Baltic J. Coleopterol. 18(1) 2018
ISSN 1407 - 8619

Contribution to the knowledge of the genus *Parathlibops* Basilewsky, 1958 of Philippines (Coleoptera: Carabidae: Scaritinae)

Petr Bulirsch, Alexander Anichtchenko

Bulirsch P., Anichtchenko A. 2018. Contribution to the knowledge of the genus *Parathlibops* Basilewsky, 1958 of Philippines (Coleoptera: Carabidae: Scaritinae). *Baltic J. Coleopterol., 18(1): 109-118.*

Two new species of the genus *Parathlibops* from Philippines are described: *P. panayensis* sp. nov. (Panay Island) and *P. bakukang* sp. nov. (Mindanao Island). Illustrations of habitus and aedeagus for both new taxa, a key to Philippine *Parathlibops* species, and new records of species of the genus for the fauna of Phillipines are provided.

Key words: Coleoptera, Carabidae, Scaritinae, *Parathlibops*, taxonomy, new species, new records, key, Phillippines

Petr Bulirsch. Milánská 461, CZ-109 00 Praha 111, Czech Republic; e-mail: p.bulirsch@seznam.cz

Alexander Anichtchenko. Institute of Life Sciences and Technologies, Daugavpils University, Vienibas 13, Daugavpils, LV-5401, Latvia; e-mail: beetl2000@mail.ru

INTRODUCTION

According to Fedorenko (2016), 20 taxa of the genus *Parathlibops* have been described, 19 of them belong to the nominotypical subgenus and for remaining Indian species he created a new subgenus *Scapterothlibops* Fedorenko, 2016. All species of this apterous genus occurs in SE Asia; seven of them were described from Phillippines: six by Heller (1899, 1916, 1921, 1923) within the genus *Thlibops* Putzeys, 1866 and another species by Fedorenko (2016). Heller (1923) keyed all species known in that time and Fedorenko (2016) minutely redescribed, illustrated and keyed most *Parathlibops* species, nevertheless he did not see four Philippine taxa.

Recently we have studied additional Philippine specimens including two new species. The main purpose of this paper is to describe these new species, to provide a key to the Philippine *Parathlibops* species and to report new records of previously described taxa. The article by Fedorenko (2016) is followed as closely as possible.

MATERIAL AND METHODS

The material from the following institutional and private collections has been examined:
BMNH Natural History Museum, London, U.K.;
DUBC Daugavpils University beetle collection, Latvia;
PBPC collection of Petr Bulirsch, Prague;
RSMI collection of Riccardo Sciaky, Milano, Italy.

Measurements: body length measured from anterior margin of closed mandibles to apex of elytra along suture; length of pronotum, along midline; width of pronotum, at widest point; length of elytra, from its base to apex along suture; width of elytra, at widest point. Length of body is given with 0.1 mm accuracy; other measurements including ratios and means are down to two decimal places. Label locality data of all specimens are quoted verbatim except standardized dates. Terms for the descriptions of diverse body parts follow Fedorenko (2016) as closely as possible.

High-resolution habitus images of *Parathlibops* species, including type specimens and additional material, are available at Carabidae of the World web-project http://www.carabidae.org.

Other used abbreviations:
HT: Holotype; PT: Paratype (s); Different lines within label are separated by "/", different labels are separated by "//".

RESULTS

***Parathlibops panayensis* sp. nov.**
(Figs 1-5)

Type material. Holotype male: Philippines / Panay, Iloilo, Leon / vi.2016 / local collector leg. // ex. Prof. A. Barševskis coll. // Holotype / Parathlibops / panayensis sp. nov. / des. Bulirsch & Anichtchenko, 2018, (DUBC).

Description. Body as in Figs 1-2; length 11.9 mm. Head antero-laterally, pronotum and elytra along lateral margin with superficial microsculpture. Head and pronotum rather densely micropunctate, pronotum along anterior margin with minute and dense punctures. Dorsum moderately shiny.

Head as in Fig. 1. Eyes rather narrow behind, genae slightly projecting forward, in lateral view concave, anteriorly with blunt tip. Supra-antennal plates subparallel, indistinctly rounded laterally. Intermediate carinae blunt, anteriorly strongly diverging, parallel at sides of ù-shaped carina; latter finer basally; y-shaped carina irregular, fine, blunt, strongly diverging anteriorly, with large median tubercle. Neck with dense subparallel longitudinal furrows mixed with rather dense punctures.

Pronotum. Shape as in Fig. 1; 1.49 times as broad as head; 1.23 times as long as broad; outline almost directly narrowed from truncate base to sharp, moderately protruded anterior angles. Anterior transverse impression evenly concave, moderately deep, impunctate; basal bead sharply edged behind, with small semilunar (hemispheric) excision in the middle. Basal sulci deep, straight, moderately convergent anteriorly. Disc with over 20 irregularly spaced, in part confluent, coarse punctures on each side below anterior angles.

Elytra. Shape as in Fig. 1; subparallel; 2.04 times as long as wide, 0.98 times as broad as pronotum; outline in basal two thirds almost straight, barely divergent posteriorly; basal margin concave, basal declivity almost vertical, humeri distinct, moderately widely rounded; basal ridge rounded, without humeral tooth. Striae deep, sulcate, obliterated on basal declivity, slightly deeper and wider posteriorly; striae 1-4 and 7 free at base, 5-6 connected just below base. Striae punctures dense, coarse and deep. Intervals 2, 4 and 6 subequally wide, strongly vaulted, subcarinate before apex; interval 1 very narrow, 3, 5 and 7 narrow, all of them distinctly narrower than even ones and 1,

Figs 1-2. Habitus of *P. panayensis* sp. nov. (HT): 1 - dorsal view; 2 - ventral view.

Figs 3-5. Aedeagus of *P. panayensis* sp. nov. (HT): 3 - lateral view; 4 - apex in latero-ventral view; 5 - apex dorsal view

3 and 5 on disc also less vaulted; 8 broad and strongly vaulted up to apex, shortly forming outline below humeri; 9 narrow, with inner carina distinct almost throughout. Intervals 2 disappearing abruptly on, 3-7 just before apex, latter with broad concavity with foveate punctures, increasingly larger and deeper, thereby forming several deep cavities inside of interval 8.

Underside as in Fig. 2. Mentum with acutangular and very pointed tooth, medial triangle strongly raised anteriorly, flattened and irregularly, finely carinate latero-basally; fine median sulcus

traceable at tip of median tooth; lateral concavities deep and just reaching base; lateral margin narrowly doubled, barely convex; mentum pits deep, merged together, not separated at its bottom; submentum asetose. Prosternum barely swollen before procoxae, with fairly deep median sulcus running from between procoxae to this convexity and with sharp median carina in front; median sulcus slightly wider anteriorly and distinctly posteriorly; intercoxal process evenly declining posteriorly, with very blunt transverse carina delimiting between ventral side and posterior declivity; latter slightly concave and finely longitudinally rugoso-striate. Propleural ridge interrupted just outside. Mesoventrite indistinctly concave between mesocoxae, barely convex at anterior margin. Metaventrite antero-laterally with deep furrow. Abdominal sternites IV-VI with about 40-60 punctures on each side, almost impunctate in middle; VII with about 80 moderately coarse to very coarse punctures in its apical half and along sides.

Legs. Protibia with four lateral teeth, upper one reduced, very blunt; lower apical movable spurs moderately narrow, upper one moderately broad, with narrowly rounded tip. Mesofemora with 4-5 antero-dorsal and 5-6 antero-ventral setae in apical third; mesotibia at antero-lateral edge with 5-6 minute teeth above large, apical tooth. Metatrochanters with one seta, with entire apical (ventral) margin barely sulcate.

Aedeagus as in Figs 3-5; length in HT 2.00 mm; median lobe rather short; apical lamella barely bent down in lateral view, tapering and short in ventral view. Parameres moderately broad, very gently broadened at apices; these obliquely truncate, somewhat rounded and rather sparsely and shortly setose.

Differencial diagnosis. *P. panayensis* sp. nov. is characterized by the rather small body, by the pronotum having the coarse antero-lateral punctures, and having the basal sulci deep, divergent anteriorly and by the elytra having almost entirely punctate striae and strongly vaulted, apically subcarinate intervals.

The new species can be chiefly distinguished from the remaining six species from Philippines, by the pronotum having on disc over 20 irregularly spaced, in part confluent, coarse punctures on each side below anterior angles whereas all the other species from Philippines have not there any rough puncture. Next characters differentiated all Philippine species are mentioned in the key below.

According to Fedorenko (2016), only three SE Asian mainland species, not occurring in the Phillippines, have the pronotum similarly punctured. *P. filiformis* (Andrewes, 1929) from SW India differs chiefly by the elytral striae being impunctate in the basal three fourths and the elytral intervals subequally broad, striate basally. *P. nepalensis* Fedorenko, 2016 from Nepal can be easily distinguished among others by the elytra having interval 3 distinctly broader than 2 and 4 and finally, *P. puncticollis* (Gestro, 1880) from Myanmar which has intervals 2-4 equally broad or 2 and 4 only barely broader than 3 can be differentiated by the pronotum having the basal sulci parallel, not diverging anteriorly and the anterior transverse impression roughly punctate; and finally, by the median lobe of the aedeagus having the apex truncate (as in Fedorenko, 2016: Figs 91-92).

Name derivation. Named after Panay Island, the provenance of the type specimen.

Distribution. Leon, Iloilo in Panay Island, Philippines.

***Parathlibops bakukang* sp. nov.**
(Figs 6-9)

Type material. Holotype male: Philippines, Mindanao / Lanao del Sur, Wao / iv.2017, local coll. leg. // ex. Prof. A. Barševskis coll. // Holotype / Parathlibops / bakukang sp. nov. / des. Bulirsch & Anichtchenko, 2018, (DUBC);

Fig 6. Habitus of *P. bakukang sp. nov.* (HT), dorsal view

Fig. 10. Habitus of *P. intermedius* (S Luzon, Laguna Luisana), dorsal view

Figs 7-9. Aedeagus of *P. bakukang* sp. nov. (HT): 7 - lateral view; 8 - apex dorsal view; 9 - apex in ventral view

Paratypes: (3 females): with same locality data but // Paratype / Parathlibops / bakukang sp. nov. / des. Bulirsch & Anichtchenko, 2018 and ii.2017 (PBPC), i.2017 (DUBC) xii.2016 (RSMI).

Description. Body as in Fig. 6; length 14.5-15.0 mm (HT 14.5 mm, n=4); head antero-laterally, pronotum along base and elytra along lateral margin and in bottom of striae with superficial microsculpture. Pronotum very densely micropunctate, with few fine punctures along anterior margin; head with minute and dense punctures; elytral intervals with irregular, transverse and very short furrows. Dorsum moderately shiny.

Head as in Fig. 6. Eyes moderately broad behind, genae projecting forward, in lateral view concave, anteriorly with rather sharp tip. Supra-antennal plates rather slightly rounded laterally. Intermediate carinae blunt and short, parallel at sides; ù-shaped carina basally fine to almost diminish; y-shaped carina irregular, fine, blunt, diverging anteriorly, with small and rather sharp median tubercle. Neck with dense subparallel longitudinal furrows mixed with rather dense punctures.

Pronotum. Shape as in Fig. 6; 1.51-1.55 (HT 1.51) times as broad as head; 1.31-1.33 (HT1.31) times as long as broad; outline very slightly, almost directly narrowed from truncate base to sharp, moderately protruded anterior angles. Anterior transverse impression evenly concave, moderately deep, impunctate, laterally with few rather deep, broad and long cross-striae; basal bead sharply edged behind, without semilunar (hemispheric) excision in middle. Basal sulci superficial, subparallel. Antero-lateral parts of disc without rough punctures on each side below anterior angles.

Elytra. Shape as in Fig.6; subparallel, 2.14-2.17 (HT 2.16) times as long as wide, 0.93-0.96 (HT 0.96) times as broad as pronotum; outline in basal two thirds almost straight, barely divergent posteriorly; basal margin concave, basal declivity almost vertical, humeri distinct, laterally forming rather sharp tooth. Striae deep, anteriorly obliterated just below basal declivity, irregularly, abruptly disappeared on apex; striae 1-5 free at base, 6-7 connected just below base. Striae punctures indistinct except for apex with irregular rows of very large and deep, mostly merged punctures. Intervals 2-5 subequally wide and on disc rather strongly vaulted, 2-7 subcarinate before apex; interval 1 narrow; 8 broad and strongly vaulted up to apex, shortly forming outline below humeri; 9 narrow, with inner carina distinct almost to base. Intervals disappearing irregularly and abruptly on apex, latter with irregular, superficial concavity with foveate punctures, forming several deep cavities inside of interval 8.

Underside. Mentum with acutangular and very pointed tooth, medial triangle flat and irregularly, finely carinate at lateral edges; fine median sulcus traceable at tip of median tooth; lateral concavities deep and just reaching base; lateral edge doubled; mentum pits merged together, barely separated at its bottom; submentum asetose. Prosternum swollen before procoxae, with fairly deep median sulcus running from anterior margin of procoxae to this convexity and with sharp median carina in front; intercoxal process evenly decliving posteriorly, with blunt transverse carina delimiting between ventral side and posterior declivity; latter slightly concave and finely longitudinally rugoso-striate. Propleural ridge obliterated anteriorly. Mesoventrite flat between mesocoxae, truncate at anterior margin. Metaventrite with superficial furrows antero-medially. Abdominal sternites II-VII with lateral bead indistinctly thicker apicad; sternites almost entirely, roughly and densely punctate.

Legs. Protibia with 3-4 lateral teeth, upper one reduced, very blunt to indistinct; lower apical movable spurs moderately narrow, upper one broad, with rather broadly rounded tip. Mesofemora with 2-4 antero-dorsal and 6-9 antero-ventral setae in apical third; mesotibia at antero-lateral edge with 4-6 minute teeth

above another, large, apical tooth. Metatrochanters with one seta, with entire apical (ventral) margin barely sulcate.

Aedeagus as in Figs 7-9; length in HT 2.39 mm; median lobe moderately long; apical lamella strongly bent down in lateral view, tapering and very long in ventral view. Parameres rather narrow, rather strongly broadening at apices; these rounded and rather densely and moderately long setose.

Differencial diagnosis. *P. bakukang* sp. nov. is characterized by the moderately large body, by the pronotum without the antero-lateral large punctures, with the basal sulci superficial and by the elytra having almost entirely impunctate striae and rather narrow and strongly vaulted inner intervals. In the external characters it is very similar to *P. integricollis* (Heller, 1921) from Luzon Island. The new species can be distinguished from the latter taxon by the body being in average smaller and narrower (in *P. integricolli*s is the body length mostly distinctly over 16 mm); by the elytra being barely longer and more parallel, having much deeper striae 2-4 and much more vaulted adjacent intervals; by the submentum being asetose (one pair of large setae presents in *P. integricollis*) and by the median lobe of the aedeagus having slightly longer and more parallel apex. Next characters differentiated all Philippine species are mentioned in the key below.

Name derivation. In local Binisaya-Cebuano language of Mindanao *bakukang* means beetle.

Distribution. Wao, Lanao del Sur, in Mindanao Island in Philippines.

***Parathlibops intermedius* (Heller, 1921)**
(Fig. 10)

Material. (1 spec.) Ex. Mus. / Coll. Agric. / Phil. Is. // H.E. Andrewes Coll. / B. M. 1945-97 // Thlibops / intermedius / Heller / Compared with / Type H.E.A., (BMNH); (1 B&): Philippines / S Luzon, Laguna, Luisana / vi.2016 / local collector leg. // ex. Prof. A. Barðevskis coll., (PBPC); (1spec): Philippines, W Luzon / Zambales, Subic / ix.2015, local coll. leg. // ex. Prof. A. Barðevskis coll., (DUBC).

Comment. Fedorenko (2016) figured most of *Parathlibops* species but he did not see any specimen of this species, so from this reason we have added figure of its habitus.

***Parathlibops omega* (Heller, 1899)**

Material. (1 spec.) Island / Sibuyan / Baker // 19159 / Ex. Mus. / Coll. Agric. / Phil. Is. // Thlibops / omega Heller / Andr. // H.E. Andrewes Coll. / B.M. 1945-97, (BMNH).

Comment. *P. omega* was described from the Luzon Island. Above mentioned specimen was collected in Sibuyan Island. Heller mentioned on label below this species: Thlibops / omega Heller / Andr. / [handwritten]: a smaller insular / race of omega / comp. with type / by K.M. Heller.

***Parathlibops intergricollis* (Heller, 1921)**

Material. (1 female) Philippines / Luzon, Camarines Sur / Ocampo, i.2015 / local collector leg. // ex. Prof. A. Barševskis coll.; (3 spec.): Philippines, N Luzon / Ifugao, Bananue, ix.2015, i.2017 or viii.2016 / local collector leg. // ex. Prof. A. Barševskis coll., (1 spec.): Philippines / Isabela, Sierra / Madre, N Luzon / ix.2013; (1 spec.): Philippines, E Luzon / Sierra Madre, Quirino / ix.2016, local coll. leg. // ex. Prof. A. Barševskis coll.; (1 spec.): Philippines, Sta. Ana / Cagayan, North / Luzon, iv.2014 // ex. Prof. A. Barševskis coll.; (1spec.): [Philippines, Luzon], Kayapa, Nueva Viscaya, North / vii.2016, (all in DUBC and PBPC).

***Parathlibops minor* (Heller, 1916)**

Material. (2 spec.) Philippines, Mindanao / Lanao del Sur, Wao / i.2015 or iv.2017, local

coll. leg. // ex. Prof. A. Barševskis coll., (DUBC, PBPC); (1 spec.) Philippines, Mindanao / Intavas, Bukidnon / iii.2014 // ex. Prof. A. Barševskis coll.; (1 spec.) Philippines, Mindanao / Davao del Sur / Kapatagan, ii.2017, local coll. leg. // ex. Prof. A. Barševskis coll. (DUBC).

Key to the Philippine *Parathlibops* species

1 Basal sulci deep. Pronotal basal bead withsmall semilunar excision in the middle……..…… 2

- Basal sulci superficial. Pronotal basal bead without small semilunar excision in the middle …….....….5

2 Pronotum below antero-lateral teeth with rough punctures. All striae entirely punctate. Supra-antennal plates parallel ….……..…… *P. panayensis* sp. nov.

- Pronotum below anterolateral teeth without rough punctures. Striae entirely impunctate or at most finely punctate latero-apically ……..…… 3

3 Inner striae weakly punctate basally, latero-apically striae finely to moderately roughly punctate. Supra-antennal plates laterally barely vaulted. Smaller species, usually about 15 mm. ..... *P. minor* (Heller, 1916) (= *P. glabriventris* (Heller, 1916))

- Elytral striae entirely impunctate. Supra-antennal plates laterally parallel-sided. Larger species, body length about 20 mm. (**Comment**. According to a very short description and a key in Heller (1923), *P. abbreviatus* most probably belongs to this item. It is the only Philippine species unknown to us and concurrently it was not redescribed in Fedorenko (2016). We assume its placing here. It should distinguish from both species in this item be the elytral intervals abbreviated, not confluent apically) …….....…… 4

4 Intervals 2 and 4 in midlength about twice broader than 3 ……...…… *P. intermedius* (Heller, 1921)

- Intervals 2 and 4 in midlength barely broader than 3 ……...……..…. .....*P. omega* (Heller, 1899)

5 Elytral striae not punctate, or indistinctly punctate only latero-apically. Supra-antennal plates laterally slightly vaulted ….....….. 6

- Elytral striae entirely punctate. Supra-antennal plates laterally parallel-sided ..... *P. punctipennis* Fedorenko, 2016

6 Larger species, usually more than 16 mm. Submentum with pair of setae. Elytra in average a bit shorter, with striae 2-4 fine on disc and with almost flat inner intervals. Luzon Island ……. *P. integricollis* (Heller, 1923)

- Smaller species, usually less than 16 mm. Submentum without setae. Elytra in average a bit narrower, with striae 2-4 deep on disc and with strongly vaulted intervals. Mindanao Island ……. ..... *P. bakukang* sp. nov.

ACKNOWLEDGEMENTS

We greatly appreciate the kindness of Drs. Arvids Barševskis (Daugavpils), Beulah Garner (London) and Riccardo Sciaky (Milano, Italy) who forwarded interesting material.

REFERENCES

Heller, K.M. 1899. Neue Käfer von den Philippinen. *Abhandlungen und Berichte des*

Königl. Zoologischen und Anthropologisch-Ethnograpischen Museums zu Dresden, 7, 1-8.

Heller, K.M. 1916. Philippinische Käfer, gesammelt von Prof. C. Fuller-Baker, Los Baños. *Deutsche Entomologische Zeitschrift*, 1916, 269-311.

Heller, K.M. 1921. New Philippine Coleoptera. *The Philippine Journal of Science*, 19(5), 523-627.

Heller, K.M. 1923. Some new Malayan Carabidae, especially Philippine. *The Philippine Journal of Science* 23: 295-307.

Fedorenko, D.N. 2016. A new subgenus and new species of *Parathlibops*, with notes on morphology and taxonomy of Scapterina (Coleoptera: Carabidae: Scaritini). *Russian Entomological Journal*, 25(4), 323-354.

Received: 30.07.2018.
Accepted: 15.08.2018.
Published: 10.09.2018.

WWW.CARABIDAE.ORG