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Sitonini of Israel (Coleoptera: Curculionidae: Entiminae)

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ABSTRACT

A survey of the weevil tribe Sitonini was conducted in Israel, recording a total of 23 species in four genera. *Sitona aliciae* Velázquez de Castro n. sp. and *S. wahrmani* Velázquez de Castro and Friedman n. sp. are described, and five additional *Sitona* species *(S. brucki* Allard*, S. demoflysi* Normand, *S. fairmaieri* Allard, *S. lepidus* Gyllenhal*, S. puncticollis* Stephens, and *Schelopius planifrons* Fåhraeus) are recorded from Israel for the first time. Genitalia illustrations are given for new and poorly known species (i.e., *S. brucki*, *S. syriacus* Stierlin, *S. fairmairei,* and *S. demoflysi*). Data on the distribution and host plants of species and keys for their determination are provided.

KEYWORDS: *Charagmus*, *Coelositona*, *Schelopius*, *Sitona*, new species, identification key, taxonomy, zoogeography

INTRODUCTION

Sitonini is a tribe within the broad-nosed weevils (Entiminae), which is widely distributed in the Palaearctic and Nearctic regions and in parts of the Palaeotropic region (South Africa, Madagascar, southeast Asia). No native Sitonini are known from South America, Australasia, and tropical Africa, but a few pest *Sitona* species were introduced into these regions and have been spreading there in recent years (Velázquez de Castro et al., 2007). The tribe Sitonini is distributed in a wide range of biotops, mainly mesophilic and xerophilic, and is usually represented by large populations. The Palaearctic fauna of Sitonini comprises six genera, of which *Andrion* and *Schelopius* include one species each, *Velazquezia* comprises three species, *Charagmus* six species, *Coelositona* ten species, and *Sitona* around 100 species. The most characteristic morphological features of the tribe are: mandibles covered by scales, deciduous appendages of mandibles absent or modified and merged with mandible, therefore mandible lacks the typical scar on its dorsal surface that is present in all other Entiminae; maxillae with galea and lacinia broadly

separated by the stipes, prementum narrowed towards distal border; sternite eight in the female with a short spiculum ventrale (except for four species of *Charagmus* that have an exceptionally flat and long spiculum ventrale), whereas in most other Entiminae, the spiculum ventrale is much longer.

All Sitonini are associated with leguminous plants (Fabacae, Mimosaceae), both in the adult and immature stages. Larvae feed on roots and root nodules; adults feed on green parts of the plant, usually on the same host plant as the larvae. Many species are considered serious agricultural pests of cultivated legumes and are therefore well studied, both with regard to their taxonomy and ecology, particularly in Europe and North America. Damage is caused by both adults and larvae. Adults are particularly harmful at the time of seed germination, as they injure young shoots and cause wilting and death. Adults that feed on adult plants make U-shaped holes in the leaves and in case of severe infestation, cause extensive to total defoliation of adult plants (Schegolev, 1941; Wiech and Clements, 1992). Larvae devour roots, causing exposed injuries, and particularly consume the contents of nitrogen-accumulating root-nodules, which causes a marked reduction of nitrogen contents in the roots leading to a 12–14% decrease in yield (Schegolev, 1941).

The weevil fauna of Israel is still not sufficiently studied (Friedman, 2009), although the Sitonini are better known than most other weevil groups due to their agricultural importance. Fourteen Sitonini species have been recorded so far from Israel: nine by Bodenheimer (1937), three by Melamed-Madjar (1966b), one by Velázquez de Castro et al. (2010), and one by Korotyaev and Velázquez de Castro (2011). The ecology, phenology, and host preferences of the pest species in Israel were studied by Melamed-Madjar (1966a,b); Plaut (1960a,b, 1961, 1973, 1976), Peled (2007); and Rivnay (1962).

The present study was inspired by a request to identify the *Sitona* pests in legume fields in ‘Emeq Yizre`el (the Jezre’el Valley) by Dr. David Ben-Yakir and Mr. Lior Peled from the Volcani Center, Bet Dagan, and by Ms. Dganit Sade from the ‘Emeq Yizre`el Research and Development Center. The project soon expanded to include species that are not necessarily associated with cultivated legumes. Overall, our study has nearly doubled the number of sitonine species that are currently known from Israel.

MATERIALS AND METHODS

We studied material from the National Collection of Insects, Tel Aviv University (TAUI), the collection of the Plant Protection and Inspection Services, Ministry of Agriculture (PPIS), as well as material that was newly collected for this study. Our examination included specimens that were studied by F.S. Bodenheimer and V. Melamed-Madjar for their publications on the *Sitona* species of Israel (Bodenheimer, 1937; Melamed-Madjar, 1966a,b).

The following are the institutions and private collections (listed by acronym) in which the studied material is deposited:

BMNH—Natural History Museum, London, UK

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 AntonioVelázquez de Castro, Valencia, Spain
CWIN—Private collection of Herbert Winkelmann, Berlin, Germany
DEI—Senckenberg, 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 Müzeum 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, Russia

Body length of adult beetles was measured in profile, from the anterior margin of the eye to the elytral apex. Terminology of structures of the internal sac follows Velázquez de Castro et al. (2007). Biological data are based on Velázquez de Castro et al. (2007) and Melamed-Madjar (1966a,b). Transliterated names of localities in Israel follow the "Israel Touring Map" (1:250,000) and "List of Settlements", published by the Israel Survey, Ministry of Labor. Where names of localities have changed, the most recent transliterated Hebrew names are given followed by the old names in brackets, for example: 'En Hemed [Aquabella]. Erroneous spellings are also included in brackets following the correct spelling. Botanical nomenclature follows Feinbrun-Dothan and Danin (1991). Regional subdivision of Israel follows Theodor (1975).

KEY TO THE GENERA OF 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***
   One species: *S. planifrons* (Figs. 26, 49, 74)
-. Body usually oblong, length 2.6–8.0 mm (may be longer in *Ch. gressorius* and *C. limosus)*; apex of rostrum incised in dorsal view, dorsal surface of rostrum variable, not limited by thick carina laterally, scrobes variable **2**
2. Scutellum with erect scales forming two bunches or tufts (Fig. 1); odd elytral interstices raised (character absent or invisible in *S. gressorius*); scrobes weakly curved (Figs. 27–29); body length 4.5–9.5 mm ..... ***Charagmus***
-. Scutellum with recumbent scales, elytral interstices frequently flat; scrobes and body size variable **3**
3. Rostrum with two dorsal longitudinal keels (Figs. 7–9) and linear or slightly curved scrobes (Figs. 30–32); eyes protuberant (Figs. 7–9); pronotum strongly contracted anteriorly and posteriorly (Figs. 7–9); fore coxae reaching prosternal line (Fig. 2); body length 4.5–10.0 mm .... ***Coelositona***

-. Rostrum without distinct dorsal keels, with angular scrobes (Figs. 33–48); other characters variable; body length usually 2.8–5.0 mm (can reach 6.5–7.0 mm in *S. demoflysi* and *S. lepidus*.....***Sitona***

GENUS *CHARAGMUS* SCHOENHERR, 1826

KEY TO SPECIES OF THE GENUS *CHARAGMUS*

1. Pronotum dark gray with narrow, median, longitudinal, bright white stripe, 0.12–0.16 times as wide as pronotum, comprised of white semiopalescent scales; elytral interstices barely raised, at most at base of elytra; elytra evenly colored, elytral pubescence comprised of delicate, pale, round scales; thin pale semierect setae 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 stripe, 0.6–0.8 times as wide as pronotum; odd interstices distinctly raised, elytra unevenly colored, elytral pubescence different; body length 6–8 mm..... **2**
2. Pronotum as long as wide, slightly convex laterally, apex of rostrum with longitudinal keel (Figs. 5, 28, 76); elytral pubescence comprised of delicate, round, white and yellow scales and apressed setae: thick, black setae on 3rd interstice and narrow white setae over elytra; coloration of elytra: 1st and 2nd interstices pale gray, 3rd interstice at least partially black, 4th interstice yellow, at least medially, lateral interstices gray (Fig. 76); interstices without row of erect setae; 8th sternite of female whith short spiculum ventrale; body length 6–8 mm ....***intermedius***
-. Pronotum 0.8 times as long as wide, distinctly convex laterally, apex of rostrum without longitudinal keel (Figs. 6, 29, 77); elytral pubescence comprised of coarse, pale, whitish-yellow round scales and thick erect white and brown setae; coloration of elytra: 1st and 2nd interstice yellowish, other interstices brownish, occasionally with dark and pale patches (Fig. 77); all interstices (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, 33º0′N 35º25′E, 4.vi.2005, A. Timm and T. Assmann, pitfall (1♂; TAUI); **Lower Galilee:** Tur'an Peak, 555 m, 32º47.8′N 35º22.5′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 and 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

Europe, Mediterranean region, Middle Asia (Dieckmann, 1980), Macaronesia (Machado and Oromí, 2000; Borges et al., 2005). Israel (Bodenheimer, 1937; Melamed-Madjar, 1966b; Gaedike, 1971).

Host Plants

Cytisus, *Genista*, *Lupinus* and *Ornithopus*; in Israel: collected on *Trifolium* spp., one adult observed in Park haYarqon in Ramat Gan feeding on *Lupinus* (A. Nir, personal communication.)

Charagmus intermedius (Küster, 1847)

(Figs. 5, 28, 76)

Material Examined

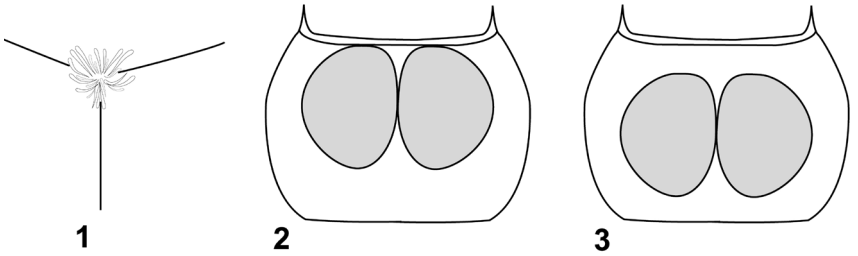
ISRAEL: **Hermon:** Har Hermon, 1800 m, 25.vi.1998, V. Chikatunov (1♀; TAUI); 1700 m, 7.v.2009, L. Friedman, on *Astragalus* (1♂; TAUI); 1600 m, 33°18.1′N 35°46.2′E, 20.vii.2009, L. Friedman, on *Astragalus* (1♀; TAUI); **Upper Galilee:** 'Akko [Ako], 9.v.1957, E. Rivnay, on alfalfa (1♂; PPIS); 'En Zetim, 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

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

Host Plants

Cytisus and *Hippocrepis*; in Israel: *Medicago sativa* (Melamed-Madjar, 1966b), and found in the present study on *Astragalus* sp. on Mount Hermon.



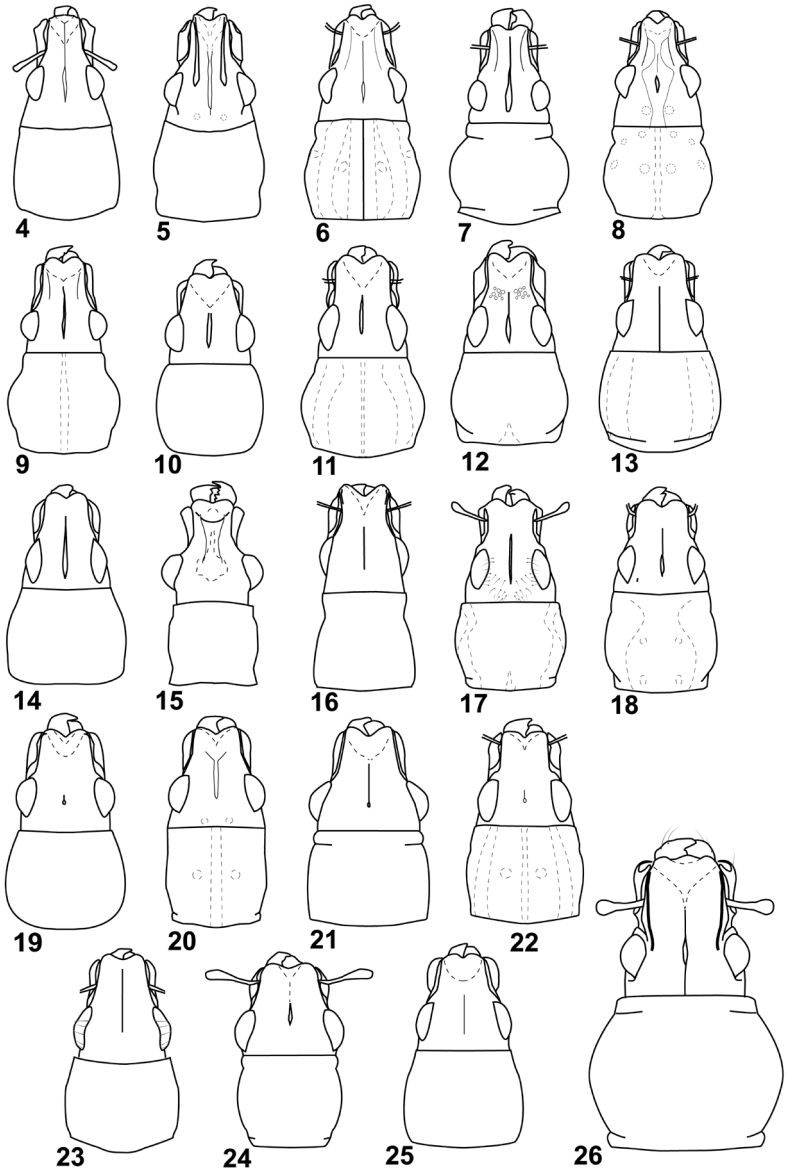
Figs. 1–3. Morphological characters of Sitonini. 1. Scutellum of *Chragmus gressorius*. 2. *Sitona lineatus*, pronotum, ventral view. 3. *Sitona brucki*, pronotum, ventral view.

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, 33º01′N 35º21′E, 12.xii.2005, A. Timm and 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 Harbor, 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. Bodehheimer (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 and L. Friedman (1♂, 2♀; TAUI); Herzliyya, hill, 32º11′N 34º49′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**



Figs. 4–26. Sitonini, head and pronotum, dorsal view. 4. *Charagmus gressorius*. 5. *Ch. intermedius*. 6. *Ch. stierlini*. 7. *Coelositona limosus*. 8. *C. ocellatus*. 9. *C. villosus*. 10. *Sitona aliciae* n. sp. 11. *S. bicolor*. 12. *S. brucki*. 13. *S. concavirostris*. 14. *S. cylindricollis*. 15. *S. demoflysi*. 16. *S. fairmairei*. 17. *S. hispidulus*. 18. *S. lepidus*. 19. *S. lineatus*. 20. *S. lividipes*. 21. *S. macularius*. 22. *S. puncticollis*. 23. *S. syriacus*. 24. *S. volkovitshi*. 25. *S. wahrmani* n. sp. 26. *Schelopius planifrons*.

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 leZiyyon, 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 Ruhama, 31º31.883′N 34º42.275′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).

Host Plants

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

GENUS *COELOSITONA* GONZÁLEZ, 1971

KEY TO SPECIES OF THE GENUS *COELOSITONA*

1. Dorsal surface covered by sparse, long, erect setae and dense, shorter, appressed setae (Figs. 32, 80); body length 5.0–6.5 mm ..... ***villosus***
-. Dorsal surface covered by scales, without long erect setae, with or without small appressed setae **2**
2. Vertex without tufts of yellow or white setae, pronontum without spots or pattern very diffuse (Figs. 7, 30); elytra rounded laterally (Fig. 78); body length 5.0–10.0 mm ..... ***limosus***
-. Vertex with two tufts of yellow or white setae, pronotum with two dorsal rows of four clear spots, comprised of white scales (Figs. 8, 31); elytra parallel-sided (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 Haroshet, 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); Merhavya, 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 Frest, 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

Vicia and *Pisum*. This species is probably the most serious sitonine pest in Israel, particularly of vetch (*Vicia faba*, *V. narbonnensis*, *V. sativa*, *V. villosa*) but also of *Pisum* 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 Beqa', 300 m, 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 and 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 beet, M. Gorali (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 and Oromí, 2000); SE 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 and Fremuth (2003).

Host Plants

Unknown. Was collected in Tunisia on *Retama* and *Ononis*. In Israel, probably associated with *Retama raetam*.

Coelositona villosus (Allard, 1869)
(Figs. 9, 32, 80)

Material Examined

ISRAEL: [Palestine], F.S. Bodenheimer (1♀; TAUI); **Upper Galilee:** Hurfeish, batha, 675 m, 33º01′N 35º21′E, 10.i.2006, A. Timm and T. Assmann, pitfall (1♀; TAUI); Ziv'on, batha, 712 m, 33º01′N 35º25′E, 21.v.2005, A. Timm and T. Assmann, pitfall (1♀; TAUI), 5.iii.2006, A. Timm and 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 and Emden 1939), Cyprus (Alziar, 2007). Recorded from Israel by Bodenheimer (1937).

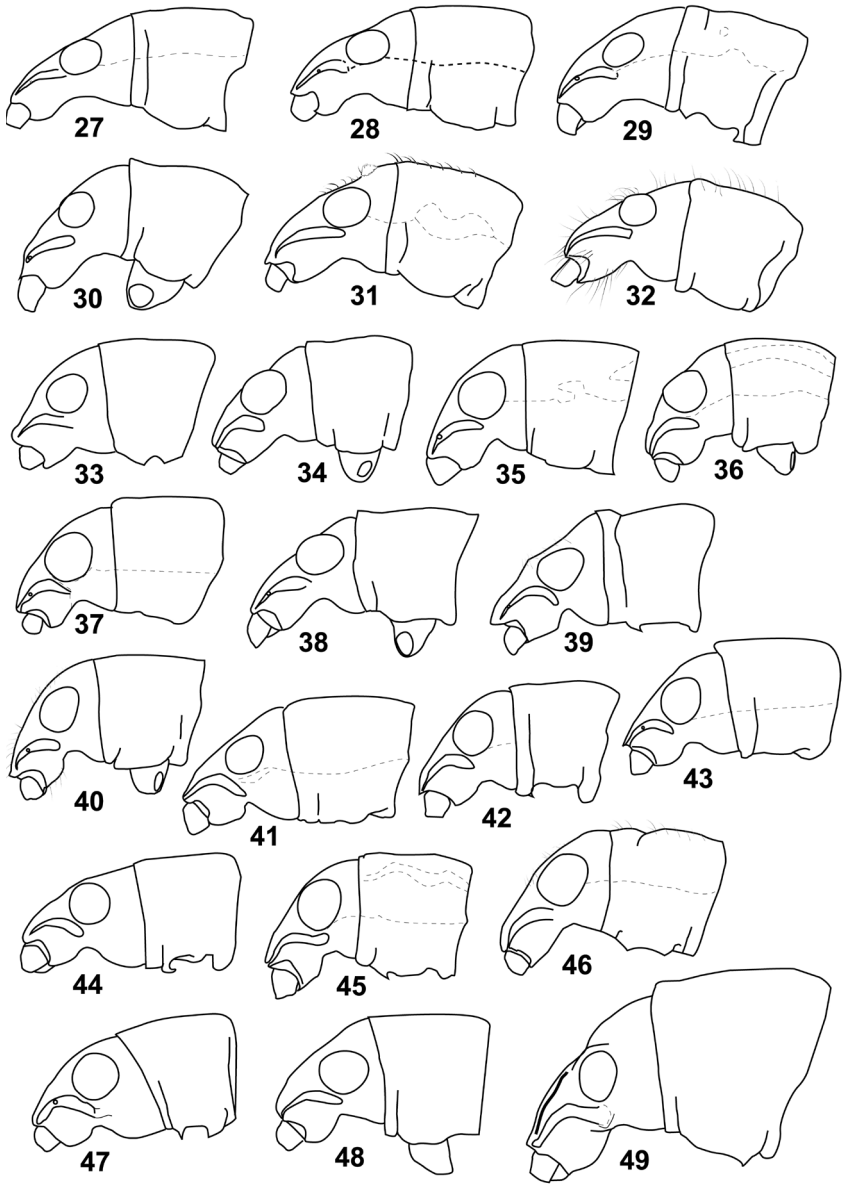
Host Plants

In Israel: collected on *Vicia* spp. and *Trifolium* spp., although it is unlikely that these are common hosts. *Coelositona villosus* belongs to the *cambricus–cinerascens–puberulus* species group, which feed exclusively on Loteae (rather than on Vicieae or Trifolieae).

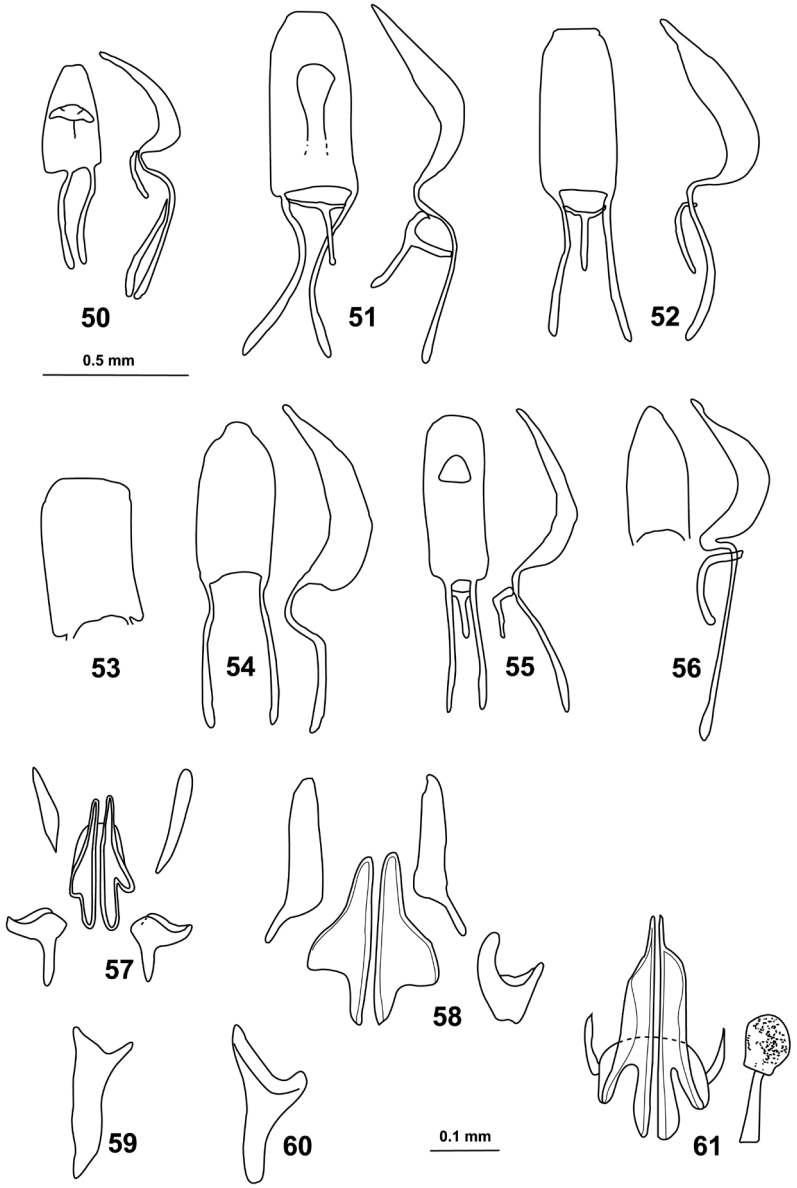
GENUS *SITONA* GERMAR, 1817

KEY TO SPECIES OF THE 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, at most with minute, appressed, piliform setae and by minute scales of various shape; body length 2.8–4.8 mm **3**
-. Elytra covered by erect, peg-like setae, particularly at apical third and by large, round scales; body length 2.9 mm (Figs. 24, 47, 88) ..... ***volkovitshi***
3. Body with wide, distinct, complete lateral stripe of pale scales (white, yellowish or with slight greenish shine), stretching from base of rostrum through latero-ventral part of pronotum, lateral parts of meso- and metanotum, to lateral side of abdominal sternites 1–4, but 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 without lateral stripe of pale scales, or stripe incomplete; coloration variable, same on appendages as on 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 forming pattern of longitudinal stripes; body length 2.8–3.5 mm (Figs. 10, 33 82) ..... ***aliciae* n. sp.**



Figs. 27–49. Sitonini, head and pronotum, lateral view. 27. *Charagmus gressorius*. 28. *Ch. intermedius*. 29. *Ch. stierlini*. 30. *Coelositona limosus*. 31. *C. ocellatus*. 32. *C. villosus*. 33. *Sitona aliciae* n. sp. 34. *S. bicolor*. 35. *S. brucki*. 36. *S. concavirostris*. 37. *S. cylindricollis*. 38. *S. demoflysi*. 39. *S. fairmairei*. 40. *S. hispidulus*. 41. *S. lepidus*. 42. *S. lineatus*. 43. *S. lividipes*. 44. *S. macularius*. 45. *S. puncticollis*. 46. *S. syriacus*. 47. *S. volkovitshi*. 48. *S. wahrmani* n. sp. 49. *Schelopius planifrons*.



Figs. 50–61. Sitonini, male genitalia. 50–56. Aedeagus. 57–61. Internal sack of aedeagus. 50. *Sitona aliciae* n. sp. 51. *S. bicolor*. 52. *S. cylindricollis*. 53. *S. demoflysi*. 54. *S. fairmairei*. 55. *S. syriacus*. 56. *Schelopius planifrons*. 57. *Sitona aliciae* n. sp. 58. *S. bicolor*. 59. *S. cylindricollis*. 60. *S. demoflysi*. 61. *S. fairmairei*.

-. Body and elytra covered by white, yellow, creamy and testaceous oblong and round scales, often forming pattern of longitudinal stripes on pronotum and elytra; body length 3.5–5.2 mm (Figs. 19, 42)..... ***lineatus***

5. Head at eye level at least as wide or wider than anterior part of pronotum (Figs. 15, 16, 21, 23)..... **6**

-. Head at eye level narrower than anterior part of pronotum (Figs. 11–14, 17, 18, 22) **12**

6. Frons deeply concave; eyes protuberant; pronotum cylindrical, slightly longer than wide; elytra slightly concave sub-basally, 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, wider or as wide as long; elytra not concave sub-basally, pubescence different **7**

7. Elytra with erect setae..... **8**

- Elytra without erect setae **11**

8. Eye convex, without anterior tuft of longer and darker setae; rostrum shallowly incised anteriorly; general coloration brown, pronotum and elytra with variable pattern; body length 3.0-4.5 mm..... **9**

- Eye flat, with anterior tuft covered by longer and darker setae; rostrum deeply incised anteriorly; general coloration gray, lateral part of pronotum and elytral interstices 3–5 usually pale; body length 5.0–5.5 mm (Figs. 16, 39, 86) ..... ***fairmairei***

9. Pronotum dorso-medially with cross-like or rhombus-like pattern of white scales; body length 4.0–4.5 mm (Figs. 23, 46, 87) ..... ***syriacus***

-. Pronotum with narrow dorsomedian longitudinal stripe and wide, lateral, longitudinal stripes of whitish scales; 3.0–4.0 mm **10**

10. Head at eye level much wider than anterior margin of pronotum; body length 3.0–4.0 mm; occurs countrywide but mostly in the Mediterranean zone (northern and central part of Israel) (Figs. 21, 44)..... ***macularius***

-. Head at eye level slightly wider than anterior margin of pronotum; body length 4.0 mm; occurs mostly in the southern, arid part of Israel (Figs. 25, 48, 89) ..... ***wahrmani* n. sp.**

11. Frons with median, longitudinal furrow reaching posterior part of eye, not terminating in deep, round pit; dorsum bright brown with diffuse pattern of longitudinal stripes, without white spots 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 in deep, round pit; dorsum dark brown with distinct pattern of longitudinal stripes, with two pairs of 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; eyes flat; frons slightly convex; lateral stripe of white scales on pronotum with two bends, body length 3.5–4.0 mm (Figs. 17, 40)..... ***hispidulus***

-. Dorsal surface covered with semierect or appressed setae, at most 0.3 times as long as length of antennal club; eyes moderately to strongly convex; lateral stripe of white scales on pronotum straight or with one bend **13**

13. Rostrum dorsally with transverse band of golden or white, round scales anterior to 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 stripe of white scales interrupted in middle part of elytron; body length 4.5–5.5 mm (Figs. 12, 35, 84)..... ***brucki***

-. Rostrum dorsally without transverse band of golden or white, round scales anterior to eye; eye

strongly to moderately convex; pronotum with dorso-lateral stripe of pale, more or less distinct scales; 5th elytral interstria covered entirely by pale scales, forming pale longitudinal stripe or elytra evenly covered by grayish scales (Fig. 83) **14**

13. Frons strongly concave, median, longitudinal furrow evenly wide and deep throughout its 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 latero-medially, slightly constricted at base; eye convex, middle area 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 evenly rounded laterally, not constricted at base; eye moderately convex, middle area of frons twice 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 concave (Figs. 10, 33), distinct lateral band of scales absent, and aedeagus different: hamuli of the internal sac of peculiar form (Fig. 57) that differs from that of all other sitonine species; only somewhat similar to that of *S. maroccanus*, but the aedeagus of the latter species is different.

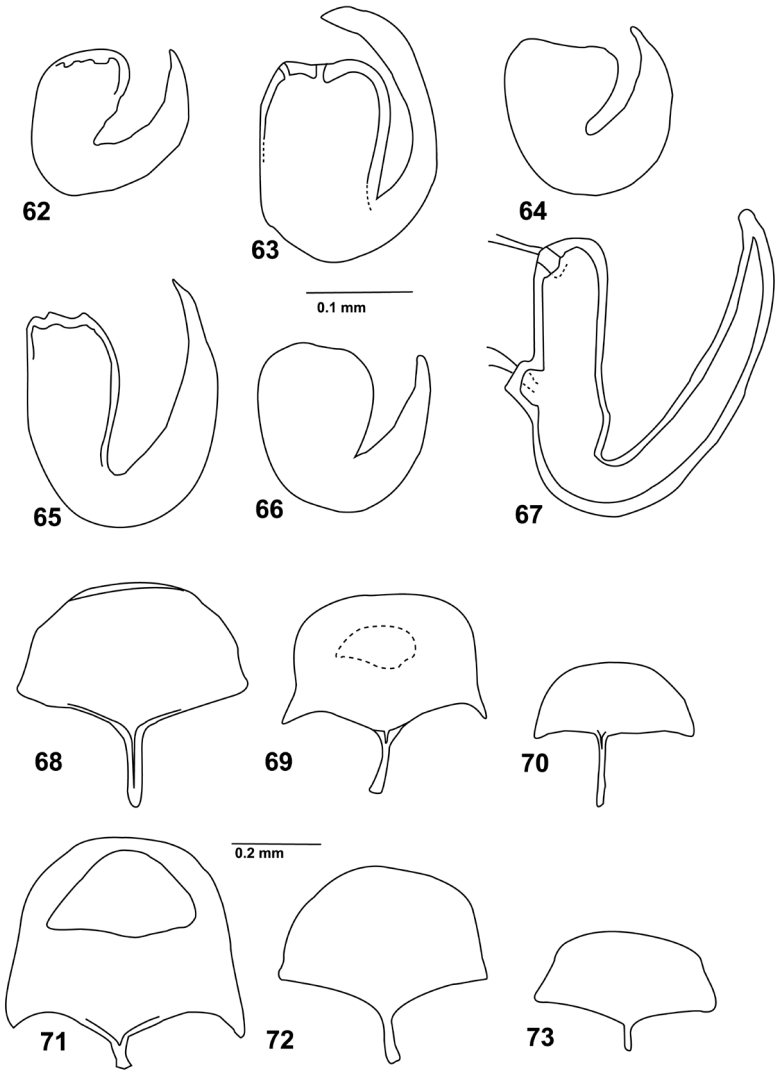
Description

Male

Body length 2.8 mm. Color black. Vestiture comprises white and copper, rounded scales, forming three median, light stripes on pronotum. Interstriae of elytra with a row of semi-erect hair-like scales; interstrial punctures with tiny setae. Head: frons flat; dorsal furrow of rostrum terminating 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. Pronotum: rounded laterally, nearly as long as wide (W/L 94%), wider behind middle, covered with large punctures, proacetabula almost reaching anterior groove of prosternum. Elytra: elongated (L/W 1.6), widest behind middle, humeral callus weakly developed. Male genitalia: aedeagus with truncate apex, laterally narrowed 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, more rounded laterally. Fe-

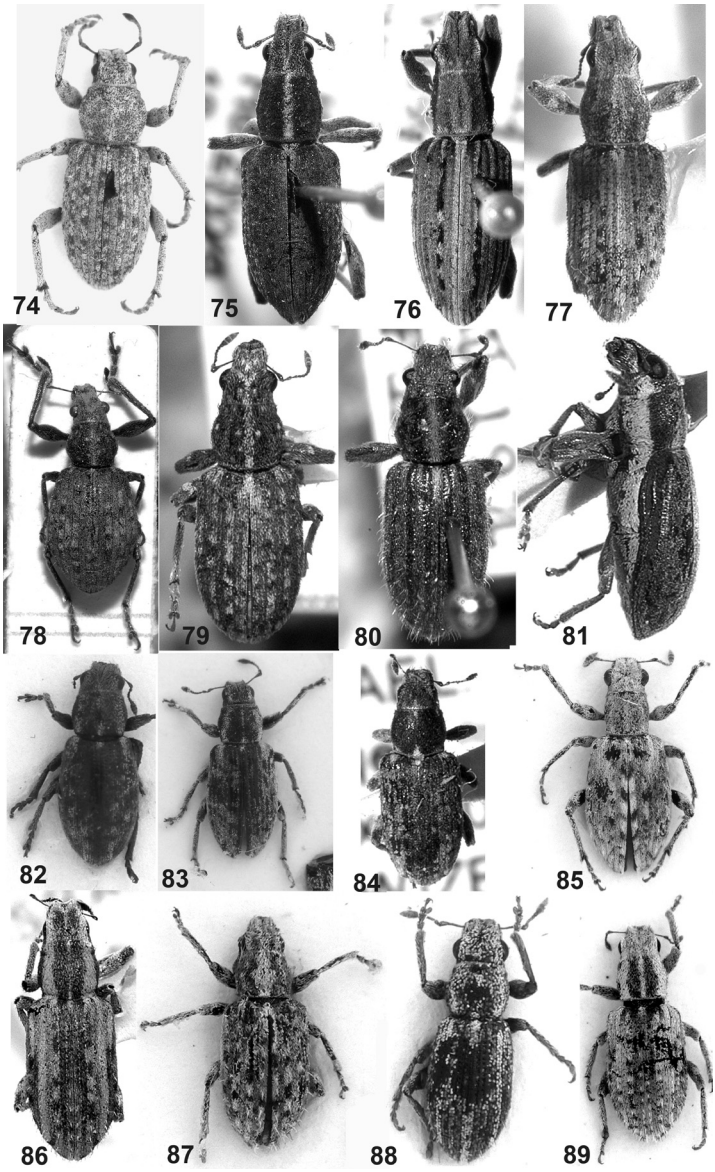


Figs. 62–73. Sitonini, female genitalia. 62–67. Spermatheca. 68–73. Spiculum ventrale. 62. *Sitona aliciae* n. sp. 63. *S. bicolor*. 64. *S. brucki*. 65. *S. demoflysi*. 66. *S. wahrmani* n. sp. 67. *S. fairmairei*. 68. *S. bicolor*. 69. *S. brucki*. 70. *S. cylindricollis*. 71. *S. demoflysi*. 72. *S. fairmairei*. 73. *S. wahrmani* n. sp.

male genitalia: 8th sternite with lamina much wider than long, spiculum ventrale thin and longer than lamina; spermatheca with rounded corpus and narrow cornu.

Etymology

The epithet is a patronym dedicated to Alicia, the daughter of the first author.



Figs. 74–89. Sitonini habitus, all in dorsal view except for *S. lividipes* that is shown in lateral view. 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. *S. volkovitshi*. 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.

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. The holotype is glued to a rectangular card, the dissected abdominal segements are glued next to it; the genitalia glued to another rectangular card pinned beneath the specimen; labeled with red holotype label; in excellent condition; deposited at TAUI.

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, 33º01′N 35º25′E, 5.iii.2006, A. Timm and 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 Hagetaot], 16.i.[19]51, N. Plaut, Div. Plant. Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (4♂; TAUI; 1♂; CVC; 1♂; CBOR; 1♂; BMNH; 1♂; MNCN; 1♂; MNHN; 1♂; ZIN; 19♀; TAUI; 1♀; CVC; 1♀; CBOR; 1♀; BMNH; 1♀; MNCN; 1♀; MNHN; 1♀; ZIN) **Southern Coastal Plain:** Mazliah, 16.xii.[19]50, N. Plaut, Div. Plant. Prot. Dept. Agr. Israel, on *Vicia* [on Bakia] (1♀; TAUI).

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.[19]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, southfacing 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 and L. Friedman (1♀; TAUI); Ga'ash, 7.XII.2001, A. Gazith and D. Milstein (1♂, 1♀; TAUI, 1♀ CVC); Petah Tiqwa [Petach Tikwah, Palestine], 20.ii.1949, H. Bytinski-Salz (1♂; TAUI); **Southern Coastal Plain:** Holon, 7.xii.2001, A. Gazith and 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 and L. Friedman (6♂, 3♀; TAUI; 2♂, 1♀ CVC). UZBEKISTAN: Samarkand, Reitter, coll. Tournier (handwritten label S. molitor) (1♂, 1♀; MNHN).

Distribution

The Balkans, Turkey, Israel, Uzbekistan.

Host Plants

In Israel: adults collected on *Cicer pinnatifidum*, *Medicago* spp., *Trifolium* spp., and *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 and L. Friedman (1♀; TAUI); Herzliyya, 31º9′N34º51′E 8.iv.2005 A. Freidberg (1♂, 2♀; TAUI; 1♀; CVC); Tel Aviv, North Afeqa, 10.iv.2004, 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), Morocco (Velázquez de Castro, 2009). First record for Israel.

Host Plants

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, 33º08′N 35º47′E, 1.vi.2008, L. Friedman (1♀; TAUI); Merom Golan, 33º08′N 35º46′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, 32º59,8′N 35º25′E, A. Freidberg (1♂, 2♀; TAUI), L. Friedman (2♂; TAUI); Mahanayim, 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 and V. Chikatunov (1♂; TAUI), 20.i.1997, T. Pavliček and V. Chikatunov (1♀; TAUI), 17.ii.1997, T. Pavliček and V. Chikatunov (1♂; TAUI), 1.xii.1997, V. Chikatunov and T. Pavliček (1♂, 1♀; TAUI), 15.xii.1997, V. Chikatunov and T. Pavliček (2♂, 1♀; TAUI; 1♀; CVC), 6.iv.1998, V. Chikatunov and 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 Nahal Yehudiya [Nahal 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 and 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, Eshta`ol], 9.iv.1995, E. Colonnelli, (1 ex.; CVC); Nahal '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 and V. Chikatunov (1♀; TAUI), 17.xi.2003, Y. Mandelik and V. Chikatunov (1♀; TAUI), 15.i.2004, U. Columbus and 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, and 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) and Meladmed-Madjar (1966a,b).

Host Plants

Medicago sativa, *Medicago* spp., *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

Palaearctic, introduced into North America (Dieckmann, 1980; Bright, 1994). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966b), and from Jordan by Katbeh-Bader (2002).

Host Plants

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 first record outside 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); **Foothils 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).

Remarks

This species is related to *S. costipennis* and *S. onerosus* based on their very similar internal sac with its unusual hamuli, which differs from that of other *Sitona* species. Some of the sclerites of the internal sac were illustrated by Sert (2006), but the hamuli were not dissected.

Distribution

Algeria, Armenia (Emden and Emden 1939), Tunisia, Libya, 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, 33º08′N 35º47′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 (1f: 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, 33º00′N 35º29′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, 10 km N, 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 into North America (Dieckmann, 1980; Bright, 1994). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966).

Host Plants

Lotus spp., *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 Palin:** Nahsholim, 13.xi.1959, on *Trifolium* (1♀; TAUI).

Distribution

Palaearctic; introduced into North America (Dieckmann, 1980; Bright, 1994), Macaronesia (Borges et al., 2005, Morris, 2007), introduced into New Zealand. New record for Israel.

Host Plants

Medicago spp., *Trifolium* spp., *Pisum* spp., *Vicia* 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. Pavliček and 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); Merhavya, 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), [Mikwe 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 SE 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:** Newe 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

Palaearctic; introduced into N. America (Dieckmann, 1980; Bright, 1994), Macaronesia (Machado and Oromí, 2000, Borges et al., 2005). Recorded from Israel by Bodenheimer (1937) and Melamed-Madjar (1966).

Host Plants

Numerous 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 Fåhraeus, 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, 33º15′N 35º44′E, 18.x.2009, L. Friedman (1♂; TAUI); **Golan Heights:** Panyas [Baniass Up.], 8.iv.1978, D. Furth (1♀; TAUI); Panyas [Banias], 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, 33º08′N 35º47′E, 30.iv.2006, L. Friedman (1♂; TAUI), 7.v.2006, L. Friedman (1♀; TAUI); Ma`agar Bental, 33º08′N 35º47′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 Nehemya, Huliyot factory [Huliot], 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); Mahanayim, 17.xi.1974, D. Furth (1♂; TAUI); Nahal Keziv, 1.i.1999, M. Finkel (1♀; TAUI); ‘En Ya’aqov, 12.vi.2006, I. Shtirberg (1♀; TAUI); Har Meron, 1100, 32º59′N 35º25′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); Nahal 'Ammud [N. Amud], 30.iv.1978, D. Furth (2♂; TAUI); **Lower Galilee:** Nazeret [Nazareth], 30.ix.1982, Q. Argaman (1♂; TAUI); **Carmel Ridge:** Nahal Oren, 17.xi.1997, V. Chikatunov, T. Pavliček (1♂; TAUI), 15.xii.1997, V. Chikatunov, T. Pavliček (1♂; TAUI); Nahal 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 ha-Sharon, 32º08′N 34º50′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), Sardinia, 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)

(Figs. 21, 44)

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. and 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, Nahal '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); Nahal '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 33º9′N 35º47′E, 25.v.2005, L. Friedman (1♀; TAUI), 30.iv.2006, L. Friedman (1♀; TAUI); Ma`agar Bental (=Bental Reservoir), 33º08′N 35º47′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 Mordekhay, 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, 32º02′N 35º26′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, 32º59′N 35º25′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); Nahal 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); Nahal Oren, 24.v.1995, A. Freidberg (1♀; TAUI), 16.xii.1996, L. Friedman (7♂, 3♀; TAUI), 28.i.1997, T. Pavliček and V. Chikatunov (2♀; TAUI), 11.ii.1997, T. Pavlicek and V. Chikatunov (1♂; TAUI), 15.xii.1997, L. Friedman (1♂; TAUI); Nahal Oren, riverbed, 14.v.2003, L. Friedman (1♂; TAUI); Nahal 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 Foothils:** 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); Shoresh, 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, 31º24′N 34º54′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.2002, P. Weill (4 ex.; CPEL). CYPRUS: Limassol, 12.i.1951, Mavromoustakis (1 ex.; TAUI).

Distribution

Palaearctic (Dieckmann, 1980). Macaronesia (Machado and 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

Several tribes of Leguminosae (Phaseolae, Hedysareae, Genisteae, Vicieae, 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).

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, C. 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.v2009, 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, 33º08′N 35º46′E, 1.vi.2008, M. Lebel (1♂, TAUI); Yehudiya [Golan Qusbyie], 4.v.1979, D. Furth (1♀, TAUI); **Upper Galilee:** 'En Zetim, 33º00′N 35º29′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

Lens spp., *Medicago* spp., *Melilotus* spp., *Trifolium* spp., *Vicia* 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: Cypern, Reitter (1 ex.; MNHN). EGYPT: Alexandrie, iv.1914, coll. Alfieri, (1 ex.; MNHN).

Distribution

Syria, Egypt (Emden and 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 *Lotus halophilus* Boiss. and Spruner as the host plant.

Sitona volkovitshi Korotyaev and Velázquez de Castro, 2011

(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♂; TAUI; 2♂, 2♀; ZIN; CVC); **Golan Heights:** Golan, Mas'sada, 28.iv.1974, D. Furth (1♂; TAUI).

Distribution

Israel (Mount Hermon and adjacent area of the Golan Heights).

Host Plants

Unknown.

Sitona wahrmani Velázquez de Castro and Friedman, n. sp.

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

Diagnosis

Similar to *Sitona macularius*, but the head is narrower and the eyes are less prominent. The head (including the eyes) is not wider than the anterior margin of the pronotum (in *S. macularius* the head (including the 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. Black, except for brown antennae and legs. Vestiture: white and light-brown rounded scales on pronotum forming three dorso-median, light stripes; middle stripe narrower than lateral stripes; elytra covered with white scales, except for interstriae 1 and 2 that are covered with brown scales and erect setae; most setae white, some black setae on head between stripes on pronotum, on uneven intervals, and on interval 2. Head: frons slightly concave, with short furrow reaching middle of eye; eye oval, not or slightly prominent; head, including eyes, 0.97 times narrower than anterior part of pronotum. Pronotum: slightly rounded laterally,

wider than long (W/L 90); proacetabula far from anterior groove of prosternum. Elytra: elongate (R L/W 1.7), with distinct humeral callus. Male genitalia: aedeagus of same shape as in the closely related *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 *Sitona* species, with globose body and narrow cornus (Fig. 66).

Etymology

S. wahrmani is named in honor of the late Prof. Jacob Wahrman (1924–2005) from the Hebrew University of Jerusalem, a pioneer of insect genetics and enthusiastic insect collector, who left an important collection of Israeli insects, now incorporated into the collection at TAUI.

Material Examined

HOLOTYPE: Israel, Tzaror, Hatira, January 2003, Elli Groner/ 344/. Labeled as: Holotypus *Sitona wahrmani* Velázquez and Friedman des. (1 ♀; TAUI). The proper locality name should be Har Zaror, Hatira Ridge (central Negev, near Sede Boqer). The holotype is glued to a rectangular card and the dissected abdominal segments and genitalia are glued next to it; bears a red holotype label; in excellent condition; deposited at TAUI.

PARATYPES: ISRAEL: **Jordan Valley:** Massu'a? [Massu'im], 28.xi.1994, Q. Argaman (1♀; TAUI); Gilgal, 32º00′N 35º26′E, 16.iii.2005, L. Friedman (1♂; TAUI); **Judean Hills:** Yerushalaim [Judean Hills, Jerusalem], 27.iii.2005, S. Ziani (1♀; BMNH; 1♀; CBOR; 1♀; MNHN; 1♀; MNCN; 1♀; TAUI; 1♀; ZIN); 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, 31º54′N 35º30′E, 16.iii.2005, L. Friedman (1♀; CVC), I. Zonstein (2♂; TAUI); Nahal Yitav Spill, 31º55′N 35º30′E, 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, 31º49′N 35º30′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); Nizzana, sanddunen, 10.i.1994, R. Prasse (1♂, 1 ♀, CWIN); **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).

Distribution

Israel (Jordan Valley, Dead Sea area, Judean Desert, and the Negev Desert). The

distribution of *S. wahrmani* partly overlaps that of the closely related *S. macularius*, although *S. wahrmani* 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: Southern 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.and I. Zonstein (4♂, 2♀; TAUI). TURKMENISTAN: 80 km. SE Askhabad (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 illustrated 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). The zoogeographical distribution of the Sitonini of Israel is summarized in Table 1. The Israeli fauna is distinctly of Palaearctic origin, with dominance of the Mediterranean elements (>50%) and with high local endemism (two species are East Mediterranean endemics and three are local endemics in Israel). We do not know whether *Schelopius planifrons* constitutes an Eremic element that reaches the deserts of Middle Asia or whether it is an Irano–Turanian element.

Four species, *Sitona hispidulus*, *S. lineatus*, *S. macularius*, and *S. brucki*, occur throughout the country, although with distinct preference for the Mediterranean zone. The first three are common, widely distributed Palaearctic species that are also known for their distributional range as pests of cultivated legumes; the south-Mediterranean *S. brucki* occurs sporadically throughout the country. Fourteen species occur only in the Mediterranean zone. *Sitona lepidus* and *S. puncticollis* are restricted to high altitudes on Mount Hermon and to the Upper Galilee, the Golan Heights, and the Carmel Ridge, and these localities represent the southern border of their distribution. *Sitona volkovitshi* has been found so far only at high altitudes on Mount Hermon and the adjacent northern areas of the Golan Heights. *Sitona syriacus* occurs predominantly near streams and its occurrence probably fits the range of its (unknown) fabacious host plant. *Sitona fairmairei* occurs throughout the Mediterranean zone of Israel but predominantly in its southern and eastern arid and semiarid parts, bordering the desert. The remaining species are common (*Coelositona limosus, Sitona bicolor*, *S. concavirostris*, *S. lividipes*) or uncommon to rare (*Charagmus gressorius*, *Ch. intermedius*, *Coelositona villosus*, *Sitona aliciae* n. sp., *S. cylindricollis*) throughout the Mediterranean zone.

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 the northern and central Negev. The enigmatic *Sitona demoflysi* was collected predominantly in pitfall traps in the central Negev, in limestone rock desert, except for one individual that was collected in the dunes of the northern Negev. This is the first time this rare, unusual species is found outside Tunisia, thus expanding its distributional range far to the east. *Sitona wahrmani* n. sp. occurs together with the closely related and quite common *S. macularius* only in arid, semi-desert, and desert areas but not in the Mediterranean zone, where *S. macularius* is very common. *Schelopius planifrons*, previously known only from the deserts of Middle Asia, is recorded in the West Palaearctic area for the first time, expanding its distributional range further to the west. Its distribution in Israel is restricted to the Jordan Valley, one of the lowest (–200 m – –400 m) and warmest areas of the world.

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Table 1
Zoogeographical distribution of the Sitonini of Israel. (I) indicates species that were introduced and established in North America (after Dieckmann 1980 and Bright 1994)

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

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