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A new hygrobatid genus from Australia (Acari: Hydrachnidia: Hygrobatidae)

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ABSTRACT — A new genus and species, *i.e.* *Proboscibates tullyensis* is described from Queensland, Australia.

KEYWORDS — Systematics; new genus; new species; water mites; Hygrobatidae; Australia

INTRODUCTION

Australia is rich in hygrobatid genera. Until present 19 genera are known (Cook 1986, Harvey 1998, Smit 2009). On a global scale the number of hygrobatid genera is only surpassed by the Neotropics (Di Sabatino *et al.* 2008).

During a recent collecting trip in Queensland, Australia a new hygrobatid genus was collected, which will be described in this paper.

MATERIALS AND METHODS

The material has been collected by the author. The following abbreviations have been used: Cx-III = third coxal plates; P1-5 = palp segment 1-5; I-leg-4-6 = fourth-sixth segments of first leg; asl = above sea level; NP = National Park; QM = Queensland Museum, Brisbane. All measurements are in μm , measurements of palp and leg segments are of the dorsal margins. Coordinates were obtained with a GPS.

SYSTEMATIC PART

Family Hygrobatidae Koch, 1842

Proboscibates n. gen.

Diagnosis — Male: Dorsum with four large plates, anterior plate with a pair of postocularia, middle pair of plates each with one glandularium, posterior plate with a pair of glandularia. In the soft integument of dorsum four pairs of smaller glandularia platelets. Eyes present. Camerostome present, roof of camerostome with a short medial projection; capitulum attached to a long protrusible tube; chelicera stylet-like. Ventral shield present. Suture lines of fourth coxae absent, glandularia of fourth coxae lying anterior to IV-leg sockets. Anterior to the fourth leg sockets a short ridge. Male idiosoma with a posterior projection with the genital field, with three pairs of acetabula; genital field only well visible in posteromedial view. P3 without a ventral projection. Legs not modified, I-leg-5 without heavy ventrodistal seta. Swimming setae absent. Female: Unknown.

FIGURE 1: *Proboscibates tullyensis* n. sp., holotype male: A – Venter; B – dorsum; C – genital field, posteromedial view; D – palp + capitulum; E – I-leg-4-6; F – IV-leg-4-6. Scale bars = 50 μm.

Type species — *Proboscibates tullyensis* n. sp.

Etymology — Named for the trunk-like protrusible tube with the capitulum.

Remarks — The presence of a protrusible tube is found in a number of non-related genera, e.g. *Limnesia* Koch (Limnesiidae, some Australian species), *Tubophora* Walter (Limnesiidae, West Africa), *Tubophorella* K.O. Viets (Limnesiidae, Australia), *Rhynchaustrobates* Cook (Hygrobatidae, Australia), *Rhynchaturus* Besch (Hygrobatidae, S America), *Pseudotorrenticola* Walter (Torrenticolidae, Europe, West Africa, Asia), *Psammotorrenticola* E. Angelier (Anisitsiellidae, Europe), *Clathrosperchon* Lundblad (Rhynchohydracaridae, N and S America) (Cook 1974, 1988). This character is therefore of little use in delineating genera. In the presence of a camerostome, roof of the camerostome with a short medial projection, protrusible mouthparts, large dorsal plates and a ventral shield the new genus is most close to the subgenus *Victoriabates* Cook, 1986 of *Rhynchaustrobates*. The new genus differs in the posterior idiosoma projection with the genital field, the wide gonopore, the absence of posterior suture line of the fourth coxae and the short ridge anterior to the fourth leg sockets. These differences, especially those of the genital field, are large enough to warrant the erection of a new genus.

***Proboscibates tullyensis* n. sp.**

Type material — Holotype male, Unnamed creek N of Tully River, Tully Gorge NP, Queensland, Australia, 17°46.590 S 145°39.871 E, alt. 80 m asl, 4-xi-2014 (QM).

Diagnosis — As for genus.

Description — Male. Idiosoma almost colourless, with some pale pink parts, ventrally 462 long, dorsally 332 long and 259 wide. Dorsum soft with four large plates, anterior plate with the postocularia, 116 long; posterior plate 124 long, with a pair of glandularia. Middle plates each with one glandularium. Idiosoma with a camerostome; capitulum 134 long, on a long protrusible tube; chelicera stylet-like, 148 long. Idiosoma posteriorly with a large projection with dorsally the excretory pore and the genital field, the latter only well visible in postero-medial view. Ventral shield present. First coxae extending beyond anterior idiosoma margin. Suture

line of coxae incomplete, suture line of fourth coxae absent. Glandularia of fourth coxae well posterior to suture lines of Cx-III and Cx-IV. Genital field with three pairs of acetabula, gonopore wide, 40 long. Length of P1-5: 18, 32, 23, 48, 30; P3 without a ventral projection. Length of I-leg-4-6: 110, 134, 100. I-leg-5 without a heavy seta, I-leg-6 somewhat tapering distally. IV-leg-4-6: 122, 130, 94. Swimming setae absent. Female: Unknown.

Etymology — Named after the Tully Gorge NP with the Tully River.

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