

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

TWO NEW GENERA AND A NEW SUBFAMILY OF
BODOTRIIDAE (CRUSTACEA: CUMACEA) FROM
EASTERN NORTH AMERICA

BY LES WATLING

*Marine Studies Center,
University of Delaware,
Lewes, Delaware 19958¹*

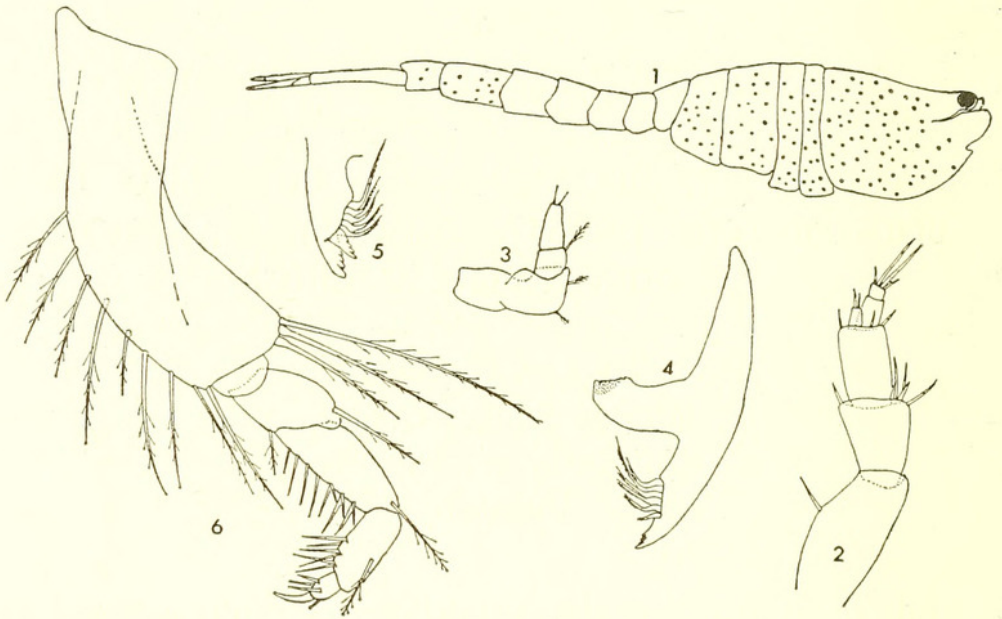
Only three species of the Bodotriidae, currently assigned to the Subfamily Vaunthompsoniinae, are known in which the males have less than five pairs of pleopods. All of these were described from North American Atlantic coastal and brackish waters: *Leptocuma minor* Calman, 1912; *Mancocuma stellifera* Zimmer, 1943; and *M. altera* Zimmer, 1943. The *Manocuma* species have two pairs of reduced pleopods, while Calman's *L. minor* possesses three pairs of fully developed pleopods. Hale (1944) noted that *L. minor* should be removed from the genus *Leptocuma* and later Jones (1973) suggested that it be included in the genus *Mancocuma*.

In this paper, the new genus *Pseudoleptocuma* will be proposed for Calman's species and an additional new genus characterized by the lack of pleopods in the male will be described. The new subfamily, Mancocuminae, is proposed for these bodotriid genera with reduced numbers of pleopods.

Mancocuminae, new subfamily

Diagnosis: Bodotriidae with the following features: less than 5 pairs of pleopods in male; at least 3 pairs of pereopods with exopods in both sexes; mandible with few (approximately 6) spines between incisor and molar processes; uropod endopod with 2 articles.

¹New address: Ira C. Darling Center, University of Maine, Walpole, Maine 04573.



FIGS. 1-6. *Spilocuma salomani*, new species, female: 1, Side view of body; 2, Antenna 1; 3, Antenna 2; 4, Right mandible; 5, left mandible, tip; 6, Third maxilliped.

Type-genus: *Mancocuma* Zimmer, 1943.

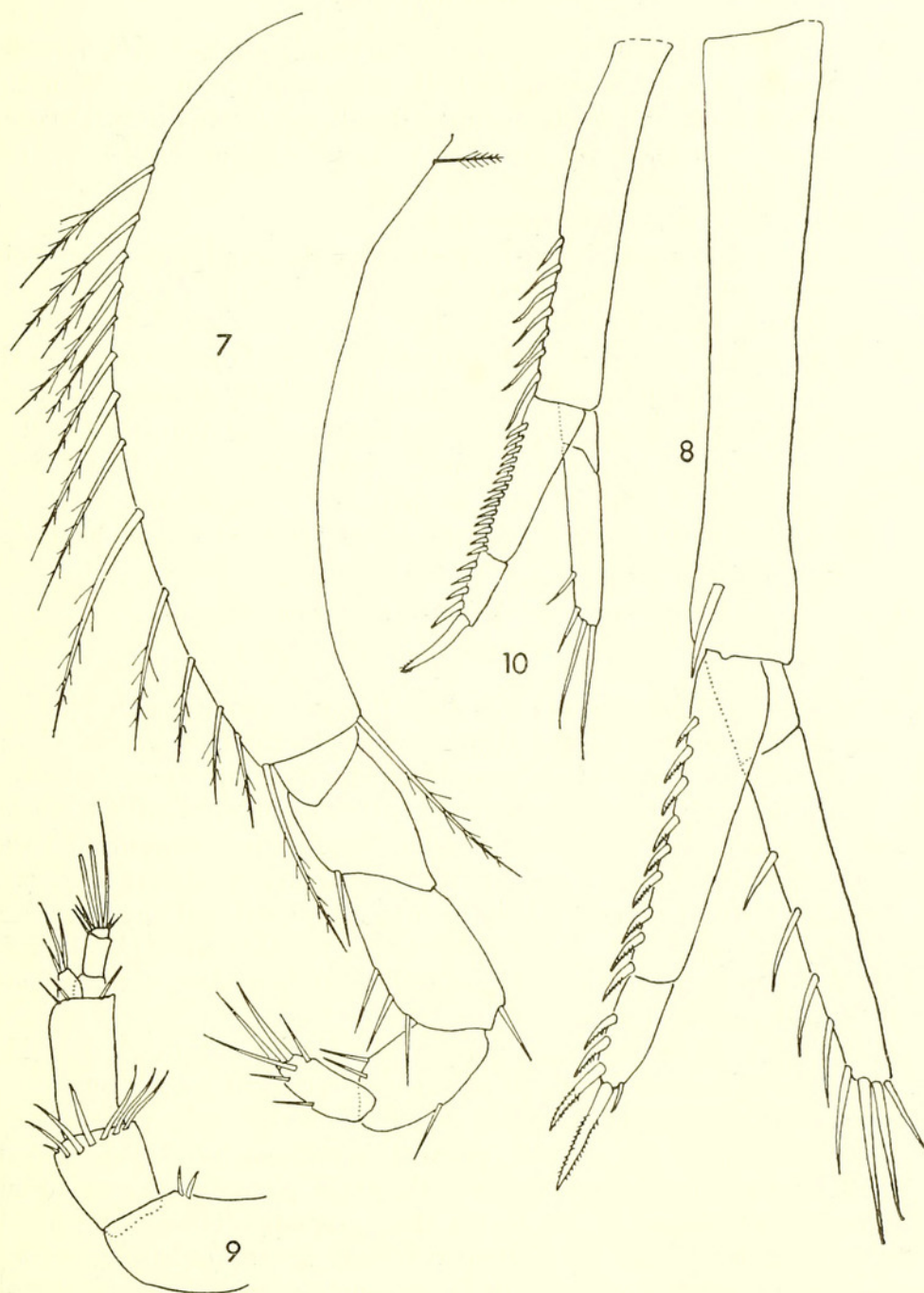
Remarks: The Family Bodotriidae previously consisted of two subfamilies, the Bodotriinae, which have exopods only on the first pair of pereopods in either sex, and the Vaunthompsoniinae, which have exopods on at least the first 2 pairs of pereopods. With the exception of the 3 North American species, all species in both subfamilies have males with 5 pairs of pleopods. The new subfamily Mancocuminae is proposed for the following genera: *Mancocuma* Zimmer, 1943; *Pseudoleptocuma* nov.; *Spilocuma* nov.

***Pseudoleptocuma*, new genus**

Diagnosis: Male with 3 pairs of pleopods, each of which has a process on endopod outer margin; female with well developed exopods on pereopods 1-3 and a rudimentary exopod on pereopod 4; male with well developed exopods on pereopods 1-4; male antenna 2 with flagellum reaching to end of pleon; distal external angle of maxilliped 3 basis produced; pereopod 1 with distal brush of setae on propodus and dactylus.

Type-species: *Leptocuma minor* Calman, 1912.

Remarks: The differences between *P. minor* (Calman) and all species of *Leptocuma* (except *L. forsmanni* Zimmer) were discussed by Hale (1944). Most of these differences are embodied in the diagnosis of the



FIGS. 7-10. *Spilocuma salomani*, new species: 7, Pereopod 1, female; 8, Uropod, female; 9, Antenna 1, male; 10, Uropod, male.

new genus. *Pseudoleptocuma* is quite similar to *Mancocuma* but differs from it in the number and development of the pleopods in the male, in the development of the male second antenna flagellum, and in the elongate form of the pereopod 1 propodus.

Spilocuma, new genus

Diagnosis: Well developed exopods on pereopods 1-3 and a rudimentary exopod on pereopod 4 in both sexes; male without pleopods; male antenna 2 with strongly reduced flagellum; distal external angle of maxilliped 3 basis not produced; pereopod 1 without distal brush of setae on propodus and dactylus.

Type-species: *Spilocuma salomani* n.

Remarks: This genus differs from all other Bodotriidae in its lack of pleopods in the male, but it possesses the following combination of features which characterize this family: mandible normal with large triturating molar; pereopods 1-4 with exopods in both sexes; uropod endopod of 2 articles. *Spilocuma* differs from both *Mancocuma* and *Pseudoleptocuma* in having a rudimentary exopod on pereopod 4, the distal external angle of the third maxilliped basis not produced, and in lacking the distal brush of setae on pereopod 1 propod and dactyl.

Etymology: Prefix derived from the Greek *spilos* = a spot, blemish.

Spilocuma salomani, new species

Figures 1-13

Description: Adult female. Length, 4.0 mm. Carapace with pseudo-rostral lobes extending only a short distance in front of ocular lobes; infero-lateral edge smooth, with small antennal sinus. All thoracic somites visible in thoracic view. Cephalothorax, with exception of fifth thoracic somite, and last 2 pleonal somites covered with chromatophores. Five pedigerous somites together as long as carapace and $\frac{2}{3}$ as long as pleon.

Antenna 1 first peduncle article as long as second and third articles together; main flagellum of 2 articles which together are half as long as third peduncle article; accessory flagellum uniarticulate, shorter than first main flagellum article.

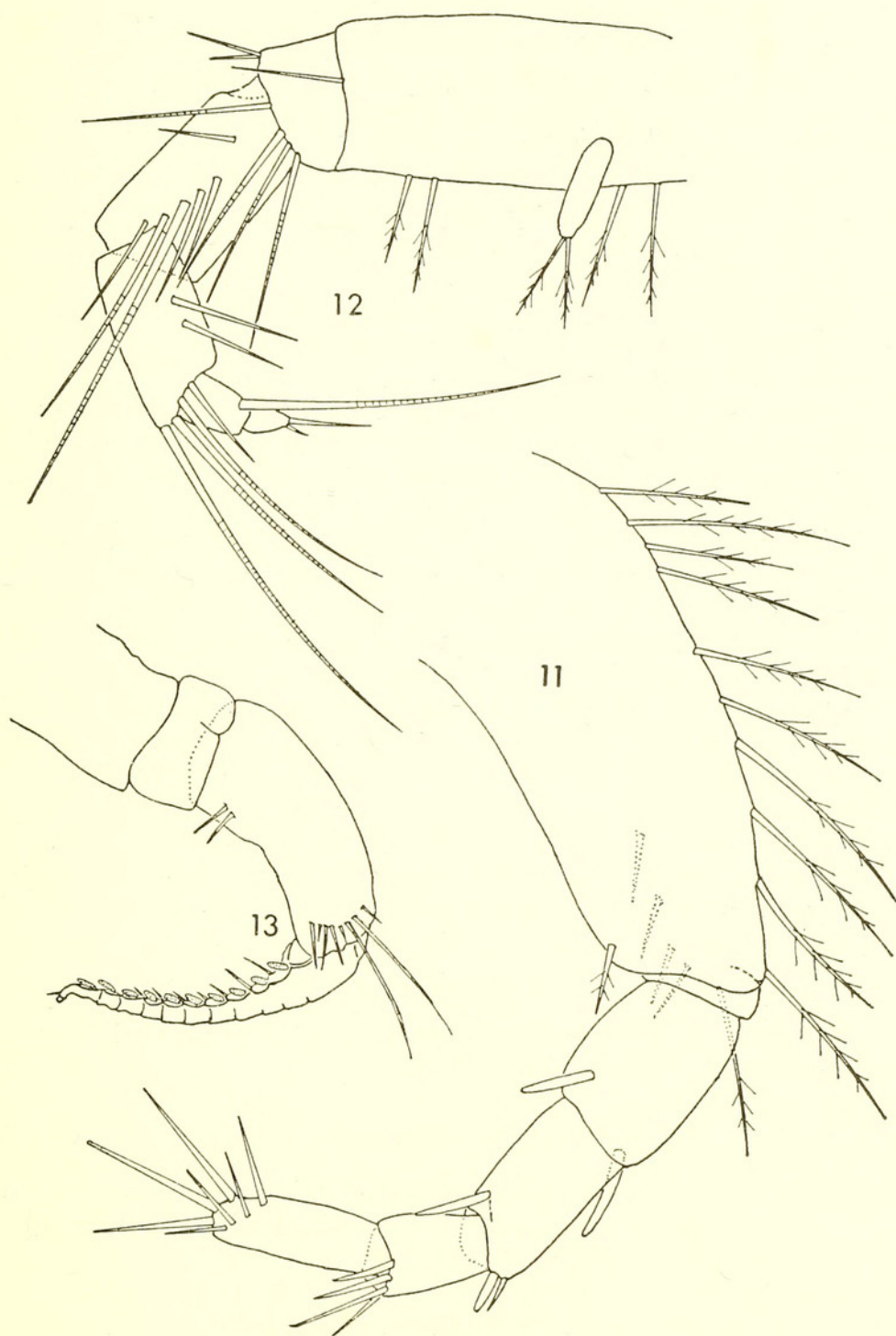
Antenna 2 small, consists of 3 articles; basal article indistinctly jointed.

Mandible of normal shape, molar process large and triturating; 5 recurved spines along inner margin between incisor and molar processes.

Third maxilliped basis distal external angle not produced, armed with 3 long plumose setae; merus with single plumose seta on distal external angle; carpus slightly longer than propodus, armed on ventral margin with long stiff setae; propodus with group of strong spines distally along ventral margin; dactylus much shorter than propodus, armed terminally with stout, recurved spine.

First pereopod basis longer than distal articles together; carpus and propodus subequal in length, carpus only slightly wider than propodus; dactylus half length of propodus, armed terminally with 2 spines.

Second pereopod of 7 articles, ischium very short; carpus and merus subequal in length, merus slightly narrower; dactylus longer than propodus, subequal in length to carpus and merus, armed terminally with 3 strong spines.



FIGS. 11-13. *Spilocuma salomani*, new species: 11, Pereopod 2, female; 12, Pereopod 4, female; 13, Antenna 2, male.

Fourth pereopod with rudimentary exopod; propodus and dactylus together shorter than carpus.

Uropod endopod of 2 articles, distal article one-third as long as basal; basal article armed along inner margin with 9–12 stout, serrated spines, terminal articles with 3 lateral and 1 terminal, serrated spines; exopod with 5 lateral and 3 terminal, strong, simple spines.

Adult Male. Length, 2.0 mm. Body similar in overall appearance to adult female; chromatophores present only on carapace, giving a banded appearance. Males obtained were grasping ovigerous females when collected.

Antenna 1 main flagellum of 3 articles, second article twice length of first; accessory flagellum uniarticulate and slightly longer than basal flagellar article.

Antenna 2 strongly modified for grasping, flagellum recurved and only slightly longer than last peduncle article; flagellum indistinctly jointed, each article bearing flattened, granulated pad on its ventral side.

Uropod exopod armed only with 2 lateral and 2 terminal setae; endopod basal article inner margin armed with 12–15 stout, serrated spines; peduncle inner margin armed with 6 or 7 long, stiff setae.

Etymology: This species is named in honor of Dr. Carl Saloman, NMFS, Gulf Coastal Fisheries Center, Panama City, Florida, who kindly sent several lots of specimens and who has carefully documented their occurrence.

Type-locality: Off Panama City Beach, Florida, 85°46' W, 30°10' N; depth, 3 m.

Material examined: 27 individuals from the type-locality.

Holotype: USNM No. 156320; male.

Paratypes: USNM No. 156321; 7 females and 4 males.

ACKNOWLEDGMENTS

The author would like to express his appreciation to Dr. Carl Saloman for bringing this material to his attention.

LITERATURE CITED

- CALMAN, W. T. 1912. The Crustacea of the order Cumacea in the collection of the United States National Museum. *Proc. U.S. Nat. Mus.* 41:603–676.
- HALE, H. M. 1944. Australian Cumacea. No. 8. The family Bodotriidae. *Trans. Roy. Soc. S. Australia* 68:225–285.
- JONES, N. S. 1973. Some new Cumacea from deep water in the Atlantic. *Crustaceana* 25:297–319.
- ZIMMER, C. 1943. Über neue und weniger bekannte Cumaceen. *Zool. Anz.* 141:148–167.



Watling, Les. 1977. "2 New Genera And A New Subfamily Of Bodotriidae Crustacea Cumacea From Eastern North America." *Proceedings of the Biological Society of Washington* 89, 593–598.

View This Item Online: <https://www.biodiversitylibrary.org/item/107501>

Permalink: <https://www.biodiversitylibrary.org/partpdf/43855>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Biological Society of Washington

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.