex, without callus of longer and darker setae in front of it; rostrum shallowly incised anteriorly; general coloration brown, pronotum and elytra with variable pattern; body length 3.0-4.5 mm.....9
 - Eye flat, with callus covered by longer and darker setae in front of it; rostrum deeply incised anteriorly; general coloration gray, pronotum laterally and elytral interstices 3-5 usually pale; body length 5.0-5.5 mm (Figs. 16, 39, 86)..... *fairmairei*
9. Pronotum dorsomedially with cross-like or rhombus-like pattern produced by white scales; body length 4.0-4.5 mm (Figs. 23, 46, 87) *syriacus*
 - Pronotum with narrow dorsomedian longitudinal stripe wide lateral longitudinal stripes produced by whitish scales; 3.0-4.0 mm10
10. Head at eyes much wider than anterior margin of pronotum; occur countrywide, but mostly in the northern and central part, in the Mediterranean zone; body length 3.0-4.0 mm (Figs. 21, 44) *macularius*

- Head at eyes slightly wider than anterior margin of pronotum; occur mostly in the southern arid part of country; body length 4.0 mm (Figs. 25, 48, 89).....
..... **wahrmani** n. sp.
- 11. Frons with median longitudinal furrow reaching posterior part of eye, not terminating with deep round pit; dorsum bright brown with diffuse pattern of longitudinal stripes, without couples of white spots comprised of scales on pronotum and vertex; body length 5.0-6.5 mm (Figs. 18, 41) **lepidus**
- Frons with median longitudinal furrow reaching about middle part of eye, terminating with deep round pit; dorsum dark brown with distinct pattern of longitudinal strips, with two couples white spots comprised of scales on pronotum and vertex; body length 4.7-6.0 mm (Figs. 22, 45) **puncticollis**
- 12. Dorsal surface covered with erect setae, nearly as long as antennal club length; eyes flat; frons slightly convex; lateral stripe of white scales on pronotum bent twice, usually white spot of scales present on lateromedian part of pronotum; body length 3.5-4.0 mm (Figs. 17, 40)..... **hispidulus**
- Dorsal surface covered with semierect or appressed setae, at most as long as one third of antennal club length; eyes moderately to strongly convex; lateral stripe of white scales on pronotum straight or bent once 13
- 13. Rostrum dorsally with transversal band of golden or white round scales in front of eye; eye flat to slightly convex; pronotum dorsally with prescutellar patch of pale scales and laterally with round patch of pale scales, connected to pale scales covering ventral part of pronotum; 5th elytral interstria with white scales at base and at apical third or at least strip of white scales interrupted in middle part of elytron; body length 4.5-5.5 mm (Figs. 12, 35, 84)..... **brucki**
- Rostrum dorsally without transversal band of golden or white round scales in front of eye; eye strongly to moderately convex; pronotum with dorsolateral stripe of pale scales, more or less distinct; 5th elytral interstria covered entirely by pale scales, producing pale longitudinal stripe or elytra evenly covered by grayish scales (Fig. 83)..... 14
- 13. Frons strongly concave, median longitudinal furrow even over its entire length; elytra with longitudinal pale stripe on 5th interstria or elytra covered evenly by grayish scales; body length 4.0-5.0 mm (Figs. 13, 36) **concavirostris**
- Frons flat or slightly concave, median longitudinal furrow deeper and wider between eyes; elytra with more or less distinct longitudinal pale stripe on 5th interstria 14
- 14. Frons flat to moderately concave; pronotum convex lateromedially, slightly constricted at bases; eye convex, middle zone of frons about 1.5 times as wide as eye in dorsal view (Figs. 11, 34); aedeagus slender, slightly truncated at apex (Fig. 51); body length 4.5-5.5 mm **bicolor**
- Frons flat; pronotum laterally evenly rounded, not constricted at bases; eye moderately convex, middle zone of frons 2 times as wide as eye in dorsal view (Figs. 14, 37) aedeagus wide, strongly truncated at apex (Fig. 52); body length 4.5-5.5 mm.....
..... **cylindricollis**

***Sitona aliciae* Velázquez de Castro n. sp.**

(Figs. 10, 33, 50, 57, 82)

Diagnosis

Closely related to *Sitona sulcifrons*, but frons not excavated (Figs. 10, 33), distinct lateral band of scales absent and aedeagus different: hamuli of the internal sac have a peculiar form (Fig. 57), different from all species of Sitonini we have examined, only somewhat similar to that of *S. maroccanus*, but this last species has an aedeagus completely different.

Description

Male: Body length 2,8 mm. Colour black. Vestiture comprise white and copper rounded scales, forming three median light stripes on pronotum. Interstriae of elytra with a row of semi-erect hair-like scales; interstitial punctures with tiny setae. Head: frons flat; dorsal furrow of rostrum terminates between eyes; eyes moderately prominent, head between eyes slightly wider than anterior part of pronotum (L/L 93%). First segment of antennae longer than second and third together. Prothorax: rounded laterally, nearly as long as wide (W/L 94%), wider behind middle, covered with large punctures, proacetabula almost reach anterior groove of prosternum. Elytra: elongated (L/W 1,6), widest behind middle, humeral callus weakly developed. Male genitalia: aedeagus with apex truncate, laterally narrow almost from base of median lobe (Fig. 50), hamuli of internal sac with basal manubrium and apical zone concave and laterally elongated (Fig. 57), pinnae weakly developed.

Female: Body length 3.5 mm. Elytra at base wider than in male, laterally more rounded. Female genitalia: 8th sternite with lamina much wider than long, spiculum ventrale thin and longer than lamina; spermatheca with rounded corpus and narrow cornu.

Etymology

Dedicated to Alicia, daughter of the first author.

Material examined

HOLOTYPE: Israel, Qusbiye, 9.i.1978, D. Furth/ Label indicating male sex/ Red label: Holotypus *Sitona aliciae* Velázquez des. (TAUI). The name of the small village Qusbiye abandoned by its inhabitants is no longer found on maps; this locality situates inside the Yehudiya Forest Nature Reserve, on the Golan Heights.

PARATYPES: ISRAEL: **Golan Heights:** Qusbiye, 28.iv.1974, D. Furth (1♀; TAUI); **Upper Galilee:** Kefar haNassi, 21.iii.[19]60, on *Vicia* (1♀; TAUI) (label written in Hebrew); Ziv'on, batha, 712 m, 33°01'N 35°25'E, 5.iii.2006, A. Timm & T. Assmann, pitfall (1♂; TAUI); **Northern Coastal Plain:** Sa'ar, 27.xii.[19]50, N. Plaut, Div. Plant. Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (3♀; TAUI); Lohame haGetaot [Lochmei Hageaot], 16.i.[19]51, N. Plaut, Div. Plant. Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (9♂; TAUI, 1♂CVC; 1♂CBOR; 23♀; TAUI; 1♀CVC; 1♀CBOR) **Southern Coastal Plain:** Mazliah, 16.xii.[19]50, N. Plaut, Div. Plant. Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (1♀; TAUI).

The holotype is glued to a card rectangle, the dissected abdominal segments are glued next to it; the genitalia glued to a card rectangle pinned beneath the specimen; labeled with red holotype label; in excellent condition; deposited at TAUI. The paratypes labeled with blue paratype labels. Most paratypes are at TAUI, one male and one female paratypes deposited in CVC, one male and one female paratypes deposited in CBOR; part of paratypes will be deposited at the Natural History Museum, London, UK, Paris Museum of Natural History, France, Museo Nacional de Ciencias Naturales, Madrid, Spain and the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

Distribution

Israel (Golan Heights, Upper Galilee, Coastal Plain).

Host plants

Vicia sp.

Sitona bicolor Fåhraeus, 1840

(Figs. 11, 34, 51, 58, 63, 68, 83)

Material examined

ISRAEL: Palestine, En xiii 38, F.S. Bodenheimer (1♀; TAUI); **Upper Galilee:** Senir river [Hermon River] (near Field School) 26.x.1987, G. Coulon (1♂; TAUI); Qiryat Shemona, 28.v.2003, A. Freidberg (1♂; TAUI); Kefar Szold, 13.v.1973, D. Furth (1♂; 2♀; TAUI); Kefar Blum 4.v.1955, *Medicago* (1♂; TAUI); Ne`ot Mordekhay, 14.vii.2004, L. Zarabi, V. Chikatunov, pheromone trap (1♀; TAUI); Gadot, 12.v.1973, D. Furth (1♀; TAUI); Mahanayim, 17.xi.1973, D. Furth (2♂, 3♀; TAUI; 2♂ CVC); Lohame haGetaot [Lochmei hagetaot], 16.i.1951, Plaut, Div. Plant Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (1♀; TAUI); **Lower Galilee:** Nahal Tavor, south facing slope, 26.iii.2002, L. Friedman (1♂; TAUI); **Carmel Ridge:** Nahal Barqan 29.iv.1997, R. Hoffman (2 ex.; TAUI); **Northern Coastal Plain:** Ilanot, 24.iv.1981, Q. Argaman (2♂, 2♀; TAUI); **Samaria:** Ma'ale Gilboa', 26.vii.1982, Q. Argaman (1♀; TAUI); Zur Natan, 26. viii.1981, Q. Argaman (1♂, 1♀; TAUI); **Jordan Valley:** Hammat Gader 7.v.1997, A. Friedberg (1♂; CVC; 1♂; TAUI), 8.v.1997, L.Friedman (1♂; TAUI); 'En Harod, 22.v.1938, on *Trifolium* (1♀; TAUI) (label written in Hebrew); Jordan Valley, Tirat-Zevi, vi.1998 D. Shahack (1♂; TAUI); **Central Coastal Plain:** Nahal Alexander, 23.ii.1996, R. Hoffman (1 ex.; CVC); Netanya, 19.v.1974, D. Furth (1♀; TAUI); Herzliyya, 18.xii.2000, A. Freidberg & L. Friedman (1♀; TAUI); Ga'ash, 7.XII.2001, A. Gazith & D. Milstein (1♂, 1♀; TAUI, 1♀ CVC); Petah Tikvah, Palestine], 20.ii.1949, H. Bytinski-Salz (1♂; TAUI); **Southern Coastal Plain:** Holon, 7.xii.2001, A. Gazith & D. Milstein (1♀; TAUI); Bet Dagan, 28.v.1959, on *Cicer pinnatifidum* (label written in Hebrew); Qiryat Gat, 22.iv.1962 Hebr. Univ. Katznelson (1♂; TAUI); **Dead Sea Area:** 'En Gedi, 14.v.75 (2♂, 2♀; TAUI).

TURKEY: Cappadocia, Mustafapaşa near Ürgüp, 8.v.2000, 1000 m, A. Freidberg, H. Ackerman & L. Friedman (6♂, 3♀; TAUI; 2♂, 1♀ CVC). UZBEKISTAN: Samarkand, Reitter, coll. Tournier (hand-written label *S. molitor*) (1♂, 1♀; MNHN).

Distribution

The Balkans, Turkey, Israel, Uzbekistan.

Host Plants

In Israel: collected on *Cicer pinnatifidum*, *Medicago* spp., *Trifolium* spp., *Vicia* spp..

Sitona brucki Allard, 1870

(Figs. 3, 12, 35, 64, 69, 84)

Material examined

ISRAEL: [Palestine], 19.iv.1941, H. Bytinski-Salz (1♀; TAUI); **Upper Galilee:** Har Meron, 20.iv.2002, Y. Ptashkovsky (1♀; TAUI); **Lower Galilee:** Upper part of Nahal [Wadi] Tavor, 25.iii.2001, V. Chikatunov (1♀; TAUI); Kokhav haYarden, 27.iii.2001, L. Friedman (5♀; TAUI), V. Chikatunov (1♀; TAUI); **Carmel Ridge:** Zikhron Ya'aqov, 1.iv.1997, R. Hoffman (1♀; TAUI); **Northern Coastal Plain:** Hadera, 11.ii.2001, L. Friedman (1♀; TAUI); **Samaria:** Ma'ale Gilboa', 8.vi.1982, Q. Argaman (2♀; TAUI); **Central Coastal Plain:** Shefayim, 21.ii.1984, Q. Argaman (2♀; TAUI); Ra'anana [Rananah, Palestine], xii.1941, H. Bytinski-Salz (1♀; TAUI); Herzliyya, 18.xii.2000, A. Freidberg & L. Friedman (1♀; TAUI); Herzliyya, 31°9'N34°51'E 8.iv.2005 A. Freidberg (1♂, 2♀; TAUI; 1♀; CVC); Tel Aviv, North Afeqa, 10.iv.O. Auster (1♀; TAUI); **Foothills of Judea:** Migdal Afeq, 28.ii.2001, L. Friedman (1♀; TAUI); **Southern Coastal Plain:** Rishon leZiyyon 27.xi.2005, O. Rittner (1♀; TAUI); Nizzanim, 18.iv.2009, L. Friedman (1♀; TAUI); Deqel, 19.v.2005, G.

Wizen (3♂, 3♀; TAUI; 1♀; CVC); **Dead Sea Area:** Yeriho [Jericho, Palestine], 1931, F. S. Bodenheimer (1♀; TAUI; 1♂; CVC).

Distribution

Central and Southern Spain, Portugal, Algeria (Velázquez de Castro, 2004), Marocco (Velázquez de Castro, 2009). New record for Israel.

Host Plants

Trifoliae (*Ononis natrix*).

Sitona concavirostris Hochhuth, 1851

(Figs. 13, 36)

Material Examined

ISRAEL: **Golan Heights:** Berekhat Ram [Birket Ram], 4.vi.1974, D. Furth (1♂; TAUI); 4 km S Mas'ade [Golan, 4 km S Mas'ada], 2.vi.1972, M. Tintpulver (1♂; TAUI); H. Nappah [Golan, Nafech], 4.i.1974, A. Freidberg (1♂; TAUI); Ma`agar Bental, 33°08'N 35°47'E, 1.vi.2008, L. Friedman (1♀; TAUI); Merom Golan, 33°08'N 35°46'E, 1.vi.2008, T. Nagar (1♂; TAUI); Golan, Afiq, 27.iv.1974, D. Furth (1♀; TAUI); **Upper Galilee:** Kefar Szold, 18.v.1978, D. Furth (1♂; 1♀; TAUI); Rosh haNiqra [Upper Galilea, Rosh Ha-Nikra], 2.iv.1995, E. Colonnelli (1 ex.; CVC); Monfort [Mont Fort], 8.i.1975, D. Furth (1♂; TAUI); 'En Zetim, 21.v.1997, V. Chikatunov (1♀; TAUI); Har Meron, 1100 m, 32°59,8'N 35°25'E, A. Freidberg (1♂, 2♀; TAUI), L. Friedman (2♂; TAUI); Maḥanayim, 17.xi.1973, D. Furth (1♀; TAUI); 'En Ya'aqov, 5.xi.2006, I. Shtirberg (1♀; TAUI); **Carmel Ridge:** Nahal Yagur, 11.xi.1996, L. Friedman, on *Quercus calliprinos* (1♂; TAUI); Damun, 17.iv.1969, J. Halperin, on *Pinus halepensis* (1♂; TAUI); Nahal Oren, 21.xii.1995, T. Pavliček & V. Chikatunov (1♂; TAUI), 20.i.1997, T. Pavliček & V. Chikatunov (1♀; TAUI), 17.ii.1997, T. Pavliček & V. Chikatunov (1♂; TAUI), 1.xii.1997, V. Chikatunov & T. Pavliček (1♂, 1♀; TAUI), 15.xii.1997, V. Chikatunov & T. Pavliček (2♂, 1♀; TAUI; 1♀; CVC), 6.iv.1998, V. Chikatunov & T. Pavliček (1♂; TAUI); Nahal Tut, 4.v.1978, D. Furth (1♂, 2♀; TAUI); Ramat haNadiv, 15.iv.2006, E. Groner, V. Chikatunov (1♂; TAUI); **Northern Coastal Plain:** Ma'agan Mikha'el, 4.v.1998, A. Friedberg (1♀; TAUI); Giv'at 'Ada, 3.v.1997, R. Hoffman (1♀; TAUI); Berekhat Ya'ar [Hadera, Berekhat Atta], 1.v.1998, A. Freidberg (1♀; TAUI); **Samaria:** Nahal 'Iron, 13.iii.1997, R. Hoffman (1♀; TAUI); Qedumim, 23.iv.2001, L. Friedman (1♀; TAUI), 10.xii.2001, L. Friedman (1♂; TAUI); **Jordan Valley:** Park haYarden, 8.v.1997, L. Friedman (1♀; TAUI); Lower Naḥal Yehudiya [Naḥal Zaki], 22.iv.2000, E. Fonio (1♂; TAUI); 'En Gev, 8.v.1997, L. Friedman (1♀; TAUI); HaOn [Haon], 8.v.1997, V. Chikatunov (2♂; TAUI); Gesher, 20.ii.1974, D. Furth (1♀; TAUI); Berosh, 14.v.1961, M. Kamo & J. Margalit (1♀; TAUI); **Southern Coastal Plain:** Rehovot, 20.vii.1956, J. Halperin (1 ex.; TAUI); Zomet Re'em (Masmiya), 3.v.1959 (1♀; TAUI); Qiryat Gat, 22.iv.1962, Katznelson (1♂; TAUI); Erez, 2.iii.1973, D. Furth (1♀; TAUI); Kefar 'Azza, 29.i.1973, D. Furth (1♂; TAUI); **Foothills of Judea:** Eshta'ol, [Jerusalén, Ehta'ol], 9.iv.1995, E. Colonnelli, (1 ex.; CVC); Naḥal 'Ezyona, 29.iii.1973, D. Furth (1♂; TAUI); **Judean Hills:** Yerushalayim [Jerusalem], 6.xii.1940, H. Bytinski-Salz (1♀; TAUI); 25.iv.1973, M. Tintpulver (1♂; TAUI); 'Adullam, 17.v.2002, Y. Mandelik & V. Chikatunov (1♀; TAUI), 17.xi.2003, Y. Mandelik & V. Chikatunov (1♀; TAUI), 15.i.2004, U. Columbus & T. Levanony (2♂; TAUI), 20.v.2007, O. Skutelsky (2♂, 1♀; TAUI).

TURKEY: Gözne, 30 km N Mersin, 500-1000 m, 11.v.2000, A. Freidberg, H. Ackerman & L. Friedman (1♀; TAUI). SYRIA: Mtes. Amanus, (1 ex.; MNCN).

Distribution

East Mediterranean, Caucasus, Iran, South Russia (Roudier, 1980). Recorded from Israel by Bodenheimer (1937), Meladmed-Madjar (1966a, b).

Host Plants

Trifoliae (*Medicago* spp.). In Israel: *Medicago sativa*, *Vicia sativa*.

Sitona cylindricollis (Fåhraeus, 1840)

(Figs. 14, 37, 52, 59, 70)

Material Examined

ISRAEL: **Upper Galilee:** 'Amir, 5.iv.1978, D. Furth (1♂; 1♀; TAUI); **Northern Coastal Plain:** Hadera, 1.iii.1997, Hoffman leg, TAUI; **Central Coastal Plain:** Bet Dagan [Bet Dagon], 10.v.1957, on arachis (1♂; TAUI); **Jordan Valley:** Hamdiyya, 21.i.1958, on *Medicago* (1♀; TAUI).

Distribution

Palaeartic, N. America (Dieckmann, 1980). Recorded from Israel by Bodenheimer (1937), Melamed-Madjar (1966b), from Jordan by Katbeh-Bader (2002).

Host Plants

Trifoliae (*Medicago* spp., *Melilotus* spp., *Trifolium* spp.). In Israel: *Medicago sativa*, *Vicia sativa*.

Sitona demoflysi Normand, 1949

(Figs. 15, 38, 53, 60, 65, 71, 85)

Material examined

ISRAEL: **Northern Negev:** Ze`elim, 25.xi.2006, G. Wizen (1♂; TAUI); **Central Negev:** Zaror, Hatira [Tzaror, Hatira], xii.2002, E. Groner, (1♂, 1♀; TAUI), i.2003, E. Groner, (1♂, 4♀; TAUI; 1♂; CVC); Har Zaror [Tzaror, Negev] 8.ii.2002, E. Groner (1♀; CVC).

N. AFRICA: Al Hushayshinah [Achichina] (1 ex.; MNHN).

Distribution

Tunisia (Normand, 1949). New record for Israel and the first record for this species from outside of Tunisia.

Host Plants

Unknown.

Sitona fairmairei (Allard, 1869)

(Figs. 16, 39, 54, 61, 67, 72, 86)

Material Examined

ISRAEL: **Upper Galilee:** Har Meron, 1100 m, 32°59,8'N 35°25'E, 22.xi.2006, A. Freidberg (1♀, TAUI); **Lower Galilee:** Lower Galilee, Mt. Yavne`el, W. Mizpe Elot, 100-350 m, 3.iv.1999, E. and B. Orbach (1♀; TAUI); **Northern Coastal Plain:** Ma'agan Mikha`el, 4.v.1998, A. Freidberg (1♀; TAUI; 1♂, 1♀; CVC); **Samaria:** Qedumim, 23.iv.2001, L. Friedman (1♀; TAUI), 25.iv.2001, L. Friedman (1♀; TAUI), 28.i.2005, L. Friedman (1♂; TAUI), 27.iii.2005, L. Friedman (1♂; TAUI); **Jordan Valley:** Umm Zuqa Natural Reserve, Rt. 90, Nahal Talkid, -200 m, 18.iii.2008, L. Friedman (1♀; TAUI); **Central Coastal Plain:** Ga'ash, 19.xii.1957, on *Trifolium* (1♂; PPIS); **Southern Coastal Plain:**

Mavqi'im, 31°37'N 34°34'E, 18.ii.2004, L. Friedman (1♂; TAUI); **Foothills of Judea:** Matta', 9.xi.2006, I Shtirberg (1♂; TAUI), **Judean Hills:** Yerushalayim [Jerusalem], 21.ii.1957 (1♀; TAUI), 23.ii.1957 (1♀; TAUI); Yerushalayim, Ramat Rahel [Jerusalem, Ramat Rahel], 30.iii.1957, J. Wahrman (1♂, 1♀; TAUI); 'Adullam, 18.i.2002 Y. Mandelik (2♂; 2♀; TAUI), 3.iv.2003, U. Columbus, T. Levanony (1♀; TAUI), 23.iv.2003, U. Columbus, T. Levanony (1♂, 1♀; TAUI), 15.i.2004, U. Columbus, T. Levanony (3♂; 1♀; TAUI); Zekharya, 17.v.2002, Y. Mandelik, V. Chikatunov (1♂; TAUI); **Judean Desert:** 'Ein Uja, large cave, 29.iv.1969, M. Warburg (1♂; TAUI); Eshkolot, 13.i.2007, I. Shtirberg (5♂, 14♀; TAUI), 4.ii.2007, I. Shtirberg (6♂; 4♀; TAUI), 18.iii.2007, I. Shtirberg (2♀; TAUI), 8.v.v.2006, I. Shtirberg (1♀; TAUI); **Northern Negev:** Lahav, 23.iii.2006, I. Shtirberg (2♂, 1♀; TAUI), 24.iii.2006, I. Shtirberg (1♂, 1♀; TAUI); Nir 'Oz, 7.ii.2010, O. Rittner (1♂, 1♀; TAUI).

EGYPT: [labeled: Israel] Sinai, W. Tala, 7.iv.1974, D. Furth (1♀; TAUI).

Morphological remarks

This species form a group with *S. costipennis* and *S. onerosus*, as the internal sac is very similar, with peculiar hamuli, and different from other species of *Sitona*. Part of sclerites of internal sac were drawn by Sert (2006), but hamuli were not dissected.

Distribution

Algeria, Armenia (Emden & Emden 1939), Tunisia, Libia, Greece (Crete, Rodos) (Velázquez de Castro, 2009), Turkey (Lodos, 1978; Sert, 2006), Cyprus (Alziar, 2007) New record for Israel and Egypt (Sinai).

Host Plants

Medicago spp., *Vicia* spp. (Lodos, 1978). In Israel: *Trifolium* spp.

Sitona hispidulus (Fabricius, 1776)

(Figs. 17, 40)

Material examined

ISRAEL: [Palestine], F. S. Bodenheimer (6♂, 7♀; TAUI); **Golan Heights:** Odem Forest, 24.v.2007, O. Rittner (3♀; TAUI); 'Orvim Reservoir, 14.ii.2000, A. Gazith (1♀; TAUI); Ma`agar Bental, 33°08'N 35°47'E, 7.v.2007, L. Friedman (1♀; TAUI), 1.vi.2008, L. Friedman (1♀; TAUI); Merom Golan, 27.iv.1978, D. Furth (1♂, 1♀; TAUI), 5.iv.1978, D. Furth (1♀; TAUI); Qazrin, 20.v.1997, V. Chikatunov (1♂ TAUI), 12.v.1998, N. Meltzer (1♀; TAUI), 4.v.1999, L. Friedman (1♀; TAUI); Yehudiya Forest Nature Reserve [Qusbiye], 21.ii.1974, D. Furth (1♂, 1♀; TAUI), 28.iv.1974, D. Furth (1♀; TAUI), 31.i.1978, D. Furth (1♀; TAUI), 22.ii.1978, D. Furth (1♂ TAUI); Yonatan, 9.viii.1983, E. Shney-Dor (4♀; TAUI); **Upper Galilee:** Hermon Field School, 25.v.1999, L. Friedman (1♀; TAUI); Kefar Szold, 13.v.1973, D. Furth (2♀; TAUI); Nahal Keziv, 1.i.1999, M. Finkel (1♀; TAUI); 'En Zetim, 33°00'N 35°29'E, 10.v.2006, L. Friedman (1♀; TAUI); **Carmel Ridge:** Karmel, nr. Haifa University, 2.v.2009, A. Nir (1♀; TAUI); Nahal Tut, 9.v.1979, D. Furth (1♀; TAUI); **Northern Coastal Plain:** Berekhat Ya'ar, 14.v.2003, L. Friedman (2♂, 5♀; TAUI), 23.v.2003, L. Friedman (1♂, 2♀; TAUI), 11.iv.2007, L. Friedman (1♂; TAUI), 26.ii.2009, L. Friedman (1♂; TAUI); **Jordan Valley:** 'En Gev, 10kmN, 8.v.1997, L. Friedman (1♀; TAUI); Sha'ar haGolan, 7.iii.2006, M. Vonshak (1♂, 1♀; TAUI); Bet Zera', 5.iii.2006, M. Vonshak (1♀; TAUI); **Yizre'el Valley:** 'En Harod, 23.ii.2005, L. Peled (1♂; TAUI); Nurit, 9.v.1979, D. Furth (1♂ TAUI); **Samaria:** Tul Karem, 9.iii.1978, D. Furth (1♀; TAUI); Qedumim, v.2002, L. Friedman (1♀; TAUI); **Central Coastal Plain:** Tel Aviv, Ramat Aviv, 15.vi.1981, Q. Argaman (2♀; TAUI); **Southern Coastal Plain:** Kefar Bilu, 5.xi.1942 (1♀; TAUI); Gedera, 26.xi.1973, D. Furth (4♀; TAUI); Segula, 26.xi.1973, D. Furth (1♀; TAUI); Qiryat Gat, 26.xi.1973, D. Furth (1♂; TAUI).

TURKEY: Cappadocia, Mustafapaşa, near Ürgüp, 8.v.2000, A. Freidberg, L. Friedman, H. Ackerman (2♀; TAUI); Rt. 750, 20 km N Tarsus, 250 m, 9.v.2000, A. Freidberg, L. Friedman, H. Ackerman (1♀; TAUI).

Distribution

Palaeartic, introduced in North America (Dieckmann, 1980). Recorded from Israel by Bodenheimer, 1937, Melamed-Madjar, 1966.

Host Plants

Loteae (*Lotus* spp.), Trifoliae (*Medicago* spp., *Trifolium* spp.). In Israel: *Medicago* spp., *Trifolium* spp., *Vicia* spp.

Sitona lepidus Gyllenhal, 1834

(Figs. 18, 41)

Material Examined

ISRAEL: **Golan Heights:** Yehudiya Forest Nature Reserve [Qusbiye], 21.ii.1974, D. Furth, (2♂, 3♀; TAUI), 9.i.1978, D. Furth (1♂; TAUI); **Northern Coastal Plain:** Nahsholim, 13.xi.1959, on *Trifolium* (1♀; TAUI).

Distribution

Palaeartic, introduced in North America (Dieckmann, 1980), Macaronesia (Borges *et al.*, 2005), introduced in New Zealand. New record for Israel.

Host Plants

Trifoliae (*Trifolium* spp., *Medicago* spp.) and Viciae (*Vicia* spp., *Pisum* spp.).

Sitona lineatus (Linnaeus, 1758)

(Figs. 2, 19, 42)

Material Examined

ISRAEL: 7.ii.1930, I. Aharoni (1♀; TAUI); **Hermon:** Har Hermon [Mt. Hermon], 1500 m, 21.v.1979, D. Furth (1♀; TAUI), 800 m, 27.iv.1978, D. Furth (1♂; TAUI); **Golan Heights:** Majdal Shams, 20.iv.2003, V. Kravchenko, V. Chikatunov, light trap (1♂; TAUI); Merom Golan, 12.vi.2000, V. Chikatunov (1♂; TAUI); Qazrin, 20.v.1997, V. Chikatunov (1♀; TAUI), 12.v.1998, V. Chikatunov (1♂; TAUI), 4.v.1999, L. Friedman (1♂; TAUI); Qazrin, 32°59'N 35°42'E, 9.v.2000, L. Friedman (1♂; TAUI); Nahal Qazrin, 32°59'N 35°42'E, 7.v.2007, V. Chikatunov (1♀; TAUI), W. Kuslitzky (1♂; TAUI); Yehudiya Forest Nature Reserve [Qusbiye], 21.ii.1974, D. Furth (1♂; 5♀; TAUI), 31.i.1978, D. Furth (1♀; TAUI); Yehudiya Forest Nature Reserve [Golan, Qusbiye], 3.ii.1981, D. G. Furth (1♀; TAUI); **Upper Galilee:** Upper Galilee ["Galil 'Elyon", in Hebrew], 13.iv.1959, non cultivated plants (1♂; TAUI); 'Amir, 5.iv.1978, D. Furth (1♂; TAUI); Hulata, 5.v.1955, on *Medicago* (1♀; TAUI); Sa'ar, 27.xii.1950, Plaut, on Bakia (on *Vicia* sp.) Div. Plant. Prot. Dept. Agr. Israel (1♂; TAUI); Kefar Yassif [Kfar Yasif], 8.v.1979, D. Furth (1♀; TAUI); Yas'ur, 8.v.1979, D. Furth (1♀; TAUI); **Carmel Ridge:** Haifa [Syrien, Kaifa], Reitter (1♀; TAUI); Nahal Oren [Nahal Oren, Mt. Carmel], T. Pavlicek & V. Chikatunov, 22.iv.1996 (1♂; 1♀; TAUI), 9.xii.1996 (1♂; TAUI), 17.xii.1996 (12♀; TAUI), 31.xii.1996 (3♀; TAUI), 13.i.1997 (1♀; TAUI), 28.i.1997 (1♂; TAUI), 11.ii.1997 (1♂; TAUI), 15.xii.1997 (2♂; TAUI), 2.ii.1998 (1♂; TAUI), 5.i.1999 (2♂; TAUI); Nahal Barqan, 15.iii.1997, R. Hoffman, 1♀; TAUI); **Jordan Valley:** Park haYarden, 2.iv.1998, A. Freidberg (2♂; 1♀; TAUI); Biq'at Bet Zayda [Betecha], 20.iii.1974, D. Furth (1♂; TAUI); Ma'agan, island, South Kineret, 23.xi.2009, G. Wizen (1♂; TAUI); Bet She'an, 20.ii.1974, D. Furth (14♂; 5♀; TAUI); Mehola [Mehula], 21.iv.1973, D.

Furth (2♂; TAUI); Lower Nahal Tirza [Lower W. Faria], 19.ii.1974, D. Furth (1♂; TAUI); **Lower Galilee:** Sha'ab, 19.v.1976, D. Gerling (3♂; 4♀; TAUI); Har Tavor [Mt. Tavor], down, 24.iv.1979, D. Furth (1♂; TAUI); **Northern Coastal Plain:** Qiryat Hayyim [Palestine, Kirj. Chaim], 24.vi.1948, H. Bytinski-Salz (1♂; TAUI); Qiryat Atta [Q. Ata], 18.iii.19723, d. Furth (1♀; TAUI); Binyamina, ahu (= meadow), 25.i.1997, R. Hoffman (4♀; TAUI); Nahal Barqan, 15.iii.1997, R. Hoffman (2♂; TAUI), 13.iv.1997, R. Hoffman (1♀; TAUI); Nahal Alexander, 8.ii.1997, R. Hoffman (2♂; TAUI); **Yizre'el Valley:** Sarid, 8.iv.1944, on *Trifolium* (1♀; TAUI); Merhavva, 15.xii.2004, L. Peled (1♂; TAUI); Binyamina, 8.ii.1997, V. Chikatunov (3♂; TAUI); **Samaria:** Nahal Tirza [W. Faria], 11.iv.1973, D. Furth (1♀; TAUI); Nahal Tirza [W. Faria], Rd. Tubas, 19.ii.1974, D. Furth (1♂; TAUI); Zomet Rantis, alfalfa field, 28.ii.2001, L. Friedman (11♂; TAUI; 1♂; CVC); **Central Coastal Plain:** Nahal Poleg, 13.iv.1997, R. Hoffman (1♂; 1♀; TAUI); Ga'ash, 7.xii.2001, A. Gazith, D. Milstein (1♂; 2♀; TAUI); Herzliyya, 18.xii.2000, A. Freidberg, L. Friedman (1♀; TAUI); Hod haSharon, 31.xii.1974, D. Furth (1♂; 2♀; TAUI); Nahal Yarqon, dam 40, 9.xii.1999, Y. Hershkovitch (1♂; TAUI); Tel Aviv, Ramat Aviv, 15.iii.1995, V. Chikatunov (1 female; TAUI), 10.v.1995, V. Chikatunov (1♀; TAUI); Rosh ha' Ayin, 15.x.1994, V. Chikatunov (1♀; TAUI); Tel Aviv, 13.iv.1997, R. Hoffman (1♂; TAUI); Miqwe Yisrael [Mikweh Israel], 8.iv., H. Bytinski-Salz (7♀; TAUI), [Mikve Israel], 1931, F. S. Bodenheimer (2♀; TAUI), [Mikve Isr.], 20.iii.1945, H. Bytinski-Salz (1♀; TAUI), 27.iv-2.v.2006, M. Vonshak (2♂; 5♀; TAUI); **Southern Coastal Plain:** Nes Ziyona, 8.ii.1992, J. Halperin (1♂; TAUI); Rehovot, vi.1951 (1♂; TAUI), 19.i.1956, N. Garbar (1♀; TAUI), 28.iv.2007, W. Kuslitzky (1♂; TAUI); Yesodot, 30.ii.1971, D. Gerling (1♀; TAUI); Ashdod-Ashqelon road, 5 km S. E. Ashdod, 30.xi.1974, D. Gerling, on *Sorghum halepense* (1♀; TAUI); 'En Zurim, 27.i.2002, D. Ben-Yaqir, on *Cicer pinnatifidum* (1♀; TAUI); Re'em Junction [Masmiya], 16.i.1957, on *Trifolium* (label written in Hebrew), (1♀; TAUI); Segula, Qiryat Gat, 5.v.1996, V. Chikatunov (2♂; 4♀; TAUI); 'Azza [Gaza], 21.xi.1987, Q. Argaman (1♂; TAUI); **Judean Foothills:** Neve Shalom, 13.v.1997, R. Hoffman (1♂; TAUI), 14.vi.1997, R. Hoffman (1♀; TAUI); Bet Shemesh, 26.iv.1973, D. Furth (1♂; TAUI), 17.iv.1974, D. Furth (1♀; TAUI); **Judean Hills:** 'Adullam, 20.v.2007, O. Skutelsky (1♀; TAUI); **Judean Desert:** Nahal Perat [Wadi Kelt], 11.x.1972, D. Furth, (1♂; TAUI); **Dead Sea Area:** Qalya [Kalia], 13.ii.1975, A. Freidberg (1♂; TAUI).

Distribution

Palaeartic, introduced in N. America (Dieckmann, 1980), Macaronesia (Machado & Oromí, 2000, Borges *et al.*, 2005). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966).

Host Plants

Several genera of Trifoliae and Viciae, also found on other Leguminosae. In Israel: *Cicer pinnatifidum*, *Medicago sativa*, *Medicago* spp., *Trifolium* spp., *Vicia faba*, *V. sativa* and *Pisum* spp.

Sitona lividipes Fähræus, 1840

(Figs. 20, 43, 81)

Material Examined

ISRAEL: **Hermon:** Har Hermon, 1600 m, 20.v.1997, L. Friedman (1♀; TAUI), 12.vi.2003, A. Freidberg (1♂; TAUI); Nabi Hazuri, 33°15'N 35°44'E, 18.x.2009, L. Friedman (1♂; TAUI); **Golan Heights:** Panyas [Baniass Up.], 8.iv.1978, D. Furth (1♀; TAUI); Panyas [Baniass], 25.v.1982, J. Halperin, on *Salix* (3 exx.; TAUI); Panyas, 16.v.2003, V. Kravchenko, light trap (1♀; TAUI); Panyas Hydrometric Station, 4.iii.2001, L. Friedman (2♂; TAUI; 1♂; CVC); Nahal Senir, 24.v.1999, L. Friedman (1♂; 2♀; TAUI); Berekhat Ram [Birket Ram],

27.iv.1978, D. Furth (1♀; TAUI); El-Rom, 15.vi.2002, V. Kravchenko, light trap (1♀; TAUI); Merom Golan, Bental Reservoir, 33°08'N 35°47'E, 30.iv.2006, L. Friedman (1♂; TAUI), 7.v.2006, L. Friedman (1♀; TAUI); Ma`agar Bental, 33°08'N 35°47'E, 7.v.2007, L. Friedman (1♂; TAUI), 1.vi.2008, L. Friedman (1♀; TAUI); Qazrin, 4.v.1999, L. Friedman (2♂; TAUI), 21.v.2002, L. Friedman (1♀; TAUI); Yehudiya Forest Nature Reserve [Qusbiye], 17.xi.1973, D. Furth (1♀; TAUI), 28.iv.1974, D. Furth (1♂; TAUI), 4.v.1979, D. Furth (1♂; TAUI); **Upper Galilee:** Tel Dan, 20.vii.1983, Y. Zvik (1♂; TAUI); ?Sede Neḥemya, Huliyyot factory [Huliyot], 20.v.1968 (3♂, 3♀; TAUI); Amir, 5.iv.1978, D. Furth (1♂; TAUI); Shamir, 5.vi.1984, J. Halperin, on *Fraxinus syriacus* (2♀; TAUI); Hula, 5.vi.1974, D. Furth (1♂, 2♀; TAUI); Gadot, 25 km N. Tiberias, 8.vi.1971, S. Bet-Aharon (1♂; TAUI); Maḥanayim, 17.xi.1974, D. Furth (1♂; TAUI); Naḥal Keziv, 1.i.1999, M. Finkel (1♀; TAUI); 'En Ya'aqov, 12.vi.2006, I. Shtirberg (1♀; TAUI); Har Meron, 1100, 32°59'N 35°25'E, 22.xi.2006, L. Friedman (1♂; 2♀; TAUI), A. Freidberg (1♀; TAUI); Har Meron [Mt. Meron], 12.vii.2002, V. Kravchenko, light trap (1♂; TAUI); Har Meron, 2006, H. Tsegai (1♂; TAUI); Naḥal 'Ammud [N. Amud], 30.iv.1978, D. Furth (2♂; TAUI); **Lower Galilee:** Nazeret [Nazareth], 30.ix.1982, Q. Argaman (1♂; TAUI); **Carmel Ridge:** Naḥal Oren, 17.xi.1997, V. Chikatunov, T. Pavliček (1♂; TAUI), 15.xii.1997, V. Chikatunov, T. Pavliček (1♂; TAUI); Naḥal Tut [N. Tut], 4.v.1978, D. Furth (1♀; TAUI); **Jordan Valley:** Biq'at Bet Zayda [Btecha], 18.x.1971, A. Goldstein (1♀; TAUI); Park haYarden, 17.v.2009, L. Friedman (2♂, 1♀; TAUI); Kursi, 15.xii.1972, D. Furth (3♂; TAUI); Ashdot Ya'aqov [Ashdot Yaacov], 27.vii.1972, A. Goldstein (1♂; TAUI); **Yizre`el Valley:** 'En Harod [Ein Charod], 9.x.1948, H. Bytinski-Salz (1♂, 1♀; TAUI); Tel Yosef, 9.xii.1939, on *Trifolium* (1♂; PPIS); **Northern Coastal Plain:** Ma'agan Mikha`el, 4.v.1998, A. Freidberg (1♂, 2♀; TAUI); Binyamina, 25.i.1997, R. Hoffman (1♂; TAUI); Hadera, 16.xi.1973, D. Furth (2♂; TAUI), 28.iv.1979, D. Furth (1♂; TAUI); Berekhat Ya'ar, 14.v.2003, L. Friedman (2♂, 2♀; TAUI), 28.iv.2004, L. Friedman (1♀; TAUI), A. Freidberg (1♂; TAUI); **Central Coastal Plain:** Ramat haSharon, 32°08'N 34°50'E, 5.v.2007, D. Gerling, Malaise trap (1♂; TAUI); Rosh ha'Ayin, 24.iii.1973, D. Furth (1♀; TAUI); **Southern Coastal Plain:** Bet Dagan [Bet Dagon], 2.ii.1957, on *Trifolium* (1♂; 1♀; PPIS), 21.xi.1957, on *Trifolium* (1♀; PPIS); Bet Dagan, 26.xii.1956, on *Trifolium* (1♀; TAUI; 1♂; PPIS), 8.ii.1957, on *Trifolium* (1♀; TAUI), 21.ii.1957, on *Vicia* (1♀; TAUI); Yavne, 27.iv.1986, Q. Argaman (1♂, 1♀; TAUI); Gan Shelomo [Kvuzat Shiler], 2.v.1958, E. Rivnay, on *Medicago* (2♀; PPIS); Giv'at Brenner, xii.1959, Perez, Div. Plant. Prot. Dept. Agr. Israel, on *Trifolium* (12 exx.; PPIS), 7.i.1951, H. Bytinski-Salz, on alfalfa (4 exx.; PPIS); Gedera, 26.xi.1973, D. Furth (1♂, 1♀; TAUI); Re`em Junction [Masmia], 16.i.1957, on *Trifolium* (2♂; PPIS), 18.v.1957, on *Trifolium* (1♂; 1♀; PPIS).

TURKEY: Antakya, 10.v.2000, A. Freidberg, H. Ackerman, L. Friedman (1♂; TAUI). SYRIA: Bolos 21.iv.2003, P. Weill, (1 ex.; CPEL). MONTENEGRO: Crna Gora, lake Skadar (1 ex.; CVC). BULGARIA: Primorsko (1 ex.; CKOS), Harmanli (South Bulg.) 6.v.1974, Angelov (1 ex., COSL).

Distribution

Mediterranean: Spain, France (inc. Corsica), Sardinian, Sicily, Greece, Algeria, Egypt, Syria (Hoffmann, 1950), Turkey (Lodos, 1978), Morocco (Kocher, 1961), Iran (Boroumand, 1975), Montenegro, Bulgaria (new record). Recorded from Israel by Melamed-Madjar (1966).

Host Plants

Trifoliae. In Israel: *Medicago* spp., *Trifolium* spp.

Sitona macularius (Marsham, 1802)

Material Examined

ISRAEL: **Hermon:** Har Hermon, 2000 m, 22.v.1973, D. Furth (3♂; 1♀; TAUI), 29.iii.1974, A. Freidberg (2♂; 3♀; TAUI), 7.v.1993, E. & B. Orbach (1♀; TAUI), 25.v.1999, L. Friedman (1♂; 1♀; TAUI), 27.v.1999, L. Friedman (1♂; TAUI); 1900 m, 22.v.1973, D. Furth (2♂; TAUI), 30.v.1978, D. Furth (1♀; TAUI), 21.v.1979, D. Furth (1♀; TAUI); 1800 m, 25.x.1977, D. Furth (1♂; TAUI), 25.v.1997, V. Chikatunov (2♀; TAUI); 1600 m, 25.x.1977, D. Furth (1♂; TAUI), 14.v.1996, V. Chikatunov (1♂; TAUI), 25.vi.1997, V. Chikatunov (2♂); 1500-1600 m, 6.vi.2002, L. Friedman (1♀; TAUI); 1500 m, 24.x.1977, D. Furth (1♂; TAUI); 1450 m, 4.vi.1974, D. Furth (1♀; TAUI); 1300 m, 27.iv.1978, D. Furth (1♀; TAUI); Har Hermon, Naḥal 'Ar'ar, 1 km NNE Berekhat Man, 1450 m, 18.v.2001, E. Orbach (1♂; TAUI); Newe Ativ, 26.iv.1974, D. Furth (1♂; TAUI); **Golan Heights:** Golan Heights, 3.viii.1994, M. Warburg (1♂; TAUI); Panyas [Baniass], 21.ii.1974, D. Furth (1♀; TAUI); Senir, 25.v.2005, L. Friedman (1♂; TAUI); Senir [Hatzbani] River, 12.v.1998, V. Chikatunov (1♀; TAUI); Naḥal 'Iyyon Reserve, haTanur, 20.ii.2002, L. Friedman (1♂; 2♀; TAUI); Merom Golan, 6.v.2000, V. Chikatunov (1♂; TAUI), 12.vi.2000, V. Chikatunov (1♂; 5♀; TAUI), 27.v.2003, L. Friedman (1♂; TAUI); Merom Golan, Bental Reservoir 33°9'N 35°47'E, 25.v.2005, L. Friedman (1♀; TAUI), 30.iv.2006, L. Friedman (1♀; TAUI); Ma`agar Bental (=Bental Reservoir), 33°08'N 35°47'E, 7.v.2007, V. Chikatunov (1♂; TAUI); Qazrin, 21.v.2002, L. Friedman (1♂; TAUI); Yehudiya Forest Nature Reserve [Qusbiye], 21.ii.1974, D. Furth (1♂; TAUI), 28.iv.1974, D. Furth (1♂; TAUI); Yehi'am, 22.ii.1974, D. Furth (1♂; TAUI); **Upper Galilee:** Kefar-Szold, 13.v.1973, D. Furth (1♀; TAUI); Ne`ot Mordekhai, 25.iv.2004, L. Zarabi, pheromone trap (1♀; TAUI), 30.v.2005, L. Zarabi, V. Chikatunov, pheromone trap (1♀; TAUI), 17.i.2006, L. Zarabi (1♀; TAUI); Ramot Naftali, 22.v.2002, L. Friedman (1♀; TAUI); 'En Ya'aqov, 12.v.2006, I. Shtirberg (1♀; TAUI), 1.xii.2006, I. Shtirberg (1♀; TAUI), 14.i.2007, I. Shtirberg (1♂; TAUI); Bar'am Forest, 670 m, 32°02'N 35°26'E, 22.xi.2006, A. Freidberg (1♀; TAUI); Dalton, 12.iii.2007, G. Wizen (1♂; TAUI); Har Meron, 1100 m, 5.vi.1974, D. Furth (3♂; 2♀; TAUI), 21.x.1996, L. Friedman on *Pistacia palestina* (1♀; TAUI), [Mt. Meron], 1100 m, 15.v.1997 (1♀; TAUI); Har Meron, 1100 m, 32°59'N 35°25'E, 22.xi.2006, L. Friedman (1♂, 3♀; TAUI), A. Freidberg, 1♀; TAUI); Kefar Masaryk, 12.iv.1984, Q. Argaman (1♂; 1♀; TAUI); **Lower Galilee:** Ya'ar Segev (Segev Forest), 6.ix.1985, M. Warburg (1♂; 1♀; TAUI), 26.ix.1985, M. Warburg (1♀; TAUI); Segev, 25.x.1994, M. Warburg (3♀; TAUI); Har Yavne`el, E Mizpe Elot, 8.iii.2002, E. Orbach (1♀; TAUI); Har Tavor, 9.v.1978, D. Furth (1♀; TAUI); Tavor, 24.iv.1974, D. Furth (1♂; TAUI); Bet Alfa, 3.vi.1981, Q. Argaman (1♀; TAUI), 10.i.2002, D. Ben-Yaqir on *Vicia* sp. (1♀; TAUI); Naḥal Tavor, 26.iii.2001, L. Friedman (1♂; TAUI); Kokhav haYarden, 26.iii.2001, V. Chikatunov (2♂; 4♀; TAUI), 27.iii.2001, L. Friedman (2♂; 8♀; TAUI; 1♀; CVC); Har Gilboa', 23.iii.1998, R. Hoffman (1♂; TAUI); **Carmel Ridge:** Bet Oren 18.v.1991, Y. Zvik (1♀; TAUI); Naḥal Oren, 24.v.1995, A. Freidberg (1♀; TAUI), 16.xii.1996, L. Friedman (7♂; 3♀; TAUI), 28.i.1997, T. Pavlicek & V. Chikatunov (2♀; TAUI), 11.ii.1997, T. Pavlicek & V. Chikatunov (1♂; TAUI), 15.xii.1997, L. Friedman (1♂; TAUI); Naḥal Oren, riverbed, 14.v.2003, L. Friedman (1♂; TAUI); Naḥal Tut, 4.v.1978, D. Furth (1♂; TAUI); 'En haShofet, 27.v.1984, J. Halperin, on *Ulmus canescens* (1♂; 1♀; TAUI); Damun, Har Carmel, 1.v.1960, J. Halperin, on *Pinus halepensis* (1♂; 1♀; TAUI); Menashe Hills, Ya'ar haEm, 1.v.1960, J. Halperin, on *Pinus halepensis* (1♀; TAUI), 16.v.1960, J. Halperin, on *Pinus halepensis* (1♀; TAUI); Menashe Hills, Yoqne'am, 20.iii.1960, J. Halperin, on *Pinus brutia* (1♂; TAUI); Ramot Menashe, 20.v.1982, Q. Argaman, on leave of flowering *Trifolium pratense* (1♂; TAUI); 'En haShofet, Irish Bridge [Hashofet, Irish Brd Dw], 19.v.2004, A. Gazith (1♀; TAUI); Zikhron Ya'aqov, 1.iv.1997, R. Hoffman (1♂; TAUI); 'Ammiqam, 8.ii.1997, R. Hoffman (1♀; TAUI); **Yizre`el Valley:** Qiryat Tiv'on, 19.v.1954, M. Sternlicht, on *Quercus ithaburensis* (1♂; TAUI); Merhaviyya,

2.ii.2001, L. Peled (1♂; 6♀; TAUI), 23.xii.2001, D. Ben-Yaqir, on *Vicia* sp. (4♂; 4♀; TAUI); **Samaria:** Qedumim, 29.xii.2000, L. Friedman, on *Cicer pinnatifidum* (3♂; 4♀; TAUI); **Northern Coastal Plain:** Binyamina [Benjamina], 25.xi.1948, H. Bytinski-Salz (1♀; TAUI); Pardes Hanna, 22.xii.1996, R. Hoffman (1♂; TAUI); **Jordan Valley:** Kinneret, ii.1973, D. Furth (1♂; TAUI); Sha'ar haGolan, 7.iii.2006, M. Vonshak (1♂; TAUI); **Hammat Gader,** 5.i.1978, D. Furth (1♀; TAUI), 8.v.1997, V. Chikatunov (1♀; TAUI); 'En Harod, 19.i.2003, L. Peled (4♂; 8♀; TAUI); Bet She'an, 1.v.2007, Y. Nakash, Malaise trap (1♂; TAUI); **Central Coastal Plain:** Rosh ha'Ayin, 15.x.1994 (1♂; TAUI); Antipatris, 11.ii.1984, Q. Argaman (1♂; TAUI); Herzliyya, 18.xii.2000, A. Freidberg, L. Friedman (2♂; TAUI); Tel Aviv, 20.iii.1954, Bash (1♀; TAUI); Miqwe Yisrael, 27.iv-2.v.2006, M. Vonshak (1♀; TAUI); **Judean Foothills:** Latrun, 30.iii.1974, D. Furth (1♂; TAUI); Deir Ayoub, 20.iii.1939, J. H. Brair (3♂; 5♀; TAUI), 27.iii.1939, J. H. Brair (1♂; 2♀; TAUI), 11.iv.1939, J. H. Brair (8♂; 4♀; TAUI); Upper Nahal Soreq, Mizpor, Point East, 17.iv.2001, L. Friedman (1♂; TAUI); Shores, 8.iii.1974, D. Furth (1♂; TAUI); Shimshon [Shimpson], 7.ii.1973, D. Furth (1♂; TAUI); Bet Shemesh, 17.iv.1974, D. Furth (1♂; TAUI); Har Tuv, 3.iii.1954, J. Ben Tov (1♀; TAUI); Newe Shalom, 13.v.1997, R. Hoffman (2♀; TAUI), 19.v.1997, R. Hoffman (1♂; TAUI); **Judean Hills:** Nes Harim, 13.iv.1963, Katznelson (1♀; TAUI); 'En Hemed [Aqua Bella], 8.v.1954, J. Wahrman (1♂; TAUI); **Hevron Desert,** 26.iii.1974, D. Furth (1♂; TAUI); Yerushalayim [Jerusalem], 4.i.1940, H. Bytinski-Salz (1♀; TAUI), 26.xi.1940, H. Bytinski-Salz (1♀; TAUI), 12.ii.1957, M. Vieselfish (1♂; 1♀; TAUI), 18.ii.1957 (1♀; TAUI), 15.vii.1972, M. Tintpulver (1♂; TAUI), 23.v.1973, M. Tintpulver (1♂; TAUI); Yerushalayim [Jerusalem, Hadassa], 14.v.1965 (1♂; 2♀; TAUI); **Zur Hadassa,** 21.iv.2001, Y. Mandelik (2 ex.; TAUI), Kefar 'Ezyon, i.1943 (1♀; TAUI); Matta', 13.i.2007, I. Shtirberg (1♂, 2♀; TAUI); 'Adullam, 20.v.2007, O. Skutelsky (2♀; TAUI), 23.x.2007, V. Skutelsky (1♀; TAUI), 10.iii.2008, O. Skutelsky (1♀; TAUI), 15.v.2008, O. Skutelsky (1♀; TAUI); Zekharya, 16.ix.2001, Y. Mandelik, **Southern Coastal Plain:** Rehovot, vi.1951 (3♂; 1♀; TAUI); Gan-Yavne, 20.i.1952 (1♂; TAUI); Re'em Junction, 10.vi.1987, I. Susman (2♂; TAUI); Segula, Qiryat Gat, 5.v.1995, V. Chikatunov (1♂; TAUI); Qiryat Gat, 22.iv.1962, Katznelson (1♀; TAUI); 'En Zurim, 27.i.2002, D. Ben-Yaqir, on *Cicer pinnatifidum* (1♂; 1♀; TAUI); **Helez,** 27.ii.1974, D. Furth (2♀; TAUI); **Northern Negev:** Lahav, 27.ii.1974, D. Furth (1♀; TAUI), 12.ii.1982, Q. Argaman (1♂; TAUI), 23.iii.2006, I. Shtirberg (1♀); Park Nahal Besor, 7.v.2003, L. Friedman (1♀; TAUI); **Hazerim, N. Negev,** 28.ii.1989, E. Orbach (1♀; TAUI); Be'er Sheva', 28.iv.1940, H. Bytinski-Salz (1 ex.; TAUI), 14.iii.1946, H. Bytinski-Salz (1♀; TAUI); **Judean Desert:** Nahal Perat [W. Kelt], 18.iv.1974, D. Furth (1♂; TAUI); Eshkolot, 31°24'N' 34°54'E, 24.i.2002, L. Friedman (1♀; TAUI); Eshkolot, 8.v.2006, I. Shtirberg (2♀; TAUI); Lehavim, 7.iv.1998, L. Friedman (1♂; TAUI); **Dead Sea Area:** Qalya [Kallia], spring 1934 (1♂; TAUI); **Zomet Zohar,** 9.vi.1997, A. Freidberg (1♀; TAUI).

SYRIA: Al Hoz 23.v.02, P. Weill leg (4 ex., CPEL). CYPRUS: Limassol, 12.i.1951, Mavromoustakis (1 ex.; TAUI).

Distribution

Palearctic (Dieckmann, 1980). Macaronesia (Machado & Oromí, 2000). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966a, b), as *S. crinitus* Herbst. Recorded from Jordan by Katbeh-Bader (2002).

Host Plants

On several tribes of Leguminosae (Phaseolae, Hedysareae, Genisteae, Viciae and Trifolieae). In Israel; *Trifolium* spp., *Medicago* spp., *Vicia sativa*.

Remarks

Sitona hebraeus Stierlin 1884 is a junior synonym of *S. macularius* (Marsham), according to Reitter (1903). Reitter referred to it one of the seven varieties of *S. macularius*, but we consider his diagnosis of little subspecific value.

***Sitona puncticollis* Stephens, 1831**

(Figs. 22, 45)

Material Examined

ISRAEL: **Hermon:** Har Hermon, 2200 m, 25.vi.1997, V. Chikatunov (1♀, TAUI); Har Hermon, Mizpe Shlagim, 2100 m, 11.vi.2003, L. Friedman (1♂, TAUI); Har Hermon, 2000 m, 10.viii.1970, S. Blondheim, M. Broza (1♂, 2♀; TAUI), 22.v.1973, A. Freidberg (1♀; TAUI), 25.v.1999, L. Friedman (1♀; TAUI), 29.v.2000, L. Friedman (1♀; TAUI); Har Hermon [Mt. Hermon], 1800 m, 25.x.1977, D. Furth (1♂, 3♀; TAUI), 28.x.1977, D. Furth (1♂; TAUI), 25.v.1998, V. Chikatunov (3♂, 3♀, TAUI); Har Hermon, 1700 m, 7.v.2009, L. Friedman (1♂; TAUI); Har Hermon [Mt. Hermon], 1650 m, 5.v.1979, D. Furth (1♂; TAUI); Har Hermon [Mt. Hermon], 1600 m, 25.x.1977, D. Furth (1♂; TAUI), 20.v.1997, I. Yarom (1♂, 1♀, TAUI); **Golan Heights:** Berekhat Ram, 19.vi.1972 (1♂, TAUI); Bab el-Hawa, 20.vi.1972 (1♀, TAUI), 2.vii.1979 (1♂; TAUI); Merom Golan, 33°08'N 35°46'E, 1.vi.2008, M. Lebel (1♂, TAUI); Yehudiya [Golan Qusbyie], 4.v.1979, D. Furth (1♀, TAUI); **Upper Galilee:** 'En Zetim, 33°00'N 35°29'E, 8.v.2007, L. Friedman (2♂; TAUI); Har Meron [Mt. Meron], 7.v.1979, D. Furth (1♂; TAUI), [Meiron], 24.v.2006, N. Angel, pitfall (1♀; TAUI), v.2007, N. Angel, pitfall (1♂; TAUI); **Carmel Ridge:** Har Karmel, nr. Haifa University, 17.iv.2009, A. Nir (1♂; TAUI).

TURKEY: Antakya, 10.v.2000, A. Freidberg, H. Ackerman, L. Friedman (1 female; TAUI).

Distribution

Widely distributed in the Palaearctic Region (Dieckmann, 1980); Macaronesia (Borges *et al.*, 2005). New record for Israel

Host Plants

Trifolieae (*Trifolium* spp., *Medicago* spp., *Melilotus* spp.), Viciae (*Vicia* spp., *Lens* spp.). In Israel: *Trifolium* spp.

***Sitona syriacus* Stierlin, 1884**

(Figs. 23, 46, 55, 87)

Material Examined

ISRAEL: **Northern Coastal Plain:** 'Akko [Ako], 15.iii.1957, on *Trifolium* (1♀; TAUI); Ma'agan Mikha'el, 23.iv.1998, L. Friedman (1♀; CVC); Nahal Taninim estuary, 20.iii.2001, L. Friedman leg, (2♂; TAUI); Pardes Hanna, 3.v.1997, R. Hoffman (1 ex.; TAUI); Pardes Hanna 18.xii.1996, R. Hoffmann (1♂; CVC); **Jordan Valley:** Nahal Peza'el [Wadi Peza'el]; 2.viii.1982, Q. Argaman (1♂, 1♀; TAUI); **Central Coastal Plain:** Tel Aviv, Tel-Barukh beach, 29.viii.1978, Y. Hadar, (1♀; TAUI), Ramla, Letourneux leg, (3 ex., MNHN); **Southern Coastal Plain:** Urim, 20.xi.1946, H. Bytinski-Salz (1 ex.; TAUI); **Dead Sea Area:** Nahal 'Arugot, 25.v.1981, Q. Argaman (1♀; TAUI).

CYPRUS: Cyprus, Reitter (1 ex.; MNHN). EGYPT: Alexandria, iv.1914, coll. Alfieri, (1 ex.; MNHN).

Distribution

Syria, Egypt (Emden & Emden, 1939; Velázquez de Castro, 2009), Cyprus (Alziar, 2007), Greece (Rhodos) (Bayer *et al.*, 2007), Israel (Bodenheimer, 1937).

Host Plants

Unknown. Bayer *et al.* (2007) suggested that *Lotus halophilus* Boiss. & Spruner can be a host plant.

Sitona sp.

(currently under description by Korotyaev and Velázquez de Castro)

(Figs. 24, 47, 88)

Material Examined

ISRAEL: **Hermon:** Har Hermon [Israel, Mt. Hermon], 1750 m, 25 km NE of Qiryat Shemona, 10.v.1994, M. G. Volkovitsh. (1♂ **HT**; TAU, 2♂ **PT**; 2♀ **PT**, ZIN, CVC); **Golan Heights:** Golan Mas'sada, 28.iv.1974, D. Furth (1♂, **PT**; TAUI).

Distribution

Israel (Mount Hermon and an adjacent elevated northern part of the Golan Heights).

Host Plants

Unknown

Sitona wahrmani Velázquez de Castro and Friedman n. ssp.

(Figs. 25, 48, 66, 73, 89)

Diagnosis

Similar to *Sitona macularius*, but the head is narrower and eyes are less prominent, the head (including eyes) is not wider than the anterior margin of the pronotum (in *S. macularius* the head (including eyes) is distinctly wider than the anterior margin of the pronotum).

Description

Body length: male 3.2-3.3 mm, female 3.5-4.5. Colour black, except antennae and legs brown. Vestiture: comprise white and light brown rounded scales, forming on pronotum three dorso-median light stripes, with most dorsal stripe narrower. Elytra covered with white scales, except interstriae 1 and 2, covered with brown scales, and with erect setae; most of setae white, part of setae on head, between stripes on pronotum, on uneven intervals and on interval 2 black. Head: frons slightly concave, with short furrow reaching middle of eye; eye oval, not or slightly prominent; head including eyes narrower than anterior part of pronotum (97%). Prothorax: slightly rounded laterally, wider than long (W/L 90); proacetabula distant from anterior groove of prosternum. Elytra: elongate (R L/W 1,7), with distinct humeral callus. Male genitalia: aedeagus is of the same shape as in the closely related species *S. macularius*. Female genitalia: 8th sternite with lamina much wider than long, with large central part not sclerotized, and short spiculum ventrale (fig. 73), resembling that of *S. costipennis*. Spermatheca similar to that of most species of *Sitona*, with globoid corpus and narrow cornus (fig. 66).

Etymology

S. wahrmani is named in honor of late Prof. Jacob Wahrman (1924-2005) of the Hebrew University of Jerusalem, a pioneer of insect genetics and indefatigable collector of insects, leaving after him important collection of Israeli insects, now incorporated in TAUI.

Material examined

HOLOTYPE: Israel, Tzaror, Hatira, January 2003, Elli Groner/ 344/ label indicating female sex/ Red label: *Holotypus Sitona wahrmani* Velázquez and Friedman des. (1 ♀; TAUI), the proper name of the locality must be: Har Zaror, Hatira Ridge (Central Negev, near Sede Boqer).

PARATYPES: ISRAEL: Jordan Valley: Massu`a? [Massu'im], 28.xi.1994, Q. Argaman (1 ♀; TAUI); Gilgal, 32°00N' 35°26E', 16.iii.2005, L. Friedman (1 ♂; TAUI); **Judean Hills:** Yerushalaim [Judean Hills, Jerusalem], 27.iii.2005, S. Ziani (6 ♀; TAUI); Yerushalayim [Yerusalem], 18.vi.1953 (1 ♀; TAUI); Yerushalaim, Bet haKerem [Wadi Ruas] 1.v.1952 (1 ♀; TAUI and damaged specimen without abdomen, CVC); 'Adullam, 15.v.2006, E. Groner, V. Chikatunov (1 ♀; TAUI), 10.iii.2008, O. Skutelsky (1 ♀; TAUI); **Judean Desert:** Eshkolot, 8.v.2006, I. Shtirberg (1 ♀; TAUI), 9.xi.2006, I. Shtirberg (1 ♂; CVC), 30.xi.2006, I. Shtirberg (1 ♀; TAUI); **Dead Sea Area:** 5 km E No'omi, saline, 31°54N' 35°30E', 16.iii.2005, L. Friedman (1 ♀; CVC), I. Zonstein (2 ♂; TAUI); Nahal Yitav Spill, 31°55N' 35°30E', 16.iii.2005, T. Stern (1 ♀; TAUI); Yeriho [Palestine, Jericho], F. S. Bodenheimer (4 ♀; TAUI); 'Uja e-Tahta, 10 km E Yeriho, cave, 6.iv.1969, M. Warburg (1 ♂?; TAUI); Deir Hajla, roadside, 31°49'N 35°30'E, 16.iii.2004, L. Friedman (1 ♀; TAUI); **Northern Negev:** Lehavim, 7.iv.1998, L. Friedman (1 ♀; TAUI); Be`er Sheva', 2.xii.2007, I. Renan (1 ♀; TAUI); Bor Mashash, 25.iv.1997, R. Hoffman (1 ♀; TAUI); **Central Negev:** Nahal Boqer [Boqer], iii.2003 (1 ♀; TAUI); Nahal Boqer [Boqer Wadi], iii.2005, I. Renan (1 ♀; TAUI); Zaror, Hatira Ridge [Tzaror, Hatira], xii.2002, E. Groner (1 ♀; TAUI); Haluqim Ridge [Khalukim Ridge, Negev], 11.iii.2002, E. Groner (1 ♀; TAUI); 5 km E Borot Loz, 6.iv.2005, A. Freidberg (1 ♂; TAUI); Har Horesha [Khurashe], 22.4.1952, J. Wahrman (1 ♀; TAUI).

The holotype is glued to a card rectangle, the dissected abdominal segments and genitalia are glued next to it; labeled with red holotype label; in excellent condition; deposited at TAUI. The paratypes labeled with blue paratype labels. Most paratypes are at TAUI, one male and one female paratypes deposited in CVC, one male and one female paratypes deposited in CBOR; part of paratypes will be deposited at the Natural History Museum, London, UK, Paris Museum of Natural History, France, Museo Nacional de Ciencias Naturales, Madrid, Spain and the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

Distribution

Israel (Jordan Valley, Dead Sea Area, Judean Desert and the Negev Desert). The distribution of *S. wahrmani* partly overlaps with the distributional range of the closely related *S. macularius*, although *S. wahrmani* distinctly occurs only in the arid parts of Israel.

Host plants

Unknown.

Genus *Schelopius* Desbrochers, 1872
***Schelopius planifrons* (Fåhraeus, 1840)**
(Figs. 26, 49, 56, 74)

Material studied

ISRAEL: **Jordan Valley:** Deganya Alef, Bet Gordon, 5.vii.1938, Y. Palmoni (1♂; TAUI); **Arava Valley:** Gerofit, iv-v.2003, D. Uchitel, V. Chikatunov (1♀; TAUI); 'En 'Avrona, 25.x.2003, U. Shanas, V. Chikatunov (1♀; TAUI); 'En Yotvata, 30.vii.2003, U. Shanas, V. Chikatunov (2♀; TAUI; 1♂; CVC).

JORDAN: South part of 'Arava Valley, 13-18.vii.2004, U. Shanas, V. Chikatunov (1♂; TAUI), 13-18.x.2004, U. Shanas, V. Chikatunov (2♀; TAUI). UZBEKISTAN: Kyzylkum (2 ex. CVC); Dzherani Reserve, Rt. A380, 30-40 km SE Bukhara, 1.vi.2007, S.& I. Zonstein (4♂, 2♀; TAUI). TURKMENISTAN: 80 km. SE Ashgabat (5 ex. CVC); Tedchen (2 ex. DEI). KAZAKHSTAN: Turgai (1 ex. DEI); Aral Sea (1 ex. CVC).

Distribution

Middle Asia, Iran (Perrin, 1970). New record for Israel and Jordan.

Host Plants

Unknown

Morphological remarks

The aedeagus is figured for the first time (fig. 56)

DISCUSSION

Twenty three species of Sitonini are recorded from Israel in the present survey. The species are assigned to four genera: *Charagmus* (3 species), *Coelositona* (3 species), *Sitona* (16 species) and *Schelopius* (1 species).

Zoogeography.

The zoogeographical distribution of the Sitonini of Israel is summarized in Table 1. Israeli fauna of Sitonini is distinctly of Palaearctic origin, with dominance of the Mediterranean elements (>50%) and high local endemism (two species are East mediterranean endemics and three are local endemics of Israel). It is unclear to us whether *Schelopius planifrons* is an Eremic element reaching deserts of Middle Asia, or it is an Irano-Turanian element.

Chorology:

Four species occur all over the country, although distinctly prefer the Mediterranean zone: *Sitona hispidulus*, *S. lineatus* and *S. macularius* and *S. brucki*. The first three are common widely distributed Palaearctic species, also known in most parts of their distributional range as pests of cultivated pulses; the south-mediterranean *S. brucki* occurs sporadically all over the country, never collected in close proximity to agricultural areas.

Fourteen species occur in the Mediterranean zone. *Sitona lepidus* and *S. puncticollis* are restricted to high altitudes on Mount Hermon and in the Upper Galilee, the Golan Heights and the Carmel Ridge, those points represent the southern border of their distribution. *Sitona* sp. (currently under description by Korotyaev and Velázquez de Castro) was found so far only at high altitudes on Mount Hermon and the adjacent northern part of the Golan Heights. *Sitona syriacus* occurs predominantly near streams; probably its occurrence fits the range of its host plant, a kind of a mesophilic wild Fabaceae. *Sitona fairmairei* occur over the Mediterranean zone of Israel, but predominantly in its southern and eastern arid and semi-arid parts, on the border of the desert. The rest of species occur all over the Mediterranean zone commonly (*Coelositona limosus*, *S. bicolor*, *S. concavirostris*, *S. lividipes*) or uncommonly to rarely (*Charagmus gressorius*, *Ch. intermedius*, *Coelositona villosus*, *Sitona aliciae* n. sp., *S. cylindricollis*).

Charagmus stierlini and *Coelositona ocellatus* are associated with sandy biotops, both along the Coastal Plain (coastal dunes and parts of the Mediterranean zone with Hamra (Chromic Luvisol) soils) and Northern and Central Negev.

The mysterious *Sitona demoflysi* was collected predominantly in pitfall traps in Central Negev, in limestone rock desert, apart from one specimen collected in the dunes of Northern Negev. It is the first time this rare and peculiar species is found outside Tunisia, therefore expanding its distributional range far to the east.

Sitona wahrmani n. sp. comprises population partly sympatric with the close related *S. macularius*, occurring only in the arid, semi-desert and desert areas. It does not occur the Mediterranean zone in contrary to *S. macularius*, which is quite common in the the arid regions, and very common in the Mediterranean zone.

Schelopius planifrons, previously known only from the deserts of Middle Asia, is recorded for the first time for the West Palaearctic area. This record unexpectedly expands its distributional range to the west. Its distribution in Israel is restricted to the Jordan Valley, one of the lowest (-200m – -400 m) and wormest places in the world.

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Illustrations:

Figures 1-3. Morphological characters of Sitonini

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74. *Schelopius planifrons* 75. *Charagmus gressorius*, 76. *Ch. intermedius*, 77. *Ch. stierlini*, 78. *Coelositona limosus*, 79. *C. ocellatus*, 80. *C. villosus*, 81. *S. lividipes*, 82. *Sitona aliciae* n. sp., 83. *S. bicolor*, 84. *S. brucki*, 85. *S. demoflysi*, 86. *S. fairmairei*, 87. *S. syriacus*, 88. *Sitona* sp., 89. *S. wahrmani* n. sp.. Photos 74, 82, 83, 85, 87-89 by A. J. Velázquez de Castro, photos 75-81, 84, 86) by O. Rittner.

Table 1. Zoogeographical distribution of Sitonini of Israel. (I) indicates species introduced and established in North America (after Bright 1994).

Zoogeographical distribution	Species
Wide Palaearctic	<i>Charagmus gressorius</i> , <i>Sitona cylindricollis</i> (I), <i>S. hispidulus</i> (I), <i>S. lepidus</i> (I), <i>S. lineatus</i> (I), <i>S. macularius</i> , <i>S. puncticollis</i>
Euromediterranean	<i>Charagmus intermedius</i>
Circummediterranean	<i>Coelositona limosus</i> , <i>Sitona lividipes</i>
South Mediterranean	<i>Charagmus stierlini</i> , <i>Coelositona ocellatus</i> , <i>Sitona brucki</i> , <i>S. fairmairei</i> , <i>S. demoflysi</i>
East Mediterranean	<i>Coelositona villosus</i> , <i>Sitona syriacus</i>
Endemic to Israel	<i>Sitona aliciae</i> n. sp., <i>S. wahrmani</i> n. sp., <i>Sitona</i> sp.
East Mediterranean - Middle Asian	<i>Schelopius planifrons</i> , <i>Sitona bicolor</i> , <i>S. concavirostris</i>