

# ***Anacaena* THOMSON, 1859 from New Caledonia: description of a new species, and corrections and additions concerning two previously described species (Coleoptera: Hydrophilidae)**

A. KOMAREK

## **Abstract**

*Anacaena dumbeana* sp.n. (Coleoptera: Hydrophilidae) is described from New Caledonia, and its aedeagus is illustrated. Some erroneous data concerning *A. sylvatica* KOMAREK, 2010 and *A. violacea* GENTILI, 1996 are deleted, and additional localities for each of these species are provided.

**Key words:** Coleoptera, Hydrophilidae, *Anacaena*, new species, taxonomy, faunistics, type specimens, corrections, New Caledonia, Pacific.

## **Introduction**

Five species of *Anacaena* THOMSON, 1859 are known from New Caledonia so far (KOMAREK 2010). One additional species, which turned up in the collection of the Natural History Museum Vienna (Austria) shortly after the paper by KOMAREK (2010) had been printed, is described below.

Furthermore, some erroneous data concerning type specimens and locality labels of two New Caledonian species of *Anacaena* are corrected herein. Additional records are provided as well.

## **Material and methods**

The aedeagus was dissected, macerated and cleared in concentrated lactic acid and examined several hours later using an Olympus BX 41 light microscope and a Leica MZ 12.5 binocular with diffuse and focused light sources. Measurements were taken with an Olympus SZ-CTV binocular with a micrometric eyepiece. Drawings were made with CorelDRAW X5. The morphological terminology is based on KOMAREK (2004, 2007).

### **Abbreviations:**

EI       elytral index = relation of greatest elytral length to greatest elytral width  
MNHW   Museum of Natural History, Wrocław University, Poland  
NMW     Naturhistorisches Museum Wien, Vienna, Austria

## ***Anacaena dumbeana* sp.n.**

**TYPE LOCALITY:** New Caledonia, South Province, flood plain of Dumbéa River, ca. 8 km NNW Nouméa.

**TYPE MATERIAL:** **Holotype** ♂ (NMW): “NEW CALEDONIA (NC 15) Grande Terre (S.-Prov.) Riv. Dumbéa flood plain 28.XI.[20]09, leg. M. A. Jäch”, “pools and backwaters ca. 8 km NNW Nouméa ca. 10 m a.s.l. 22°09'20.7"S/166°27'23.7"E”.

**DESCRIPTION:** Total length 1.9 mm, total width 1.1 mm, EI 1.2. **Habitus:** Distinctly convex dorsally, moderately wide, not attenuate apically.

Head: Clypeus and frons dark brown, with large yellowish preocular patches. Punctures on clypeus and frons moderately fine, mixed with few coarser punctures, densely distributed, spaces 2–3 × as wide as one puncture. Microsculpture absent. Clypeus large, with blunt indistinct anterolateral angles and straight anterior edge. Eyes not emarginate anteriorly. Antenna composed of eight antennomeres. Maxillary palpus slender; palpomere 2 weakly inflated; palpomere 4 without infuscation. Mentum flat, with straight lateral margins, very slightly impressed anteriorly, anterior edge not emarginate. Ventral face rugose, with distinct setiferous punctures. Labial palpi slender, elongate, longer than lateral edge of mentum.

Thorax: Pronotum dark brown, with indistinct, small, round infuscation mesally. Pronotal punctures as fine as on head, with distinctly larger interspaces. Prosternum with very short median carina on anterior third, with slight bulge on posterior two thirds. Elytra dark brown. Setae absent from lateral borders of pronotum and elytra. Callosity on shoulder region absent. Anterior elytral declivity indistinct. Sutural stria present on posterior 2/3 of elytra in dorsal view. Punctures on elytra moderately fine, as on pronotum; arrangement of punctures distinctly serial, unequally sized and with unequal interspaces, distributed in alternating primary and secondary rows. Microsculpture absent. Mesoventrite with distinct blunt median triangular tooth. Procoxae without spine-like setae. Legs dark brown, profemur pubescent on proximal 3/4, mesofemur on proximal 2/3 of ventral face; metafemoral pubescence reduced to a narrow stripe at anterior margin and proximal portion; metatarsus shorter than metatibia.

Aedeagus (Fig. 1): Phallobase distinctly shorter than parameres, slightly wider than long; manubrium with spine-like extension. Borderline between unpigmented and narrow pigmented part of ventral face of phallobase reaching midlength. Parameres with distinctly sigmoidal lateral margins, widest at base, narrowing towards apex; mesal margins with distinct bulge in distal third; apices narrowly rounded, pointing mesad; ventral bases of parameres fused; dorsal bases curved, slightly reaching into phallobase. Median lobe rather slender basally, continuously narrowing apicad. Median lobe shorter than parameres; corona in apical position; basal apophyses shorter than main piece of median lobe, with short extension into phallobase, pointing mesad. Base of median lobe distinctly connected with parameres by a very blunt tooth.

DIFFERENTIAL DIAGNOSIS: *Anacaena dumbeana* is most similar to *A. wewalkai* with regard to coloration, size, and punctuation. The distribution of the elytral punctures in primary and secondary rows is more distinct than in *A. violacea* and *A. wewalkai*. The new species differs distinctly from all other known species from New Caledonia by the aedeagus (mesal margins of parameres with distinct bulge, apices narrowly rounded, pointing mesad).

BIONOMICS: This species is obviously aquatic. The holotype was collected in a pool near the backwaters of the Dumbéa River flood plain (see JÄCH & BALKE 2010: fig. 39).

DISTRIBUTION: Known only from the type locality.

ETYMOLOGY: The epithet refers to the type locality, the Dumbéa River flood plain; the name is to be treated as an adjective.

### *Anacaena silvatica* KOMAREK, 2010

In the original description (KOMAREK 2010), 29 paratypes of *A. silvatica* were listed from the North Province. However, one of these specimens (“1 ♂ (MNHW): Aoupinié, gate meteo st., 900–950 m a.s.l., 21°11'S/165°17'E, 8.II.2004, leg. M. Wanat”) was included by error. There is no male specimen of *Anacaena* from Mt. Aoupinié in the MNHW. Therefore, the paratype series of *A. silvatica* actually consists of 35 (not 36) specimens.

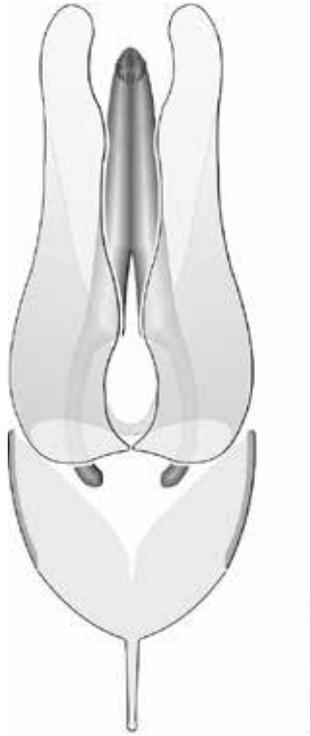


Fig. 1: *Anacaena dumbeana*, aedeagus, dorsal view. Scale bar: 0.1 mm.

The following two specimens have been overlooked in KOMAREK (2010):

NORTH PROVINCE: 1 ♂ (MNHW): Mandjélia (summit), 750–780 m a.s.l., 20°23.9'S 164°31.9'E, sifting rain forest litter, 11.I.2007, leg. M. Wanat.

SOUTH PROVINCE: 1 ♀ (MNHW): Rivière Bleue Provincial Park, Grand Kaori, ca. 180 m a.s.l., 22°6'S 166°41'E, humid forest, sifted litter, 26.I.2004, leg. M. Wanat.

The remark on the distribution of *A. silvatica* provided in KOMAREK (2010): “Known only from northeastern Grande Terre”, has to be corrected as well. This species is actually known from the very north and the very south of Grande Terre. In the distribution map (KOMAREK 2010: fig. 12), the dot for Mt. Aoupinié in the southern half of the North Province must be deleted.

### *Anacaena violacea* GENTILI, 1996

The following record from the North Province for *A. violacea* in KOMAREK (2010) must be deleted: “3 ♀ ♀ (MNHW): Mandjélia (summit), 750–780 m a.s.l., 20°23.9'S 164°31.9'E, sifting rain forest litter, 11.I.2007, leg. M. Wanat”.

In fact, these three females refer to the following locality:

NORTH PROVINCE: Aoupinié, gate meteo st., 900–950 m a.s.l., 21°11'S 165°17'E, 8.II.2004, leg. M. Wanat.

Accordingly, the distribution of this species has to be re-evaluated as it is actually known only from the southern half of Grande Terre. In the distribution map (KOMAREK 2010: fig. 11), the dot for Mt. Mandjélia in the very north of Grande Terre must be deleted.

### Acknowledgements

I am grateful to the water beetle team of the NMW, particularly to Manfred A. Jäch and Heinrich Schönmann (†) for their friendly support and the opportunity to use the Coleoptera collection. My thanks also go to Rolf G. Beutel (Jena, Germany), for corrections and critical comments on the manuscript. I am indebted to Marek Wanat (MNHW) for drawing my attention to the fact that some of the data provided in KOMAREK (2010) need to be corrected. Paweł Jałoszyński (MNHW) is thanked for bringing the specimens of the MNHW to Vienna.

### References

- GENTILI, E., 2002: Descrizione di nuove specie del genere *Paranacaena* Blackburn, 1889 (Coleoptera: Hydrophilidae). – *Giornale italiano di Entomologia* 10: 77–97.
- 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.
- KOMAREK, A. 2004: Taxonomic revision of *Anacaena* Thomson, 1859. I. Afrotropical species (Coleoptera: Hydrophilidae). – *Koleopterologische Rundschau* 74: 303–349.
- KOMAREK, A. 2007: Taxonomic revision of *Anacaena* IV. Australia (Hydrophilidae). – *Koleopterologische Rundschau* 77: 147–170.
- KOMAREK, A. 2010: Hydrophilidae: The genus *Anacaena* Thomson (Coleoptera), pp. 271–282. – In Jäch, M.A. & Balke, M. (eds.): Water beetles of New Caledonia (part 1). – *Monographs on Coleoptera* 3: IV+449 pp.

Dr. Albrecht KOMAREK

*Naturhistorisches Museum Wien, Burgring 7, A – 1010 Wien, Austria* (albrecht.komarek@aon.at)