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ГЛАСНИК ОДЈЕЉЕЊА ПРИРОДНИХ НАУКА, 23, 2019.

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*J. K. Lowry**, *A. A. Myers***

**CLIPPERTONIA GEN NOV., SP. NOV., A NEW TALITRID
AMPHIPOD FROM BIRD NESTS ON CLIPPERTON
ISLAND IN THE TROPICAL EASTERN PACIFIC OCEAN
(AMPHIPODA, SENTICAUDATA, TALITROIDEA,
TALITRIDAE)**

Abstract

Clippertonia schmitti, a new genus and species of terrestrial talitrid amphipod, based on the work of Shoemaker (1942), is described from the small, isolated Clipperton Island in the tropical eastern Pacific Ocean. The species lives among the nests of ground-dwelling colonies of the large seabirds in the genus *Sula* Brisson, 1760. *Clippertonia* appears to be related to the terrestrial genera *Cerrorchestia* Lindeman, 1990 from forests environments in Costa Rico and Panama and *Lanorchestia* Miyamoto & Morino, 2010 and *Nipponorchestia* Morino & Miyamoto, 2015 from forest environments in Taiwan and Japan.

Keywords: taxonomy, Amphipoda, Talitridae, new genus, new species, *Clippertonia schmitti*, Clipperton Island, tropical Eastern Pacific Ocean

INTRODUCTION

The Presidential cruise of 1938 to the tropical eastern Pacific Ocean and the Caribbean Sea concentrated on collecting marine amphipods, but at Cedros Island

* J. K. Lowry, Australian Museum Research Institute, Australian Museum, 1 William Street, Sydney, NSW 2010, Australia. E-mail: stephonyx@gmail.com

** A. A. Myers, School of Biological, Earth and Environmental Sciences, University College Cork, Cork Enterprise Centre, Distillery Fields, North Mall, Cork, Ireland. E-mail: bavayia@gmail.com

and Magdalena Bay off the Baja Peninsula the beach-hopper *Traskorchestia traskiana* (Stimpson, 1857) and at Clipperton Island the land-hopper '*Orchestia marquesana* Stephensen, 1935 were collected and studied by Shoemaker (1942). In this paper we describe the specimens of *O. marquesana* as a new genus and species *Clippertonia schmitti* **gen. nov., sp. nov.**

MATERIAL AND METHODS

Diagnostic character states in the description are given in bold.

Family Talitridae

Clippertonia **gen. nov.**

(Figures 1, 2)

Orchestia marquesana. — Shoemaker, 1942: 14, figs 4, 5 (based on a male it appears to be a new genus in the subfamily Chroestinae).

Not *Orchestia marquesana* Stephensen, 1935b: 32, figs 8–10 (probably *Talitroides*). — Schellenberg, 1935c: 7. — García Madrigal, 2007: 127, Appendix, 188.

Not '*Parorchestia*' *marquesana*. — Bousfield, 1984: 207, table 8.

Type species. *Clippertonia schmitti* sp. nov., monotypy.

Included species. *Clippertonia* includes 1 species: *Clippertonia schmitti* sp. nov.

Types. Male, 13 mm, USNM 77678.

Type locality. Clipperton Island, eastern tropical Pacific (10°18'N 109°13'W).

Category. Mascupod.

Ecological type. Field-hopper.

Habitat. Terrestrial among debris under two boobies' nests more than 100 m from the beach in a dry location.

Size. Male, 13 mm.

Etymology. Named for Clipperton Island.

Description. Based on the male described by Shoemaker (1942).

Head. *Eye* medium (1/5–1/3 head length). *Antenna 1* short, not reaching mid-point of peduncular article 5 of antenna 2. *Antenna 2* peduncular articles slender; article 3 without plate or process ventrally. **Maxilliped palp broad, article 2 with distomedial lobe; article 4 reduced, button-shaped.**

Pereon. *Pereonites* without transverse ridges. ***Gnathopod 1*** sexually dimorphic; subchelate; **posterior margin of merus, carpus and propodus each with lobe covered in palmate setae**; propodus 'subtriangular' with well-developed

posterodistal lobe, palm transverse. **Gnathopod 2** subchelate; posterior margin of merus, carpus and propodus each without lobe covered in palmate setae; propodus palm acute; **dactylus short, recurved distally**, shorter than posterior margin of propodus. *Pereopods 3–7* bicuspidactylate. *Pereopod 4* dactylus with small bump. *Pereopod 5* short, less than 2/3 length of pereopod 6; dactylus long, slender, dactylus not inflated. *Pereopod 6* not sexually dimorphic; basis slightly expanded. *Pereopods 6–7* without row of short setae along posterior margin of dactyli. *Pereopod 7* not sexually dimorphic; articles not modified; male basis not expanded into plate-like structure; basis expanded; merus unexpanded.

Pleon. *Pleonites 1–3* without dorsal spines. **Pleopods 1–3 rami reduced.** *Epimera 1–3* slits absent. *Uropod 1* peduncle distolateral robust seta present, with simple tip; endopod with marginal robust setae in 1 row; exopod without marginal robust setae. *Uropod 2* rami without apical spear-shaped setae; exopod with marginal robust setae in 1 row; endopod with marginal robust setae in 1 row. *Uropod 3* ramus linear (narrowing); shorter than peduncle. **Telson** longer than broad, tapering distally, deeply notched, **with marginal and apical robust setae**, with 7–9 robust setae per lobe.

Remarks. Shoemaker (1942) considered his specimens to be the same species as ‘*Orchestia*’ *marquesana* Stephensen (1935). Stephensen (1935) based his description on a female and did not illustrate important non-sexually dimorphic characters such as the maxilliped. There are significant similarities between the taxa. They both have short first antennae, pleopods 1–3 all similarly reduced, uropod 1 peduncle with a well-developed distolateral robust seta and no marginal robust setae on the exopod, there are at least nine other talitroid genera with the same characteristics. There are several differences based on non-sexually dimorphic characters. The pleopodal rami, although reduced, are better developed in *C. schmitti* (essentially vestigial in ‘*Orchestia*’ *marquesana*), and the telson is longer than broad with a deep apical notch and 7 robust setae per lobe (as broad as long with an apically incised telson with 3 robust setae per lobe in ‘*Orchestia*’ *marquesana*).

Based on the excellent illustrations of Shoemaker (1942) *Clippertonia* is separated from other talitrid genera by the above diagnostic characters. In other respects *Clippertonia* appears to be similar to other terrestrial talitrids such as *Cerrorchestia* Lindeman, 1990 from Costa Rica and Panama in the eastern Pacific, *Lanorchestia* Miyamoto & Morino, 2010 from Taiwan and *Nipponorchestia* Morino & Miyamoto, 2015 from Japan in the north-western Pacific.

Clippertonia differs from these genera in having a short, recurved dactylus on gnathopod 2 (unmodified, distally blunt in *Cerrorchestia*, attenuated distally in *Lanorchestia* and *Nipponorchestia*); pereopod 4 dactylus with a small bump along posterior margin (thickened proximally with a notch midway along

posterior margin in *Cerrorchestia* and *Lanorchestia* and similar to pereopod 3 in *Nipponorchestia*); telson deeply notched (apically notched in *Cerrorchestia*, *Lanorchestia* and *Nipponorchestia*).

Richardson (1996) commented that *Protorchestia lakei* Richardson, 1996 and *P. campbelliana* (Bousfield, 1984) are both found in the rookeries of seabirds, in this case mutton-birds, 10 to 80 m above sea level. But this habitat is wet. *Clippertonia schmitti* is the third talitrid found in this unusual habitat.

Distribution. Clipperton Island, eastern tropical Pacific Ocean (Shoemaker 1942).

Clippertonia schmitti sp. nov.

(Figures 1–2)

Orchestia marquesana. — Shoemaker, 1942: 14, figs 4, 5.

Type material. Holotype, male, 13 mm, USNM 77678. Paratypes, female USNM 1550576, about 30 specimens, USNM 1550577, 13 specimens (5 males, 6 females, 2 immatures), USNM 107229.

Additional material. Many specimens, debris from two boobies' nests, back from landing place, 21 July 1938, station no. 14–38, Clipperton Island.

Type locality. Clipperton Island, tropical eastern Pacific Ocean (10°18'N 109°13'W).

Ecological type. Field-hoppers occur among coastal vegetation, in meadows, pastures, grasslands and urban gardens, among litter band under stones and logs.

Habitat. Many specimens found among debris under two booby's nests.

Etymology. Named the Waldo Schmitt, naturalist on the voyage and probable collector of this species.

Description. With the characters of the genus.

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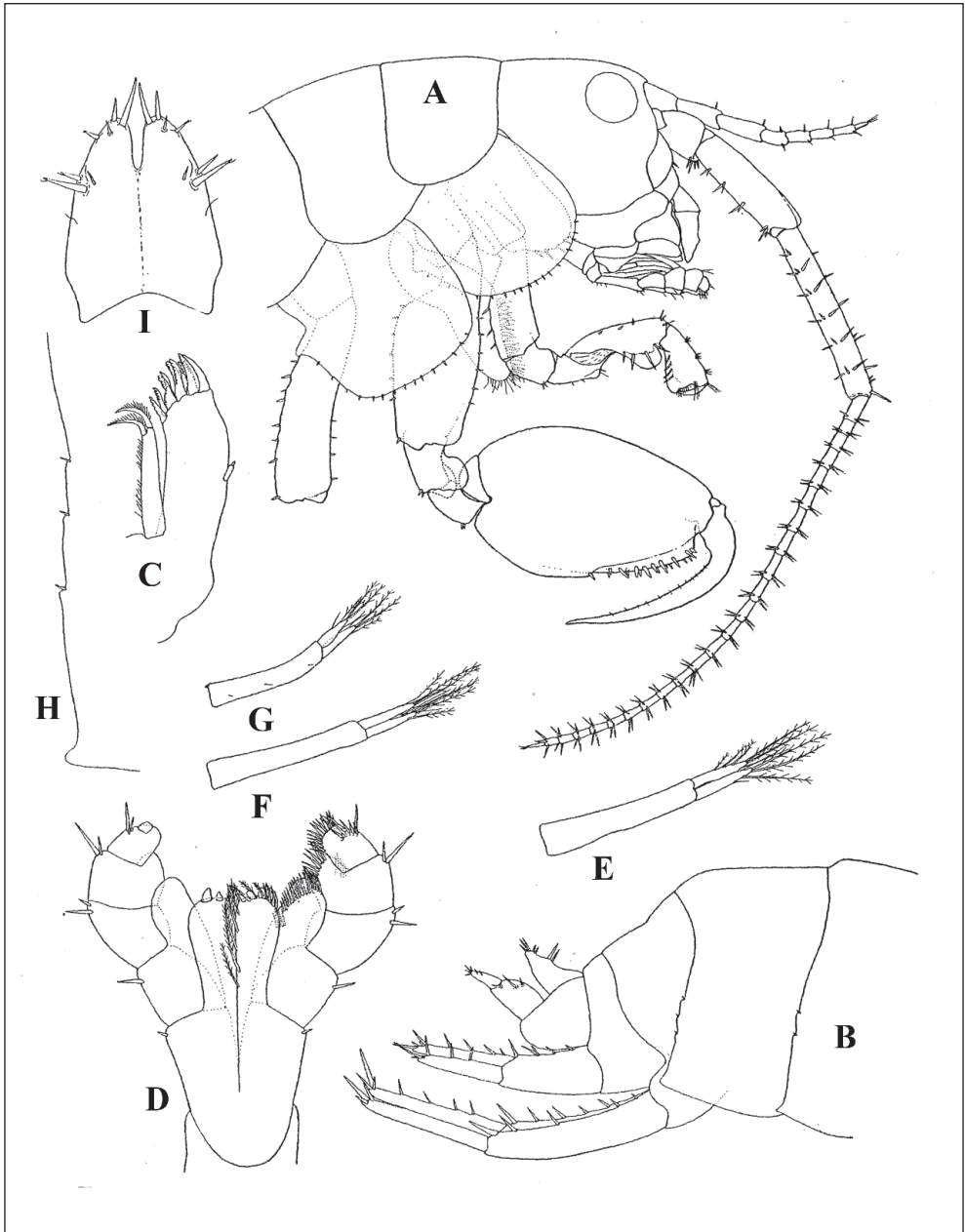


FIGURE 1. *Clippertonia schmitti* sp. nov. Male, Clipperton Island. A. Head and first two pereon segments; B. epimera 2-3 and urosome; C. maxilla 1, D. maxilliped; E, F, G, pleopods 1, 2 and 3; H. epimeron 3; I. telson (after Shoemaker, 1942).

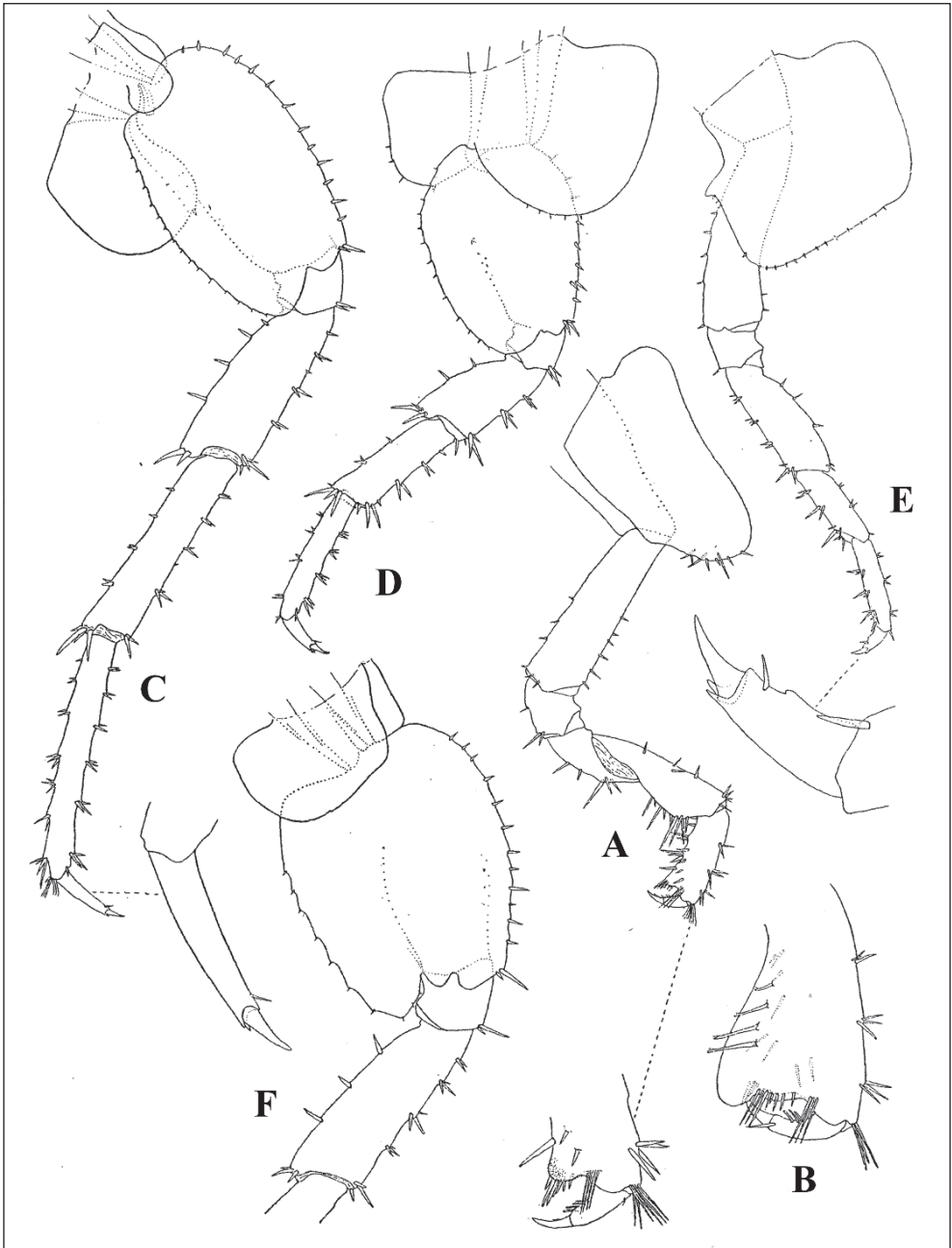


FIGURE 2. *Clippertonia schmitti* sp. nov. Female, Clipperton Island. A. gnathopod 1. Male, Clipperton Island. B. propodus and dactylus of gnathopod 1; C, pereopod 6; D, pereopod 5; E, pereopod 4; F, pereopod 7 (after Shoemaker, 1942).