

HYDROPHILIDAE: The genus *Sternolophus* SOLIER

(Coleoptera)

H. NASSERZADEH

Abstract

A single species of *Sternolophus* SOLIER, 1834 (Coleoptera: Hydrophilidae), *S. marginicollis* (HOPE, 1841), is recorded from New Caledonia (Grande Terre, Île des Pins). Diagnostic characters are described and illustrated.

Key words: Coleoptera, Hydrophilidae, *Sternolophus marginicollis*, Australian Region, New Caledonia.

Introduction

Sternolophus SOLIER, 1834 presently includes nine described species, all of which are restricted to the Old World. Three species are known from the Australian Region: *Sternolophus australis* WATTS, 1989, *S. immarginatus* ORCHYMONT, 1911, and *S. marginicollis* (HOPE, 1841). The latter is the only species of the genus occurring in New Caledonia.

Sternolophus can be identified by the combination of the following features: body length 7.0–15.5 mm; coloration black; body shape oval; basal antennal club segment not lunulate; apical segment of maxillary palp almost as long as or slightly longer than penultimate segment; maxillary palpomere 2 distinctly curved, bending laterad; prosternum carinate and tectiform, with an anteromedial projection, bearing some rather long setae; meso- and metaventrite raised medially to form a glabrous keel, which is produced into a horizontal spine posteriorly; meso- and metafemora with hydrofuge pubescence basally.

Material and methods

All specimens examined are deposited in the following collections:

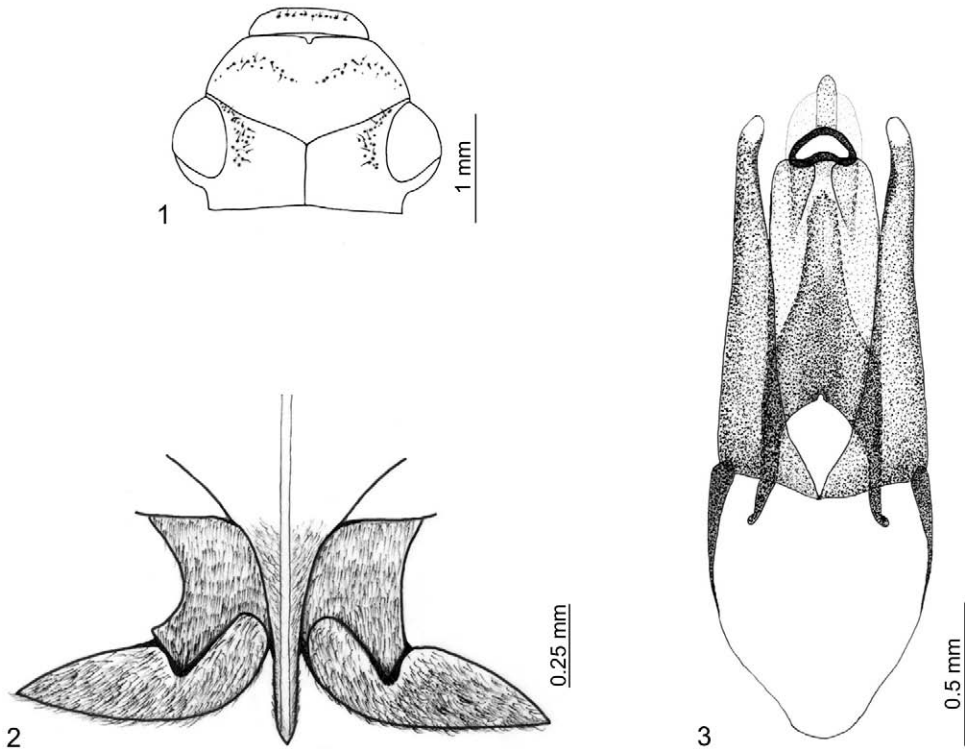
IAC Institut Agronomique Néo-Calédonien, Pocquereux, New Caledonia; S. Cazères, C. Mille
MNHW Museum of Natural History, Wrocław University, Poland; M. Wanat
NMW Naturhistorisches Museum Wien, Vienna, Austria; M.A. Jäch

Male genitalia were dissected, macerated and cleared in concentrated lactic acid and examined several hours later with a stereoscopic microscope (Wild M10). Measurements were taken using a micrometric eyepiece. Ink drawings were made from photographs taken with a digital camera (Cannon, IXUS 3.2) through the stereomicroscope.

List of Localities

(**Locs. 2001/NC:** leg. Balke & Wewalka, **Locs. 2009/NC:** leg. Jäch)

- Loc. 2001/NC 2:** Dumbéa, 150 m a.s.l., road to Mt. Koghi, Rue de Forêt, 3.XI.2001. Stream in deep gorge, slightly flowing, edges sandy/gravelly.
- Loc. 2001/NC 4, 4a** (JÄCH & BALKE 2010: Fig. 8): Dumbéa, 50 m a.s.l., swamp at road to upper course of River Dumbéa, 4.XI.2001 (NC 4) and 21.XI.2001 (NC 4a). Swampy area and inundated forest, larger shaded pools on red clay, with thick leaf layers, some reeds.
- Loc. 2001/NC 6:** 5 km east of Pouembout, 20 m a.s.l., 6.XI.2001. Lowlands, dirt road inland to Forêt Plate, partly shaded pool (2 m², max. 50 cm deep) in otherwise dry stream bed on red clay, edges of pool with some leaves, grass and roots; water eutrophicated by cattle; surrounding area dry shrubland.
- Loc. 2001/NC 7** (JÄCH & BALKE 2010: Fig. 11): 10 km east of Pouembout, 50 m a.s.l., 6.XI.2001. Lowlands, dirt road 10 km inland to Forêt Plate, small stream, slowly flowing, more or less shaded, collected from small backflows and bays at the edge, with leaves and pine needles; and larger, slowly flowing shallow stream nearby.
- Loc. 2001/NC 9** (JÄCH & BALKE 2010: Fig. 10): 15 km NE Voh, 50 m a.s.l., 6.XI.2001. Almost stagnant river, 10–15 m wide and max. 1 m deep, gravelly, partly shaded, edge with dense mats of submerged vegetation; backflows with leaf packs.
- Loc. 2001/NC 23:** 9 km SSW Ouégoa, near road to Bondé, 50 m a.s.l., 11.XI.2001. Stream, partly shaded.
- Loc. 2001/NC 25a:** 8 km south of Ouégoa, 2 km on the road to Mandjélia, 50 m a.s.l., 11.XI.2001. Stream pool in cultivated land.
- Loc. 2001/NC 30:** Bopope, 17 km west of Pombeï, 150 m a.s.l., 13.XI.2001. Small stream, shaded, water almost stagnant, in narrow swampy valley, abundance of leaves in water, numerous pools alongside stream bed; in the midst of cultivated, sun exposed area.
- Loc. 2001/NC 42** (JÄCH & BALKE 2010: Fig. 20): 6 km south of Thio, 50 m a.s.l., 17.XI.2001. Swampy area around a fishpond, close to agricultural school, edge with grass and emergent plants.
- Loc. 2001/NC 52:** Mt. Mou, near Sanatorium, 400 m a.s.l., 23.XI.2001. Small stream, shaded, backflows with leaf packs and ditch at road, created by backflow, ground sandy/gravelly, shaded.
- Loc. 2001/NC 54:** Île des Pins, Kwanyi, 50 m a.s.l., 24.XI.2001. Secondary forest, dry stream bed, 1 m wide, cut into ground (ca. 50 cm), rest water puddle, 1.5 m long and max. 15 cm deep, ground with leaves; partly shaded.
- Loc. 2001/NC 59:** Touaourou, ca. 10 km SE Yaté, 5 m, 19.XI.2001. At light. Sampled by G. Wewalka only.
- Loc. 2009/NC 12:** ca. 10 km NW Nouméa, ca. 2 m a.s.l., 22°09'50.4"S/166°25'33.8"E, 25.XI.2009. Swamp in River Dumbéa flood plain.
- Loc. 2009/NC 15** (JÄCH & BALKE 2010: Fig. 39): ca. 8 km NNW Nouméa, ca. 10 m a.s.l., 22°09'20.7"S/166°27'23.7"E, 28.XI.2009. Pools and backwaters of River Dumbéa flood plain.
- Loc. 2009/NC 18** (JÄCH & BALKE 2010: Fig. 37): ca. 2 km NNE Farino, Refuge de Farino – Petite Cascade, ca. 270–340 m a.s.l., 21°38'55"S/165°46'53"E (coordinates taken at Refuge de Farino), 29.XI.2009. Rock pools and residual pools of two very small, almost dry streams (right tributaries of River Farino), flowing through degraded forest.
- Loc. 2009/NC 21** (JÄCH & BALKE 2010: Fig. 38): ca. 7 km SE La Foa, ca. 20 m a.s.l., 21°44'04"S/165°53'23"E, 30.XI.2009. River Pocquereux, epipotamal, ca. 5–10 m wide, flowing through forest.
- Loc. 2009/NC 27** (JÄCH & BALKE 2010: Fig. 46): ca. 8 km NNE Bouloupari, ca. 120 m a.s.l., 21°48'08"S/166°04'12"E, 3.XII.2009. Stream (La Wamuttu), hardly flowing, mostly over bare rock and between big boulders, with numerous rock pools, through degraded forest.
- Loc. 2009/NC 29** (JÄCH & BALKE 2010: Fig. 47): ca. 12 km NE Poya, ca. 120 m a.s.l., 21°16'21"S/165°14'46"E, 4.XII.2009. Small stream, ca. 1–2 m wide, flowing through degraded forest and pastures.
- Loc. 2009/NC 30** (JÄCH & BALKE 2010: Fig. 51): ca. 4 km SW Népoui, ca. 140 m a.s.l., 21°12'48"S/165°06'06"E, 4.XII.2009. Small stream (left tributary of River Népoui), ca. 1–2 m wide, pools and waterfalls, flowing through degraded forest.
- Loc. 2009/NC 31** (JÄCH & BALKE 2010: Fig. 48): ca. 17 km NE Népoui, ca. 110 m a.s.l., 21°13'30"S/165°05'30"E (and about 2 km upstream), 4.XII.2009. River Népoui, ca. 10–20 m wide, flowing through degraded forest and cultivated land.



Figs. 1–3: *Sternolophus marginicollis*, 1) head, 2) posterior spine of sternal keel, 3) aedeagus.

***Sternolophus marginicollis* (HOPE, 1841)**

Hydrobius marginicollis HOPE 1841: 48. – HOPE 1842: 428.

Sternolophus (*Neosternolophus*) *marginicollis*: ORCHYMONT 1919: 158. – HANSEN 1999: 207.

Hydrobius assimilis HOPE 1841: 48. – HOPE 1842: 428. – ORCHYMONT 1919: 158 (syn.). – HANSEN 1999: 207.

Hydrobius artensis MONTROUZIER 1860: 247. – WATTS 1989: 93 (syn.). – HANSEN 1999: 207.

Sternolophus artensis: BEDEL 1891: lxxxvii. – ORCHYMONT 1911: 1. – WATTS 1989: 93 (syn.). – HANSEN 1999: 207.

Sternolophus (*Neosternolophus*) *artensis*: ZAITZEV 1909: 229. – HANSEN 1999: 207.

Sternolophus nitidulus MACLEAY 1871: 129. – BLACKBURN 1888: 814. – ORCHYMONT 1919: 158 (syn.). – WATTS 1989: 93 (lectotype designation). – HANSEN 1999: 207.

Sternolophus (*Neosternolophus*) *nitidulus*: ZAITZEV 1909: 229. – HANSEN 1999: 207.

Sternolophus tenebricosus BLACKBURN 1888: 813. – ZAITZEV 1909: 232. – WATTS 1989: 93 (syn.). – HANSEN 1999: 207.

Sternolophus (*Neosternolophus*) *tenebricosus*: ORCHYMONT 1911: 55. – HANSEN 1999: 207.

Sternolophus oceanicus ZAITZEV 1910: 225. – HANSEN 1999: 207 (syn.).

TYPE LOCALITY: Port Essington, Northern Territory, Australia.

TYPE MATERIAL: The type specimen(s) of *Hydrobius marginicollis* could not be retrieved. No type specimen is deposited in the Hope Entomological Collections (University of Oxford, UK), where the collection of F.W. Hope should be deposited (J. Hogan, personal communication). For further information see WATTS (1989).

MATERIAL EXAMINED (New Caledonia):

1 ex.: “New Caledon.[ia], 1893 / *Sternolophus artensis* Montrouzier, 1860”.

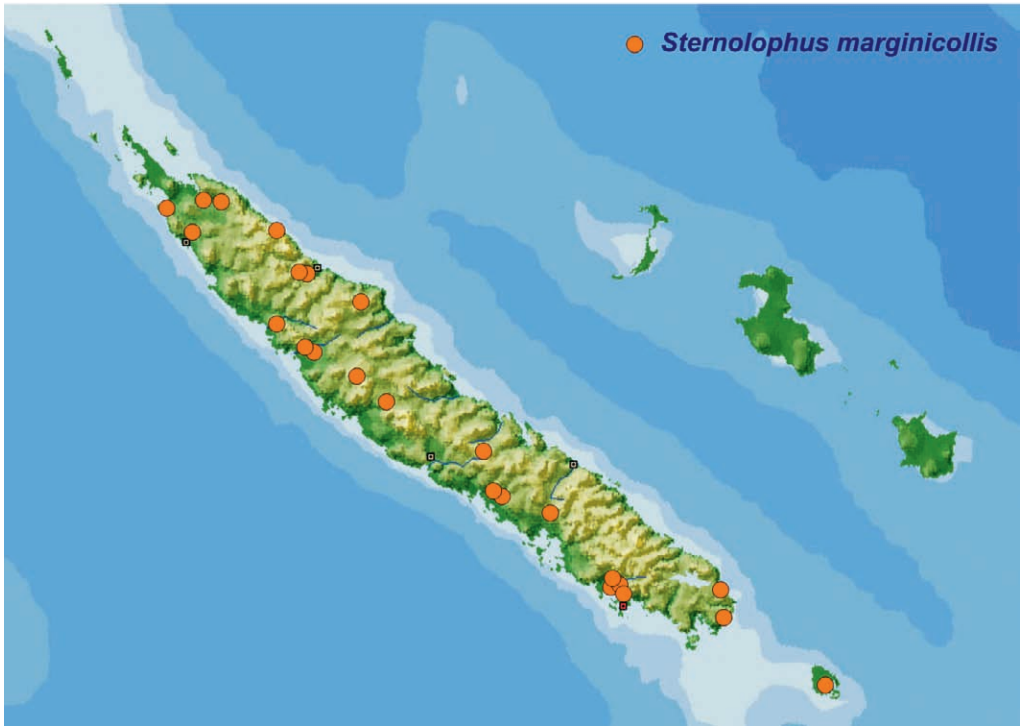


Fig. 4: Geographical distribution of *Sternolophus marginicollis* in New Caledonia.

NORTH PROVINCE: 5 exs. (MNHW): “NEW CALEDONIA (N) 20°25.2'S 164°13.3'E Nehoue river, 15 m 8.01.2007 public camp site night coll. (lamp & beating) leg. M. Wanat & R. Dobosz”; 7 ♂♂, 10 ♀♀ (NMW): Koumac area, Grottes Les Cresson, 60 m, 18.IX.1965, leg. Austrian New Caledonia Expedition (Loc. FNK 110, puddle in dry stream bed); 1 ex. (MNHW): “NEW CALEDONIA (N) 20°35'S/164°50'E 5 m Camping Panié 31.01.2004 ad lucem leg. M. Wanat”; 1 ex. (MNHW): “NEW CALEDONIA (N) 20°44.8'S 164°52.8'E Tiendanite 50 m 12.01.2007 leg. M. Wanat & R. Dobosz”; 1 ex. (MNHW): “NEW CALEDONIA (N) 20°45'S/164°53'E Tiendanite 50 m ad lucem 4.02.2004 leg. M. Wanat”; 10 exs. (MNHW): “NEW CALEDONIA (N) 21°07'S/164°57'E 30 m Tiéa Forest (GIE Fab Nicoli) [private sclerophyll forest reserve owned by Fab Nicoli] sclerophyllous forest 30.01.2004 ad lucem leg. M. Wanat”.

1 ♂, 1 ♀: Loc. 2001/NC 6; 1 ♂: Loc. 2001/NC 7; 1 ♂: Loc. 2001/NC 9; 2 ♂♂: Loc. 2001/NC 23; 2 ♂♂, 3 ♀♀: Loc. 2001/NC 25a; 6 ♂♂, 5 ♀♀: Loc. 2001/NC 30.

1 ex. (NMW): Loc. 2009/NC 29; 2 exs. (NMW): Loc. 2009/NC 31; 1 ♀: Loc. 2001/NC 59.

SOUTH PROVINCE (Grande Terre): 5 exs. (IAC): La Foa, Pocquereux, 2000–2004, various collectors; 1 ex. (MNHW): ca. 5 km N of Port Boisé, 22°20'S/166°58'E, 80 m, at light, 14.II.2004, leg. M. Wanat.

1 ♂, 2 ♀♀: Loc. 2001/NC 2; 2 ♂♂, 3 ♀♀: Loc. 2001/NC 4; 2 ♂♂, 3 ♀♀: Loc. 2001/NC 4a; 3 ♂♂, 7 ♀♀: Loc. 2001/NC 42; 1 ♀: Loc. 2001/NC 52.

8 exs. (NMW): Loc. 2009/NC 12; 6 exs. (NMW): Loc. 2009/NC 15; 1 ex. (NMW): Loc. 2009/NC 18; 1 ex. (NMW): Loc. 2009/NC 21; 1 ex. (NMW): Loc. 2009/NC 27.

SOUTH PROVINCE (Île des Pins): 1 ♀: Loc. 2001/NC 54.

DIFFERENTIAL DIAGNOSIS: *Sternolophus marginicollis* can be distinguished from *S. immarginatus* and *S. australis* by the following characters: Anterior margin of clypeus notched (Fig. 1). Spine of sternal keel longer, extending posteriorly to middle of first ventrite (Fig. 2). Last ventrite with an apical notch. Aedeagus as in Fig. 3.

DISTRIBUTION: *Sternolophus marginicollis* is widely distributed in the Oriental and Australian Regions. In the Pacific it is known from New Guinea, Vanuatu, New Caledonia (see Fig. 4), and Fiji (HANSEN 1999).

HABITAT: This species was collected mainly at lower elevations (20–400 m). The favorite habitats are slowly flowing streams and stagnant waters, e.g. stream pools, fish ponds, or inundated forests with an abundance of decaying organic material.

Acknowledgements

I heartily thank A. Komarek (NMW) for his advice and for reading the manuscript. Thanks are also due to the other staff members of the NMW for their kind support.

References

- BEDEL, L. 1891: Synopsis des grands Hydrophiles (Genre *Stethoxus* Solier). – Revue d'Entomologie 10: 306–323.
- BLACKBURN, T. 1888: Notes on Australian Coleoptera with descriptions of new species. – Proceedings of the Linnean Society of New South Wales (2) 3 [1889]: 805–875.
- HANSEN, M. 1999: Hydrophiloidea (Coleoptera). – In: Hansen, M. (ed.): World Catalogue of Insects. Vol. 2. – Stenstrup: Apollo Books, 416 pp.
- HOPE, F.W. 1841: Observations on the Coleoptera of Port Essington, in Australia, with descriptions of the following new species. – Journal of Proceedings of Entomological Society of London (1841–1846): 43–50 [pp. 43–48 issued 1841; pp. 49–50 issued 1842].
- HOPE, F.W. 1842: Observations on the Coleoptera of Port Essington, in Australia, with descriptions of the following new species. – Annals and Magazine of Natural History 9 (LIX): 423–430.
- JÄCH, M.A. & BALKE, M. 2010: Introduction, pp. 1–29. – In: Jäch, M.A. & Balke, M. (eds.): Water beetles of New Caledonia (part 1). – Monographs on Coleoptera 3: IV+449 pp.
- MACLEAY, W. 1871: Notes on a collection of insects from Gayndah. – The Transactions of the Entomological Society of New South Wales 2: 79–205.
- MONTROUZIER, R.P. 1860: Essai sur la faune entomologique de la Nouvelle-Calédonie (Balade) et des Îles des Pins, Art, Lifu, etc. – Annales de la Société entomologique de France (3) 8: 229–308.
- ORCHYMONT, A. d' 1911: Contribution à l'étude des genres *Sternolophus* Solier, *Hydrophilus* Leach, *Hydrous* Leach (Fam Hydrophilidæ). – Mémoires de la Société entomologique de Belgique 19: 53–72, pl. 6.
- ORCHYMONT, A. d' 1919: Contribution à l'étude des sous-familles des Sphaeridiinae et des Hydrophilinae (Col. Hydrophilidae). – Annales de la Société entomologique de France 88: 105–168.
- WATTS, C.H.S. 1989: Revision of the Australian *Sternolophus* Solier (Coleoptera, Hydrophilidae). – Records of the South Australian Museum 23 (2): 89–95.
- ZAITZEV, P. 1909: Analytische Uebersicht der mir bekannten Arten der Gattung *Sternolophus* Solier nebst Bemerkungen über die anderen Arten dieser Gattung (Coleoptera, Hydrophilidae). – Russkoe entomologicheskoe Obozrënie 8 [1908]: 228–233.

Hiva NASSERZADEH

Insect Taxonomy Research Department, Iranian Research Institute of Plant Protection, P.O. Box 1454, Tehran, 19395, Iran (h_naserzadeh@yahoo.com)

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Monographs on Coleoptera](#)

Jahr/Year: 2010

Band/Volume: [3](#)

Autor(en)/Author(s): Nasserzadeh Hiva

Artikel/Article: [Hydrophilidae: The genus Sternolophus Solier \(Coleoptera\) 251-255](#)