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A NEW SPECIES OF THE WEEVIL GENUS *SITONA* GERMAR (COLEOPTERA: CURCULIONIDAE) FROM MT. HERMON IN ISRAEL

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ABSTRACT

A new species of the weevil genus *Sitona* Germar, 1817 (*Sitona volkovitshi* sp. nov.) is described from Mt. Hermon in Israel.

Key words: Coleoptera, Curculionidae, Israel, *Sitona*, Mt. Hermon, weevils

НОВЫЙ ВИД ДОЛГОНОСИКОВ РОДА *SITONA* GERMAR (COLEOPTERA: CURCULIONIDAE) С ГОРЫ ХЕРМОН В ИЗРАИЛЕ

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РЕЗЮМЕ

Описывается новый вид жуков-долгоносиков рода *Sitona* Germar, 1817 (*Sitona volkovitshi* sp. nov.) с горы Хермон в Израиле.

Ключевые слова: Coleoptera, Curculionidae, Израиль, *Sitona*, гора Хермон, долгоносики

INTRODUCTION

The Holarctic genus *Sitona* Germar, 1817 comprises about 100 species associated exclusively with plants of the legume family (Fabaceae) (Velázquez de Castro et al. 2007). The majority of them are Palaearctic, while 11 live in the Nearctic (5 introduced), and two are introduced into the Australian Region. In the

number of the specialized herbivores of legumes, *Sitona* is the second among Palaearctic coleopterans after the genus *Tychius* Germar, 1817 (Curculionidae). *Sitona* is unique in larval habit among broadnosed weevils in attacking root nodules of legumes.

The majority of *Sitona* species occur in open, moderately humid and arid landscapes from subtropical deserts to the tundra. Many species are commonest weevils in the forest and steppe zones and damage forage crops. This accounts for the great attention paid to the genus *Sitona* both by taxonomists (Reit-

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ter 1903; Dieckmann 1980; Bright 1994; Bahr et al. 2006) and plant protection specialists (Grossheim 1928; Petrukha 1969; Aeschlimann 1980). Along with widespread species this genus includes many those locally distributed, which are especially numerous in the southern mountain regions of the Western and central Palaearctic. The fauna of the Mediterranean is still very poorly known although a great number of species have been described from this region. Another species is described below from the Hermon Mountains in northern Israel, well-known for their highly diversified and specific fauna of herbivorous beetles (Chikatunov and Pavliček 2005).

MATERIAL AND METHODS

The length of body was measured from anterior margins of eyes to the apex of the elytra. Terminology of the parts of the internal sac of the aedeagus after Velázquez et al. (2007).

SYSTEMATICS

Family Curculionidae Latreille, 1802

Genus *Sitona* Germar, 1817

Sitona volkovitshi sp. nov.

(Figs. 1–3)

Type material. Holotype (male), Israel, Mt. Hermon, 1750 m, 25 km NE of Qiryat Shemona, 10 May 1994, coll. M.G. Volkovitsh. Paratypes: 2 males, 2 females, same data as holotype; 1 male, Israel, Golan Mas'ada, 28 April 1974, coll. D. Furth.

Type deposition. Holotype and 1 paratype are in the Tel Aviv University, 2 paratypes – in the Zoological Institute, Russian Academy of Sciences, Saint Petersburg (ZIN); 2 paratypes – in Museo Valenciano de Historia Natural, Valencia.

Description. *Male.* Rostrum 0.7 times as long as wide, feebly narrowing toward apex, separated from frons by obsolete depressions before eyes at sides. Dorsal surface of rostrum flat, without carinae at sides separating dorsum from lateral surface, slightly lustrous, uniformly covered with shallow, fine, round punctures. Densely covered with brightly shining, parallel-sided scales; apical part of dorsum scarcely sloping anteriorly, indistinctly separated posteriorly, bearing no median carina. Median sulcus very narrow and shallow, only slightly wider and deeper than



Fig. 1. *Sitona volkovitshi* sp. nov., male.

a puncture, reaching nearly middle of frons, ending in small shallow fovea in midlength of rostrum. Frons gently sloping anteriorly and flat in cross-section; width of frons 1.5 times longitudinal diameter of medium-sized, moderately convex, and nearly round eye. Punctures on frons denser than on rostral dorsum, mostly weakly oblong but not merging in striae. Punctuation on vertex similar to that on frons. Antennae rather short. Scape weakly curved, gradually thickening in apical 3/5. First segment of antennal funicle about 1.5 times as long as wide, 2nd segment slightly longer than wide, 3rd weakly, 4th moderately, 5–7th rather strongly transverse. Funicle thickening apically, twice as wide at apex as at base, bearing rather long erect light hairs. Club oblong-ovate.

Pronotum 1.2 times as wide as long, 1.1 times as wide at apex as at base and as head with eyes. Basal constriction deeper than apical one, closely approximate to basal margin; apical constriction shallow, on disc wide and separated from apical margin by slightly less than 1/4 length of pronotum. On prosternum, constriction reaching fore coxal cavities. Disc moderately convex, more rapidly sloping toward base than toward apex, evenly covered with weakly oblong,

rather large, moderately deep punctures of approximately same size as punctures at base of elytral striae and about 1.5–2 times as large as punctures on frons. Intervals between punctures narrow but smooth and shiny. Scutellum very small, not protruding above elytral surface.

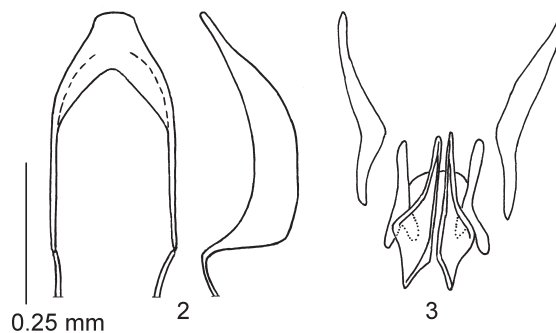
Elytra 1.7 times as long as wide, in widest point (near to, or slightly before middle) 1.4 times as wide as at humeri, and 1.35 times as wide as pronotum; humeral prominences moderately convex and somewhat rounded, sides moderately rounded. Disc very weakly convex in longitudinal direction and moderately convex in cross-section; apical declivity rather short and steep. Elytral striae weakly narrowing toward apex. Strial punctures moderately large, not very deep; short interspaces between punctures leveling with intervals between striae. Intervals flat, shiny, in center of disc 1.5–2 times as wide as striae; even-numbered intervals somewhat narrower than odd-numbered ones.

Legs slender. All tibiae with rather long sharp mucro. Fore tibia weakly incurved and widened inward at apex. Tarsi rather long and narrow; in fore tarsus 1st segment almost twice, 2nd segment 1.15 times as long as wide, 3rd segment 1.3 times as wide as 2nd, lobes of 3rd segment with very weakly rounded outer margin; claw-segment by 0.6 of own length extending beyond lobes of 3rd segment, moderately widening toward apex.

Aedeagus narrowly rounded apically (Fig. 2), internal sac (Fig. 3) with hastae developed, apparently without hamuli, with pinnae very long and feather-like, pallium rounded.

Female. Rostrum 0.6 times as long as wide. Median sulcus indistinct, dorsum with obsolete fovea in middle. Width of frons twice longitudinal diameter of eye. Pronotum 1.1 times as wide as long. Elytra 1.6 times as long as wide, at widest point, 1.4 times as wide as at humeri, and 1.5 times as wide as pronotum. Mucro on fore and middle tibiae very small, on hind tibia scarcely visible among pubescence. Tarsi slightly narrower than in male.

Body black, antennae and legs unicolorous reddish brown, rather light. Dorsal side rather densely covered with large, broad teardrop-shaped or round, pinkish, weakly shiny scales, with suberect arcuate, parallel-sided, white and brown scales in between. On intervals of elytra, recumbent broad scales arranged in 2 or 3 rows; length of suberect scales only slightly less than width of interval. Sides of pronotum with



Figs. 2, 3. *Sitona volkovitshi* sp. nov., male genitalia: 2, aedeagus, dorsal and lateral views; 3, inner sclerites of endophallus.

ill-defined light stripes of denser and paler scales, disc with slightly darker and somewhat thinned scales. Sutural, 5th, and 2 intervals along lateral margin with somewhat paler scales, 2nd–4th intervals with common small dark spot at base. Underside with moderately dense smaller and narrower light scales. Legs not very densely covered with subrecumbent and recumbent white hairs and hair-like scales, femora with a few oval scales.

Body length of males 2.5–2.9 mm, that of females 3 mm (rostrum excluded).

Comparison. *Sitona volkovitshi* sp. nov. belongs to a group of species of small size, with procoxae reaching the prosternal groove, and with rows of suberect scales on the elytra. This Mediterranean group includes also *S. delicatulus* Hustache, 1946, *S. mateui* Roudier, 1958, *S. parvulus* Hustache, 1939, and *S. negletus* Hustache, 1946. *Sitona volkovitshi* is similar to *S. mateui*, but differs in the presence of the clearly developed pinnae in the pieces of internal sac of the aedeagus, which lack in *S. mateui*. In addition, the new species differs from *S. mateui* in the structure of the male pygidium, which has no the characteristic central plate present in *S. mateui*. *Sitona volkovitshi* probably is rather closely related also to *S. crinitoides* Reitter, 1903 from Transcaucasia, sharing most of its characteristic features, including the shape of the aedeagus, with this species, but differs from it in the smaller size and smoothed sculpture of the head, pronotum, and elytra.

Etymology. The species is named for M.G. Volkovitch (ZIN) who has collected a very interesting material of weevils in Israel.

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REFERENCES

- Aeschlimann J. P. 1980.** The *Sitona* (Col., Curc.) species occurring on *Medicago* and their natural enemies in the Mediterranean region. *Entomophaga*, **25**(2): 139–153.
- Bahr F., Bayer CH., Behne L., Sprick P. and Stuben P.E. 2006.** Digital-Weevil-Determination for Curculionidae of Western Palearctic Transalpina: *Sitona* (Entiminae: Sitonini). *Snudebiller*, **7**: 14–20.
- Bright D.E. 1994.** Revision of the genus *Sitona* (Coleoptera: Curculionidae) of North America. *Annals of the Entomological Society of America*, **87**: 277–306.
- Chikatunov V. and Pavliček T. 2005.** Leaf beetles (Coleoptera: Chrysomelidae) of the west and southwest facing slopes in the Israeli part of the Hermon Mountains. In: A. Konstantinov, A. Tishechkin, and L. Penev (Eds). Contributions to Systematics and Biology of Beetles. Papers Celebrating the 80th Birthday of Igor Konstantinovich Lopatin. Pensoft, Sofia–Moscow, **43**: 17–42.
- Dieckmann L. 1980.** Insektenfauna der DDR: Coleoptera – Curculionidae (Brachycerinae, Otiiorhynchinae, Brachyderinae). *Beiträge zur Entomologie*, **30**(1): 147–310.
- Grossheim N.A. 1928.** Contribution to the study of the genus *Sitona* Germ. *Trudy Mleevskoi Sadovo-Ogorodnoi Opytnoi Stantsii*, **17**: 1–57. [In Russian]
- Petrukha O.I. 1969.** Weevils of the genus *Sitona* Germ. of the USSR fauna injurious to crops. Nauka, Leningrad, 255 p. [In Russian]
- Reitter E. 1903.** Genus *Sitona* Germ. und *Mesagroicus* Schönh. aus der palaearktischen Fauna. *Bestimmungstabellen der europäischen Coleopteren* (Paskau), **52**: 3–44.
- Velázquez de Castro A.J., Alonso-Zarazaga M.A. and Outereiro R. 2007.** Systematics of Sitonini (Coleoptera: Curculionidae: Entiminae), with a hypothesis on the evolution of feeding habits. *Systematic Entomology*, **32**: 312–331.

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