

Haroldius jechaer sp. nov. (Coleoptera: Scarabaeidae) from Yunnan, China

David KRÁL¹⁾ & Jiří HÁJEK²⁾

¹⁾Department of Zoology, Faculty of Science, Charles University in Prague, CZ-128 43 Praha 2, Czech Republic; e-mail: kraldavid59@gmail.com

²⁾Department of Entomology, National Museum, Kunratice 1, CZ-148 00 Praha 4, Czech Republic; e-mail: jiri_hajek@nm.cz

Abstract. *Haroldius jechaer* sp. nov. from Yunnan province, China, is described and illustrated. The new species resembles *H. stevensi* Arrow, 1931 in having a large body (length 3.8 mm) and a small semi-elliptic bordered area near the base of the pronotum. Both species can be separated mainly by their different colour, punctuation and macrosetation of the dorsal surface. An updated annotated checklist of all described species of *Haroldius* Boucomont, 1914 is added.

Key words. Coleoptera, Scarabaeidae, Scarabaeinae, *Haroldius*, taxonomy, new species, annotated checklist, China, Oriental Region, Palaearctic Region

Introduction

The genus *Haroldius* Boucomont, 1914 accommodates small, as far as we know, myrmecophilous scarabaeines. Because of myrmecophilous life, their morphology is rather unusual and some diagnostic characters are missing, or at least modified and hard to homologize for tribal classification within Scarabaeinae (cf. e.g., PHILIPS & SCHOLTZ 2000, PHILIPS et al. 2004, KRIKKE & HUIJBREGTS 2006, MONTREUIL 2010). *Haroldius* is currently classified either in Deltochilini (formerly Canthonini, see BOUCHARD et al. (2011) for the explanation) (KRIKKE & HUIJBREGTS 2006), Onthophagini (LÖBL et al. 2006, KRELL & PHILIPS 2010), or most recently in Ateuchini (MONTREUIL 2010).

The genus is distributed in the Afrotropical and the Oriental Regions, including 38 described species. Several species are known to penetrate to the transition zone between the Oriental and the Palaearctic Regions, especially to China and Himalaya where six species are recorded (KRÁL 2003; KRAJCIK 2006; KRIKKE & HUIJBREGTS 2006, 2009; DAVIS et al. 2008). The present finding of an unusually large *Haroldius* in Yunnan Province, China, revealed another undescribed species. The new species is described below and compared with the holotype of the most similar and probably closely related species, *H. stevensi* Arrow, 1931.

Material and methods

Specimens were examined with an Olympus SZ61 stereomicroscope, measurements were taken with an ocular graticule. The habitus photographs were taken using a Canon MP-E 65mm/2.8 1–5× Macro on bellows attached to a Canon EOS 550D camera. Partially focused images of specimen were combined using Helicon Focus 3.20.2Pro software.

Exact label data are cited for the type material. Authors' remarks and addenda are in square brackets, separate label lines are indicated by slash (/), separate labels by double slash (//). Information in 'brackets' indicates the original spelling in the original description.

The specimens included in this study are deposited in the following collections:

- BMNH The Natural History Museum [former British Museum (Natural History)], London, United Kingdom (Maxwell V. L. Barclay);
NMPC National Museum, Prague, Czech Republic (Jiří Hájek).

Taxonomy

Haroldius jechaer sp. nov.

(Figs. 1–3)

Type locality. China, Yunnan province, Tengchong, Laifeng Shan National Forest Park, 25°01.1'N 098°29.1'E, 1700–1900 m a.s.l.

Type material. HOLOTYPE: ♂ (NMPC), 'CHINA: Yunnan prov., 4.VI.2007 / TENGCHONG, 1700-1900 m, / LAIFENG SHAN Nat. Forest Park / 25°01.1'N 098°29.1'E, / J. Hájek & J. Růžička leg. // individually collected under / stones and logs, on soil surface, / on dead wood and on plants and / shrubs, wet mixed forest [printed] // *Haroldius jechaer* sp. nov., HOLOTYPUS ♂, David Král & Jiří Hájek det. 2012 [red, printed]'.

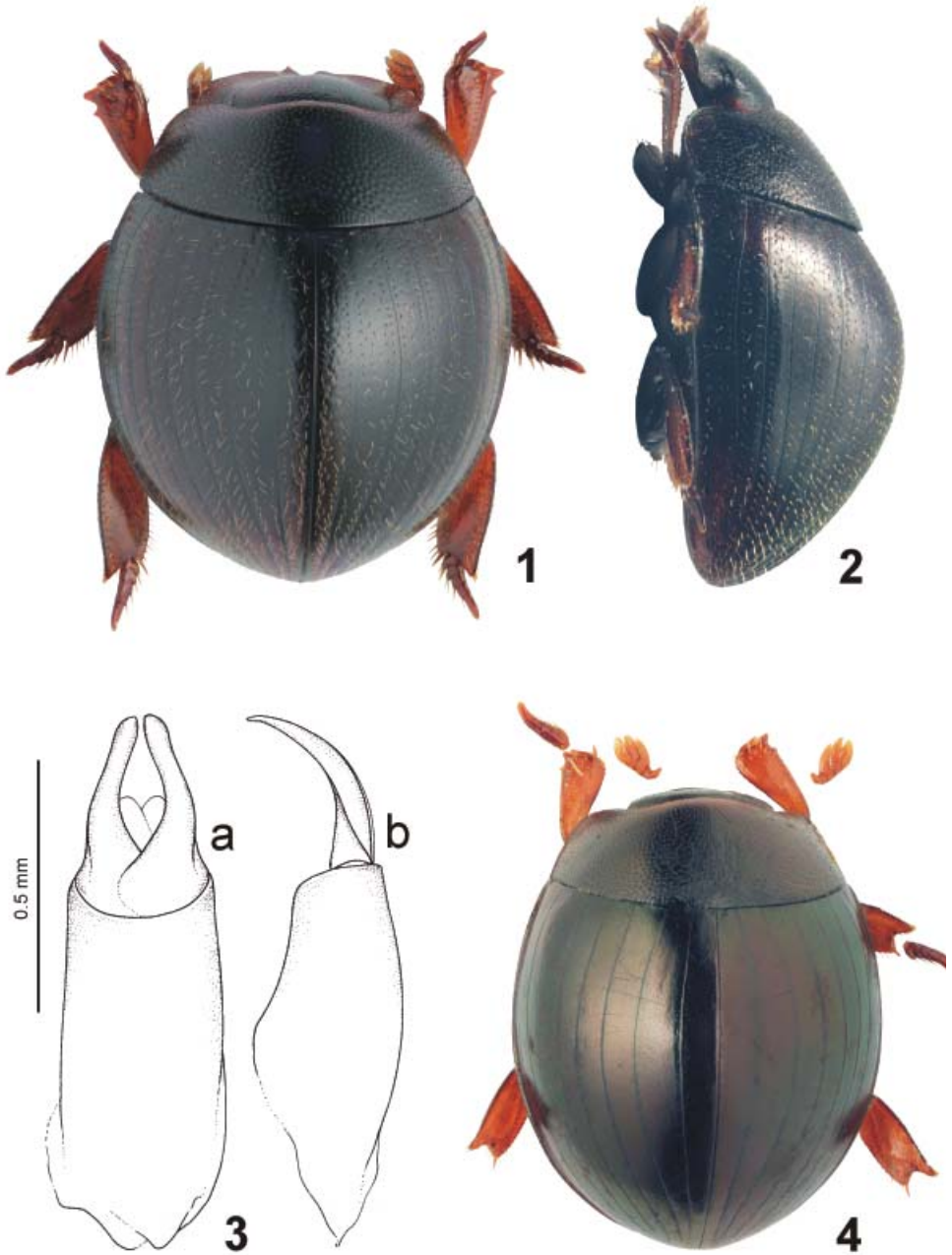
Description of holotype. Total body length 3.8 mm. Approximately hemispheric in shape, broadest at middle of elytra (maximum width 2.8 mm); colour of dorsal surface black, distinctly shiny; clypeus anterolaterally, genae laterally, tibiae and tarsi brownish; macrosetation pale (Figs. 1, 2).

Head. Anterior margin of clypeus with two sharp denticles separated by V-shaped emargination, distinctly depressed along anterolateral margin. Clypeo-genal and fronto-clypeal sulci absent. Frons feebly convex. Lateral outline of gena angulate, bordered. Dorsal surface of head slightly microsculptured and covered with shallow, densely distributed punctures separated by about three their diameters, several punctures mainly on clypeus bearing very fine and short, erect macrosetae. Ultimate maxillary palpomere much longer than three proximal palpomeres together.

Pronotum transverse, convex, basal area not depressed, about twice as wide as long, anterior margin bisinuate, anterior angles broadly rounded towards straight subparallel-sided lateral margins; basis simply rounded, finely bordered. Surface densely and coarsely punctate, each puncture bearing short semierect macroseta, shape of punctures broadly oval; small semi-elliptic area near base (reaching to beginning of elytron stria 2) with shallow, longitudinal striolae.

Scutellar shield absent.

Elytra distinctly convex, not considerably depressed basally in lateral view (Fig. 2); striae finely but distinctly impressed over whole length, intervals flat, all of approximately same



Figs. 1–4. 1–3 – *Haroldius jechaer* sp. nov. 1 – habitus of holotype, dorsal aspect (body length: 3.8 mm); 2 – same, left lateral aspect; 3 – aedeagus: a – dorsal aspect, b – lateral aspect. 4 – *H. stevensi* Arrow, 1931, habitus of holotype, dorsal aspect (body length: 3.1 mm).

Table 1. Differential characters of *Haroldius jechaer* sp. nov. and *H. stevensi* Arrow, 1931.

Character	<i>Haroldius jechaer</i> sp. nov.	<i>Haroldius stevensi</i> Arrow, 1931
dorsal surface colour (excepting extremities)	blackish (Figs. 1, 2)	black with weak metallic cupreous tinge (Fig. 4)
dorsal surface macrosetation	head microscopically, pronotum and elytra finely, densely macrosetaceous (Figs. 1, 2)	pronotum and elytra entirely glabrous (Fig. 4)
clypeus shape	distinctly depressed along anterolateral margin	shallowly depressed along anterolateral margin
head and pronotum punctation	finer	coarser
shape of pronotal punctures	broadly oval	narrowly oval
elytral punctation	coarse and more dense, arranged in somewhat irregular longitudinal rows along striae (Figs. 1, 2)	very fine and sparse, regularly distributed (Fig. 4)
distribution	China (Yunnan)	India (Darjeeling, Meghalaya), Nepal, Thailand, N Vietnam

width, punctation coarse and dense, punctures arranged in somewhat irregular longitudinal rows along striae, macrosetae simply acute, erect, only their apices bent slightly posteriad.

Protibiae moderately widened apicad, bidentate; meso- and metatibiae rather strongly widened, slightly sinuate externally, apical margin of metatibia straight (Fig. 1).

Male genitalia. Aedeagus symmetrical; parameres simple, broadly rounded to apex in dorsal aspect, strongly curved and acute apically in lateral aspect (Figs. 3a,b).

Differential diagnosis. *Haroldius jechaer* sp. nov. is similar and probably closely related to *H. stevensi* Arrow, 1931 in possessing a small bordered semi-elliptic area near the pronotal basis. This character is so far known only in these two species. They can be readily separated as given in Table 1.

Etymology. The name of the new species is composed from Czech phonetic transcription of initials of our ever helpful friend Jan Choleva Růžička (Prague, Czech Republic), an excellent student in Coleoptera, especially in Silphidae and Leiodidae, and co-collector of the holotype. Noun in apposition; pronounce as ye-kha-er.

Collecting circumstances. Wet mixed forest, collected individually.

Distribution. So far known only from the type locality in western Yunnan, China.

Haroldius stevensi Arrow, 1931

(Fig. 4)

Haroldius stevensi Arrow, 1931: 416.

Material examined. HOLOTYPE: not sexed (BMNH), 'Holo- / type [printed, round label, red margin] // Gopaldhara / Darjeeling. / 4,720-6,100 ft. [printed] 7. [handwritten] / H. Stevens [printed] 4-IX- [printed] 14: [printed, strikethrough handwritten] // H. Stevens. / Brit. Mus. / 1922-307. // Haroldius / Stevensi. / type Arrow [handwritten by Arrow] // Haroldius / stevensi Arr. [handwritten by Bacchus] / M.E.Bacchus det. 1975 / HOLOTYPE [printed]'.

Distribution. In addition of the type locality the species is recorded also from Nepal, India (Meghalaya), Thailand and Vietnam (Tonkin) (PAULIAN 1985, KRÍKKEK & HUIJBREGTS 2006). This additional material has not been studied by the authors.

Annotated checklist of the genus *Haroldius*

- Haroldius* Boucomont, 1914: 253.** Type species: *Haroldius rugatulus* Boucomont, 1914, by subsequent designation (ARROW 1931: 413).
- = *Afroharoldius* Janssens, 1949: 183. Type species: *Afroharoldius ennearthrus* Janssens, 1949, by original designation. Synonymised by PAULIAN (1985: 196).
- = *Cyclotrogus* Wasmann, 1918: 2. Type species: *Cyclotrogus heimi* Wasmann, 1918, by original designation. Synonymised by ARROW (1931: 413).
- = *Formicdubius* Philips & Scholtz, 2000: 227. Type species: *Formicdubius convexus* Philips & Scholtz, 2000, by original designation. Synonymised by KRELL & PHILIPS (2010: 44).
- = *Ponerotrogus* Silvestri, 1924: 583. Type species: *Ponerotrogus amandalei* Silvestri, 1924, by original designation. Synonymised by PAULIAN (1985: 197).
- Haroldius amandalei* (Silvestri, 1924):** 586 (*Ponerotrogus*). Type locality: 'Barkuda Islands in the Chilka lake'. Distribution: India: Orissa (Silvestri 1924), Karnataka (Paulian 1934).
- = *Haroldius chapmani* Paulian, 1934: 163. Type locality: 'Bangalore: Chikkangalur'. Synonymised by PAULIAN (1985: 197).
- Haroldius borneensis* Paulian, 1993:** 170. Type locality: 'Sabah, Poring Hot Springs, Langanan Falls'. Distribution: Malaysia: Sabah.
- Haroldius brendelli* Krikken & Huijbregts, 2009:** 259. Type locality: 'Indonesia, N. C. Seram, Manusela NP'. Distribution: Indonesia: Maluku: Ceram.
- Haroldius cambeforti* Krikken & Huijbregts, 2006:** 176. Type locality: 'Indonesia, Sulawesi Utara, Dumoga Bone N. P.'. Distribution: Indonesia: Sulawesi.
- Haroldius cardoni* Boucomont, 1923:** 83. Type locality: 'Chota Nagpur, Nowatoli'. Distribution: India: Chhattisgarh.
- = *Haroldius oberthueri* Paulian, 1934: 163. Type locality: 'Chota Nagpur: Nowatoli'. Synonymised by PAULIAN (1985: 197).
- Haroldius celebensis* Krikken & Huijbregts, 2006:** 174. Type locality: 'Indonesia, Sulawesi Utara, Dumoga Bone N. P.'. Distribution: Indonesia: Sulawesi.
- Haroldius convexus* (Philips & Scholtz, 2000):** 230 (*Formicdubius*). Type locality: 'South Africa, Gauteng Province, Pretoria, The Willows, 25.45S 28.21E'. Distribution: South Africa: Gauteng.
- Haroldius discoidalis* Paulian, 1993:** 172. Type locality: 'Sabah, Poring Hot Springs, Langanan Falls'. Distribution: Malaysia: Sabah.
- Haroldius ennearthrus* (Janssens, 1949):** 183 (*Afroharoldius*). Type locality: 'Elisabethville [= Lubumbashi]'. Distribution: Democratic Republic of the Congo: Katanga (Janssens 1949), Kasai-Occidental (Krell & Philips 2010).
- Haroldius fairmairei* Boucomont, 1914:** 254. Type locality: 'Singapore'. Distribution: Singapore.
- Haroldius fleutiauxi* Paulian, 1945:** 60. Type locality: 'Tonkin, Yen Bay'. Distribution: N Vietnam (Paulian 1945); Thailand (Paulian & Scheuern 1994).

- Haroldius globosus* Boucomont, 1925:** 151. Type locality: ‘Luzon: Mont Banahao’. Distribution: Philippines: Luzon.
- Haroldius heimi* (Wasmann, 1918):** 4 (*Cyclotrogus*). Type locality: ‘Wallon (Ahmednagar-Distr.)’. Distribution: India: Maharashtra (Wasmann 1918); Pakistan: Swat (Paulian 1985).
= *Cyclotrogus nigrita* Wasmann, 1918: 4. Type locality: ‘Wallon (Ahmednagar-Distr.)’. Synonymised by ARROW (1931: 415).
- Haroldius herrenorum* Paulian, 1985:** 199. Type locality: ‘Ceylan (Sri Lanka) Sud, Palatupana, Yala National Park’. Distribution: Sri Lanka.
- Haroldius hwangi* Masumoto, Lee & Ochi, 2005:** 243. Type locality: ‘Taiwan, Kaohsiung Hsien, Tengchin’. Distribution: Taiwan.
- Haroldius jechaer* sp. nov.** Type locality: ‘China, Yunnan prov., Tengchong, Laifeng Shan National Forest Park, 25°01.1’N 098°29.1’E, 1700–1900 m a.s.l.’ Distribution: China: Yunnan.
- Haroldius kawadai* Masumoto, 1995:** 59. Type locality: ‘Doi Suthep, Chiang Mai Pref., NW Thailand’. Distribution: Thailand.
- Haroldius kolaka* Krikken & Huijbregts, 2006:** 174. Type locality: ‘SE Sulawesi, Kolaka, Sanggona Base Camp, alt.m 0200’. Distribution: Indonesia: Sulawesi.
- Haroldius krali* (Utsunomiya & Masumoto, 2000):** 407 (*Ponerotrogus*). Type locality: ‘Sri Lanka, Kanoy’. Distribution: Sri Lanka.
- Haroldius lassallei* Cambefort, 1986:** 69. Type locality: ‘Népal central, nord de Gorkha, 1800 m’. Distribution: Nepal.
- Haroldius leleupi* (Janssens, 1953):** 346, 347 (*Afroharoldius*). Type locality: ‘Katanga: Kanzenze’. Distribution: Democratic Republic of the Congo: Katanga.
- Haroldius loebli* Paulian, 1987:** 718. Type locality: ‘Thailand, Chiang Mai, Doi Suthep, 1050 m’. Distribution: Thailand.
- Haroldius maruyamai* Utsunomiya & Masumoto, 2005:** 487. Type locality: ‘Malay, Pahang, Fraser Hill’. Distribution: Malaysia: Pahang.
- Haroldius modestus* (Janssens, 1953):** 346 (*Afroharoldius*). Type locality: ‘Massif du Kundelungu, alt. 1750 m’. Distribution: Democratic Republic of the Congo: Katanga (Janssens 1953); Malawi (Krell & Philips 2010).
- Haroldius oharai* Ochi, Kon & Barclay, 2009:** 238. Type locality: ‘Indonesia, East Kalimantan, Bukit Bankirai, Kutai Kartanegara’. Distribution: Indonesia: East Kalimantan.
- Haroldius pahangensis* Král, 2003:** 193. Type locality: ‘Malaysia, Prov. Pahang, Fraser Hill, Jeriau Wf., 950 m’. Distribution: Malaysia: Pahang.

- Haroldius pauliani* Scheuern, 1995:** 764. Type locality: 'Borneo: Sabah, Mt. Kinabalu National Park, Poring Hot Springs, 510 m'. Distribution: Malaysia: Sabah.
- Haroldius penelopeae* Krikken & Huijbregts, 2006:** 175. Type locality: 'Indonesia, Sulawesi Utara, Dumoga Bone N. P.'. Distribution: Indonesia: Sulawesi.
- Haroldius perroti* Paulian, 1939:** 70. Type locality: 'Tonkin: Tam Dao'. Distribution: N Vietnam (Paulian 1939); Taiwan (Krikken & Huijbregts 2006).
- Haroldius philippinensis* Pereira, 1954:** 1. Type locality: 'Dingalan bay, East Luzon, Philippine Islands'. Distribution: Philippines: Luzon.
- Haroldius rugatulus* Boucomont, 1914:** 253. Type locality: 'Singapore'. Distribution: Singapore (Boucomont 1914); Malaysia: Sabah (Ochi et al. 2009).
- Haroldius stefanii* Montreuil, 2010:** 73. Type locality: 'Madagascar, Province d'Antsirana, Forêt d'Anabohazo, 21.6 km 247° WSW Maromandia, elev 120 m, 14°18'32"S 47°54'52"E'. Distribution: Madagascar: Antsirana.
- Haroldius stevensi* Arrow, 1931:** 416. Type locality: 'Bengal: Rungbong Valley, Darjeeling dist., 4720–6000 ft.'. Distribution: India: Darjeeling (Arrow 1931); India: Meghalaya, Nepal, Thailand, N Vietnam (Paulian 1985).
- Haroldius sumatranus* Paulian & Scheuern, 1994:** 436. Type locality: 'Sumatra Ouest, Anai Valley Nat. Res., 10 km ouest Pandangpanjan, 200 m'. Distribution: Indonesia: Sumatra (Paulian & Scheuern 1994); Malaysia: Sabah (Ochi et al. 2009).
- Haroldius tangkoko* Krikken & Huijbregts, 2006:** 175. Type locality: 'Sulawesi Utara, Tangkoko'. Distribution: Indonesia: Sulawesi.
- Haroldius thailandensis* Paulian & Scheuern, 1994:** 438. Type locality: 'Thaïlande, Chiang Maï, Doi Suthep, 1180 m'. Distribution: Thailand.
- Haroldius turnai* Král, 2003:** 195. Type locality: 'China, SE Hubei, Mufu Shan, 29.4 N 114.6 E, Jiugongshan forest, 1000 m a.s.l.'. Distribution: China: Hubei.
- Haroldius uenoi* Masumoto & Yin, 1993:** 84. Type locality: 'S China, Xishuangbanna, Menglun, 600 m alt.'. Distribution: China: Yunnan.

Acknowledgements

Our thanks go to Maxwell V. L. Barclay (BMNH) for enabling us to study the holotype of *Haroldius stevensi* in his care and Miss Zuzana Čadová (Liberec, CZ) for executing the line drawings. We are obliged to Aleš Bezděk (České Budějovice, Czech Republic) and an anonymous reviewer for their valuable comments on the manuscript. The study was supported in part by the Ministry of Culture of the Czech Republic DF12P01OVV021 (JH) and institutional resources of Ministry of Education, Youth and Sports of the Czech Republic for the support of science and research.

References

- ARROW G. J. 1931: Coleoptera, Lamellicornia, part 3, Coprinae. In: STEPHENSON J. (ed.): *Fauna of British India, including Ceylon and Burma*. Taylor & Francis, London, 428 pp.
- BOUCHARD P., BOUSQUET Y., DAVIES A. E., ALONSO-ZARAZAGA M. A., LAWRENCE J. F., LYAL C. H. C., NEWTON A. F., REID C. A. M., SCHMITT M., ŚLIPIŃSKI S. A. & SMITH A. B. T. 2011: Family-group names in Coleoptera (Insecta). *ZooKeys* **88**: 1–972.
- BOUCOMONT A. 1914: Les coprophages de l'Archipel Malais. *Annales de la Société Entomologique de France* **73**: 238–350.
- BOUCOMONT A. 1923: Notes sur divers coléoptères coprophages. *Bulletin du Muséum National d'Histoire Naturelle* **29**: 81–83.
- BOUCOMONT A. 1925: Lamellicorne coprophages nouveaux des îles Philippines. *Bulletin de la Société Entomologique de France* **1925**: 151–154.
- CAMBEFORTY. 1986: Un *Haroldius* nouveau du Népal (Coleoptera, Scarabaeidae). *Revue Française d'Entomologie (Nouvelle Série)* **8**: 69–70.
- DAVIS A. V. L., FROLOV A. V. & SCHOLTZ C. H. 2008: *The African Dung Beetle Genera*. Protea Book House, Pretoria, 272 pp.
- JANSSENS A. 1934: Description d'un *Haroldius* nouveau. *Bulletin et Annales de la Société Entomologique de Belgique* **74**: 33–34.
- JANSSENS A. 1949: Un Scarabaeinae termitophile nouveau du Congo Belge. *Revue de Zoologie et de Botanique Africaines* **42**: 183–184.
- JANSSENS A. 1953: Contribution à l'étude des coléoptères lamellicornes d'Afrique II. Espèces nouvelles du genre *Afroharoldius*. *Revue de Zoologie et de Botanique Africaines* **47**: 344–347.
- KRÁL D. 2003: The genus *Haroldius* (Coleoptera: Scarabaeinae): two new species, range extension, catalogue. *Acta Societatis Zoologicae Bohemicae* **67**: 193–198.
- KRAJCIK M. 2006: Checklist of Scarabaeoidea of the World. 1. Scarabaeinae. *Animma.X, Supplement* **3**: 1–189.
- KRELL F.-T. & PHILIPS T. K. 2010: *Formicdubius* Philips & Scholtz from South Africa, a junior synonym of *Haroldius* Boucomont, and a survey of the trichomes in the African species (Coleoptera, Scarabaeidae, Onthophagini). Pp. 41–48. In: RATCLIFFE B. & KRELL F.-T. (eds.): Current advances in Scarabaeoidea research. *ZooKeys* **34**: 1–207.
- KRIKKEN J. & HUIJBREGTS J. 2006: Miniature scarabs of the genus *Haroldius* on Sulawesi, with notes on their relatives (Coleoptera: Scarabaeidae). *Tijdschrift voor Entomologie* **149**: 167–187.
- KRIKKEN J. & HUIJBREGTS J. 2009: A new *Haroldius* Boucomont and a new *Tesserodon* Hope from the Moluccas (Coleoptera: Scarabaeidae: Scarabaeinae). *Koleopterologische Rundschau* **79**: 257–266.
- LÖBL I., KRELL F.-T., ZIANI S. & KRÁL D. 2006: Tribe Onthophagini Burmeister, 1846. Pp. 159–176. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera. Volume 3. Scarabaeoidea – Scirtoidea – Dascilloidea – Buprestoidea – Byrrhoidea*. Apollo Books, Stenstrup, 690 pp.
- MASUMOTO K. 1995: Coprophagid-beetles from Northwest Thailand, IX (Coleoptera, Scarabaeidae). *Entomological Review of Japan* **50**: 59–67.
- MASUMOTO K., LEE C.-F. & OCHI T. 2005: A new *Haroldius* (Coleoptera: Scarabaeidae) from Taiwan. *Entomological Review of Japan* **60**: 243–245.
- MASUMOTO K. & YIN W.-Y. 1993: Small coprophagous scarabaeids (Coleoptera, Scarabaeidae) from Yunnan, Southern China. *Elytra* **21**: 83–86.
- MONTREUIL O. 2010: Première espèce du genre *Haroldius* Boucomont, 1914, à Madagascar, et redéfinition des *Epilissini* (Coleoptera, Scarabaeidae, Ateuchini). *Bulletin de la Société Entomologique de France* **115**: 73–76.
- OCHI T., KON M. & BARCLAY M. V. L. 2009: Notes on the coprophagous scarab-beetles (Coleoptera: Scarabaeidae) from Southeast Asia (XXII): a new species of *Haroldius* and four new species of *Panelus* from Borneo. *Entomological Review of Japan* **64**: 237–245.
- PAULIAN R. 1934: Quelques *Panelini* asiatiques nouveaux ou peu connus. *Bulletin de la Société Entomologique de France* **39**: 162–164.
- PAULIAN R. 1939: Quelques nouvelles espèces de coléoptères lamellicornes coprophages. *Bulletin de la Société Entomologique de France* **104**: 68–74.
- PAULIAN R. 1945: *Faune de l'Empire Français III. Coléoptères scarabéides de l'Indochine. Première partie*. Librairie Larose, Paris, 225 pp.

- PAULIAN R. 1985: Notes sur les coléoptères Scarabaeidae du Muséum de Genève. II. *Revue Suisse de Zoologie* **92**: 189–203.
- PAULIAN R. 1987: Notes sur les coléoptères Scarabaeidae du Muséum de Genève. III. *Revue Suisse de Zoologie* **94**: 717–724.
- PAULIAN R. 1993: Deux nouveaux *Haroldius* Boucomont de Bornéo (Coleoptera, Scarabaeidae). *Revue Suisse de Zoologie* **100**: 169–173.
- PAULIAN R. & SCHEUERN J. 1994: *Haroldius* Boucomont nouveaux ou peu connus de la région Orientale (Coleoptera, Scarabaeidae). *Revue Suisse de Zoologie* **101**: 435–440.
- PEREIRA F. S. 1954: A new myrmecophilous scarabaeid beetle from the Philippine islands with a review of *Haroldius*. *Psyche* **61**: 1–8.
- PHILIPS T. K., PRETORIUS E. & SCHOLTZ C. H. 2004: A phylogenetic analysis of dung beetles (Scarabaeidae: Scarabaeinae): unrolling and evolutionary history. *Invertebrate Systematics* **18**: 53–88.
- PHILIPS T. K. & SCHOLTZ C. H. 2000: A new genus and species of trichome-bearing dung beetle (Coleoptera: Scarabaeidae: Scarabaeinae) from South Africa. *African Entomology* **8**: 227–231.
- SCHEUERN J. 1995: Eine neue *Haroldius*-Art aus Borneo (Coleoptera, Scarabaeidae). *Revue Suisse de Zoologie* **102**: 763–768.
- SILVESTRI F. 1924: Description of a new genus of myrmecophilous Scarabaeidae (Coleoptera) of India. *Records of the Indian Museum* **26**: 583–586.
- UTSUNOMIYA Y. & MASUMOTO K. 2000: A new *Ponerotrogus* (Coleoptera: Scarabaeidae: Alloscelini) from Sri Lanka. *Elytra* **28**: 407–408.
- UTSUNOMIYA Y. & MASUMOTO K. 2005: A new *Haroldius* from the Malay Peninsula. *Elytra* **33**: 487–489.
- WASMANN E. 1918: Myrmecophile und termitophile Coleopteren aus Ostindien, hauptsächlich gesammelt von P. J. Assmuth S. J. II. Scarabaeidae. *Wiener Entomologische Zeitung* **37**: 1–33.

Back copies

The library of the Entomological Department of the National Museum still has back copies of most titles ever published by the department. These include:

Acta Entomologica Musei Nationalis Pragae

Volumes 2/1924 – 51(2)/2011 (excluding 16/1938)

Acta Faunistica Entomologica Musei Nationalis Pragae

Volumes 1/1956 – 19/1989 (excluding 13/1968)

Acta Entomologica Musei Nationalis Pragae, Supplementum

- 1/1951 Bouček Z., The first revision of the European species of the family Chalcididae (Hymenoptera). 108 pp + 17 pls.
- 2/1951 Balthasar V., Monographie des Chrysidides de Palestine et des pays limitrophes. 317 pp.
- 3/1955 Hoberlandt L., Results of the Zoological Scientific Expedition of the National Museum in Praha to Turkey. 18. Terrestrial Hemiptera-Heteroptera of Turkey. 264 pp + 12 pls.
- 4/1957 Hoberlandt L., Aradoidea (Heteroptera) of Madagascar and adjacent islands. 109 pp.
- 5/1964 Hlisnikovský J., Monographische Bearbeitung der Gattung Agathidium Panzer (Coleoptera). 255 pp.
- 6/1974 Results of the Czechoslovak-Iranian Entomological Expedition to Iran 1970 (Alberti B., Lepidoptera: Hesperidae, Syntomidae, Zygaenidae; Bortesi O. & Zunino M. – Coleoptera: Scarabaeidae; Onthophagus (Euonthophagus); Čejchan A. – Orthoptera: Tettigoniidae; Nephoptera; Čejchan A. & Mařan J. – Dermoptera; Dlabola J. – Homoptera: Auchenorrhyncha (I. Teil); Hoberlandt L. – Introduction; Heteroptera: Aradidae; Kryzhanovskij O. L. – Coleoptera: Histeridae; Minář J. – Diptera: Culicidae; Moucha J. – Lepidoptera: Nymphalidae; Pandoriana pandora; Wagner P. S. – Lepidoptera: Satyridae: Melanargia). 118 pp.
- 7/1976 Moucha J., Horse-flies (Diptera: Tabanidae) of the World. Syntopic catalogue. 319 pp.
- 8/1977 Čejchan A., The postembryonic development of the bush crickets *Tettigonia cantans* (Fussley), *Decticus verrucivorus* (L.) and *Metrioptera brachyptera* (L.) (Orthoptera: Tettigonoidea: Tettigoniidae). 88 pp + 11 pls.
- 9/1999 Bílý S., Larvy krasců (Coleoptera: Buprestidae) střední Evropy. Larvae of buprestid beetles (Coleoptera: Buprestidae) of Central Europe. 45 pp + 33 pls (in Czech and English).
- 10/2003 Bílý S., Summary of the bionomy of the buprestid beetles of Central Europe (Coleoptera: Buprestidae). 103 pp.
- 11/2007 Bogusch P., Straka J. & Kment P. (eds.): Annotated checklist of the Aculeata (Hymenoptera) of the Czech Republic and Slovakia. 300 pp.
- Vol. 50 (supplementum)/2010 Lackner T.: Review of the Palaearctic genera of Saprininae (Coleoptera: Histeridae). 254 pp.
- Vol. 51 (supplementum)/2011 Minoshima Y. & Hayashi M.: Larval morphology of the Japanese species of the tribes Acidocerini, Hydrobiusini and Hydrophilini (Coleoptera: Hydrophilidae)

Acta Faunistica Entomologica Musei Nationalis Pragae, Supplementum

- 1/1959 Zahradník J., Kritická bibliografie červců Československa. (Bibliographie critique des Cochenilles de la Tchécoslovaquie) (Homoptera, Coccinea). 69 pp (in Czech and French)
- 2/1966 Kocourek M., Prodrómus der Hymenopteren der Tschechoslowakei. Pars 9: Apoidea, 1. 122 pp.
- 3/1971 Wolf H., Prodrómus der Hymenopteren der Tschechoslowakei. Pars 10: Pompiloidea. 76 pp.
- 4/1977 Dlabola J. (ed.), Enumeratio Insectorum Bohemoslovakiae. Check List tschechoslowakische Insektenfauna. Teil I. (all orders except Coleoptera, Diptera, Lepidoptera, and Hymenoptera). 158 pp.

If you are interested in some of them, please contact:

Library, Department of Entomology, National Museum, Kunratice 1, CZ-148 00 Praha 4, Czech Republic; e-mail: Irena_Chalupova@nm.cz.