

DESCRIPTION OF THE MALE AND NOTES ON  
THE FEMALE OF *ARGEIOPSIS INHACAE*  
(CRUSTACEA: ISOPODA: BOPYRIDAE)

Daniel L. Adkison, Richard W. Heard, and Guy T. Clark

*Abstract.*—The male of *Argeiopsis inhacae* Kensley, 1974 is described for the first time from one specimen. The diagnosis for the male is: head fused with first pereomere; first antenna of 3 segments, second antenna of 5 segments, basal segment with posteriorly directed projection; midventral tubercles on pereomeres; and pleon fused, segments laterally indicated, mid-ventral tubercles, pleopods, and uropods absent. The viability of the subfamily Argeiinae Markham, 1977 is questioned. Based on a review of the literature and examination of the holotype *A. inhacae* and specimens from the Philippine Islands, the range of *A. inhacae* is extended from Mozambique to the Philippine Islands.

---

The genus *Argeiopsis* Kensley, 1974 is based on a single species, *Argeiopsis inhacae* Kensley, 1974, described from a single ovigerous female collected from Mozambique on the banded coral shrimp *Stenopus hispidus* (Oliver). The present report is based on the examination of 2 females and a male of *A. inhacae* obtained by one of us (GTC) from an aquarium shop in Norfolk, Virginia. Host shrimp were collected in the Philippine Islands and shipped to Norfolk, Virginia as part of a consignment to a marine aquarium shop. Efforts to learn more precise collection data were unsuccessful.

*Argeiopsis inhacae* Kensley, 1974

Fig. 1

*Argeiopsis inhacae* Kensley, 1974:259-261, fig. 1.—Markham, 1977:109-110.

*Material examined.*—Infesting *Stenopus hispidus*. Inhaca Island, Mozambique; from right branchial chamber of *Stenopus hispidus*; 1 ♀ (holotype, ovigerous) SAM A10979.—Philippine Islands; 1977 (aquarium trade, no other collection data known); from left branchial chamber of *S. hispidus*; 1 ♀ (ovigerous), 1 ♂ USNM 172471. Philippine Islands; 1977 (aquarium trade, no other collection data); from right branchial chamber of *S. hispidus*; 1 ♀ (non-ovigerous, no ♂) USNM 172472.

*Description.*—Female. Distortion slight. Head pentagonal, width less than twice length; anterior lamina present, medially indistinct, laterally curled dorsally. Small eyes on anterolateral margin of head. First antenna of 3 segments; second antenna of 4 segments. Maxilliped covered with scales; palp present, medially with fringe of long setae. Posteroventral lamina with 2 pairs of sickle shaped projections.

Pereon broadest at pereomere 3; pereomere 3 nearly straight, pereomeres 4 to 7 progressively directed more posteriorly. Narrow coxal plates on pereomeres 1 to 4. Dorsal bosses present on pereomere 1 to 4. Pereomere 1 to 4 bilobed laterally, tergal area of pereomeres of expanded side enlarged; pereomere 1 on enlarged side with tergal area L-shaped or hooked anteriorly. Pereopods increas-



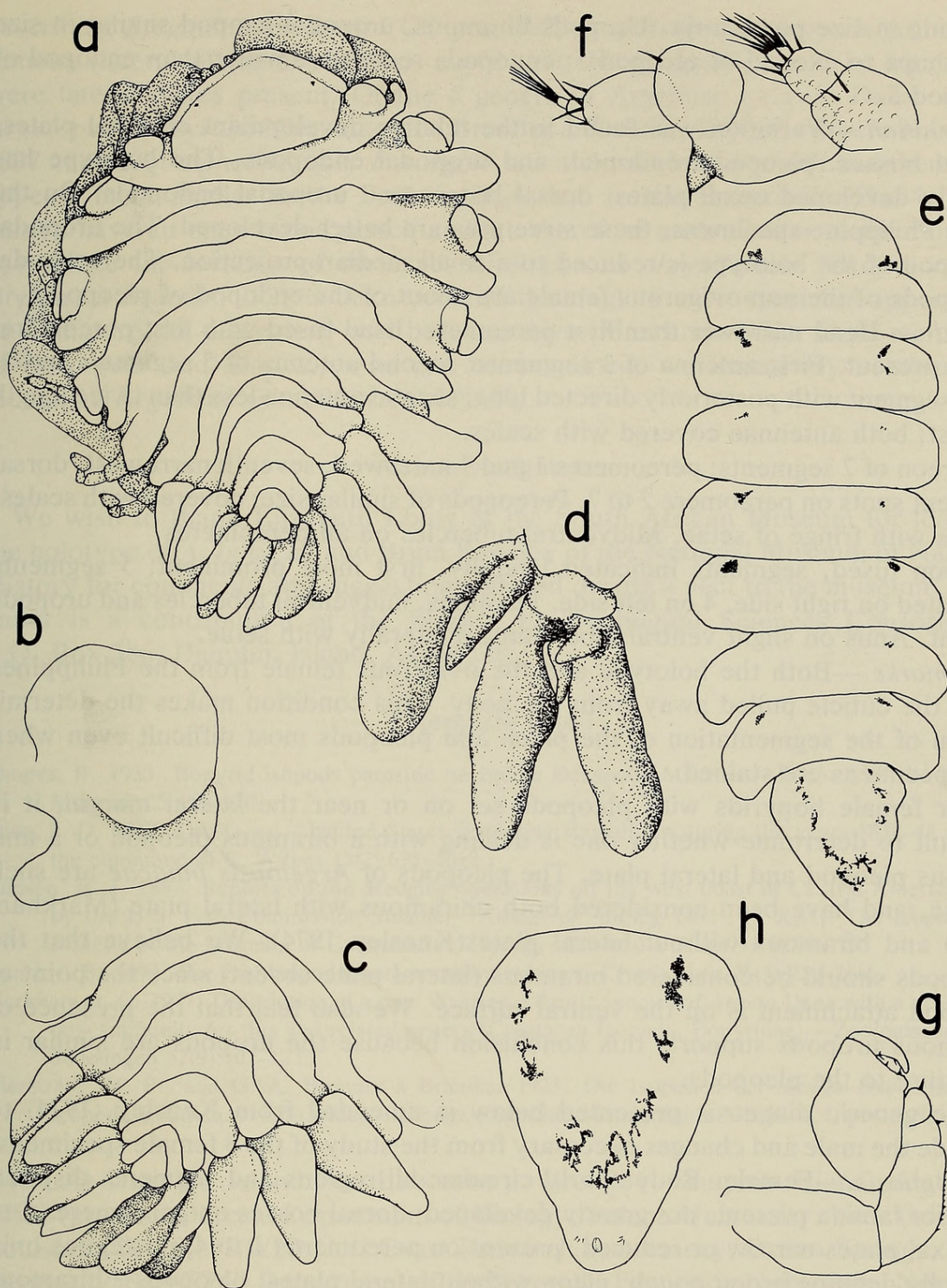


Fig. 1. *Argeiopsis inhacae*, female a–d (USNM 172472), male e–h (USNM 172471): a, Dorsal view; b, Left oostegite 1, internal view; c, Pleon, dorsal view; d, Uropods and right pleopod 5, ventral view; e, Dorsal view; f, Right antennae; g, Left pereopod 1; h, Pleon, ventral view.

ing in size posteriorly. Oostegites only laterally defining brood pouch. Oostegite 1 with internal ridge unornamented; posterior plate developed into laterally directed point.

Pleon of 6 distinct segments, length subequal to width. Lateral plates absent. Pleopods biramous, 5 pairs; larger on expanded side; pleopodal endopods de-



creasing in size posteriorly. Uropods biramous, uropodal exopod similar in size and shape to exopod of pleopod 5; endopods reduced, smaller than endopod of pleopod 5.

*Variation*.—Variation was found in the relative development of coxal plates, dorsal bosses, pleopodal endopod, and uropodal endopods. The holotype has weakly developed coxal plates, dorsal bosses and uropodal endopods. On the other Philippine specimens, these structures are better developed. The uropodal endopod of the holotype is reduced to a small median projection. The uropodal endopods of the non-ovigerous female are about of the endopod of pleopod 5.

*Male*.—Head narrower than first pereomere; head fused with first pereomere. Eyes present. First antenna of 3 segments; second antenna of 5 segments, proximal segment with posteriorly directed lobe; second antenna less than twice length of first; both antennae covered with scales.

Pereon of 7 segments; pereomeres 1 and 7 narrowed, seventh narrowest; dorsal pigment spots on pereomere 2 to 7. Pereopods of similar size; covered with scales, scales with fringe of setae. Midventral tubercles on all pereomeres.

Pleon fused, segments indicated laterally, first most prominent; 5 segments indicated on right side, 4 on left side. Pleopods, midventral tubercles and uropods absent. Anus on slight ventral lobe, flanked laterally with setae.

*Remarks*.—Both the holotype and the ovigerous female from the Philippines have the cuticle pulled away from the body. This condition makes the determination of the segmentation of the pleon and pleopods most difficult even when the specimens are stained.

For female bopyrids with pleopods set on or near the lateral margin, it is difficult to determine whether one is dealing with a biramous pleopod or a uniramous pleopod and lateral plate. The pleopods of *Argeiopsis inhacae* are such a case, and have been considered both uniramous with lateral plate (Markham 1977) and biramous without lateral plate (Kensley 1974). We believe that the pleopods should be considered biramous (lateral plate absent) since the point of pleopod attachment is on the ventral surface. We also feel that the presence of biramous uropods supports this conclusion because the uropods are similar in structure to the pleopods.

The generic diagnosis presented below is amended from Kensley (1974) to include the male and changes necessary from the study of the 3 female specimens.

*Diagnosis*.—Female: Body nearly circular; all regions and segments distinct; anterior lamina present, not greatly developed; dorsal bosses on pereomeres 1 to 4; coxal plates narrow or reduced, present on pereomeres 1 to 4; oostegites only laterally defining brood pouch; pleon without lateral plates; pleopods 5 biramous pairs; uropod biramous, endopod reduced. Male: head fused with first pereomere; head narrower than first pereomere; pereon of 7 segments, sides nearly parallel; pleon with lateral indication of pleomeres; pleon narrower than pereon; pleopods, midventral tubercles, and uropods absent.

The 5 important differences listed by Markham (1977) distinguishing the Argeiinae from the Bopyrinae (head shape, body outline, pleomere fusion, lateral plate and uropod development, and number of pleopod rami) appear variable and insufficient to maintain Argeiinae as a separate subfamily. In addition, the genera *Argeiopsis* and *Stegoalpheon* Chopra, 1923 appear to have biramous pleopods. *Argeiopsis* has biramous pleopods and no lateral plates. Chopra (1923), when



describing *Stegoalphton kemp* Chopra, 1923, reported the pleopods to be biramous (lateral plates absent) but noted that the pleopods would be biramous were lateral plates present. Of the 5 genera in Argeiinae (*Argeia* Dana, 1853; *Argeiopsis*, *Bopyrosa* Nierstrasz and Brender à Brandis, 1923; *Parargeia* Hansen, 1897 and *Stegoalphton*), only *Parargeia* has a closed brood pouch and therefore appears more similar to the Pseudioninae than to the Bopyrinae. The 4 other genera have an open brood pouch and are therefore more similar to the Bopyrinae. Since the location of the types of *Bopyrosa phryxiformis* Nierstrasz and Brender à Brandis, 1923 is unknown and the single known specimen appears to be immature, its placement is at best tentative (Markham 1977). Until members of *Parargeia* and *Stegoalphton* can be examined, we tentatively continue to recognize Argeiinae as a distinct subfamily.

### Acknowledgments

We wish to thank Elizabeth Louw of the South African Museum for loan of the holotype of *A. inhacae* and Brian Kensley of the National Museum of Natural History for comments and suggestions offered during a visit to the museum. This paper is a contribution of the Marine Environmental Sciences Consortium, P.O. Box 386, Dauphin Island, AL 36528.

### Literature Cited

- Chopra, B. 1923. Bopyrid isopods parasitic on Indian Decapoda Macrura.—Records of the Indian Museum 25:411–550.
- Dana, J. D. 1853. Crustacea.—United States Exploring Expedition during the years 1838–42 under the command of C. Wilkes 13(2):691–1018.
- Hansen, H. J. 1897. Reports on the dredging operations off the west coast of Central America . . . by the U.S. Fish Commission Steamer “Albatross” during 1891 . . . XXII. The Isopoda.—Bulletin of the Museum of Comparative Zoology, Harvard College 31(5):96–129.
- Kensley, B. 1974. Bopyrid Isopoda from southern Africa.—Crustaceana 26(3):259–266.
- Markham, J. C. 1977. Description of a new Western Atlantic species of *Argeia* Dana with a proposed new subfamily for this and related genera (Crustacea Isopoda, Bopyridae).—Zoologische Mededelingen 52(9):107–123.
- Nierstrasz, H. F., and G. A. Brender à Brandis. 1923. Die Isopoden der Siboga-Expedition II. Isopoda Genuina. I. Epicaridea.—Siboga-Expedition Monographie 32b:57–121, pls. 4–9.

(DLA) Dauphin Island Sea Laboratory, Box 386, Dauphin Island, Alabama 36528 (present address: Department of Biology, Tulane University, New Orleans, Louisiana 70118); (RWH) Gulf Coast Research Laboratory, Ocean Springs, Mississippi 39564; (GTC) Department of Biology, Old Dominion University, Norfolk, Virginia 23508.



Adkison, Daniel L., Heard, Richard W., and Clark, Guy T. 1982. "Description Of The Male And Notes On The Female Of *Argeiopsis inhacae* Crustacea Isopoda Bopyridae." *Proceedings of the Biological Society of Washington* 95, 334–337.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/108716>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/48265>

#### **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>.