

## SOME SPECIES OF AQUATIC COLEOPTERA FROM NEW CALEDONIA\*

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A small but interesting collection of aquatic Coleoptera was made by the members of the Osaka Museum Scientific Expedition to New Caledonia in 1958. This collection contained twenty-nine specimens representing twelve species, of which six species were Dytiscidae, one Gyrinidae, one Hydraenidae and four Hydrophilidae. Two hitherto-unknown species were included among the specimens and I would like to describe them in the present paper.

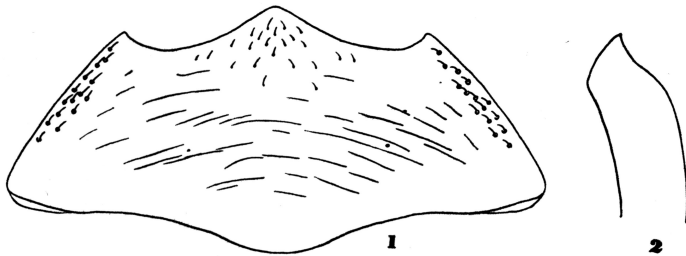
All the specimens treated in this paper are preserved in the collection of the Osaka Museum of Natural History.

I am grateful to Prof. T. ISHIHARA of Ehime University, Dr. R. KATAYAMA of the Aichi Institute of Public Health, Mr. K. OHBAYASHI in Nagoya and Dr. A. TAKAHASHI of Nagoya University for their kind and constant advices and I wish to express my sincere thanks to Mr. I. HIURA of Osaka Museum who has enabled me to study the valuable material.

### Family Dytiscidae

#### *Laccophilus clarki* SHARP

*Laccophilus clarki* SHARP, 1882. Sci. Trans. R. Dublin Soc., 2(2): 313.



Figs. 1-2. *Laccophilus clarki* SHARP: 1. Sixth abdominal sternite;  
2. Median lobe of male genitalia.

Systematic position of the present species was discussed by BALFOUR-BROWNE (1939), comparing it with *Laccophilus parvulus* AUBÉ and others.

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Specimen examined: 1 ♂, Poya, Oct. 22, 1958, Y. Shibata leg.

Distribution: Australia, New Caledonia.

*Hydaticus (Guignotites) bihamatus goryi* AUBÉ

*Hydaticus goryi* AUBÉ, 1838. in DEJEAN, Spec. Col., 6 : 175.

*Hydaticus scriptus* BLANCHARD, 1853. Voy. Pôre Sud. 4 (Zool.) : 46, Atlas 2, pl. 4, fig. 1.

*Colymbetes clairvillei* MONTROUZIER, 1860. Ann. Soc. ent. France, 3 (8) : 242.

*Hydaticus banksi* CROTCH, 1872. in HAROLD Col., 9/10 : 205.

*Hydaticus bihamatus goryi*: BALFOUR-BROWNE, 1939. Ann. Mag. Nat. Hist., (11) 3 : 112

BALFOUR-BROWNE (1939a) distinguished the present subspecies from the nominate one which is distributed in Philippines by the colour-pattern, and he has mentioned that the

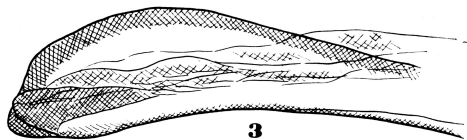


Fig 3. *Hydaticus (Guignotites) bihamatus goryi*  
AUBÉ: Median lobe of male genitalia.

male genitalia of the subspecies is identical with that of the nominate one. The male genitalia of the present subspecies may be slightly different at the apex of median lobe from BALFOUR-BROWNE's figure of *Hydaticus bihamatus* AUBÉ.

Specimen examined: 1 ♂, Poum, Dec. 4, 1958, Y. Shibata leg.

Distribution: Australia, New Caledonia, New Guinea, Tasmania, Torres Is., Fiji, Tonga.

*Hydaticus (Guignotites) consanguineus* AUBÉ

*Hydaticus consanguineus* AUBÉ, 1838. in DEJEAN, Spec. Col., 6 : 160.

*Colymbetes dorsalis* MONTROUZIER, 1860. Ann. Soc. ent. France, 3(8) : 243.

*Colymbetes adumbratus* CLARK, 1863. Jour. Ent., 2 : 17.

This species is widespread in the Australian Region and seems to be common.

Specimen examined: 1 ♀, Poum, Dec. 4, 1958, M. Ogata leg.

Distribution: Australia, New Caledonia, New Guinea, New Hebrides, Samoa, Fiji, Tonga.

*Hydaticus (Guignotites) quadrivittatus australianus* M. SATO

*Hydaticus quadrivittatus australianus* M. SATO, 1961. Trans. Shikoku Ent. Soc., 7(1/2) : 58.

*Hydaticus quadrivittatus*: CLARK (nec BLANCHARD), 1864. Trans. Ent. Soc. London: 212 (in part).

*Hydaticus vittatus*: SHARP (nec FABRICIUS), 1882. Trans. R. Dublin Soc., 2(2) : 670 (in part).

The present subspecies is easily differentiated from the nominate subspecies which is distributed in New Guinea by the structure of male genitalia. The figures are cited from my previous paper (1961).

Specimens examined: 1 ♂, Poum, Dec. 4, 1958, Y. Shibata leg.; 1 ♀, Poya, Oct. 22, 1958, Y. Shibata leg. (Both examples are parts of the paratypes).

Distribution: Australia, New Caledonia.

***Rhantaticus congestus* (KULG)**

*Hydaticus congestus* KULG, 1832. Ins. Madag.: 136.

*Hydaticus signatipennis* CASTELNAU, 1834. Etud. Ent.: 238

*Hydaticus congestus*, var. *rochazi* MONTROUZIER, 1894. Ann. Soc. Linn. Lyon, 10 : 81.

*Rhantaticus congestus*: SHARP, 1882. Trans. R. Dublin Soc., 2(2) : 779.

This species is widely distributed in most of the tropics, except the Neotropical Region.

Specimen examined: 1 ♀, Poya, Oct. 22, 1958, Y. Shibata leg.

Distribution: Australia, New Caledonia, New Guinea, Africa, Madagascar, India, S. China, Sunda Is., Philippines, Indo-china, Formosa.

***Cybister (Gschwendtnerhydrus) tripunctatus hamatus* (MONTROUZIER)**

*Colymbetes hamatus* MONTROUZIER, 1857. Ann. Soc. agr. Lyon, 9 : 9.

*Cybister novae-caledoniae* MONTROUZIER, 1860. Ann. Soc. ent. France, 3(8) : 241.

*Cybister artensis* MONTROUZIER, 1860. Ann. Soc. ent. France, 3(8) : 241.

*Cybister gayndaensis* MACLEAY, 1871. Trans. Ent. Soc. N. S. Wales, 2 : 127.

*Dytiscus tripunctatus*, var. SHARP, 1882. Trans. R. Dublin Soc., 2(2) : 729.

*Cybister tripunctatus*: FAUVEL (nec OLIVIER), 1883. Rev. d'Ent. Caen, 2 : 345.

*Cybister tripunctatus*, var. *temnenki*: RÉGIMBART (nec AUBÉ), 1899. Ann. Soc. ent. France, 68 : 351.

*Cybister tripunctatus temnenki*: GSCHWENDTNER, 1931. Ent. Blätt., 27 : 102.

*Cybister (Gschwendtnerhydrus) tripunctatus convexior*: BRINCK (nec GSCHWENDTNER), 1945. Lund Univ. Arsskr., 41(4) : 16.

*Cybister tripunctatus hamatus*: BALFOUR-BROWNE, 1945. Occ. Paper B. P. Bishop Museum, 18(7) : 114.

Specimens examined: 2 ♀ ♀, Poya, Oct. 22, 1958, M. Ogata and Y. Shibata leg.

Distribution: New Caledonia, New Guinea, Aru, Australia, Oceania, Ceram, New Hebrides, Fiji, Tonga, Samoa, Caroline Is., Mariana Is.

**Family Gyrimidae*****Dineutus (Cyclous) australis australis* (FABRICIUS)**

*Gyrinus australis* FABRICIUS, 1775. Ent. Syst.: 235.

*Gyrinus rufipes* FABRICIUS, 1801. Syst. Eleuth., 1 : 276.

*Gyrinus dentipennis* MACLEAY, 1825. Annul. Java.: 133.

*Gyrinus limbatus* MACLEAY, 1825. Annul. Java.: 133.

*Dineutus dentatus* SUFFRIAN, 1842. Stett. Ent. Zeit., 3 : 256.

*Dineutes janthinus* BLANCHARD, 1853. Voy. Pôle Sud. 4 (Zool.): 50.



Fig. 4-5. *Hydaticus (Guignotites) quadrivittatus australianus* M. SATÔ: 4. Right half body; 5. Median lobe of male genitalia.

*Dineutus leucopoda* MONTROUZIER, 1860. Ann. Soc. ent. France, 3(8) : 245.

*Dineutus (Cyclous) australis*, : OCHS, 1926. Ent. Blätt., 23 : 34.

This species is very widely distributed in the Oriental and Australian Regions, and separated into three geographical races, viz. *D. australis australis* (FABRICIUS), *D. australis ultimis* OCHS [Fiji] and *D. australis tokunoshimanus* M. SATÔ [Ryukyus].

Specimens examined: 12 exs., Poya, Oct. 22, 1958, M. Ogata and Y. Shibata leg.; 2 exs., Yaté, Sept. 28, 1958, Y. Shibata leg.

Distribution: Australia, New Caledonia, New Hebrides, Lombok, Sumba, Buru, Bali, Sunda Is., Java, Philippines, S. China, Formosa.

### Family Hydraenidae

#### *Hydraena* (s. str.) *princeps* FAUVEL

*Hydraena princeps* FAUVEL, 1903. Rev. d'Ent. Caen, 22 : 350.

*Hydraena* (s. str.) *princeps*: BALFOUR-BROWNE, 1939. Ann. Mag. Nat. Hist., (11) 3 : 469.

Specimens examined: 2 ♂ ♂, Poya, Oct. 22, 1958, Y. Shibata leg.

Distribution: New Caledonia, New Hebrides.

### Family Hydrophilidae

#### *Dactylosternum montagnei* BALFOUR-BROWNE

*Dactylosternum montagnei* BALFOUR-BROWNE, 1939. Ann. Mag. Nat. Hist., (11) 3 : 372.

Originally described from Mt. Arago of New Caledonia. As the male genitalia has never been figured, I will illustrate it here.

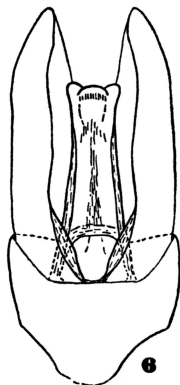


Fig. 6. *Dactylosternum montagnei* BALFOUR-BROWNE: Male genitalia.

Male genitalia of the trilobate-type, moderately sclerotized; basal piece about 1.8 times as long as parameres; parameres clearly longer than the median lobe, somewhat stout and pouchy laterally; median lobe tapering, reflexed at the sides, with the apex trilobated.

Specimens examined: 2 ♂ ♂, Koghis, Oct. 9, 1958, Y. Shibata leg.

Distribution: New Caledonia.

#### *Paracymus pygmaeus* (MACLEAY)

*Cyclonotum pygmaeum* MACLEAY, 1871. Trans. Ent. Soc. N. S. Wales, 2 : 133.

*Hydrobius nitidusculus* BROWN, 1880. Man New Zealand Coleopt., 1 : 78.

*Paracymus metallescens* FAUVEL, 1883. Rev. d'Ent. Caen, 2 : 352.

Specimen examined: 1 ex., Poya, Oct. 22, 1958, Y. Shibata leg.

Distribution: Australia, New Caledonia, New Zealand, Fiji, Society Is.

**Genus *Yateberosus* M. SATÔ, nov.**

Type-species: *Yateberosus maculatus* M. SATÔ, sp. nov.

Body oblong-oval, moderately convex; dorsal surface shining, distinctly and somewhat closely punctate, a fine hair arising from each puncture. Head provided with some hairs on the front clypeal suture at just before the eyes, occipital stria distinct; front margin of labrum slightly emarginate; antennae eight-jointed, the three terminal joints forming a club; maxillary palpi four-jointed, shorter than the antennae; eyes prominent. Pronotum transverse, the sides not in line with the elytral sides. Each elytron furnished with eleven punctate-striae, intervals somewhat convex.

Ventral surface opaque, shagreened, but the second to fourth abdominal sternites shining and indistinctly reticulate; prosternum transverse, tectiform; mesosternum distinctly laminate at the middle; mesocoxae narrowly separated; metasternum triangularly elevated at the central area and with an indistinct median stria which is traced at posterior half; epipleura extending from the base to the apex of elytra. Legs slender; basal half of front femora pubescent; tibiae provided with several rows of setigerous punctures longitudinally; tarsi bearing long natatory hairs on under surface; claws slightly dilated at the base.

The present genus is closely allied to the genus *Berosus* LEACH and the genus *Hemiosus* SHARP, but can be easily distinguished from them by the eight-jointed (3+5) antennae and the epipleura beginning at the base of elytra and ending at the apex.

***Yateberosus maculatus* M. SATÔ, sp. nov.**

Testaceous; head dark-brown with purplish to greenish sheen; central broad area of pronotum, elytral zigzag maculations, legs (except the front tibiae and all tarsi), and under surface brown to dark-brown.

Head a little wider than long, distinctly and somewhat closely punctate on the vertex, and the punctures becoming finer anteriorly and sparser posteriorly, integument finely reticulate; clypeus microreticulate and somewhat sparsely punctate, the punctures more finer than those on the vertex; the distance between eyes about 2.7 times as broad as the eye-breadth at the vertex.

Pronotum about 2.2 times as broad as long, broadest at the basal third, thence strongly narrowed anteriorly, slightly narrowed posteriorly, front angles slightly prominent, hind angles obtuse; surface distinctly and closely punctate, with two vague impressions just before the base, the punctures nearly as those on the head, integument finely reticulate. Scutellum triangular, minutely and sparsely punctate.

Elytra about 1.5 times as long as broad, broadest at basal third, thence moderately narrowed anteriorly and posteriorly, distinctly punctate-striate, the striae becoming deeper posteriorly, each interval moderately convex, but the fifth, seventh and ninth intervals distinctly elevated, integument remotely punctate.

Ventral surface scantily pubescent; the apex of fifth abdominal sternite feebly emarginate. Legs moderate in length, approximate ratio of front, middle and hind tarsal segments as follows: 1:4:3:3:8, 2:9:5:4:8, 3:10:7:5:8.

Length: 3.06mm; breadth: 1.50mm.

Specimen examined: 1 ♀ (Holotype), Riviere Bleue, Yaté R., Oct. 3, 1958, Y. Shibata leg.

Distribution: New Caledonia.

*Yateberosus novaecaledonicus*

M. SATÔ, sp. nov.

Piceous with purplish sheen; lateral sides of body narrowly, tibiae, tarsi, palpi and antennae testaceous; ventral surface, femora and coxae blackish to reddish-brown.

Head broader than long, distinctly and closely punctate, integument microreticulate; clypeus distinctly and sparsely punctate; the distance between eyes about 2.6 times as broad as the eye-breadth at the vertex.

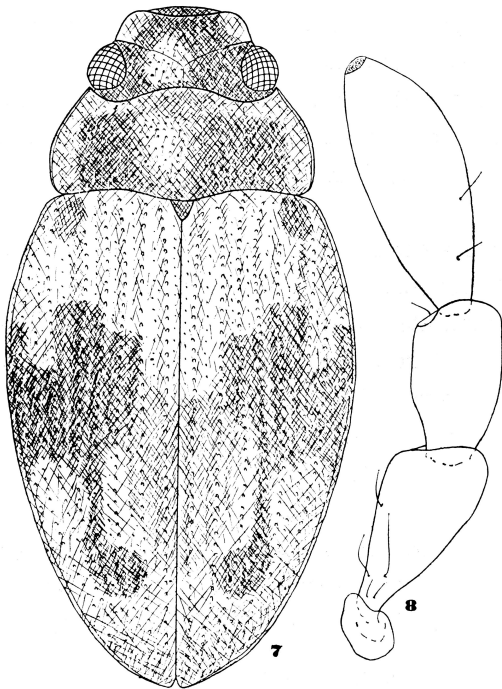
Pronotum about 2.3 times as broad as long, broadest at the apical third, thence gradually narrowed anteriorly and posteriorly, front angles rectangular, hind angles obtuse; surface distinctly and closely punctate, with two vague, oblique impressions on each side of the middle, integument feebly reticulate. Scutellum triangular, coarsely punctate.

Elytra about 1.3 times as long as broad, broadest at basal third, thence slightly narrowed anteriorly, more or less strongly narrowed posteriorly, evidently punctate-striate, the striae becoming deeper towards the apices, intervals distinctly convex, sparsely and minutely punctate, interspaces of the punctures feebly reticulate.

Abdominal sternites closely pubescent, the apex of fifth sternite notched. Legs moderate in length, relative length of fore, mid and hind tarsal joints as follows: 1:2:2:2:5, 1:5:4:4:7, 2:6:5:3:6.

Length: 2.5mm; breadth: 1.31 mm.

Specimen examined: 1 ♀ (Holotype), Riviere Bleue, Yaté R., Oct. 3, 1958, Y. Tsutsui leg.

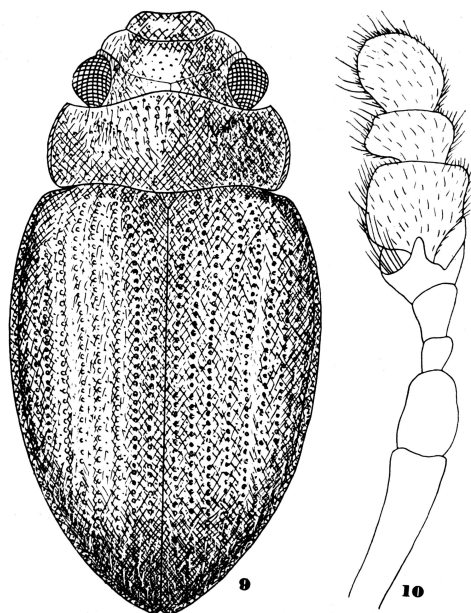


Figs. 7-8. *Yateberosus maculatus* M SATÔ: 7. Dorsal aspect of body; 8. Maxillary palpus.

Distribution: New Caledonia.

The species can be distinguished from the preceding species by lacking the elytral maculation, the fifth abdominal sternite notched at apex and so on.

Fig. 9-10. *Yateberosus novaecaledonicus*  
M. SATÒ: 9. Dorsal aspect of body ;  
10. Antenna.



### References

- BALFOUR-BROWNE, J. 1939a. A Contribution to the Study of the Dytiscidae, I (Coleoptera, Adephaga), Ann. Mag. Nat. Hist. (11) 3 : 97-114.
- 1939b. New and Rare Species of Aquatic Coleoptera from New Caledonia, Ann. Mag. Nat. Hist. (11) 3 : 370-376.
- 1939c. On the Aquatic Coleoptera of the New Hebrides and Banks Islands. Dytiscidae, Gyrinidae, and Palpicornia, Ann. Mag. Nat. Hist. (11) 3 : 459-479.
- 1945. Aquatic Coleoptera of Oceania (Dytiscidae, Gyrinidae, and Palpicornia), Occ. Papers B. P. Bishop Mus. 18 (7) : 103-132.
- BRINCK, P. 1943. Nomenklatrische und systematische Studien über Dytisciden. I. Nomenklatrische Bemerkungen zu einigen Dytisciden-Gattungen, Kgl. Fysiogr. Sällsk. Lund Förh. 13(13) : 1-13.
- 1945. Nomenklatrische und systematische Studien über Dytisciden. III. Die Klassifikation der Cybisterinen, Lund Univ. Arssk. 41 (4) : 3-20.
- CLARK, R. H. 1864. Notes on the Genus *Hydaticus* (LEACH), with Description of new Species, Trans. Ent. Soc. London : 209-222.
- FAUVEL, A. 1883. Les Coléoptères du la Nouvelle-Calédonie et dépendances avec Descriptions, Notes et Synonymies Nouvelles, Rev. d'Ent. Caen, 2 : 335-360.
- 1903. Faune analytique Coléoptères du la Nouvllle Calédonie, Rev. d'Ent. Caen, 22 : 350-356.
- FLEUTIAUX, E. 1911. Contribution à la faune entomologique de la Nouvelle-Calédonie (Col.), Bull. Soc. ent. France, 26 : 161-165.

- GSCHWENDTNER, L. 1931. Revision der *Cybister tripunctatus*-Gruppe, Entom. Blätt. 27(3) : 97-103, pl. 1.
- OCHS, G. 1927. Ein *Dineutus* von den Fidji-Inseln, Entom. Blätt. 23 (1) : 32-34.
- D'ORCHYMONT, A. 1937. Check List of the Palpicornia of Oceania (Coleoptera, Polyphaga), Occ. Papers B. P. Bishop Mus. 13 (13) : 147-160.
- 1943. Notes sur la Tribu Berosini BEDEL (Coleoptera, Palpicornia, Hydrophilidae), Bull. Mus. r. Hist. nat. Belgique, 19(42) : 1-12.
- RÉGIMBART, M. 1899. Revision des Dytiscidae de la Région Indo-Sino-Malaise, Ann. Soc. ent. France, 68 : 186-367.
- SATO, M. 1961. *Hydaticus vittatus* (FABRICIUS) and its allied species (Coleoptera: Dytiscidae), Trans. Shikoku Ent. Soc. 7 (1/2) : 54-64.
- SHARP, D. 1882. On Aquatic Carnivorous Coleoptera or Dytiscidae, Sci. Trans. R. Dublin Soc. 2 (2) : 179-1003, pls. 6-18.

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#### Explanation of Plate 1

- Fig. 1. *Laccophilus clarki* SHARP
2. *Hydaticus* (*Guignotites*) *bihamatus goryi* AUBÉ
  3. *Hydaticus* (*Guignotites*) *consanguineus* AUBÉ
  4. *Rhantaticus congestus* (KULG)
  5. *Cybister* (*Gschwendtnerhydrus*) *tripunctatus hamatus* (MONTROUZIER)
  6. *Dineutus* (*Cyclous*) *australis australis* (FABRICIUS)
  7. *Hydraena* (s. str.) *princeps* FAUVEL
  8. *Dactylosternum montagnei* BALFOUR-BROWNE
  9. *Paracymus pygmaeus* (MACLEA)



