

TO THE KNOWLEDGE OF THE PHILIPPINE PASSANDRIDAE (COLEOPTERA: CUCUJOIDEA)

Andris Bukejs, Marina Janovska

Bukejs A., Janovska M. 2019. To the knowledge of the Philippine Passandridae (Coleoptera: Cucujoidea). *Acta Biol. Univ. Daugavp.*, 19 (2): 235 – 240.

In the current paper, information on Passandridae from the Philippines is summarized. Faunal data on six species are presented. Two species of them, *Passandra rufipennis* (Fabricius, 1801) and *P. semifusca* (Newman, 1839) are mentioned for the first time for local fauna. A check-list of the Philippine Passandridae is compiled. In total, 12 species belonging to 3 genera are known from studied area: *Ancistria* (4 spp.), *Aulonosoma* (1 sp.), and *Passandra* (7 spp.).

Key words: parasitic flat bark beetles, fauna, check-list, Southeast Asia, biodiversity.

Andris Bukejs, Marina Janovska. Daugavpils University, Institute of Life Sciences and Technology, Vienības Str. 13, Daugavpils, LV - 5401, Latvia, E-mail: carabidae@inbox.lv, marina.janovska@biology.lv

INTRODUCTION

Passandridae or parasitic flat bark beetles is small family comprising 112 species in 9 genera predominantly with tropical distribution (Burckhardt & Ślipiński 2003, 2010, Aoki 2008, Burckhardt & Zürcher 2013, Bukejs 2019). Larvae of Passandridae are ectoparasites on wood-inhabiting coleopteran larvae and pupae, e.g. Cerambycidae, Curculionidae (Cryptorhynchinae, Platypodidae, Scolytinae), and also reported from larvae of Hymenoptera (Fiske 1905, Thomas 1993, Burckhardt & Ślipiński 2003, 2010, Zubaran & Di Iorio 2018).

In a catalogue of the Philippine Coleoptera (Schultz 1916), four parasitic flat bark beetle species were listed within the family Cucujidae: *Ancistria retusa* (Fabricius, 1801) (as *A. cylindrica* Westwood), *Passandra blanchardi* Grouvelle, 1876, *Passandra heros* (Fabricius, 1801) (as *Hectarthrum*), and *Passandra*

trigemina (Newman, 1839) (as *Hectarthrum latum* Grouvelle). Burckhardt & Ślipiński (2003) reported nine passandrid species from the Philippines.

In the current paper, a check-list of Passandridae of the Philippines is compiled and new faunal data is presented.

MATERIAL AND METHODS

The material examined is deposited in the beetle collection of Daugavpils University, Daugavpils, Latvia [DUBC].

Observations of this specimen were made using a Nikon SMZ 745T stereomicroscope. The images were taken using a Nikon SMZ 745T stereomicroscope with Nikon DSFi1 digital camera. Extended depth of field at high magnifications was achieved by combining

multiple images from a range of focal planes using Helicon Focus 6.0.1 software.

The following keys were used for the identification of species: Ślipiński (1987), Burckhardt & Ślipiński (2003), and Aoki (2008).

In the check-list, genera and species are arranged alphabetically. Synonyms, references to bibliographic sources and distribution in the Philippines follow scientific names of species.

RESULTS

FAUNAL RECORDS OF PASSANDRIDAE FROM THE PHILIPPINES

Passandra blanchardi Grouvelle, 1876 (Fig. 1)

Material examined: CARAGA REGION, Mindanao Isl., Agusan del Sur: Esperanza, XII 2018 (1 ex.), Sigabad, I 2018 (1 ex.); CENTRAL VISAYAS REGION, Negros Isl., Negros Oriental: Don Salvador Benedicto, II 2018 (1 ex.).

Passandra elongatula Grouvelle, 1874 (Fig. 2)

Material examined: CARAGA REGION, Mindanao Isl., Agusan del Sur: San Luis, I 2019 (1 ex.).

Passandra heros (Fabricius, 1801) (Fig. 3)

Material examined: AUTONOMOUS REGION IN MUSLIM MINDANAO, Mindanao Isl., Lanao del Sur: Wao, VI 2018 (1 ex.), X 2018 (1 ex.); CAGAYAN VALLEY REGION, Luzon Isl., Cagayan: Santa Ana, XII 2016 (1 ex.), Nueva Vizcaya: Kayapa, IV 2017 (1 ex.), Quirino: Disimungal, XII 2017 (1 ex.); CARAGA REGION, Mindanao Isl., Agusan del Sur: Esperanza, III 2016 (1 ex.), San Luis, XI 2018 (1 ex.), Sigabad, III 2018 (1 ex.); CORDILLERA ADMINISTRATIVE REGION, Luzon Isl., Abra: Tineg, XI 2017 (1 ex.), X 2018 (2 ex.); DAVAO REGION, Mindanao Isl., Davao del Sur: Kapatagan, III 2016 (2 exx), VIII 2018 (1 ex.); Compostella Valley: Masara, I 2016 (1

ex.); EASTERN VISAYAS, Samar Isl., Northern Samar: Lope de Vega, VI 2016 (1 ex.), VII 2016 (1 ex.), VIII 2016 (1 ex.), IX 2016 (2 exx), V 2017 (1 ex.), XI 2018 (2 exx), XII 2018 (1 ex.), I 2019 (1 ex.); NORTHERN MINDANAO REGION, Mindanao Isl., Bukidnon: Panamokan, X 2015 (1 ex.); Camiguin Isl., XII 2016 (1 ex.); WESTERN VISAYAS, Panay Isl., Antique, VIII 2018 (1 ex.); Iloilo: Leon, V 2016 (2 exx).

Passandra rufipennis (Fabricius, 1801) (Fig. 4)

Material examined: CORDILLERA ADMINISTRATIVE REGION, Luzon Isl., Abra: Tineg, XI 2017 (1 ex.), VII 2018 (1 ex.).

Note. The first record of species from the Philippines.

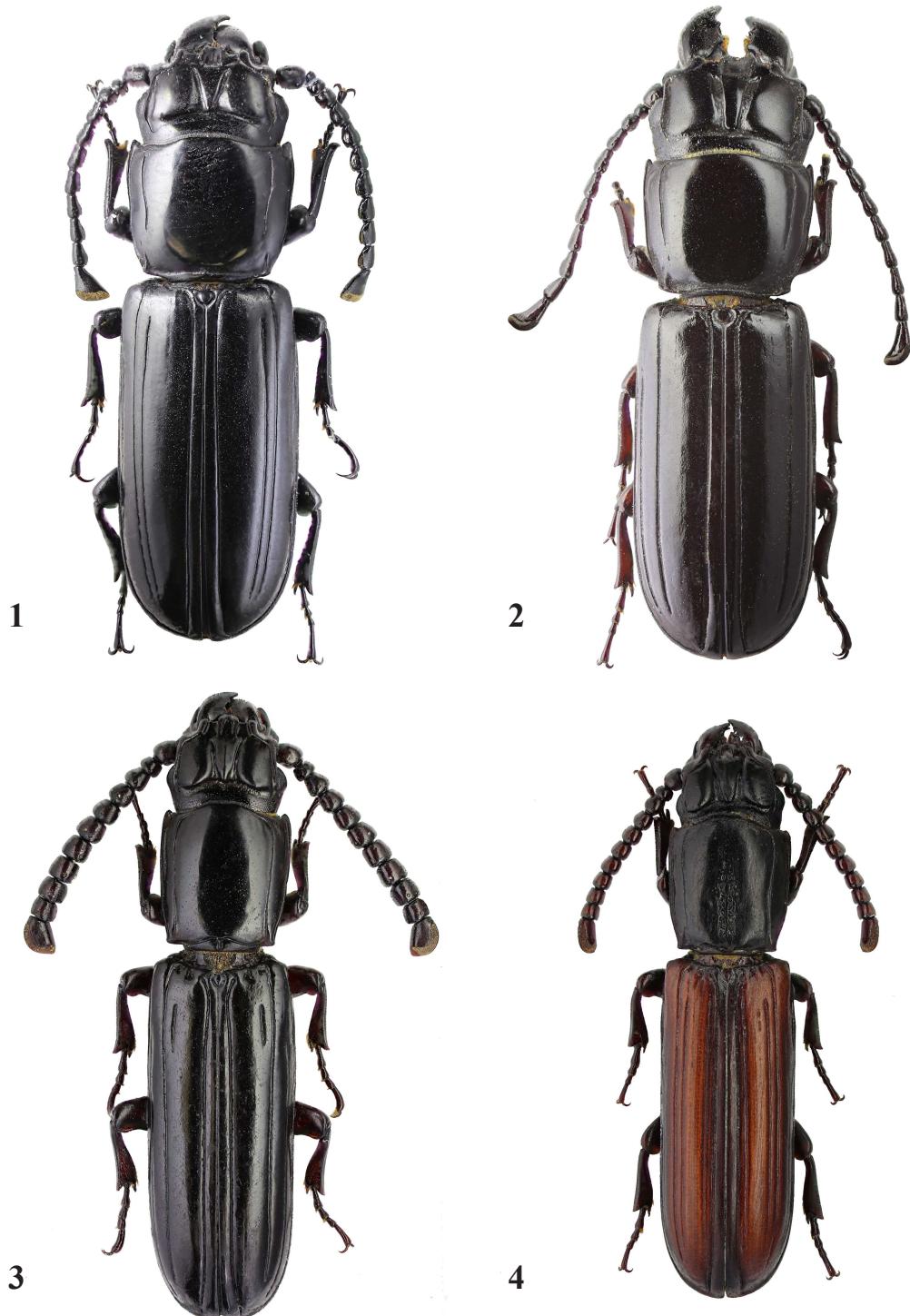
Passandra semifusca (Newman, 1839) (Fig. 6)

Material examined: SOCCSKSARGEN REGION, Mindanao Isl., Cotabato: Alamada, XII 2018 (2 exx).

Note. The first record of species from the Philippines.

Passandra trigemina (Newman, 1839) (Fig. 5)

Material examined: AUTONOMOUS REGION IN MUSLIM MINDANAO, Mindanao Isl., Lanao del Sur: Wao, III 2016 (2 exx), IX 2016 (2 exx), X 2016 (1 ex.), II 2017 (2 exx), IX 2018 (2 exx), XI 2018 (1 ex.), XII 2018 (2 exx); BICOL REGION, Luzon Isl., Camarines Sur: Lagonoy, VI 2018 (1 ex.), VIII 2018 (2 exx), IX 2018 (2 exx), X 2018 (3 exx), XI 2018 (5 exx), XII 2018 (5 exx), I 2019 (1 ex.); CAGAYAN VALLEY, Luzon Isl., Nueva Vizcaya: Ambaguyo, V 2017 (1 ex.), Dupax del Sur, XII 2018 (1 ex.), Quezon, V 2017 (1 ex.); Quirino: Disimungal, X 2015 (1 ex.), XII 2015 (1 ex.), Madela, IV 2017 (1 ex.), Nagtipunan, III 2016 (1 ex.); CALABARZON REGION, Luzon Isl., Rizal: Rodriguez, XII 2017 (2 exx), Tanay, II 2018 (2 exx); CARAGA REGION, Mindanao Isl., Agusan del Sur: VI 2016 (1 ex.), Borbon, X 2018 (2 exx), Esperanza, X 2016 (1 ex.), San Luis, XI 2018 (1 ex.), Sigabad, VI 2015 (1 ex.), X 2015 (1 ex.), XI 2015 (1 ex.), XII 2015 (1 ex.), I 2016 (2 ex.), II 2016 (1



Figs. 1–4. Philippine Passandridae, habitus in dorsal view: 1 – *P. blanchardi*, Mindanao Isl., Sigabad; 2 – *P. elongatula*, Mindanao Isl., San Luis; 3 – *P. heros*, Mindanao Isl., Wao; 4 – *P. rufipennis*, Luzon Isl., Tineg. Not reproduced to the same scale.

ex.), VIII 2016 (1 ex.), X 2016 (2 exx), III 2018 (1 ex.); Surigao del Sur: Barobo, XII 2018 (1 ex.), Lingig, VII 2018 (1 ex.); CENTRAL LUZON, Luzon Isl., Aurora: Dingalan, V 2017 (1 ex.), XII 2017 (1 ex.), I 2018 (1 ex.), II 2018 (1 ex.), VII 2018 (1 ex.); Zambales: Subic, V 2016 (1 ex.); CENTRAL VISAYAS, Negros Isl., Negros Oriental: Don Salvador Benedicto, II 2018 (1 ex.); CORDILLERA ADMINISTRATIVE REGION, Luzon Isl., Benguet: Atok, XI 2017 (1 ex.); Ifugao: Banaue, I 2016 (1 ex.), V 2016 (1 ex.), VI 2016 (1 ex.), IX 2016 (1 ex.); Kalinga: Pinukpuk, VII 2017 (1 ex.); Mountain Province: Barlig, XII 2015 (1 ex.); DAVAO REGION, Mindanao, Compostella Valley: New Albay, IX 2016 (2 exx); EASTERN VISAYAS, Samar Isl., Samar: Lope de Vega, V 2016 (1 ex.), VI 2016 (4 exx), IX 2016 (3 exx), III 2017 (1 ex.), IV 2017 (1 ex.), XI 2017 (3 exx), XII 2017 (7 exx), I 2018 (2 exx), II 2018 (3 exx), III 2018 (8 exx), IV 2018 (2 exx), V 2018 (1 ex.), VII 2018 (2 exx), VIII 2018 (1 ex.), IX 2018 (1 ex.), X

2018 (4 exx), XI 2018 (4 exx), XII 2018 (1 ex.); MIMAROPA, Marinduque Isl., Marinduque: Boac, Boi, X 2018 (2 exx), Buenavista, VI 2016 (1 ex.); NORTHERN MINDANAO REGION, Mindanao Isl., Bukidnon: Cabanglasan, XII 2015 (1 ex.), VIII 2016 (2 exx), XI 2016 (1 ex.), IX 2018 (1 ex.), Dominorog, XI 2018 (2 exx), XII 2018 (2 exx), Intavas, IV 2014 (1 ex.), X 2015 (1 ex.), I 2016 (1 ex.), IX 2018 (3 exx), X 2018 (1 ex.), Kalatungan, X 2015 (1 ex.), Miarayon, XII 2018 (1 ex.), Tambobong, XII 2018 (1 ex.); Lanao del Norte: Kapatagan, X 2015 (4 exx), VII 2018 (1 ex.); Misamis Oriental: Balingasag, V 2015 (4 exx), I 2016 (2 exx); SOCCSKSARGEN REGION, Mindanao Isl., Cotabato: Bakusanun, X 2018 (1 ex.); Sarangani: Kiamba, VII 2017 (1); WESTERN VISAYAS, Guimaras Isl., Guimaras: Buenavista, VI 2016 (2 exx); ZAMBOANGA PENINSULA REGION, Mindanao Isl., Zamboanga del Sur, Labuan, I 2018 (2 exx).



5



6

Figs. 5–6. Philippine Passandridae, habitus in dorsal view: 5 – *P. trigemina*, Samar Isl., Lope de Vega; 6 – *P. semifusca*, Mindanao Isl., Alamada. Not reproduced to the same scale.

CHECK-LIST OF THE PHILIPPINE PASSANDRIDAE

In total, 12 species belonging to 3 genera are known from the Philippines: *Ancistria* (4 spp.), *Aulonosoma* (1 sp.), and *Passandra* (7 spp.).

Passandridae Blanchard, 1845 / Erichson, 1845

Ancistria Erichson, 1845

Ancistria alternans Grouvelle, 1913

Burckhardt & Ślipiński 1995, 2003

Masbate Island.

Ancistria concava Burckhardt & Ślipiński, 1995

Burckhardt & Ślipiński 1995, 2003

Luzon.

Ancistria nicolettae Burckhardt & Ślipiński, 1995

Burckhardt & Ślipiński 1995, 2003

Palawan.

Ancistria retusa (Fabricius, 1801)

= *cylindrica* Westwood, 1848

Schultz 1916 (as *cylindrica* Westwood);

Burckhardt & Ślipiński 1995, 2003

Luzon, Mindoro, Negros, Mindanao, Luzon, Calapan, Palawan.

Aulonosoma Motschulsky, 1858

Aulonosoma tenebrioides Motschulsky, 1858

Burckhardt & Ślipiński 1991, 2003

No locality.

Passandra Dalman in Schoenherr, 1817

= *Hectarthrum* Newman, 1838

Passandra barsevskisi Bukejs, 2019

Bukejs 2019

Luzon.

Passandra blanchardi Grouvelle, 1876

Schultz 1916; Ślipiński 1987; Burckhardt & Ślipiński 2003

Luzon, Mindanao, Negros.

Passandra elongatula Grouvelle, 1874

Schultz 1916; Ślipiński 1987; Burckhardt & Ślipiński 2003
Mindanao.

Passandra heros (Fabricius, 1801)

Schultz 1916 (as *Hectarthrum*); Ślipiński 1987;
Burckhardt & Ślipiński 2003
Luzon, Mindanao, Mindoro, Palawan, Panay,
Samar.

Passandra rufipennis (Fabricius, 1801)

present paper

Luzon.

Passandra semifusca (Newman, 1839)

present paper

Mindanao.

Passandra trigemina (Newman, 1839)

= *latum* Grouvelle, 1874

Schultz 1916 (as *Hectarthrum latum* Grouvelle);
Ślipiński 1987; Burckhardt & Ślipiński 2003
Guimaras, Luzon, Marinduque, Mindanao,
Negros, Samar.

ACKNOWLEDGEMENTS

The authors are sincerely grateful to Dr. Alexey Shavrin (Daugavpils, Latvia) for the help in photos preparation.

REFERENCES

Aoki J. 2008. A new species of *Passandra* (Coleoptera, Passandridae) from Japan, formerly classified as *P. trigemina* (Newmann). *Elytra, Tokyo*, 36 (1): 37–41.

Bukejs A. 2019. A new species of *Passandra* Dalman (Coleoptera: Passandridae) from the Philippines and Borneo. *Zootaxa*, 4701 (2): 179–184.

Burckhardt D., Ślipiński S.A. 1991. A review of the Passandridae (Coleoptera, Cucujoidea) of the world. III. Genera *Anisocerus*, *Aulonosoma*, *Passandrella*, *Passandrina*,

- Scalidiopsis and *Taphroscelidia*. *Revue suisse de Zoologie*, 98: 453 – 497.
- Burckhardt D., Ślipiński S.A. 1995. A review of the Passandridae of the world (Coleoptera, Cucujoidea). IV. Genus *Ancistria*. *Revue suisse de Zoologie*, 102 (4): 995 – 1044.
- Burckhardt D., Ślipiński S.A. 2003. Phylogeny and taxonomy of the world Passandridae (Coleoptera). In: Cuccodoro G., Leschen R.A.B. (Eds.) *Systematics of the Coleoptera: Papers Celebrating the Retirement of Ivan Lobl. Memoirs on Entomology, International*, 7: pp. 753 – 883.
- Burckhardt D., Ślipiński S.A. 2010. 10.19. Passandridae Blanchard, 1845/Erichson, 1845. In: Leschen R.A.B., Beutel R.G., Lawrence J.F. (Eds) *Arthropoda: Insecta: Coleoptera 2: Morphology and systematics (Elateroidea, Bostrichiformia, Cucujiformia partim)*. Walter de Gruyter, Berlin / New York: pp. 363 – 368.
- Burckhardt D., Zürcher I. 2013. The parasitic flat bark beetles (Coleoptera: Passandridae) of Laos. *Entomologica Basiliensis et Collectionis Frey*, 34: 309 – 317.
- Fiske W.F. 1905. *Catogenus rufus*, a coleopterous parasite. *Proceedings of the Entomological Society of Washington*, 7: 90 – 92.
- Ivie M.A., Ślipiński S.A. 2005. New species and records of Costa Rican Passandridae (Cucujoidea). *The Coleopterists Bulletin*, 59 (4): 459 – 463.
- Schultz W. 1916. A catalogue of Philippine Coleoptera. *The Philippine Journal of Science, Section D*, 11 (1): 1 – 94.
- Ślipiński S.A. 1987. A review of the Passandridae of the world (Coleoptera, Cucujoidea). I. Genus *Passandra* Dalman. *Annali del Museo civico di Storia naturale, Genova*, 86: 553 – 603.
- Thomas M.C. 1993. The flat bark beetles of Florida (Coleoptera: Silvanidae, Passandridae, Laemophloeidae). *Arthropods of Florida and Neighboring Land Areas, Volume 15*. Gainesville, Florida Department of Agriculture & Consumer Services. Pp. 93.
- Zubarán G.O., Di Iorio, O.R. 2018. The family Passandridae (Coleoptera: Cucujoidea) in Argentina with comments on species from Brazil and Paraguay. *Zootaxa*, 4425 (3): 471 – 497.

Received: 29.09.2019.

Accepted: 01.11.2019.