Odonatologica 31(3): 319-322 *September 1, 2002*

THE LARVA OF *HUONIA MELVILLENSIS* BROWN & THEISCHINGER (ANISOPTERA: LIBELLULIDAE)

G. THEISCHINGER[1] and G.R. BROWN[2]
[1] 2A Hammersley Road, Grays Point, NSW 2232, Australia
[2] DBIRD, GPO Box 3000, Darwin, NT 0801, Australia

Received August 15, 2001 / Reviewed and Accepted November 3, 2001

The larva of the sp. that is known only from Melville Island, off the northern coast of Australia, is described from 5 final instar exuviae from the type locality.

INTRODUCTION

Huonia melvillensis was discovered in 1996 and described by BROWN & THEISCHINGER (1998). An attempt of the second author of this note to find the female and larvae or exuviae of the species in 2000 was at least partly successful. Two adult males both of which perfectly display the diagnostic features given in the original description and 5 final instar exuviae which are the basis of the description of the larva given below.

HUONIA MELVILLENSIS BROWN & THEISCHINGER

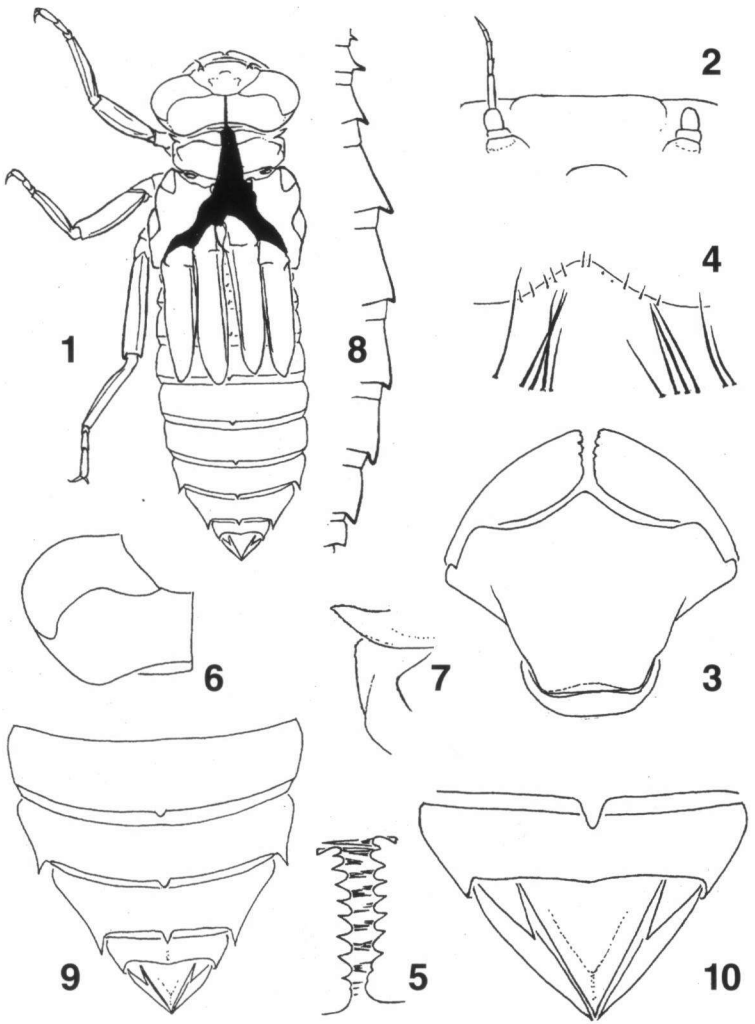
Figures 1-10

Huonia melvillensis Brown & Theischinger, 1998: 99-103, figs 1-8: 3 ♂, type-loc. Melville Island

Material. – 5 final instar exuviae, Australia, Melville Island, Pickertaramoor, 11°46.03'S/130°53.07'E, on mossy vertical surface, 4-X-2000, G.R. Brown. 3 exuviae in Museum & Art Gallery of the Northern Territory in Darwin, NT; 2 exuviae in Coll. Gunther Theischinger.

DESCRIPTION OF LARVA. – Dimensions (in mm): Total length 14.0-17.0; width of head including eyes 4.1-4.5; length of metafemur 3.2-3.6; length of abdomen 9.5-11.5, greatest width 4.7-5.3. Prementum: length 2.4-2.7; width at distal end 3.5-3.9, at base 1.0-1.3.

H e a d (Figs 1-6). – Wide, with eyes slightly protruding, forming, together with margin of well rounded postocular lobes, a rather flat slope. Prementum very short and wide; ligula subtriangularly produced and with 12-14 slim but rather long setae along margin of median portion; 5-6 pairs of large premental setae in wide-angled to almost straight transverse row, outermost seta or 2 more distant from the other 4 than those

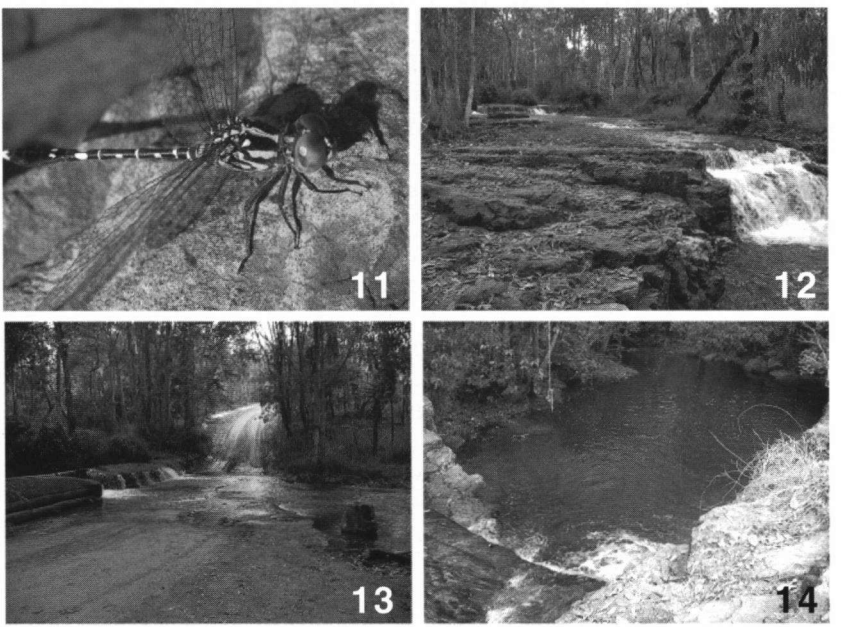


Figs 1-10: *Huonia melvillensis* Brown & Theischinger, final instar exuviae: (1) dorsal view; – (2) frontal region, dorsal view; – (3) prementum and labial palps, ventral view; – (4) premental ligula and setae, dorsal view; – (5) dentations of labial palps, frontal view; – (6) left eye and postocular lobe, dorsal view; – (7) left notal lobe and prothoracic processes, dorsal view; – (8) dorsal profile of abdominal segments 2-10; – (9) posterior abdominal segments, dorsal view; – (10) anal pyramid, dorsal view.

from each other, innermost seta somewhat shorter than the others. Labial palps very large with approximately 10 dentations, the outer (dorsal) 7 well defined, the inner (ventral) 3 ill-defined; all dentations with group of strong setae; 6 large palpal setae and about 7 slim but rather long setae along inner margin; movable hook slim, slightly curved.

T h o r a x (Figs 1, 7). – Notal lobes small, narrowly rounded. Anterior prothoracic process prominent, spine-like; posterior process a very widely rounded short lobe. Meso- and metahorax unarmed. Legs short and strong, particularly the femora and tibiae.

A b d o m e n (Figs 1, 8-10). – Short, relatively wide and deep, with small but distinct mid-dorsal spines on segments 2-9 (spine on 5 the most prominent) and well developed lateral spines on segments 8 and 9. Lateral spines on both segments shorter than mid-dorsal length of respective segment. Abdominal segment 10 extending beyond segment 9 to form smooth outline of terminal segments with anal pyramid. Epiproct wide, slightly shorter than paraprocts; cerci wide, subtriangular, almost 1/2 as long as paraprocts.



Figs 11-14. *Huonia melvillensis* Brown & Theischinger: (11) adult ♂ resting at edge of causeway; – (12) type locality, Takamprimili Ck, Pickertaramoor, showing a small weir immediately above causeway in the background, and part of the vertical rock wall on which the exuviae were found in the foreground; – (13) type locality, showing causeway where adults were collected; – (14) type locality, showing extreme end of the pool above which the exuviae were collected, and the next larger pool.

HABITAT. – The exuviae were found at a small permanent pool 100 meters downstream from where adults were collected. This pool is bounded by small waterfalls (2-4 m) upstream and downstream, and by a vertical rock wall to 4 meters on one side and a vegetated flat sandy bank on the other side. The bottom of the pool is sloped and sandy. There are no rocks in the pool and there is very little live or dead plant material present.

The exuviae were found about 1 meter above the current water level, although this distance would be shorter if adults emerged during the wet season. All exuviae were found clinging to dry moss-like vegetation. None were found on bare rock, and none were found upstream of this pool where the water was faster flowing, even though there was a large block of concrete in the stream, and there was a large paperbark tree (*Melaleuca* sp.) at the waters edge.

DIAGNOSIS AND DISCUSSION

Locality of discovery and the available illustration of a *Huonia* larva (*H. thais* from Misool Island and western New Guinea) by LIEFTINCK (1953) leave no doubt about the correct identity of the larvae described above.

The characters presented in this article are sufficient to distinguish the larva of *Huonia melvillensis* from all other Australian species. The only similar larvae from Australia are those of *Nannophlebia* which are, however, much smaller and have much larger mid-dorsal abdominal spines or hooks, particularly in the final instar.

The larva of *H. melvillensis* seems also to differ from the larva of *H. thais* by the more prominent mid-dorsal abdominal spines, particularly on the basal segments and on segment 5.

ACKNOWLEDGEMENTS

We wish to thank AARON TRENFIELD for facilitating this trip to Melville Island.

REFERENCES

BROWN, G.R. & G. THEISCHINGER, 1998. Huonia melvillensis spec. nov., a new dragonfly from Australia (Anisoptera: Libellulidae). *Odonatologica* 27: 99-103.

LIEFTINCK, M.A., 1953. Revisional notes on the genera Diplacina Brauer and Huonia Förster (Odon.) *Treubia* 22: 153-216.