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A NEW SPECIES OF *HATSCHEKIA* (COPEPODA: DICHELESTHIIDAE) PARASITIC ON LEOPARD CORAL TROUT IN THE GREAT BARRIER REEF, AUSTRALIA

Ju-shey Ho* and Masahiro Dojiri†

ABSTRACT: *Hatschekia plectropomi* sp. n. is described based on the specimens taken from *Plectropomus leopardus* (Lacépède) collected from Wistari Reef, Heron Island, and Lizard Island of the Great Barrier Reef, Australia.

There are two known records of *Hatschekia* reported from Australia, but none from the Great Barrier Reef. Heegaard (1962) described *H. elongata*, which he (1964) renamed *H. thompsonii*, from "*Brachaluteres jacksonianus*" washed ashore at Cronulla Beach, near Port Hacking, New South Wales, and Kabata (1965) described *H. modesta* from *Upeneichthys porosus* (Cuvier et Valenciennes) which was collected east of Albany, Western Australia.

Specimens of the new species treated below were collected by Dr. K. Rohde, while director of the Heron Island Research Station, Queensland, Australia. We would like to thank Dr. Rohde for his kindness and generosity in placing his collection of copepod parasites at our disposal.

Hatschekia plectropomi sp. n.

(Figs. 1-11)

Material examined: 87 ovigerous and juvenile ♀♀ on gills of *Plectropomus leopardus* (Lacépède). From Wistari Reef: 12 ovigerous and 3 juveniles from a 58 cm long host, 4 November 1973; 3 ovigerous and 2 juveniles from a 63 cm long host, 4 November 1973; 17 ovigerous and 2 juveniles from a 45 cm long host, 11 November 1973 (holotype, USNM 170547, and 10 paratypes, USNM 170548, selected from this collection are deposited in the U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.); 8 ovigerous and 1 juvenile from 62 cm long host, 4 December 1973; 8 ovigerous from a 50 cm long host, 5 January 1974; 1 ovigerous from a 50 cm long host, 29 May 1974. From Heron Island: 6 ovigerous (no host length recorded), 2

September 1973; 3 ovigerous from a 68 cm long host, 4 December 1973; 10 ovigerous from a 78 cm long host, 28 January 1974. From Lizard Island: 8 ovigerous from a 31 cm long host, 23 April 1975.

Female: Body (Fig. 1) long, with flattened ventral surface. Head wider than long, with a rounded margin extending posteriorly into trunk. Distinct cuticular ribs on dorsal surface of head. First and second pedigerous somites short and incompletely fused. Third and fourth pedigerous segments completely fused to form a long trunk bearing a prominent lateral swelling on either right or left side. Genital segment (Fig. 2) small, attached to ventral surface of trunk. Egg sacs attached to posterodorsal surface of genital segment. Abdomen (Fig. 2) distinctly wider than long, bearing a pair of small setules on posterodorsal surface. Caudal ramus about 3 times longer than wide, armed with 6 unequal setae (3 plumose, 3 naked).

First antenna (Fig. 3) 3-segmented, with stout basal portion covered by a semi-transparent membrane. Armature of these segments being: 9, 10, and 12 + 1 aesthete. Second antenna (Fig. 4) a strong prehensile apparatus bearing numerous microtubules on its huge second segment. These tubules appear as minute scales on surface of cuticle. Terminal segment a simple recurved hook. Base of second antenna lacking papilla. Mandible (Fig. 5) stubby, bearing 3 stout teeth. Maxilla (Fig. 6) small, consisting of 2 lobes, each bearing 2 processes. Maxilliped (Fig. 7) long, slender, and 4-segmented; second and third segments each bearing a seta; terminal segment bearing a break on its cuticle and a forked tip.

Both leg 1 (Fig. 8) and leg 2 (Fig. 9) biramous, with 2-segmented rami bearing rows of spinules only on their anterior surfaces. Armature on these legs as follows:

Leg 1	Protopod 1-1	Exopod 1-0; 6
		Endopod 0-0; 5
Leg 2	Protopod 1-0	Exopod 1-0; 5
		Endopod 0-1; 5

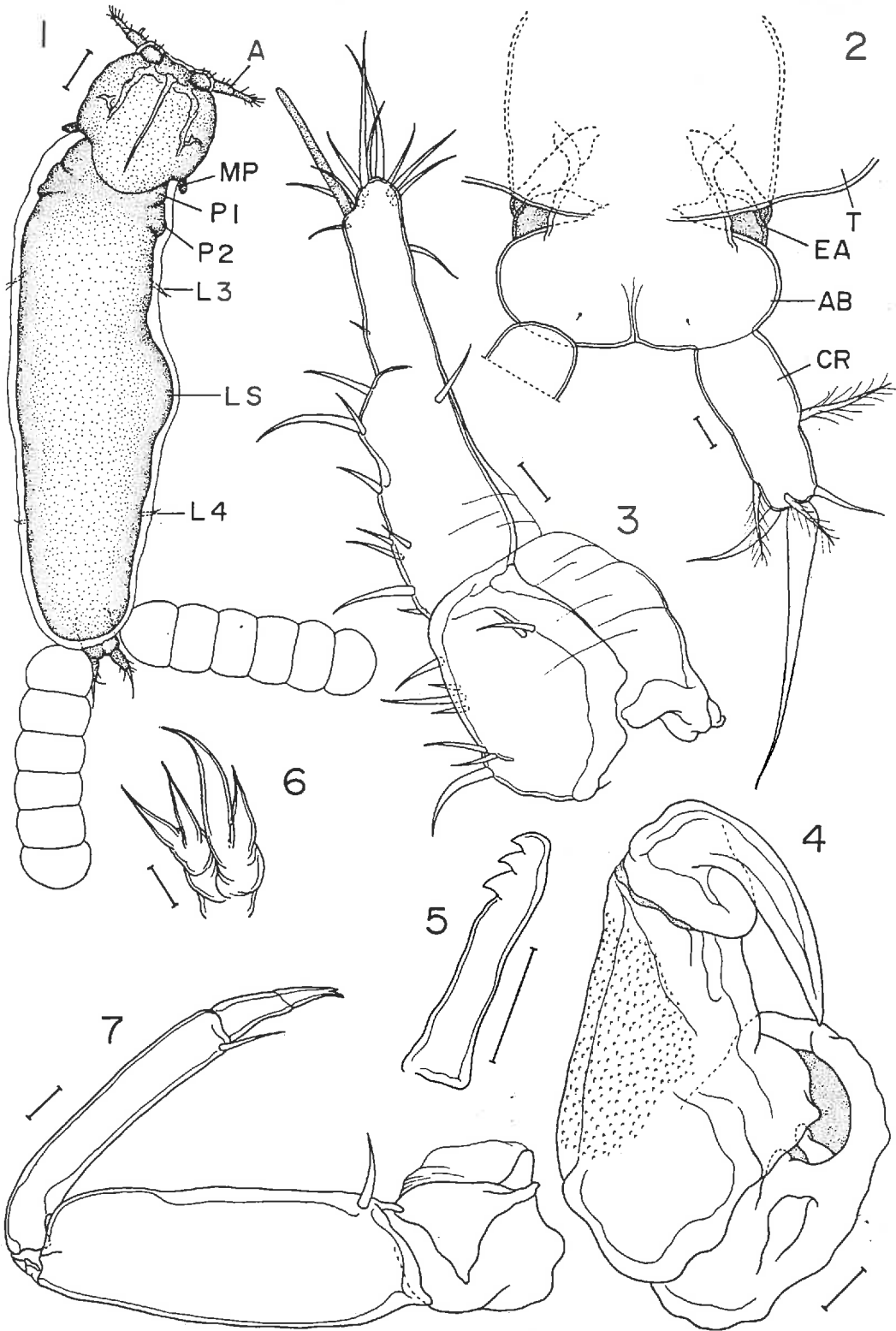
Leg 3 (Fig. 10) represented by a small lobe tipped with 2 plumose setae and leg 4 (Fig. 11), with 1 plumose seta.

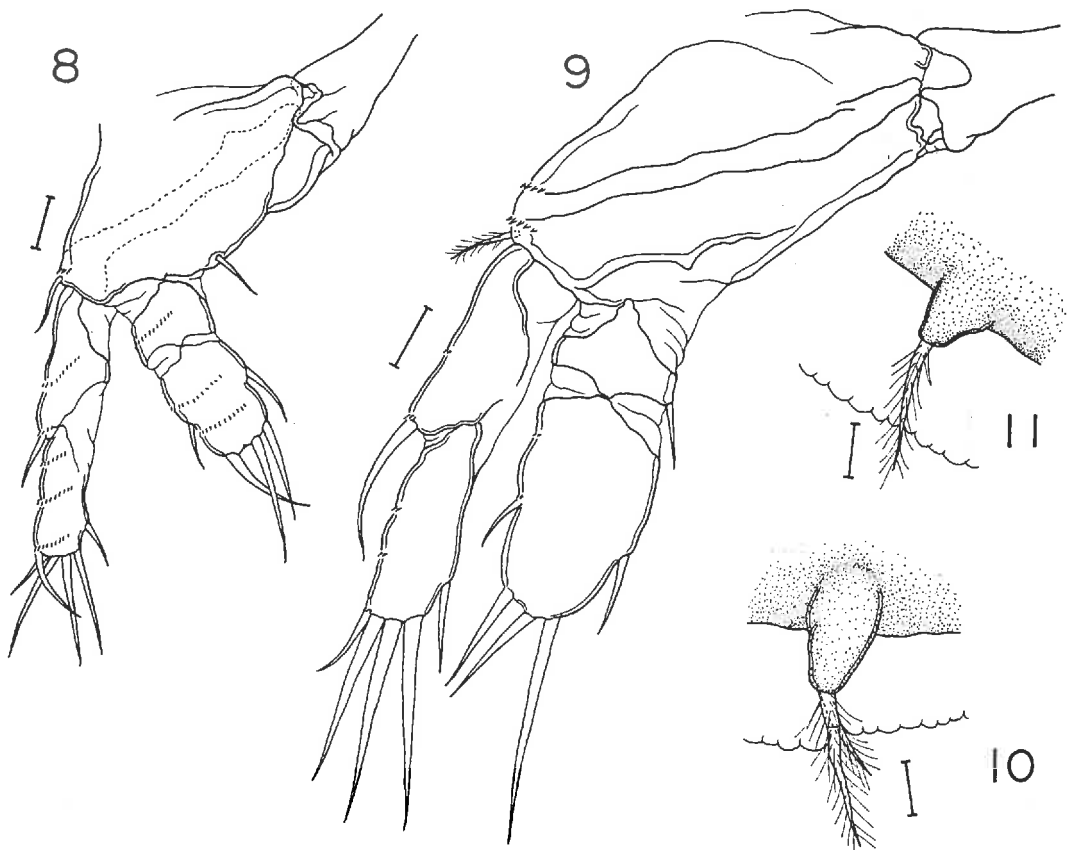
Measurements (in μm):

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FIGURES 8-11. *Hatschekia plectropomi*, female, continued. 8. Leg 1, anterior. 9. Leg 2, posterior. 10. Leg 3, dorsal. 11. Leg 4, dorsal. Scale: 0.01 mm in all figures.

	Largest ovigerous ♀	Smallest ovigerous ♀
Head length	272	262
Head width	318	306
Trunk length	963	818
Trunk width		
including swelling	415	341
excluding swelling	372	323

DISCUSSION

Although *Hatschekia* is one of the largest genera of parasitic copepods containing 87

nominal species (many of them are unsatisfactorily described), the present new species from Australia can be distinguished easily from all of them by one character alone—the lateral swelling on the trunk, located between leg 3 and leg 4. This curious swelling on the body is present in all 76 ovigerous females examined, with 39 of them possessing it on their right side (as shown in Fig. 1) and the remaining 37, on their left side. In all instances, the part of the body anterior to this swelling is curved

←

FIGURES 1-7. *Hatschekia plectropomi* sp. n., female, from the leopard coral trout, Australia. 1. Body, dorsal (A = first antenna, LS = lateral swelling, MP = maxilliped, L3 = leg 3, L4 = leg 4, P1 = first pedigerous somite, P2 = second pedigerous somite). 2. Posterior part of body, dorsal (AB = abdomen, CR = caudal ramus, EA = egg sac attachment area, T = trunk). 3. First antenna, dorsal. 4. Second antenna. 5. Mandible. 6. Maxilla. 7. Maxilliped. Scale: 0.1 mm in 1; 0.01 mm in 2, 3, 4, 5, 6, 7.

toward the side where the lateral swelling is found. In the juvenile females, however, there is no such lateral swelling.

The presence of the reduced third and fourth legs on the ventrolateral surfaces of the trunk seems to be a valuable taxonomic character. Unfortunately, the existing information on most species of *Hatschekia* contains neither descriptions nor illustrations of structures. Consequently, the use of this apparent diagnostic feature in the genus *Hatschekia* is correspondingly reduced. As Hewitt (1969) pointed out, this genus is in urgent need of revision.

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