

***Planostibes medvedevi*, new species of stizopoid group
(Coleoptera: Tenebrionidae: Stizopina) from Namibia**

***Planostibes medvedevi* – новый вид стизопойдной группы
(Coleoptera: Tenebrionidae: Stizopina) из Намибии**

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Ключевые слова: Coleoptera, Tenebrionidae, Stizopina, *Planostibes*, новый вид, таксономия.

Abstract. The namibian species *Planostibes medvedevi* sp. n. is described and illustrated. The new species is close to *P. zinni* Koch, 1963 having similar pronotum and antennae but it differs in the male fore tibiae. The distribution map is provided.

Резюме. Описан и иллюстрирован новый вид из Намибии *Planostibes medvedevi* sp. n. Новый вид близок к *P. zinni* Koch, 1963, имеющему похожие переднеспинку и усики, от которого отличается строением передних голеней самца. Дана карта распространения этих видов.

Introduction

According to interpretation presented by Iwan and Schimroszyk [2009] the subtribe Stizopina should be treated as a separate taxon consists of 21 genera (95 species and subspecies). The interpretation based on the revision of the group by Koch [1963].

The genus *Planostibes* was erected by Gemminger, Harold [1870], with *Planodes byrroides* Mulsant et Rey, 1859 as a type species. Iwan and Schimroszyk [2009] listed 20 species distributed in South West Africa (Republic of South Africa and Namibia), most of them (12) were described by Koch [1963]. Two last papers on Stizopina presented descriptions of two new species of *Planostibes*: *P. goellnerae* by Ferrer [2004] and *P. jaegeri* by Iwan and Schimroszyk [2007]. The present paper contains description of the 21st species of the genus – *P. medvedevi* sp. n.

Planostibes is closely related to the genus *Blenosia* Laporte de Castelnau, 1840 by the structure of mentum (mid part flat, without carina, see fig. 2) and anterior part of elytron (basal margin bordered, humerus angular, see fig. 6). The genera differ by body form and the presence of legs dimorphism: *Planostibes* – body more convex, posterior pronotal angles and humeri bent downwards, male fore tibiae curved inwards; body of *Blenosia* flattened on upper side, male fore tibia simple.

Materials and methods

The studied specimens were collected during expedition in Southern Africa (project BIOTA, www.biota-africa.de).

For examination of internal structures, females and males were dissected and whole abdomens were cleared in 10% cold potassium hydroxide overnight. The dissected structures were stained in chlorazol black dissolved in glycerin. Photographs were acquired with Hitachi S-3400N (SEM, in low vacuum mode) and were made using Leica MZ16 (DFC 500, Leica Application Suite version 2.7.1294) in the Museum and Institute of Zoology Polish Academy of Sciences in Warsaw, Poland.

The measurements, taken using a filar micrometer, were as follows: width of anterior elytral margin from humeral angle to scutellum; body length from anterior margin of labrum to elytral apex; body width maximum elytral width; pronotal length – in the middle of pronotum, from tip of anterior pronotal angle to tip of posterior pronotal angle.

Type material is housing in the entomological collection of Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

Description of new species

Planostibes medvedevi Iwan et Schimroszyk, sp. n.

Body surface shining, dark brown, legs and antennae brownish, length 2.4–3.5 mm (Color plate 7: fig. 16). Pronotum length/breadth ratio ca. 0.57–0.61, elytra length/breadth ratio ca. 1.14–1.22, length ratio elytra/pronotum ca. 2.16–2.31, breadth ratio elytra/pronotum ca. 1.08–1.09.

Head as in fig. 1. Genae protruding outwards, widest than eyes. Clypeus and frons separated by distinct, transverse depression, fronto-clypeal suture present. Anterior margin of clypeus distinctly emarginated. Upper surface of head with moderately dense puncturation, distance between punctures more than puncture diameter. Antenna as in fig. 3: short (length ratio antenna/pronotum = 0.84–0.95) and moderately robust (ratio length of antenna/width of 3rd antennomere ca. 16.6); ratio of length/width of 2–11 antennomeres as follow: 1.3/1.1; 1.7/1; 1.2/1.1; 1.1/1.2; 1/1.2; 1.2/1.7; 1.4/2; 1.6/2.2; 1.6/2.3; 2.3/2.2, distal segments (antennomeres 7–11) widened, transverse. Mentum small, mid part narrow and flat, with sharp anterior margin; last segment of maxillary palp moderately widened, securiform (fig. 2).

Pronotum transverse with weakly rounded, almost subparallel sides, slightly narrowing anteriorly, anterior angles obtuse. Pronotal disc evenly convex, with sparse but well visible puncturation, more dense and coarse near lateral margins. Border of basal and anterior margins widely interrupted in the middle; border of

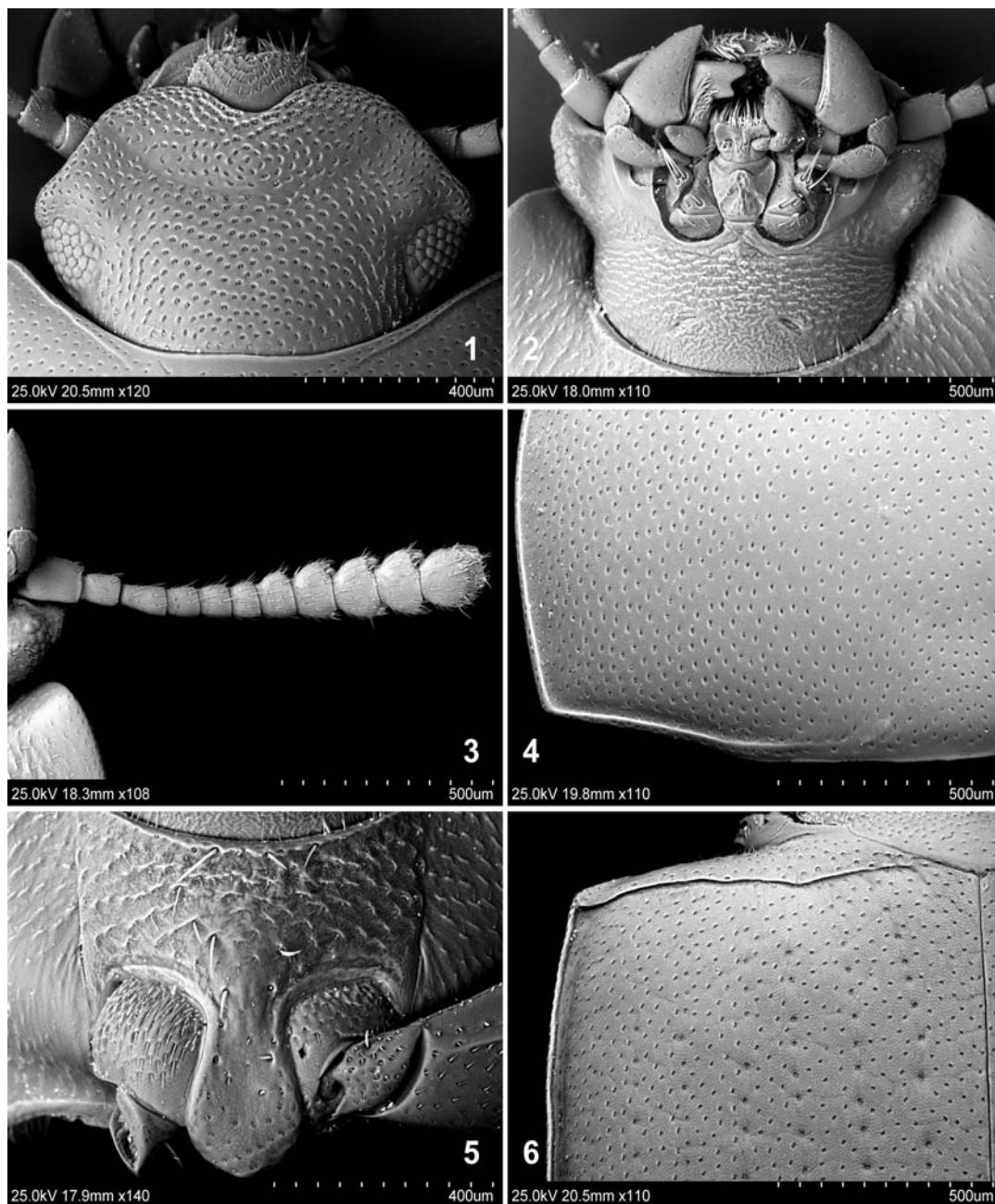


Fig. 1–6. *Planostibes medvedevi* sp. n.

1 – head, dorsal view; 2 – head, ventral view; 3 – antenna; 4 – pronotum, posterior angle; 5 – prosternum; 6 – elytron, anterior part.

Рис. 1–6. *Planostibes medvedevi* sp. n.

1 – голова, вид сверху; 2 – голова, вид снизу; 3 – усик; 4 – переднеспинка, задние углы; 5 – переднегрудь; 6 – надкрылье, передняя часть.

lateral margins entire and very narrow (breadth ratio border/base of 3rd antennomere ca. 0.33). Pronotal base arcuate, in the middle protruding beyond the level of posterior angles; basal angles straight (fig. 4). Surface of propleura covered by elongated tubercles with short recumbent setae. Anterior margin of prosternum bordered. Prosternal process gradually widened, rounded on apex; border of prosternal process narrow and disappearing at apex (fig. 5).

Scutellum wide and flat at base.

Elytra narrowing towards apex, widest in the middle, not tucked in posteriorly. Elytron of 9 rows, striae punctate-sulcate. Intervals flat on disc, moderately convex on slope and on apex; surface covered by sparse punctations. Elytral base bordered, humeri right, not protruding outwards (fig. 6). Pseudopleuron flat

and strongly widened at level of 5th abdominal ventrite.

Wings completely reduced.

Legs (fig. 7–12). In both sexes tarsi narrow, but all tibiae widened. Male fore, mid and hind tibia distinctly curved inwards.

Abdominal ventrites narrow and distinctly transverse, with regularly distributed, sparse and shallow punctures (distance between punctures more than puncture diameter); the last abdominal ventrite unbordered; process of I abdominal ventrite narrower than mesosternal process (width ratio process of 1st abdominal ventrite/process of metasternum ca. 0.9).

Male genitalia (fig. 14). Length ratio male body/aedeagus ca. 4; length ratio basal/apical parts of aedeagus ca. 2.1; apical part of tegmen narrow, modified into parameres; basal part of tegmen

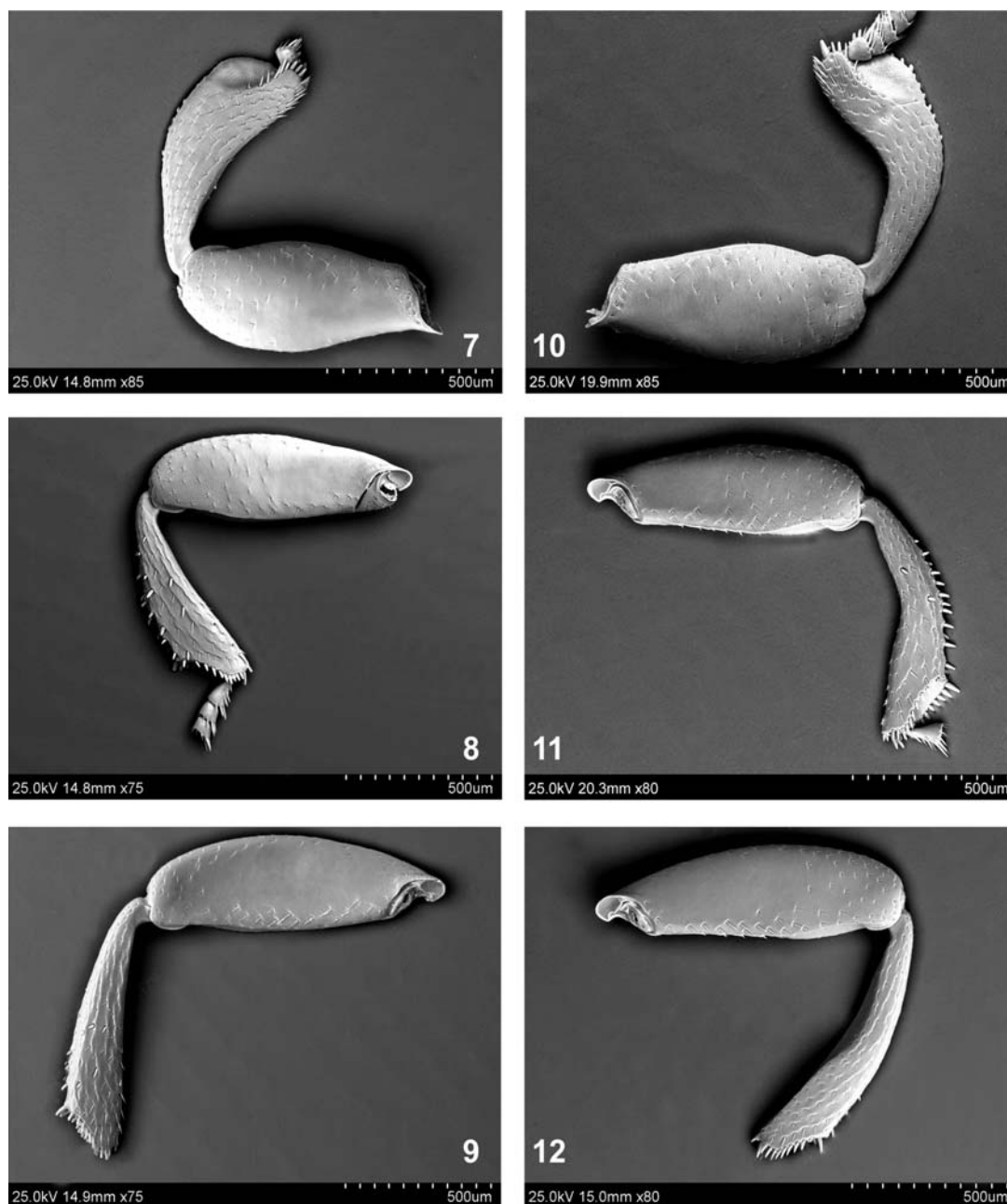


Fig. 7–12. *Planostibes medvedevi* sp. n.

7–9 – female tibiae: 7 – fore, 8 – mid, 9 – hind; 10–12 – male tibiae: 10 – fore, 11 – mid, 12 – hind.

Рис. 7–12. *Planostibes medvedevi* sp. n.

7–9 – голень самки: 7 – передняя, 8 – средняя, 9 – задняя; 10–12 – голень самца: 10 – передняя, 11 – средняя, 12 – задняя.

opened ventrally.

Female genitalia (fig. 13). Ovipositor: length ratio female body/ovipositor 7; paraproct shorter than coxites (length coxites/paraproct ca. 2.6), first plate transverse (first lobe of coxite breath/length ratio ca. 4.5), 2nd and 3rd plates of coxites fused, apical free part of fourth plate long, gonostylus present; bursa copulatrix simple (without sclerite), spermatheca branched from the base, with narrow ducts.

Type material. Holotype, ♂, “Namibia: Keetmanshoop; Dist. Nabaos 7, Plot 92; 26°23'56.1”S/17°59'50.3”E; 1080 m NN, 27.ii.-3.iii.2003; 10 pitfall traps, Biota 1715; leg. P. Schönefeld”.

Paratypes. 2♂, 1♀, “Namibia: Keetmanshoop; Distr.: Gellap Ost 3, 23 km; NW Keetmanshoop; dwarf shrub; savannah (Nama-Karoo)”, “Biota 10.021.2001.07.05.672; 26°24'13.6”S/18°00'22.8”E; pitfall trap E2; Gellap 13.-

21.X.2001; leg. A. Hoffmann”; 1♂, 1♀, “Namibia: Keetmanshoop; Distr.: Nabaos 7 (Nuwe; Fontein) 24km NW; Keetmanshoop, dwarf shrub; savannah (Nama-Karoo)”, “Biota 11.032.2001.7.11.1010; 26°23'38”S/17°59'51”E; singling; 09.iv.2001, 33°C; leg. J. Deckert”; 1♀, “Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'36.1”S/18°00'28.8”E; 1120 m NN, 3.-7.iii.2003; 10 pitfall traps, Biota 1742; leg. P. Schönefeld, Plot 92”; 2♂, 1♂, “Namibia: Keetmanshoop; Dist. Nabaos 7, Plot 61; 26°23'48.6S/17°59'50.5”E; 1080 m NN, 27.ii.-3.iii.2003; 10 pitfall traps, Biota 1716; leg. P. Schönefeld”; 1 m “Namibia: Keetmanshoop; Dist. Nabaos 7, Plot 92; 26°23'56.1”S/17°59'50.3”E; 1080 m NN, 27.ii.-3.iii.2003; 10 pitfall traps, Biota 1715; leg. P. Schönefeld”; 1♂, 2♀, “Namibia: Keetmanshoop; Dist. Gellap Agr. Exp.Stat.; 26°24'42.2”S/18°00'45.0”E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E2, Biota; leg. A. Hoffmann”; 1♂, “Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2”S/17°59'50.1”E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E8, Biota; leg. A. Hoffmann”; 1♂, 2♂, “Namibia: Keetmanshoop; Dist.

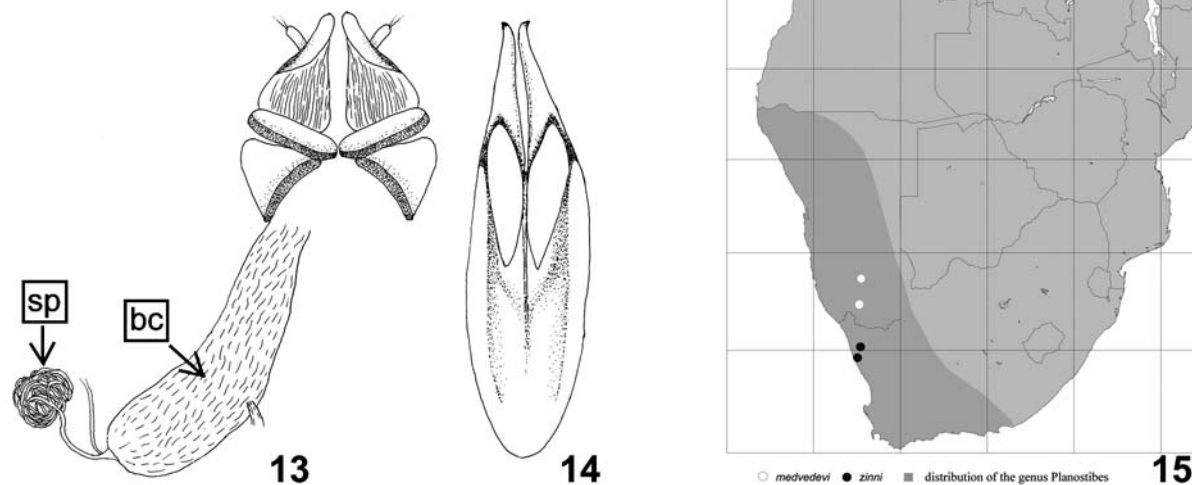


Fig. 13–15. *Planostibes*.

13–14 – *P. medvedevi* sp. n.; 13 – female genitalia (bc – bursa copulatrix, sp – spermatheca); 14 – aedeagus; 15 – distribution of *Planostibes medvedevi* sp. n. (open circle) and *P. zinni* (close circle).

Рис. 13–15. *Planostibes*.

13–14 – *P. medvedevi* sp. n.; 13 – гениталии самки (bc – копулятивная сумка, sp – сперматека); 14 – эдеагус; 15. – распространение *Planostibes medvedevi* sp. n. (прозрачный кружок) и *P. zinni* (черный кружок).

Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 27.ii-6.iii.2003; pitfall trap E10, Biota; leg. A. Hoffmann"; 1♂, 2♀, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 27.ii-6.iii.2003; pitfall trap E6, Biota; leg. A. Hoffmann"; 2♂, 3♀, "Namibia: Keetmanshoop; Distr.: Nabaos 7 (Nuwe; Fontein) 24km NW; Keetmanshoop, dwarf shrub; savannah (Nama-Karoo)", "Biota 11.077.2002.07.05.493; 26°23'49.6"S/18°00'10.7"E; pitfall trap E3; Nabaos 16.-23.x.2002; leg. A. Hoffmann"; 1 m "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'50.7"S/18°00'10.9"E; 1080 m NN, 30.vii-6.viii.2003; pitfall trap E5, Biota; leg. A. Hoffmann"; 1 m "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'50.2"S/18°00'10.8"E; 1080 m NN, 30.vii-6.viii.2003; pitfall trap E4, Biota; leg. A. Hoffmann"; 1♂, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 20.-27.v.2003; pitfall trap E7, Biota; leg. A. Hoffmann"; 1♂, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 20.-27.v.2003; pitfall trap E8, Biota; leg. A. Hoffmann"; 1♂ "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'51.6"S/18°00'10.9"E; 1080 m NN, 30.vii-6.viii.2003; pitfall trap E7, Biota; leg. A. Hoffmann"; 1♂ "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'49.6"S/18°00'10.7"E; 1080 m NN, 30.vii-6.viii.2003; pitfall trap E3, Biota; leg. A. Hoffmann"; 1♂ "Namibia: Keetmanshoop; Dist. Nabaos 7, Plot 51; 26°23'42.8"S/17°59'48.2"E; 1080 m NN, 27.ii.-3.iii.2003; 5 pitfall traps, Biota 1717; leg. P. Schönfeld"; 1♀, "Namibia: Keetmanshoop; Dist. Nabaos 7, Plot 81; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 27.ii.-3.iii.2003; 5 pitfall traps, Biota 1714; leg. P. Schönfeld"; 4♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E5, Biota; leg. A. Hoffmann"; 1♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E4, Biota; leg. A. Hoffmann"; 2♀, "Namibia: Keetmanshoop; Distr. Gellap Agr. Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E7, Biota; leg. A. Hoffmann"; 1♂, 2♀, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 27.ii.-6.viii.2003; pitfall trap E4, Biota; leg. A. Hoffmann"; 1♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E9, Biota; leg. A. Hoffmann"; 1♂, 1♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 27.ii.-6.iii.2003; pitfall trap E3, Biota; leg. A. Hoffmann"; 1♂, 1♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'42.2"S/18°00'45.0"E; 1080 m NN, 20.-27.v.2003; pitfall trap E9, Biota; leg. A. Hoffmann"; 1♂, "Namibia: Karasburg Distr.; Karios 8 (Gondwana Canyon; Park), Game Camp not fenced, 92km S Keet-; manshoop, dwarf shrub; savannah (Nama-Karoo)", "Biota 12.082.2002.07.05.368; 27°41'01.4"S/17°48'21.7"E; pitfall traps; 27.ix.-23.x.2002; leg. M.Uhlig, J.Deckert, K.Ebert"; 2♀, "Namibia: Keetmanshoop; Distr. Gellap Agr.Exp.Stat.; 26°24'13.9"S/18°00'22.8"E; 1080 m NN, 30.vii.-6.viii.2003; pitfall trap E1, Biota; leg. A. Hoffmann"; 1♀, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 20.-27.v.2003; pitfall trap E3, Biota; leg. A. Hoffmann"; 1♀, "Namibia: Keetmanshoop; Dist. Nabaos Comm. Area; 26°23'55.2"S/17°59'50.1"E; 1080 m NN, 20.-27.v.2003; pitfall trap E2, Biota; leg. A. Hoffmann".

Etymology. The species is named in honor of the outstanding Russian entomologist, Prof. Gleb Sergeevich Medvedev.

Differential diagnosis. *Planostibes medvedevi* sp. n. is similar to *P. zinni* Koch, 1963 in body size (2.4–4.75 mm), structure of antenna (2nd antennomer is shorter than 3rd), pronotal shape (sides weakly rounded), structure of male mid and hind tibia (distinctly bent inwards). The two species differ in body shape (more slender in *P. medvedevi* sp. n.), form of pronotal base (sinuate in *P. zinni*) and shape of male fore tibiae (strongly bent inwards in *P. zinni*), cf. fig. 4, 10, 16 and figures in Koch [1963: Plate IV, Fig. 6].

The species presented allopatric distribution (fig. 15).

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