

To the knowledge of species of the subgenus *Pseudoophonus* (genus *Harpalus*) from the Himalayan region and Southern China (Coleoptera: Carabidae)

B.M. Kataev

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Two new species of the genus *Harpalus* are described: *H. pseudohauserianus* sp. n. from Yunnan (China), separated originally by Schaubberger in 1930 as an aberration of *H. sinicus yunnanus* Schaubberger, 1930, and *H. meghalayensis* sp. n. from Meghalaya (NE India). *H. hauserianus* Schaubberger, 1929, stat. rest., from China and *H. meridianus* Andrewes, 1923 from S India are redescribed. The geographical variation of *H. indicus* is discussed and the following new synonymy is proposed: *H. indicus* Bates, 1891 = *H. eberti* Jedlička, 1966, syn. n. = *H. janetscheki* Jedlička, 1970, syn. n. It is suggested that *H. disaogashimensis* Huang, 1995 may be a synonym of *H. hauserianus*.

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The paper deals with the taxonomy of several species of the genus *Harpalus* Latreille, 1802 treated traditionally as representatives of the supraspecific taxon *Pseudoophonus* Motschulsky, 1846 (considered as a subgenus or genus by various authors). All these species occur at southern boundary of the geographical distribution of the genus *Harpalus* in East Asia and are very similar to each other in having the pronotum with obtuse, nondenticulate basal angles and the nonpubescent elytra with impunctate striae and with only lateral intervals punctate

In the paper, the following abbreviations are used: MPU – Moscow Pedagogical University, Moscow (Dr. K.V. Makarov and Dr. A.V. Matalin); NHM – The Natural History Museum, London (Dr. S. Hine); NHMW – Naturhistorisches Museum, Wien (Dr. H. Schillhammer); NMB – Naturhistorisches Museum, Basel (Dr. M. Brancucci); NME – Naturkundemuseum, Erfurt (Dr. M. Hartmann); NMP – National Museum, Prague (Dr. J. Jelínek); OÖLL – Oberösterreichisches Landesmuseum, Linz (Dr. F. Gusenleitner); SMNH – Swedish Museum of Natural History, Stockholm (late Dr. P. Lindskog); TMB – Természettudományi Múzeum, Budapest (Dr. Gy. Szel); ZISP – Zoological Institute, Russian Academy of Sciences, St.Petersburg; cBEL – Coll. Dr.

I.A. Belousov, St.Petersburg; cFCCH – Coll. Dr. S. Facchini, Piacenza, Italy; cFED – Coll. Dr. D.N. Fedorenko, Moscow; cGRG – Coll. Dr. B.V. Guéorguiev, Sofia; cITO – Coll. Dr. N. Ito, Kawanishi City, Japan; cMORV – Coll. Dr. D.M. Morvan, Karentoir, Bretagne, France; cSCI – Coll. R. Sciaky, Milano; cSUND – Coll. Dr. Ju. Sundukov, Lazo, Primorsk Terr., Russia; cWR – Coll. Dr. D.W. Wrase, Berlin; cZAM – Coll. Dr. A. Zamotajlov, Krasnodar, Russia.

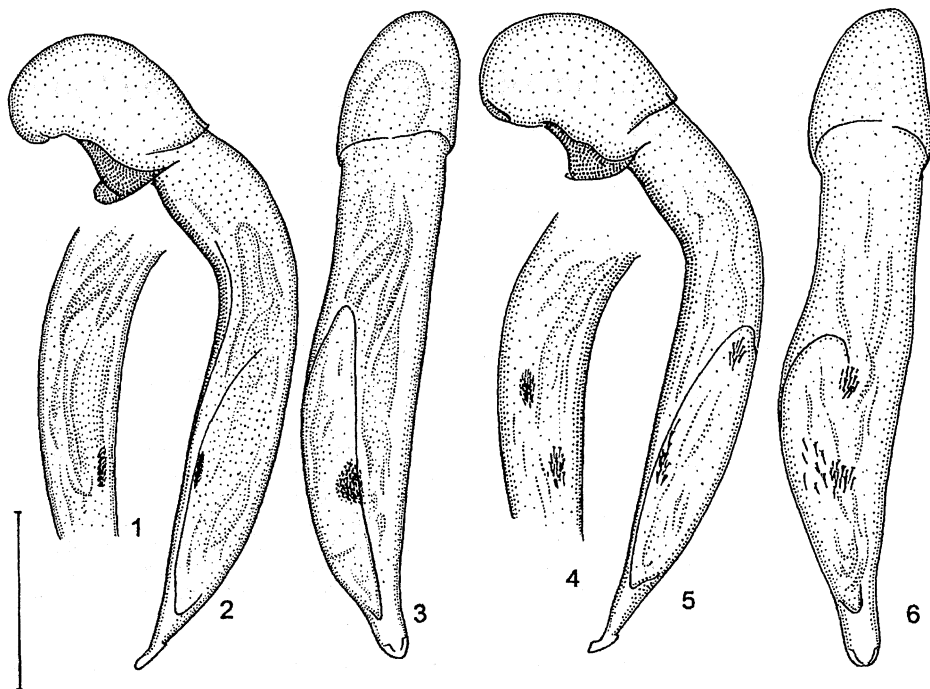
The measurements have been taken according to our previous publications (e.g. Kataev, 1997).

Harpalus pseudohauserianus sp. n. (Figs 1-7, 56)

Harpalus (Pardileus) sinicus yunnanus ab. *pseudohauserianus* Schaubberger, 1930: 173 (type locality: "Yunnan-sen", Yunnan, China).

Harpalus (Pardileus) sinicus yunnanus f. *picipes* Schaubberger, 1932: 27, 30.

Holotype. ♂, China, "Yunnan-Sen [= Kunming], Yunnan" [labelled by Schaubberger: "Type", "*Harp. (Pard.) sinicus Hope* s. *yunnanus* Schb. ab. *pseudohauserianus* Schaub., loc. class.", "*sinicus Hope* s. *yunnanus* Schaub. a. *pseudohauserianus* Schaub., det. Dr. E. Schaub.", "*sinicus Hope* s. *yunnanus* Schaub. f. *picipes indentata*", "Coll. Dr. E. Schaubberger" and "Type"] (OÖLL)



Figs 1-6. *Harpalus pseudohauserianus* sp. n., penis (1-3, "Yunnan-Sen", paratype; 4-6, env. Dali). 1, 4, view from right side; 2, 5, view from left side; 3, 6, dorsal aspect. Scale = 1 mm.

Paratypes. China: *Yunnan:* 1 ♂, same data as holotype [labelled by Schauburger: "Cotype", "*sinicus* Hope s. *yunnanus* Schaub., det. Dr. E. Schaub.,", "Coll. Dr. E. Schauburger" and "Cotype"] (OÖLL); 1 ♂, env. Dali, 2100 m, 30.IV.1955, O. Kryzhanovskij leg. (ZISP); 1 ♂, 1 ♀, same locality, 2600-3200 m, 2-12.XI.1997, O. Gvozdeva & D. Obydov leg. (ZISP; cSUND); 1 ♂, Jainshan, W Dali, 30.V.1955, Yang Sin-chi leg. (ZISP); 1 ♂, Habashan Mts, SE slope, 27°20'N 100°11'E, 2000-3000 m, 10-13.VII.1992, D. Kral leg. (NMB); 1 ♂, Lijiang, 26°53'N 100°18'E, 1800 m, 23.VI.-21.VII.1992, S. Becvar leg. (cWR); 1 ♀, same locality, 9.VIII.1996, D. Fedorenko leg. (cFED); 3 ♀, northern env. Lijiang, 2400-2800 m, 15.VII-12.VIII.1990, D. Kral leg. (NMB; cWR); 1 ♂, Daju, 50 km N Lijiang, 27°21'N 100°19'E, 27-28.VI.1992, S. Becvar leg. (cWR); 1 ♀, Lijiang distr., Ganhaizi - Lijiang road, Yulongshan Mts., 24-26.VII.1990, V. Kuban & D. Kral leg. (NMB); 1 ♀, Yulongshan Mts., Ganhaizi Pass, 27°06'N 100°15'E, 3000-3500 m, 18-23.VII.1990, V. Kuban leg. (cWR); 1 ♀, Yulongshan Mts., Baishui Vill., 27°08'N 100°14'E, 2900-3500 m, 7-12.VII.1990, D. Kral leg. (NMB); 1 ♀, Yulong Mts., 27°01'N 100°12'E, 3200 m, 24-26.V.1993, Bolm leg. (NMB); 1 ♀, Jizu Mts., 25°58'N 100°21'E, 2800 m, 30.V-3.VI.1993, Bolm leg. (NMB).

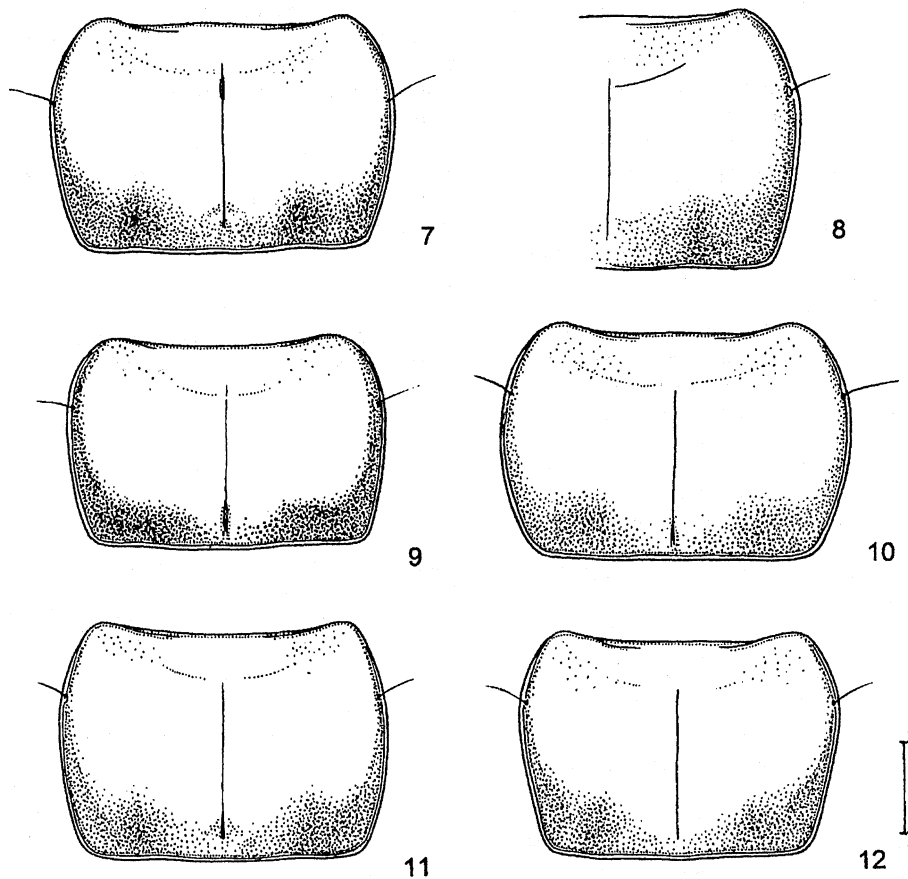
Description. Body length 9.2-11.6 mm, width 3.6-4.5 mm.

Body black, with labrum, bases of mandibles and very narrow margins of pronotum often slightly paler; palpi, antennae and tarsi yel-

lowish brown; femora and tibiae dark brown to black but knees and tibia apices often paler; upperside shiny.

Head moderate in size, measured across eyes and across neck constriction, respectively 0.72-0.75 and 0.56-0.62 times as wide as pronotum, impunctate. Eyes large and convex. Tempora short, usually rather abruptly descending to neck; nonpubescent. Clypeus with two setigerous pores. Tooth of mentum well developed, somewhat acute at apex. Basal segment of labial palpi without carina ventrally. Antennae slender, slightly overpassing elytral base. Dorsal microsculpture fine, usually strongly suppressed on frons and vertex, consisting of isodiametric meshes.

Pronotum (Fig. 7) moderately convex, 1.44-1.53 times as wide as long, widest before middle, with unisetose sides rounded up to more or less widely rounded basal angles. Anterior margin only scarcely emarginate, posterior margin almost straight, a little wider than anterior margin and slightly narrower than elytral base between humeral angles. Apical angles not protruding, rounded at apex. Lateral depressions beginning from apical angles, extremely narrow apically, slightly widened behind lateral pore and fused basally with broad



Figs 7-12. *Harpalus*, pronotum. 7, *H. pseudohauserianus* sp. n. (Lijiang); 8, *H. meridianus* (holotype); 9, *H. meghalayensis* sp. n. (holotype); 10-12, *H. hauserianus* (10, Lijiang; 11, env. Kunming; 12, Habashan). Scale = 1 mm.

and shallow basal foveae; area between latter somewhat convex. Pronotal surface coarsely and densely punctate along base and in lateral depressions; sometimes fine punctation visible also at anterior margin between medial line and apical angles. Microsculpture fine, consisting of slightly suppressed either isodiametric or weakly transverse meshes in central part of pronotum and of more distinct isodiametric meshes along pronotal margins.

Elytra convex, elongate, 1.49-1.60 times as long as wide, 2.56-2.72 times as long and 1.13-1.21 times as wide as pronotum, evenly rounded at sides and widest at middle or just behind it. Humeri subangulate, rounded at apex, each bearing a tiny denticle. Subapical sinuation comparatively deep; sutural angle acute, only slightly blunted at apex. Basal edge glabrous, slightly sinuate, meeting lateral margin in obtuse angle with distinct vertex. Striae thin and impunctate; scutellar stria very long,

with basal pore; 9th stria clearly visible, long. Intervals slightly convex, strongly narrowed before apex, nonpubescent; two lateral intervals finely and sparsely punctate; usually very fine, barely visible punctation also present at base of elytra along basal edge and at apex. Microsculpture distinct throughout, consisting of isodiametric meshes along margins and of hardly transverse, nearly isodiametric meshes on remaining elytral surface.

Metepisterna long and strongly narrowed posteriorly. Three penultimate abdominal sternites glabrous laterally, finely setaceous medially. Anal sternite and tergite in both sexes rounded at apex. In fore tibia, apical spur not dentate, only obtusely angulate at margins (Fig. 56), outer distal margin with four (sometimes five) spines and ventroapical tubercle with two spines at apex. Hind femora each with three or four setigerous pores along hind margin. Tarsi dorsally densely pubescent; in ♂,

1thmesotarsomerewith adhesive vestiture in apical half.

Penis (Figs 1-6) moderately arcuate, with apex slightly directed ventrad (lateral aspect); terminal lamella notably longer than wide, parallel-sided or hardly narrowed to apex, with oblique horseshoe-shaped apical capitulum narrowly rounded at apex (dorsal aspect). Internal sac usually with one or two small spiny patches (dorsomedial and/or ventroapical), rarely without any sclerotic elements.

Distribution. Yunnan, China.

Remarks. *H. pseudohauserianus* sp. n. has originally been described by Schaubberger (1930) as an aberration of *H. sinicus yunnanus* Schaubberger, 1930; the latter represents a very poorly separated local form of *H. sinicus* Hope, 1845 from Yunnan. According to Schaubberger, this aberration is characterized almost exclusively by the nondentate apical spur of fore tibiae. However, the constant and strong differences in the male genitalia between *H. sinicus* and the taxon in question show that they are separate species. In *H. sinicus*, the penis possesses two medial spiny patches in the internal sac (Figs 70, 71; the more proximal patch is sometimes subdivided into two patches) and the apical spur of fore tibia is always tridentate (Figs 53, 54) in contrast to *H. pseudohauserianus* sp. n., the penis of which has usually a dorsomedial and/or a ventroapical spiny patch in the internal sac (rarely without any sclerotic elements) and the apical spur of fore tibia is not dentate, only slightly angulate at margins. In addition, *H. pseudohauserianus* sp. n. is easily distinguished from *H. sinicus* by the dark legs. More recently, Schaubberger (1932) used the infrasubspecific name "*f. picipes*" for the specimens of *H. sinicus* with dark legs from Yunnan, but it is evident that this form is identical to *H. pseudohauserianus* sp. n. because the colour of legs in *H. sinicus*, according to our data, is always pale. This is supported by the fact that the examined "type" of *H. sinicus yunnanus* ab. *pseudohauserianus* Schaub. was also labelled by Schaubberger as "*sinicus* Hope. s. *yunnanus* Schaub. *f. picipes* indentata". Since both "*ab. pseudohauserianus*" and "*f. picipes*" were proposed by Schaubberger as infrasubspecific names, *H. pseudohauserianus* sp. n. is described here as a new species.

In our opinion, *H. pseudohauserianus* sp. n. is most related to *H. davidi* (Tschitschérine, 1897) from Central and Northeastern China and to *H. sericatus* Tschitschérine, 1906 from Central China (Sichuan) because all three taxa share such important characteristics as the dark legs, rounded basal angles of pronotum, elytra

with nearly isodiametric microsculpture and with at most two lateral intervals punctate, simple apical spur of fore tibiae, largely glabrous abdominal sternites and similar male genitalia with one or two spiny patches in the internal sac. *H. pseudohauserianus* sp. n. differs from *H. davidi* in the impunctate elytral striae and is distinguished from *H. sericatus* by the shiny dorsum and entirely glabrous elytra with more convex intervals. Besides, 1st mesotarsomere of male in both *H. davidi* and *H. sericatus* is lacking adhesive vestiture ventrally as opposed to that of *H. pseudohauserianus* sp. n., which possesses such vestiture in its apical half.

Harpalus indicus Bates, 1891

(Figs 13, 37, 48-51, 57, 58)

Harpalus indicus Bates, 1891: CCCXXXII (type locality: "Konbir, Tetara", Chota Nagpur Mts., India).

Harpalus (Pardileus) perlucidus Schaubberger, 1929: 191 (type locality: "Sikkim, Himalaja").

Harpalus indicus andrewesianus Schaubberger, 1932: 29 (type locality: "Spiti-Pulga im westlichen Himalaja").

Harpalus eberti Jedlička, 1966: 237 (type locality: "Chaunri-Kharka", Nepal), *syn. n.*

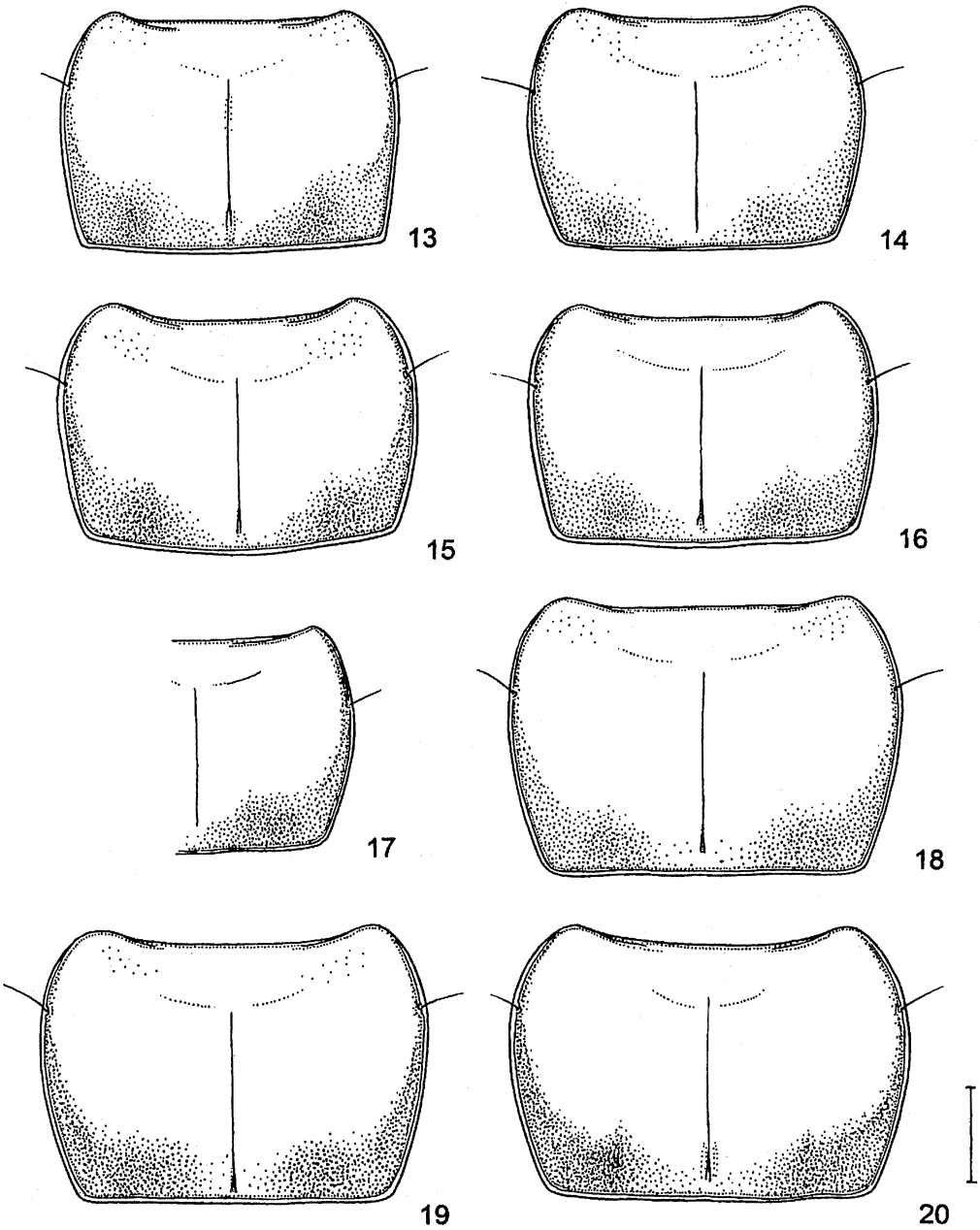
Harpalus (Amblystus) janetscheki Jedlička, 1970: 440 (type locality: "Lager Tate", Nepal), *syn. n.*

Type material examined. Lectotype of *H. perlucidus* [designated as "holotype" by Gusenleitner (1990: 770)], ♂ labelled "Himalaya, Sikkim", "Type", "*Harpalus (Pardileus) perlucidus* Sch., loc. class.", "*perlucidus* Schaub., det. Dr. E. Schaub.", "*Harpalus Pardileus indicus* Bates v. *perlucidus* Schaub." and "Coll. Dr. E. Schaubberger" (OÖLL); paralectotype, ♂ labelled "Himalaya, Sikkim", "Cotype", "*indicus* ssp. *perlucidus* Schaub., det. Dr. E. Schaub.", "Coll. Dr. E. Schaubberger" and "Cotype" (OÖLL).

Holotype of *H. eberti*, ♂ [cited erroneously as female in original description] with labels "Nepal, Prov. Nr. 3, East Chounvikherla - Namche, 3000 m, 28.VI.1964, Löffler leg. (40), Staatsslg. München", "Holotypus", "*Harpalus eberti* sp. n., det. Ing. Jedlička", "Zool. Staatssl. München" (ZSBSM).

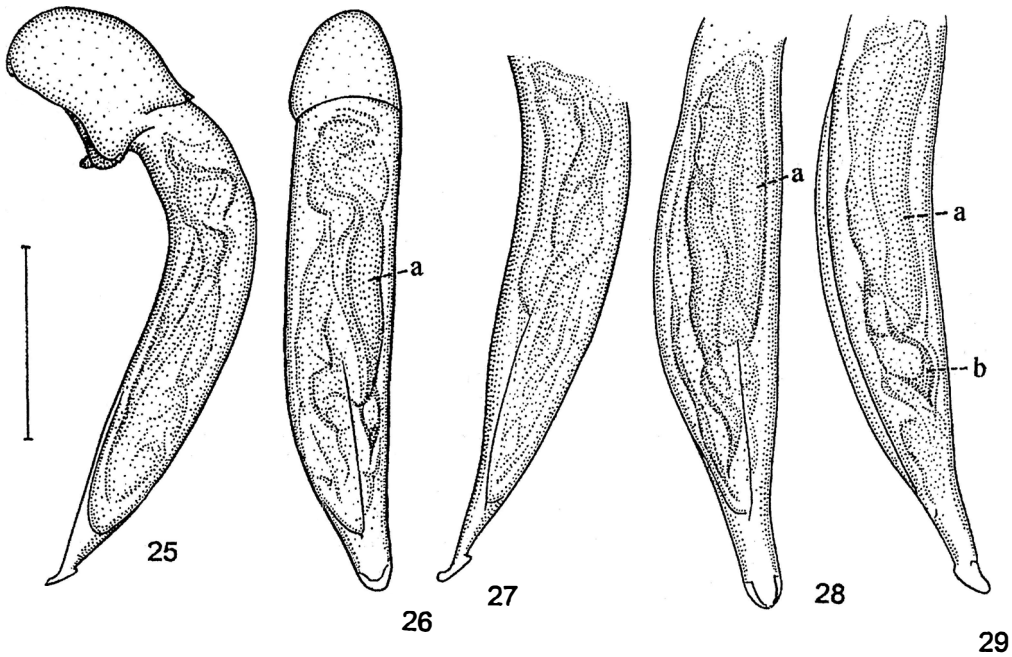
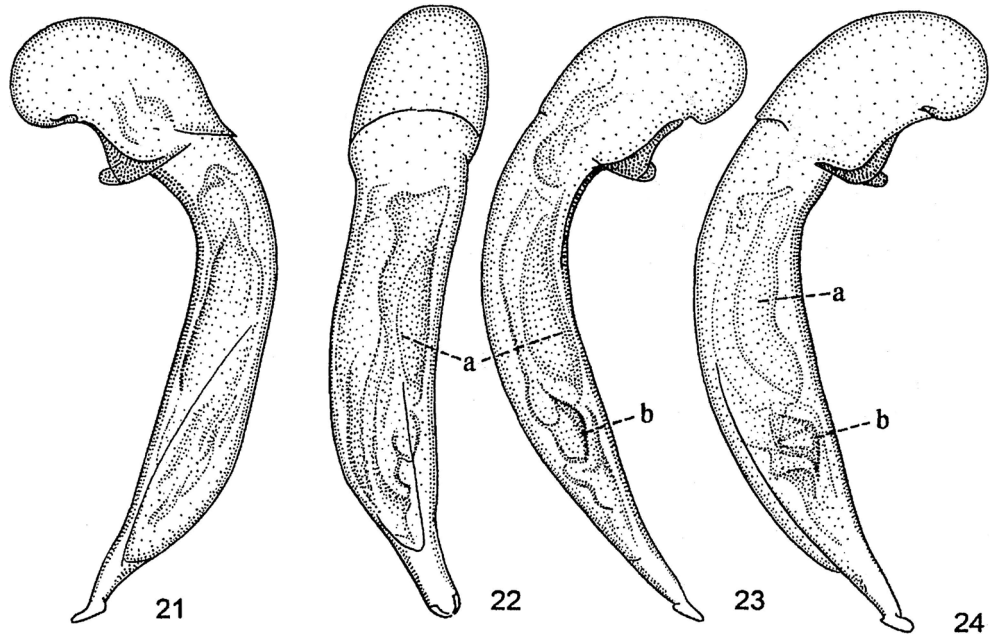
Paratypes of *H. janetscheki*, 1 ♂, 1 ♀, with labels "Np-61", "Paratypus", "*Harpalus janetscheki* sp. n., det. Ing. Jedlička" and "Mus. Nat. Pragae, Inv. 65140" (NMP).

Other material examined. Nepal: 2 ♀, Karnali Distr., Gothichaur Valley, 29°12'10"N 82°18'56"E, 2800 m, dry slope, 12-13.VI.1997, Grill leg. (NME); 1 ♂, 2 ♀, Karnali Prov., Gothichaur Valley, 29°12'10"N 82°18'56"E, 2900-3100 m, 12.VI.1997, J. Weipert leg. (NME); 5 ♂, Karnali Prov., Maharigaun, 29°20'24"N 82°23'21"E, 3200 m, 16.VI.1997, J. Weipert leg. (NME); 1 ♂, Karnali Prov., env. Jumla, 29°16'25"N 82°11'32"E, 2400 m, 22.V.1997, J. Weipert leg. (NME); 5 ♂, 2 ♀, Karnali Prov., Camp E Churta, Gothichaur Valley, 2800-3300 m, 7.VI.1997, J. Weipert leg. (NME); 1 ♂, Karnali Distr., way from Kaigaon to Chaurikot,

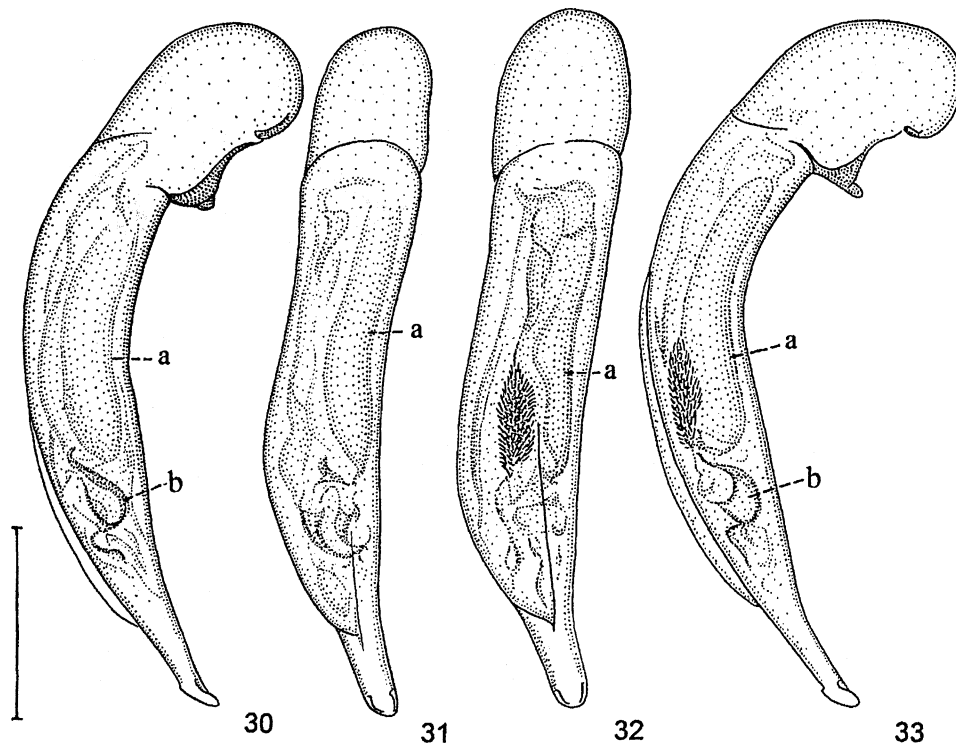


Figs 13-20. *Harpalus indicus*, pronotum (13-18, Nepal: 13, Jumla – Padmara; 14, Khanre; 15, 16, Gothichaur Valley; 17, holotype of *H. eberti*; 18, Rakse. 19, 20, Vietnam, Sa Pa). Scale = 1 mm.

- 29°07'N 82°31'E, 2645-3170 m, 5.VI.1997, Grill leg. (NME); 1 ♂, Karnali Distr., Tripurakot – Pahada, 29°04'N 82°39'E, 2100-3045 m, 1.VI.1997, Grill leg. (NME); 1 ♂, Dolpo Distr., Pahada, Kagmara Valley, 29°04'33"N 82°42'41"E, 3000 m, 31.V.1997, A. Weigel leg. (NME); 1 ♂, Jumla Distr., Lamri to Talphi, 2300-2700 m, 15.VI.1997, A. Weigel leg. (NME); 1 ♂, Bagmati, Sindhupalchok, Dapkakharka – Menegero, 2100-2500 m, 12.VI.1989, M. Brancucci leg. (cWR); 1 ♂, Mustang Distr., Koll Gandaiki Kholo, Kalopani, 2000-2500 m, 20-21.VI.1980, Probst leg. (cWR); 1 ♀, Jumla Distr., Bumra Nyowru Kholo, 29°23.41'N 82°08.48'E, above 2700 m, 22.VI.1999, M. Hartmann leg. (NME); 2 ♂, 1 ♀, Jumla Distr., Munigaon, Baila Kholo, 2500 m, 4.V.1995, A. Weigel leg. (NME); 1 ♂, Mugu Distr., Camp NW Churchi Lagna Pass, 29°29.47'N 82°07.51'E, ca 2440 m, 23.VI.1999, Grill leg. (NME); 1 ♂, "Nepala-Kuz-heol, Simikot, Uhel, 2850 m", V.1980, Morvan leg. (cMORV); 1 ♂, 1 ♀, Khanre, 2000 m, X.1971, Morvan leg. (cMORV); 1 ♂, Jumla – Padmara, 2300-2750 m, 27.V.1977, W. Wittmer leg. (cWR); 1 ♂, 1 ♀, Chaudrung, 1563 and 1950 m, 12 and 15.X.1979, Y. Hama (cITO); 1 ♀, Sanchur, 2700 m, Jajal. Himal, 1989, Morvan leg. (cMORV); 1 ♀, Hipa, 1800 m, 1989, Morvan leg. (cMORV); 1 ♀, Shirka, 1600 m, X.1987, Morvan leg. (cMORV); 1 ♀, Kuz-heol, Jumla, 2800 m, IV.1980, Morvan leg. (cMORV); 2 ♂, 1 ♀, "Himalaya, Mt Everest" (TMB); 1 ♂, Kathmandu Valley, Godavari, 1500 m, 3.VI.1986, Probst leg. (cWR); 1 ♂, NE Kathmandu, near Gorkhara Park, above Bagmati, 1340 m, 17.VI.1999, Grill leg. (NME); 1 ♂, Annapurna Mt. S., Kali Gandaki Valley, 12 km NW Ghasa, env. Keketani, 2900 m, 12.V.1996, M. Tscherniakhovskiy leg. (ZISP); 1 ♀, Annapurna Mt. S., 10 km SE Ghorapani, 2300 m, 15.V.1996, M. Tscherniakhovskiy leg. (ZISP); 1 ♂, Annapurna Mt. S., Kali Gandaki River, lower course, env. Sudami, 18.V.1996, M. Tscherniakhovskiy leg. (MPU); 7 ♂, 14 ♀, Annapurna, Panchhase, W Pokhara, 2000-2300 m, 18.V.1997, J. Schmidt leg. (ZISP); 4 ♂, 3 ♀, Dolakha, Shivalga – Jiri, 27°36.61'N 86°17.55'E, 1700-2200 m, 9-12.V.2000, A. Konstantinov, S. Lingafelter & M. Volkovitsh leg. (ZISP); 2 ♂, Jiri – Charikot, 27°37.63'N 86°05.38'E, 13.V.2000, A. Konstantinov, S. Lingafelter & M. Volkovitsh leg. (ZISP); 1 ♀, Dolakha, Mude Pass, 27°42.07'N 86°56.24'E, 13.V.2000, A. Konstantinov, S. Lingafelter & M. Volkovitsh leg. (ZISP); 1 ♂, Lantang, Nat. Park Grang, 1800-1900 m, 12.IX.1984, P. Beron & St. Andreev leg. (ZISP); 1 ♂, 1 ♀, Koshi, Hile, 2000 m, 7-8.VI.1999, V. Patrikeev leg. (MPU); 5 ♂, Mechi Prov., Ilam Distr., Rakse vill., 1700-2600 m, VII.1998, N. Orlov leg. (ZISP). **Burma:** 4 ♂, 1 ♀, Kambaiti, 7000 ft. (2000 m), 22.VI.1934, R. Malaise leg. (SMNHS). **India:** 1 ♀, Uttar Pradesh, Kumaon, Nainital Distr., Bhimtal, 1500 m, 20.IV.1981 (NHMW); 3 ♀, 5 km S Joshimath, Auli, 2700-3000 m, 2.VIII.1993, Kauttaweisz leg. (ZISP); 1 ♀, Meghalaya state, Janttia Hills reg., Jowai, 25°27'N 92°12'E (WGS 84), 1350+100 m, 6-8.VI.1996, E. Jendek & O. Sausa leg. (cITO). **China:** *Yunnan:* 1 ♂, Taveishan Mts near Pingbian, 1350 and 1500 m, 21 and 27.VI.1956, D. Panfilov & Huang Ke leg. (ZISP); 4 ♀, Jingdong, 1170 m, at light, 6, 24-25.VI.1956, O. Kryzhanovskij leg. (ZISP); 1 ♀, Wuliangshan, env. Jindong, 2300 m, 22.III.1957, D. Panfilov leg. (ZISP); 3 ♂, 4 ♀, Gaoligongshan Mts., 90 km W Baoshan, 26-28.V.1995, S. Becvar leg. (cWR; cSCI); 1 ♀, Gaoligong Mts., 24°57'N 98°45'E, 2200-2500 m, 8-16.V.1995, O. Semela leg. (cITO); *Taiwan:* 1 ♂, 1 ♀, Taitung Prov., Chihpen, 390 m, at light, 9-11.VI.1997, B. Herczig & L. Ronkay leg. (TMB); 1 ♂, Taipei, Wu-Lai, 21.V.1987, C.E. Lee leg. (cWR). **Vietnam:** 2 ♂, Hoang Lien Son, Sa Pa, 11-15.V.1990, V. Kuban leg. (NMB; cWR); 2 ♂, 2 ♀, Sa Pa, 11-18.VI.1990, A. Olexa leg. (NMB; cWR); 1 ♀, Lao Cai Prov., Fan Si Pan Mt. (northern slope), Sa Pa, 22°17'N 103°44'E, 1525 m, "prim. Urwald", 28.X-3.XI.1994, Sinjaev & einh. Sammler leg. (cWR); 1 ♂, same locality, 1400-1500 m, 26.V.-6.VI.1999, N. Orlov leg. (ZISP); 6 ♂, 11 ♀, env. Sa Pa, Hoang Lien Son Nature Reserve, 1250 m, 27.V.-23.VI.1998, A. Napolov leg. (ZISP); 3 ♂, 6 ♀, Central Annam, Quan Binh Prov., Minh Hoa Distr., env. Yen Hop, 17.III-23.IV.1999, S. Kruskop leg. (MPU; ZISP); 1 ♀, Tam-Dao, 900 m, 16-23.V.1991, J. Strnad leg. (cWR); 1 ♀, Shonla Prov., env. Shongla, 1.V.1986, A. Gorokhov leg. (ZISP).
- Description.* Body length 8.9-13.6 mm, width 3.6-5.5 mm.
- Body dark brown to black, shiny on dorsum and slightly iridescent on elytra; labrum, bases of mandibles and very narrow margins of pronotum usually paler; palpi, antennae and legs reddish brown. Head similar to that of the preceding species but comparatively a little larger, measured across eyes and across neck constriction, respectively 0.72-0.82 and 0.57-0.66 times as wide as pronotum.
- Pronotum moderately convex (Figs 13-20), 1.35-1.55 times as wide as long, widest before middle. Sides unisetose, either rounded throughout or straightly converging in basal half. Anterior margin weakly or rather strongly arcuately emarginate; posterior margin usually more or less straight, sometimes very widely rounded, equal to anterior margin or slightly wider, a little narrower than elytral base between humeral angles. Apical angles usually slightly protruding, rounded at apex. Basal angles well marked, obtuse, with apex variable in shape: in most cases, rather narrowly rounded, more rarely (in some specimens from Western Nepal) rather sharp, but never denticulate (Fig 13). Lateral depressions extremely narrow apically, widened behind lateral pore and fused basally with somewhat broad and shallow basal foveae forming rather shallow latero-basal depressions; area between latter convex. Pronotal surface coarsely and densely punctate along base and in lateral depressions; often finer punctation present also at anterior margin near apical angles. Microsculpture fine, consisting of slightly suppressed, weakly transverse meshes in central part of pronotal disc and of more distinct, isodiametric meshes along pronotal margins.
- Elytra moderately convex, elongate, 1.44-1.57 times as long as wide, 2.51-2.77 times as



Figs 21-29. *Harpalus indicus*, penis (21-26, Nepal: 21-23, Tripurakot – Pahada; 24, Simikot; 25, 26, holotype of *H. eberti*. 27-28, Sikkim, lectotype of *H. perlucidus*). 21, 25, 27, view from left side; 22, 26, 28, dorsal aspect; 23, 24, 29, view from right side. *a*, *b*, folded formations of internal sac. Scale = 1 mm.



Figs 30-33. *Harpalus indicus*, penis (Rakse, Eastern Nepal). 30, 33, view from right side; 31, 32, dorsal aspect. Scale = 1 mm.

long and 1.15-1.23 times as wide as pronotum, evenly rounded at sides and widest at middle or just behind it. Humeri angulate, rounded at apex, each usually with tiny acute denticle poorly visible only from behind. Subapical sinuation rather deep; sutural angle slightly blunted at apex. Basal edge glabrous, scarcely or markedly sinuate, meeting lateral margin in obtuse angle with distinct vertex. Striae thin and impunctate; scutellar stria long, with basal pore; 9th stria clearly visible, long. Intervals convex, narrowed before apex, nonpubescent; two lateral intervals finely and sparsely punctate. Microsculpture visible throughout, consisting of fine, clearly transverse meshes on elytral disc and of granulate, isodiametric meshes along margins and at apex of elytra.

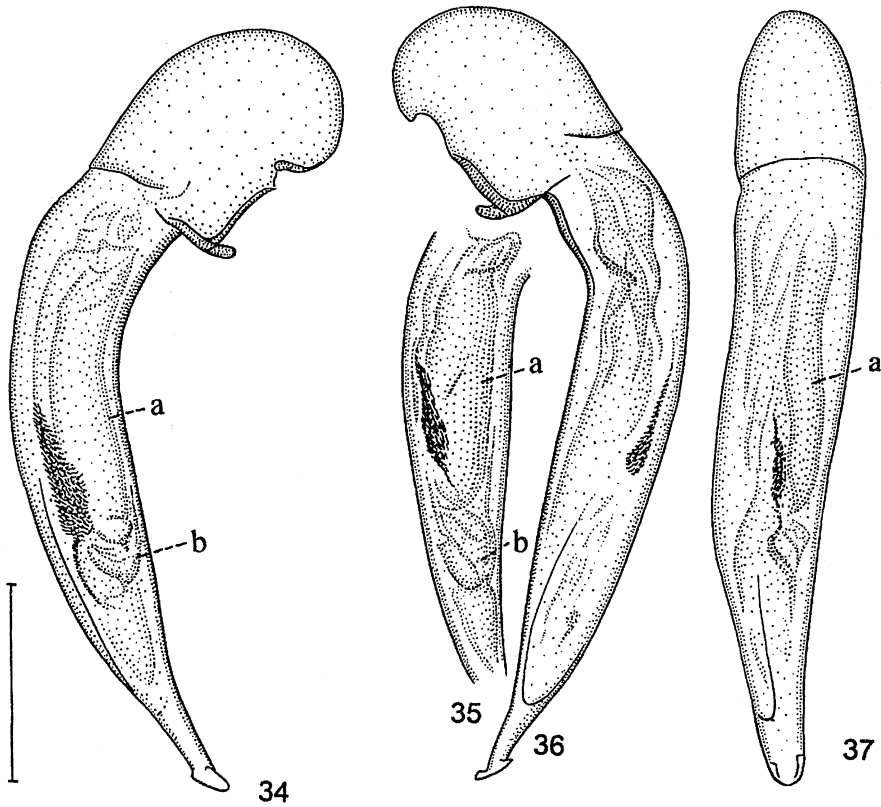
Metepisterna longer than wide, strongly narrowed posteriad (Figs 48-51). Two penultimate abdominal sternites glabrous; 3rd visible sternite finely setaceous medially and glabrous laterally. Anal sternite and tergite in both sexes rounded at apex, but tergite, especially in female, much more narrowly than sternite. In fore tibia, apical spur not dentate, only slightly angulate at margins (Figs 57, 58); outer distal

margin with four spines and ventroapical tubercle with two spines at apex. Hind femora each with two or three (very rarely four) setigerous pores along hind margin. Tarsi densely pubescent dorsally; in male, 1st mesotarsomere either without ventral adhesive vestiture or at most with a pair of adhesive scales at apex.

Penis (Figs 21-37) similar to that of the preceding species, but internal sac either without any sclerotic armature or with one comparatively large dorsomedial spiny patch; always clearly visible long field "a" in basal half of penis and often peculiar folded formation "b" in apical half (view from right side).

Distribution. Mountains of Northern and Central India, Nepal, Sikkim, Burma, Northern Vietnam, Southeastern China (southeastern part of Yunnan) and Taiwan.

Remarks. *H. indicus* is a rather common species widely distributed throughout the Himalayan region to Taiwan. It is recognizable by the combination of the following characters: tarsi densely pubescent dorsally, pronotum with obtuse, often rounded basal angles, elytral microsculpture consisting of clearly transverse meshes, elytral intervals nonpubescent, hind



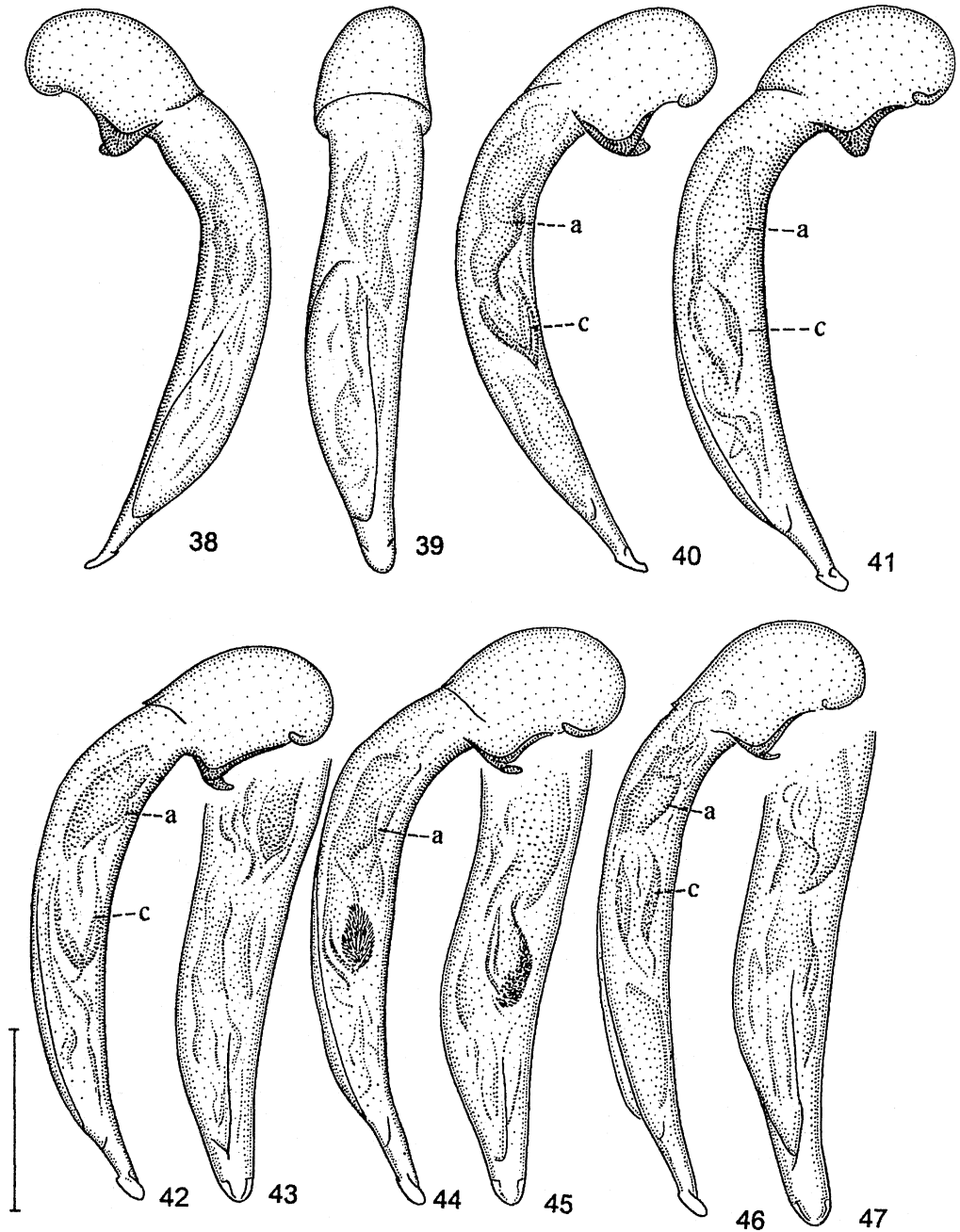
Figs 34-37. *Harpalus indicus*, penis (34, Sa Pa, Vietnam; 35-37, Taiwan). 34, 35, view from right side; 36, view from left side; 37, dorsal aspect. a, b, folded formations of internal sac. Scale = 1 mm.

femora with two or three setigerous pores along hind margin, apical spur of fore tibia not dentate, and penis with at most one dorsomedial spiny patch in internal sac.

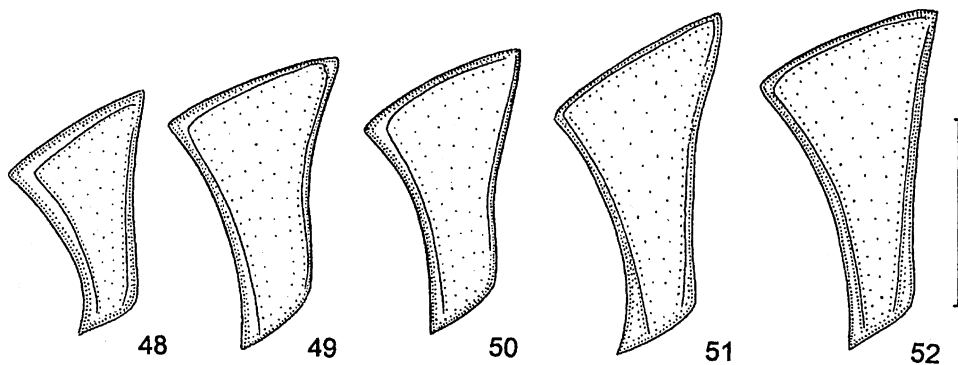
Like most other widely distributed species of the genus *Harpalus*, *H. indicus* is highly variable in geographical respect. Schauberger (1932) has divided it into three subspecies and a variety: *H. i. andrewesianus* (the West Himalayas), the nominotypical subspecies and var. *perlucidus* (the Central Himalayas), and *H. i. hauserianus* (China). According to this author, these taxa differ from one another mainly in the body size, size of punctures on elytral intervals, shape of pronotum and of elytra. In my point of view, only two geographical forms may be recognized: (1) the western form, distributed in the western portion of the Himalayas up to Eastern Nepal and Sikkim, is characterized by the smaller body size (8.9-12.6 mm), shorter metepisterna (Figs 48, 49), lack of ventral adhesive vestiture in 1st mesotarsomere of male and by penis without any sclerotic armature in internal sac (Figs 21-26), and (2) the

eastern form, distributed in the eastern part of the geographical range of the species east of Eastern Nepal and Sikkim to Taiwan, is characterized by the greater body size (11.4-13.6 mm), longer metepisterna (Fig. 51), presence of adhesive scales in apical part of 1st mesotarsomere of male and by penis with a dorsomedial spiny patch in internal sac (Figs 34-37). In addition, the elytra in the eastern form are more parallel-sided.

An attempt to treat the western and eastern forms of *H. indicus* as subspecies faces some problems. First, I was unable to examine the type series of *H. indicus* or any other material from Chota Nagpur Mountains, the type locality. In the original description, Bates (1891) noted that *H. indicus* occurs also "in N. W. India, in the hills of Assam, and on the Yang tsze Kiang, but as a variety, with the hind thoracic angles less obtuse". Second, there is a wide zone of intergradation between the two forms in Eastern Nepal and Sikkim occupied by populations with intermediate characteristics. Within this zone, specimens (even from the



Figs 38-47. *Harpalus hauserianus*, penis (38-40, lectotype; 41, Jumla to Sisne Himal, Nepal; 42, 43, Tanhua Baicao Mts, Yunnan; 44-47, N Kanding, Sichuan). 38, view from right side; 39, 43, 45, 47, dorsal aspect; 40-42, 44, 46, view from right side. *a*, *c*, folded formations of internal sac. Scale = 1 mm.



Figs 48-52. *Harpalus*, left metepisternon. 48-51, *H. indicus* (48, Gothichaur, Nepal; 49, Annapurna, Nepal; 50, Sikkim; 51, Vietnam); 52, *H. hauserianus* (Yunnan). Scale = 1 mm.

same locality) are known, for example, both with and without a spiny patch in the internal sac of penis (Figs 30-33). A re-examination of the type specimens of *H. perlucidus*, described originally as a separate species from Sikkim, has revealed, this taxon really refers to such intermediate populations and is based on specimens lacking a spiny patch in the internal sac (Figs 27-29) as in specimens of the western form. Furthermore, *H. indicus andrewesianus* has been described from rather small (10.5-11.5 mm) specimens of *H. indicus* from the West Himalayas, distinguished, according to Schaubberger (1932), from the specimens from both the Central Himalayas and China by the more stout body with more oval elytra. Based on these characteristics, I believe that *H. i. andrewesianus* belongs to the western form of *H. indicus* characterized by me. According to my measurements, the body size in *H. indicus* is rather variable even within one region, though there is a tendency to increase of the size towards the east. The smallest specimens (8.9-9.8 mm) are known to me from the comparatively high altitudes of Western Nepal (Karnali Prov.) and the largest (12.0-13.6 mm) from the lower mountains of Yunnan, Taiwan and Vietnam. Examination of the holotype of *H. eberti* (a male from Nepal with a length of 9.5 mm from anterior margin of clypeus to elytral apex; its pronotum and male genitalia are illustrated in Figs 17, 25 and 26) has shown that this name is to be also referred to the western form of *H. indicus* in my interpretation. The present synonymization of *H. janetscheki* described from Nepal with the western form of *H. indicus* is based on the examination of two paratypes of the former. As for *H. hauserianus*, treated by Schaubberger (1932) as a eastern subspecies of *H. indicus* from China, this taxon is

really nonconspecific with the latter and should be treated as a separate species (see below).

In summary, in spite of the marked morphological differences between the western and the eastern forms of *H. indicus*, now I prefer not to divide this species into subspecies. In the present paper, I treat *H. i. andrewesianus*, *H. perlucidus*, *H. janetscheki* and *H. eberti* only as synonyms of *H. indicus*, but infraspecific taxonomy of the latter invites further investigation.

***Harpalus hauserianus* Schaubberger, 1929, stat. rest.**

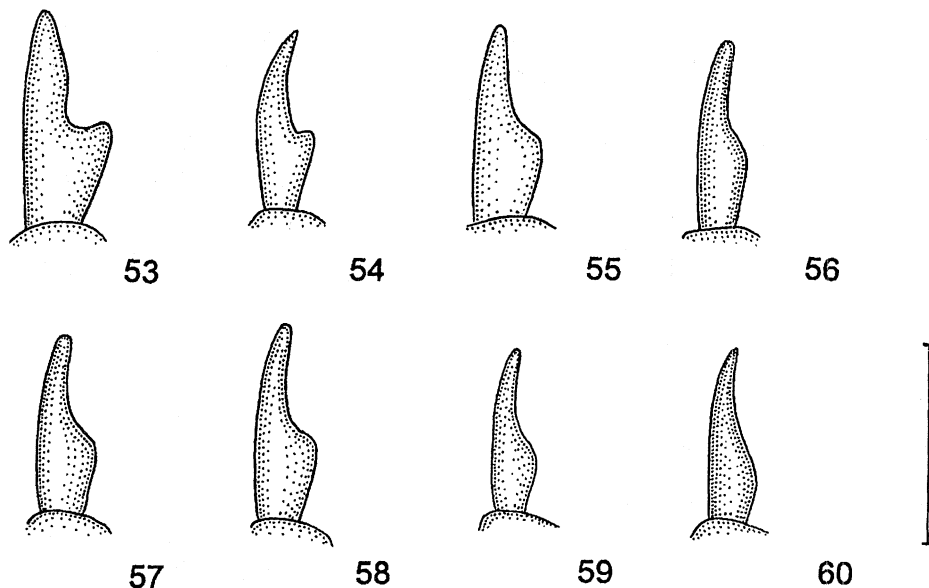
(Figs 10-12, 38-47, 52, 59)

Harpalus (Pardileus) hauserianus Schaubberger, 1929: 191 (type locality: "Yun-nan-sen [= Kunming]", Yunnan, China).

? *Harpalus (Pseudoophonus) disaogashimensis* Huang in Huang & Zhang, 1995: 113, 116 (type locality: Kunming, Yunnan, China).

Type material examined. Lectotype of *H. hauserianus* [designated as "holotype" by Gusenleitner (1990: 759)], ♂ labelled "Yun-nan-sen", "Type", "*Harp. (Pard.) hauserianus* Sch., loc. class.", "*Hauserianus* Schaub., det. Dr. E. Schaub", "*Harpalus Pardileus indicus* Bates. *Hauserianus* Schaub." and "Type" (OÖLL); three paralectotypes (all in OÖLL): 1 ♂ and 1 ♀, same data but labelled as cotypes, and 1 ♂ labelled "China, Pr. Honan, Kihung-Shan", "Cotype", "*Hauserianus* Schaub., det. Dr. E. Schaub.", "Coll. Dr. Schaubg.", and "Cotype".

Other material examined. China. Yunnan: 9 ♂, 9 ♀, Lijiang, 9.VIII.1996, D. Fedorenko & A. Zamotailov leg. (ZISP; cFED; cZAM); 12 ♂, 1 ♀, Silin (stone forest), 30.IX.1988, P. Beron leg. (cGRG; ZISP); 1 ♂, env. Dali, 2600-3200 m, 2-12.XI.1997, O. Gvozdeva & D. Obydov leg. (cSUND); 1 ♀, same locality, 2100 m, 30.IV.1955, O. Kryzhanovskij leg. (ZISP); 1 ♂, Kunming, Chuxiong, 18.V.1956, V. Popov leg. (ZISP); 2 ♀, env. Kunming, 1900 m, 16.V.1956, O. Kryzhanovskij leg. (ZISP); 1 ♀, Kiunchusze, env. Kunming, 4.VI.1957,



Figs 53-60. *Harpalus*, apical spur of right fore tibia, lateral aspect. 53, 54, *H. sinicus*; 55, *H. meridianus*; 56, *H. pseudo-hauserianus* sp. n.; 57, 58, *H. indicus*; 59, *H. hauserianus*; 60, *H. meghalayensis* sp. n. Scale = 0.5 mm.

A. Monchadskij leg. (ZISP); 1 ♂, Mengzi, 1350 m, 2.VI.1956, D. Panfilov leg. (ZISP); 1 ♂, Xiaguan – Kunming, 2.VI.1955, O. Kryzhanovskij leg. (ZISP); 1 ♂, Baoshan – Yonping, 28.V.1955, V. Popov leg. (ZISP); 1 ♂, “Prov. Yunnan, Gbg., 29.V.” (ZISP); 1 ♂, Yulongshan Mts, Baishui, 27°08'N 100°14'E, 2900-3500 m, 7-12.VII.1992, V. Kuban leg. (cWR); 1 ♂, Hutiao Gorge, Jinsha R., 27°15'N 100°09'E, ca 2000 m, 18-22.VII.1992, V. Kuban leg. (cWR); 1 ♂, Habashan Mts, SE slope, 27°20'N 100°11'E, 2000-3000 m, 10-13.VII.1992, D. Kral leg. (cWR); 2 ♂, 1 ♀, Sabe Jinsha, 27°19'N 100°13'E, ca 2000 m, 17.VII.1992, D. Kral leg. (NMB; cWR); 5 ♂, 2 ♀, Weibaoshan Mts., W slope, 25°11'N 100°24'E, 2000-2800 m, 25-28.VI.1992, D. Kral leg. (NMB; cWR); 2 ♂, 1 ♀, Jizu Mts, 25°58'N 100°21'E, 2800 m, 30.V.-3.VI.1933, Bolm leg. (NMB; cWR); 4 ♂, Jizu Shan, 25°58'N 100°21'E, 2500-2700 m, 6-10.VII.1994, Z. ěernin leg. (clTO); 3 ♂, northern env. Lijiang, 2400-2800 m, 15.VII.-12.VIII.1990, D. Kral leg. (NMB); 1 ♂, Kunming (Zoo), 1900 m, 2.VII.1990, V. Kuban leg. (NMB); 1 ♂, Tanhua Baicao Mts, 2000 m, 24-26.VII.1995, Bolm leg. (NMB); 1 ♂, Dongchuan, 26°07'N 103°14'E, 1500-3200 m, 28.VI.-3.VII.1994, Z. ěernin leg. (clTO); *Sichuan*: 1 ♂, southern env. Xichang, cultural steppe, 26.VII.1997, J. Turna leg. (cFCCH); 1 ♀, Rilong, VII.1996, Moretto leg. (cWR); 1 ♀, Luding, Gongga Shan, lower Hailuoguo Valley, 29°36'N 102°04'E, 1600-2000 m, dec. forest, 2.VII.1994, K. & B. Březina leg. (ZISP); 1 ♂, Gongga Shan Massif, Moxi Vill., SSW Lunding, 29°40'N 102°06'E, 2600-2700 m, 24.V.-7.VI.1993, B. Březina leg. (cBEL); 4 ♂, Ganzi Pref., Daxue Shan, N Kanding, 30°03'N 101°57'E, 2600-2700 m, 22-24.V.1997, A. Pütz leg. (cWR); 1 ♂, Daxue Shan, western env. Kanding, 30°03'N 101°57'E, 2600-2700 m, 22-24.V.1997, D. Wrase leg. (cWR); 10 ♂, 3 ♀, road Xichang – Yanyuan,

pass 15 km SW Pingchuan, 27°33'N 101°49'E, cca 3200 m, 26-27.VI.1998, J. Turna leg. (clTO); 6 ♂, 80 km NE Yanyuan, near Pingchuan, 2500 m, 25-27.VI.1998 (clTO).

Specimen conditionally referred to this species. Nepal: 1 ♂, Karnali, Jumla to Sisne Himal, 5000 m, 6.VI.-20.VI.1995, J. Kolibač leg. (clTO).

Description. This species is very similar in colour and morphology to *H. indicus*, but hind femora along posterior margin usually with four, more rarely (in most cases, only in one femur) with three or five, setigerous pores, and penis (Figs 38-47) with a much shorter basal field “a” and with a peculiar medial folded formation “c” in internal sac (better seen laterally, from right side). Besides, pronotum generally less narrowed basad and more widely rounded at sides than in *H. indicus* and 1st mesotaromere of male constantly lacking adhesive vestiture ventrally.

Body length 9.2-12.9 mm, width 5.7-7.8 mm.

Proportions: head, measured across eyes and across neck constriction, respectively 0.71-0.78 and 0.57-0.63 times as wide as pronotum; latter 1.43-1.53 times as wide as long; elytra 1.47-1.60 times as long as wide, 2.57-2.74 times as long and 1.13-1.23 times as wide as pronotum.

Distribution. China: Yunnan (mainly in northern and central parts of province), Honan and Sichuan; ? Nepal. Reported by Schaubeger (1930) from Mukden (= Sheniang; Liaoning, China) and “Kiautschou” (= Jiao Xian;

Shandong, China). Two latter records need verification.

Remarks. The rank of this taxon is rather controversial. Schauburger (1929) has described *H. hauserianus* as a distinct species, but more recently he (Schauburger, 1932) treated it as an eastern subspecies of *H. indicus* distributed in China. According to our data, both these taxa occur in Yunnan demonstrating no evidence of intergradation and may be treated as nonconspecific. We have been interested to find that *H. hauserianus* is more similar in some external characters (body size, general habitus, 1st mesotarsomere of male without adhesive vestiture) to the western form of *H. indicus* than to the eastern form of the same species occurring in Yunnan. Moreover, the male genitalia of *H. hauserianus* are geographically variable: internal sac is without any sclerotic armature in the examined specimens from Yunnan and Honan (Figs 38-43) and both with and without a medial spiny patch in the examined specimens from Sichuan (Figs 44-47). By this means, the males of *H. hauserianus* from Yunnan are also easily distinguished in the armature of internal sac from the males of the eastern form of *H. indicus* from Yunnan, which constantly possess a medial spiny patch in the internal sac.

The description of *H. disaogashimensis*, based on 22 specimens from Kunming (Yunnan), fully agrees with the characters of *H. hauserianus*. The two species may be conspecific, but the examination of the holotype of the former is necessary.

The male from Western Nepal, Karnali Province (see above) is similar in its characteristics, including those of genitalia (Fig. 41), to the individuals of *H. hauserianus* from China, but was collected far from the area of distribution of the latter. If the label data are correct, the taxonomic position of this specimen should be determined on the basis of more extensive material.

***Harpalus meghalayensis* sp. n.**

(Figs 9, 60, 61-67)

Holotype. ♂, India, Meghalaya, Upper Shillong, 1900 m, 13.V.1976, W. Wittmer & U. Baroni leg. (cWR).

Paratypes. India: 1 ♂, same data as holotype (ZISP); 1 ♂, Meghalaya, Mawphlang, 1850 m, 15.V.1976, W. Wittmer & U. Baroni leg. (cWR).

Description. Body length 10.5-11.1 mm, width 4.1-4.4 mm.

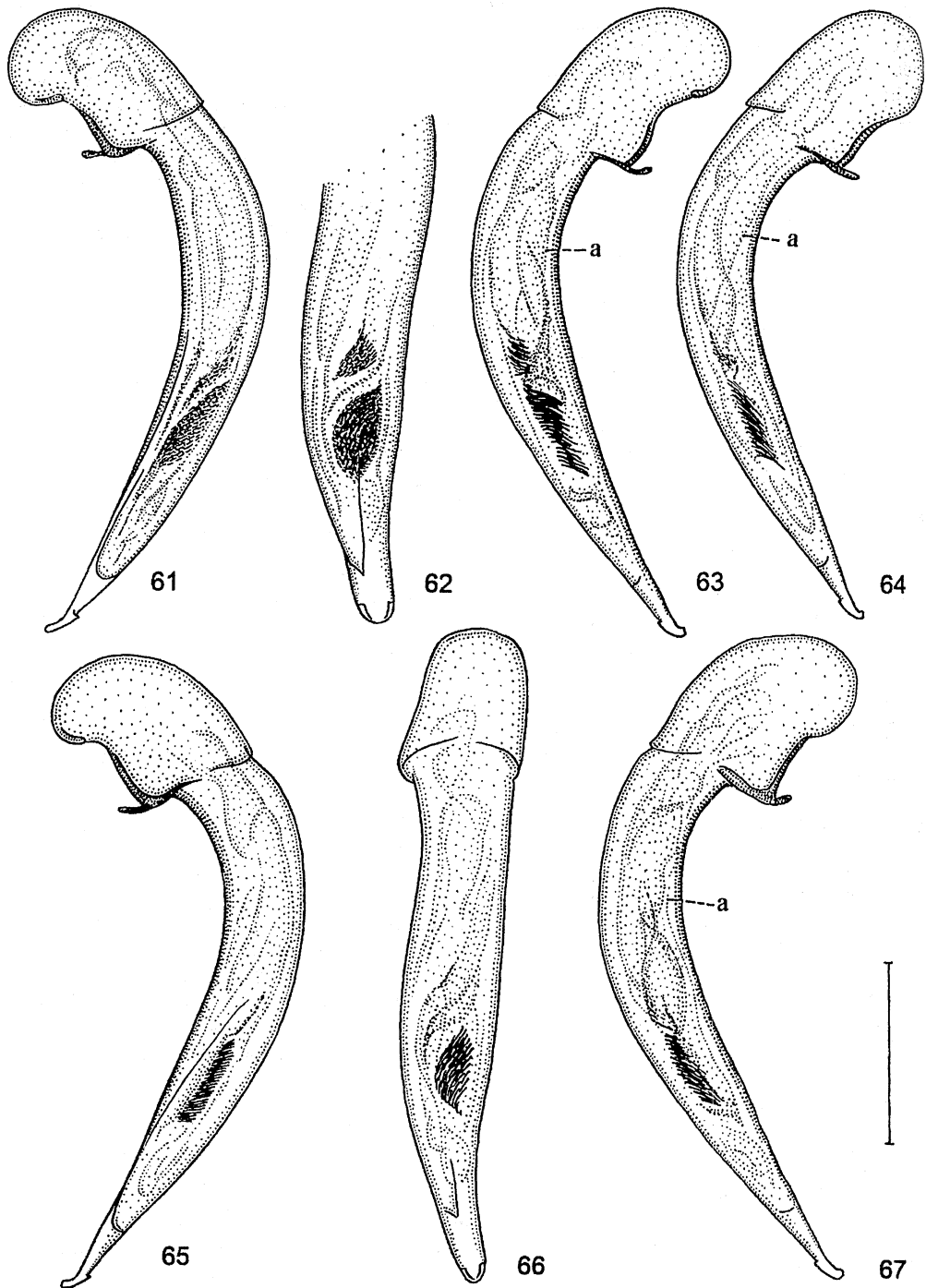
Dark brown to black, shiny on dorsum and weakly iridescent on elytra; labrum, bases of

mandibles and margins of pronotum usually reddish brown; palpi, antennae and legs brownish yellow to brown; 3rd-7th antennomeres each with longitudinal dark strip.

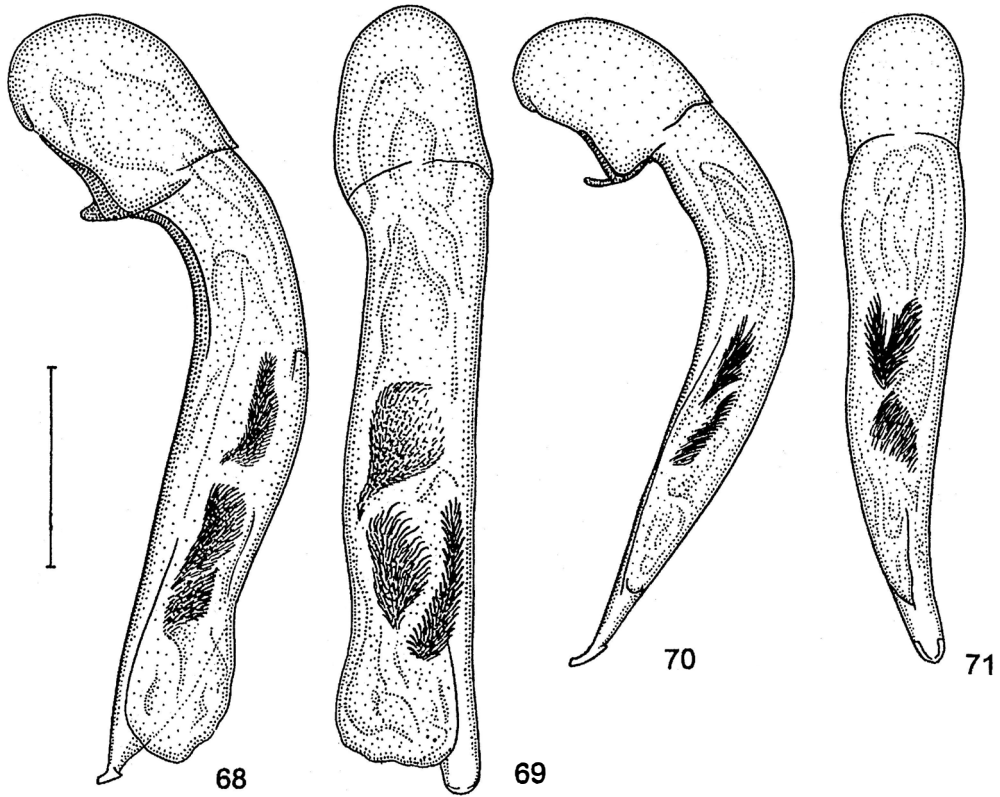
Head similar to that of *H. indicus*, measured across eyes and across neck constriction, respectively 0.72-0.75 and 0.60-0.61 times as wide as pronotum, micropunctate and slightly wrinkled behind eyes. Tooth of mentum narrowly rounded at apex. Dorsal microsculpture highly suppressed on frons and vertex, clearly visible around supraorbital seta and behind eyes, consisting of more or less isodiametric meshes.

Pronotum (Fig. 9) rather convex and comparatively broad, 1.53-1.56 times as wide as long, widest in anterior third, with unisetose sides rounded anteriorly and almost straightly converging to base posteriorly. Anterior margin weakly emarginate; posterior margin somewhat straight, only scarcely rounded medially, a little wider than anterior margin and slightly narrower than elytral base between humeral angles. Apical angles hardly protruding, rather widely rounded at apex; basal angles well marked, obtuse, only slightly blunted at apex. Lateral depressions beginning from apical angles, extremely narrow apically, evenly widened behind lateral pore and fused basally with broad and poorly visible basal foveae, forming rather deep latero-basal depressions; area at base between latter convex. Pronotal surface coarsely and densely punctate in lateral and latero-basal depressions; punctures confluent; more fine and sparse punctation present at anterior margin near anterior angles. Microsculpture fine, consisting of weakly transverse meshes in central part of pronotum and of isodiametric meshes along pronotal margins.

Elytra convex, elongate, 1.52-1.56 times as long as wide, 2.73-2.84 times as long and 1.17-1.19 times as wide as pronotum, slightly rounded at sides, widest at middle or just behind it. Humeri angulate, each with a tiny acute denticle at apex. Subapical sinuation distinct, moderately deep; sutural angle acute, sharp or slightly blunted at apex. Basal edge glabrous, weakly sinuate, meeting lateral margin in obtuse angle with distinct vertex. Striae thin and impunctate; scutellar stria long, with basal pore; 9th stria clearly visible, long. Intervals convex, notably narrowed before apex; nonpubescent; only two lateral intervals very finely and sparsely punctate. Microsculpture clearly visible throughout, consisting of fine, transverse meshes on disc and of isodiametric, nearly granulate meshes along lateral margins and at apex of elytra.



Figs 61-67. *Harpalus meghalayensis* sp. n., penis (61-63, Mawphlang; 64-67, Upper Shillong (64, holotype)). 61, 65, view from left side; 62, 66, dorsal aspect; 63, 64, 67, view from right side. *a*, folded formation of internal sac. Scale = 1 mm.



Figs 68-71. *Harpalus*, penis. 68, 69, *H. meridianus* (shores of Kodaikanal Lake, paratype); 70-71, *H. sinicus* (Hanoi, Vietnam). 68, 70, view from left side; 69, 71, dorsal aspect. Scale = 1 mm.

Metepisterna long and strongly narrowed posteriad. Anal sternites, except for obligatory setae and fine cilia in medial part of 3rd visible sternite, glabrous. Anal sternite (in male) slightly truncate and anal tergite (in male) rounded at apex. In fore tibia, apical spur not dentate but obtusely angulate at margins (Fig. 60); outer distal margin with four (sometimes five) spines and ventroapical tubercle with two spines at apex. Hind femora each with two (more rarely three) setigerous pores along hind margin. Tarsi densely pubescent dorsally; 1st mesotarsomere in male with vestigial adhesive scales at apex.

Penis (Figs 61-67) moderately arcuate, with apex slightly directed ventrad (lateral aspect); terminal lamella much longer than wide, weakly narrowed to apex, with oblique horse-shoe-shaped apical capitulum narrowly rounded at apex (dorsal aspect). Internal sac with one or two medial spiny patches and comparatively short field "a".

Distribution. This new species is known only from 2 localities in Meghalaya, NE India.

Remarks. *H. meghalayensis* sp. n. is very similar to *H. indicus* in many characteristics including the transverse elytral microsculpture, nondentate apical spur of fore tibiae, hind femora with two or three setigerous pores along hind margin, nonpubescent elytral intervals and the obtuse, not denticulate, basal angles of pronotum. The main differences between these species are in the male genitalia: the internal sac of *H. meghalayensis* sp. n. is characterized by the comparatively short field "a" and by one or two medial spiny patches (Figs 61-67) in contrast to the internal sac of *H. indicus*, which possesses a rather long field "a" and at most only one medial spiny patch (Figs 21-37). There are also some differences in external characters: the new species is stouter, its pronotum is broader and more strongly depressed at basal angles. According to our material, *H. meghalayensis* sp. n. and *H. indicus* occur in Meghalaya sympatricly.

The new species is distinguished from *H. hauserianus* by the hind femora with two or three setigerous pores along hind margin and

by the penis without folded formation "c" in the internal sac characteristic to *H. hauserianus*. In external morphology, *H. meghalayensis* sp. n. is also similar to *H. meridianus*, but easily differs in the transverse elytral microsculpture, fewer number of setigerous pores at hind margin of hind femora and structure of the male genitalia (see below).

***Harpalus meridianus* Andrewes, 1923**
(Figs 8, 55, 68, 69)

Harpalus meridianus Andrewes, 1923: 443 (type locality: "Nilgiri Hills, Utacamand", India).

Harpalus indicola sensu Schauburger, 1930 (non Bates, 1878).

Type material examined. Holotype, ♂ with labels "H.L. Andrewes, Nilgiri Hills.", "Type", "*Harpalus meridianus* Andr., Type" and "H.E. Andrewes Coll., B. M. 1945-97" (NHML); two paratypes, both ♂, labelled "Shores of Kodaikanal Lake, 6850 ft., Palni Hills, S. India, VIII.22 (under stones), S. Kemp", "Indian Mus. Calcutta", "Cotype", "*Pardileus meridianus* Andr., cotype, H.E. Andrewes det.", "Cotype", "H.E. Andrewes Coll., B. M. 1945-97" (NHML).

Other material examined. India: 4 ♀, Uttar Pradesh, Kumaon, Nainital Distr., Bhimtal, 1500 m, 20.IV.1981 (NHMW, cWR); 2 ♀, "India or., Madura" (TMB). Kashmir: 2 ♂, Daksum, 2300-2500 m, 3-4.VIII.1980, Richter leg. (NHMW); 2 ♂, Pahalgam, 2300 m, 11.VI.1985, H. Willberg leg. (NHMW); 1 ♀, Lohinvan, 3000-3600 m, 21.VII.1980, Holzschuh leg. (NHMW). Pakistan: 1 ♀, Northern Areas, Chalt, 36°15.20'N 74°20.14'E, 1850 m, at light, 11.VII.1998, G. Csorba & L. Ronkay leg. (TMB); 1 ♀, NW Karakorum, at light, 26.VIII.1959, F. Lobbichler leg. (cWR).

Description. Body length 11.0-12.9 mm, width 4.4-5.1 mm.

Body dark brown to black, shiny on dorsum but not iridescent, with paler labrum, anterior part of clypeus, bases of mandibles and often very narrow margins of pronotum; underneath paler than upperside, dark brown; palpi, antennae and legs brownish yellow; antennae beginning from 2nd or 3rd segment slightly infuscated (in holotype, each of 3rd-11th antennomeres with longitudinal dark strip).

Head moderate in size, measured across eyes, 0.70-0.71 times as wide as pronotum, impunctate. Eyes large and convex. Tempora nonpubescent, more or less abruptly descending to neck. Clypeus with two setigerous pores. Tooth of mentum obtuse, slightly rounded at apex. Basal segment of labial palpi lacking carina ventrally. Dorsal microsculpture visible only behind eyes, consisting of fine isodiametric meshes.

Pronotum (Fig. 8) moderately convex, 1.48-1.55 times as wide as long, widest either in

middle (in holotype) or before it, with unisetose sides rounded up to base; sides basally rounded very widely, nearly straight. Anterior margin only weakly emarginate; posterior margin more or less straight, entirely bordered, notably wider than anterior margin and a little narrower than elytral base between humeral angles. Apical angles weakly protruding, rounded at apex; basal angles well marked, obtusangular, narrowly rounded or blunted at apex. Lateral depressions beginning from apical angles, very narrow apically, gradually widened in basal half up to pronotal base. Basal foveae broad, superficial, separated from lateral depressions by small flattened convexity; area between basal foveae somewhat convex. Lateral portions of pronotal base and lateral depressions densely punctate, punctures often confluent; more sparse and fine punctation also present at anterior margin and in mediobasal portion of pronotum. Microsculpture fine, consisting of weakly transverse meshes.

Elytra elongate, comparatively broad, 1.50-1.54 times as long as wide, 2.68-2.78 times as long and 1.16-1.20 times as wide as pronotum, weakly rounded at sides, widest just behind middle. Humeri subangulate, obtuse, each with a tiny acute denticle at apex well visible from behind. Subapical situation weak; sutural angle sharp at apex. Basal edge glabrous, weakly sinuate, meeting lateral margin in very obtuse angle with more or less distinct vertex. Striae thin and impunctate, slightly impressed; scutellar stria well developed, with basal pore. Intervals somewhat convex, narrow before apex, nonpubescent; two or four lateral intervals punctate: in latter case, 8th and 9th intervals much densely and coarsely than 6th and 7th; elytral apex nearly impunctate; sometimes, very fine punctation also present at base of elytra along basal edge. Microsculpture fine, clearly visible throughout, consisting of isodiametric meshes.

Metepisterna long, approximately 1.5 times as long as wide, strongly narrowed posteriorly. Prosternum finely and densely pubescent. Abdominal sternites, except for obligatory setae, glabrous. Anal sternite blunted at apex. In fore tibiae, apical spur not dentate but distinctly obtusely angulate at margins (Fig. 55); outer distal margin with four spines and ventroapical tubercle with two spines at apex. Hind femora each with four or five setigerous pores along hind margin. Tarsi dorsally densely pubescent; in male, 1st mesotarsomere with vestigial adhesive vestiture ventroapically.

Penis (Figs 68-69) comparatively weakly arcuate, with apex scarcely directed dorsad (lat-

eral aspect); terminal lamella a little longer than wide, hardly narrowed to apex, with oblique horseshoe-shaped apical capitulum rounded at apex (dorsal aspect). Internal sac with three (proximal and two distal) large spiny patches in medial part of median lobe.

Distribution. *H. meridianus* is known with assurance only from the western part of the Himalayas and from Southern India: Madras (Nilgiri and Palni Hills) and Bombay (Nasik).

Remarks. In external morphology and male genitalia, this species is very similar to *H. sinicus* Hope, 1845 widely distributed in East Asia, but differing mainly in the nondentate apical spur of fore tibiae, more elytral intervals punctate and male genitalia with differently-organized armature of internal sac (the penis of *H. sinicus* is illustrated in Figs 70-71). It is possible that *H. meridianus* is only a subspecies of *H. sinicus*, but more material is necessary to decide this. In any case, I believe that all records of *H. sinicus* from Kashmir (Bates, 1890, as *H. japonicus* Morawitz; Andrewes, 1924) were based on specimens of *H. meridianus*. Both *H. sinicus* and *H. meridianus* are easily distinguished from *H. indicus* and other related species (*H. hauserianus* and *H. meghalayensis* sp. n.) by the elytral microsculpture consisting of isodiametric meshes.

Based on an examination of the original specimen of *H. meridianus* from Kodaikanal (Palni Hills), Schaubberger (1932) concluded that formerly he erroneously determined the specimens of this species from Poo (Kashmir) as *H. indicola* (Schaubberger, 1930).

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