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3
A NEW GENUS AND SPECIES OF CHIROSTYLIDAE (DECAPODA,
ANOMURA, GALATHEIDEA) FROM THE HAWAIIAN ISLANDS

BY

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Among anomuran crabs sent to me for identification by Dennis M. Devaney of the Bernice P. Bishop Museum, Honolulu, were two examples of an undescribed species which appeared, at first glance, to be an aberrant member of genus *Munida* (family Galatheidae). Closer examination revealed a number of characters which place it in the Chirostylidae: the antennal peduncle is composed of five articles, and the antennal acicle is well developed; there is no epipod on the third maxillipeds; the caudal fan is bent back against the preceding abdominal segments, and the telson is simple except for its division into two lobes by a transverse suture. Since this species cannot be placed in any of the genera currently included in family Chirostylidae, a new genus is established for its reception.

***Pseudomunida* gen. nov.**

Chirostylids with a slender, spiniform rostrum and a single pair of supraorbital spines. Carapace with feebly developed, interrupted transverse striae; no spines on dorsal surface. Basal article of antennular peduncle unarmed. Mandibles armed with only a few teeth. First maxillipeds with an epipod. Third maxillipeds nearly contiguous at base. Chelipeds very long and slender. Pereiopods 1-4 strongly spined. Sternum of fifth pereiopods completely lacking.

Type-species: *Pseudomunida fragilis* sp. nov.

Derivation of name: From Greek "pseudes", false, and *Munida*, because of its superficial resemblance to the latter genus.

***Pseudomunida fragilis* sp. nov.**

Material: "Townsend Cromwell" Sta. TC-52-108, off Waianae Oahu, Hawaiian Islands, 21°25.4'N 158°16.78'W; 16 March 1971; 969-1280 meters; coll. Paul J. Struhsaker. Oviparous female (holotype), Bishop Mus. Cat. No. S7996; oviparous female (paratype), Bishop Museum Cat. No. S8535.

Description. --- Carapace slightly longer than broad, exclusive of rostrum; integument firm and hard; dorsal surface strongly convex laterally, unarmed; cervical groove and its posterior branch distinctly marked, grooves separating cardiac from branchial areas weakly developed, other surface grooves obsolete. Region anterior to cervical groove with weakly developed, short transverse rugae;

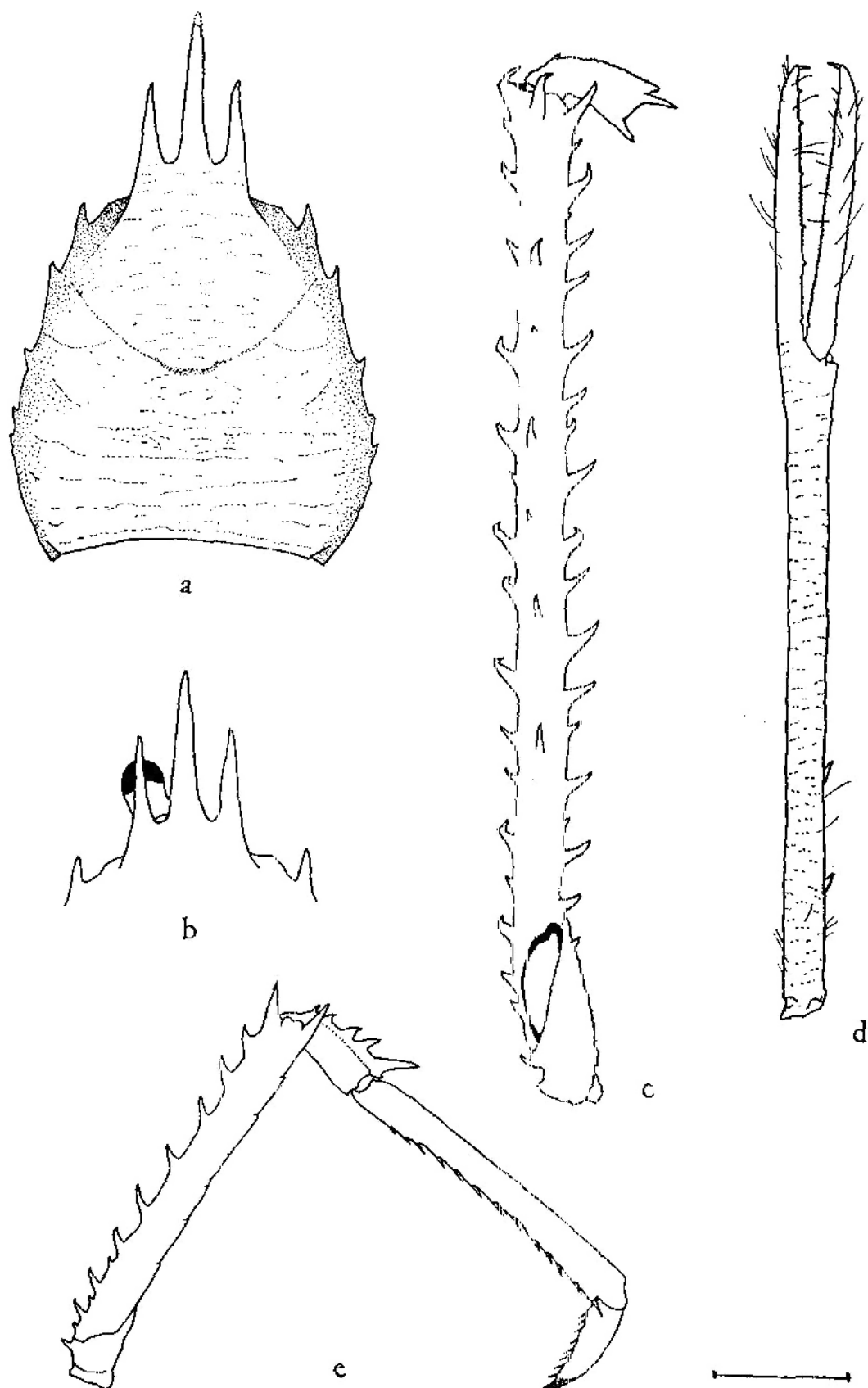


Fig. 1. *Pseudomunida fragilis* n. sp. a, carapace (holotype); b, frontal area of carapace (paratype); c, ischium, merus, and carpus of left cheliped, mesial view (holotype); d, left chela (holotype); e, right first walking leg (holotype). Scale = 5 mm.

somewhat stronger transverse rugae, wavy and partially interrupted, on posterior part of carapace. Surface densely covered with very fine, short setae, visible only under magnification. Lateral margins diverging posteriorly, each armed with five spines; the first spine, large and well developed, situated anterior to cervical groove; marginal branchial spines smaller and decreasing in size posteriorly, last one at level of greatest breadth of carapace; posterior to the latter spine, one or two still smaller ones sometimes developed. Rostrum comprising over one-fourth total carapace length; slender, spiniform, nearly horizontal. A single pair of supra-orbital spines, subparallel with rostrum, similar to it in shape but shorter, extending a little more than one-half its length, and slightly directed upward. Eyes short and stout, cornea slightly expanded.

Basal segment of antennular peduncle unarmed. Antennular peduncle with five segments; first segment with distolateral angle slightly produced; second segment with distolateral spine moderately to well developed; third segment strongly produced anteriorly, extending well beyond base of fifth segment; fourth segment with strong dorsomesial projection; fifth segment with three spines distally, one dorsal, one mesial, and one lateral, the latter largest; acicle spiniform, slender, extending well beyond base of fifth segment; flagellum long, non-setose.

Third maxillipeds nearly contiguous at base; ischium slightly shorter than merus, crista dentata with 11 to 13 denticles; merus with one or two minute spinules on distal third of lateral margin; carpus unarmed.

Chelipeds nearly four times length of carapace including rostrum. Ischium with spine dorsally and another at ventrodistal corner. Merus subcylindrical, nearly twice length of carapace including rostrum; with about 15 to 17 spines in dorsal row and 18 in ventral row, these more or less evenly spaced but of varying sizes; a row of five widely spaced spines and sometimes a few spinules on mesial surface; lateral surface with a single strong distal spine and covered with very small, sharp granules. Carpus short, with small, sharp granules and with two strong ventrodistal spines, one toward lateral and the other toward mesial surface. Chelae long, a little shorter than merus; palm subcylindrical, narrow, straight, with small, sharp granules dorsally; three small, widely spaced spines on ventromesial surface. Fingers about half as long as palm, narrow, straight, slightly curved downward toward tip, terminating in small corneous claw; cutting edges with row of blunt, close-set denticles; fixed finger also with a few larger, wide-set, triangular denticles.

Walking legs long, progressively a little shorter from first to third. Ischium with spinule on dorsal margin. Merus with about 9 to 14 spines of various sizes on dorsal margin, distal one largest; ventrally a large distal spine; in third walking legs, a row of small spines on lateral surface. Carpus with five spines on dorsal margin, distal one largest. Propodus laterally compressed, unarmed dorsally; ventral margin with row of movable spinules. Dactyl laterally compressed, not curved except for corneous claw; ventral margin with row of movable spinules.

Thoracic sternite of third maxillipeds with median processes produced into a short spine (holotype) or rounded (paratype). Sternite of chelipeds unarmed.

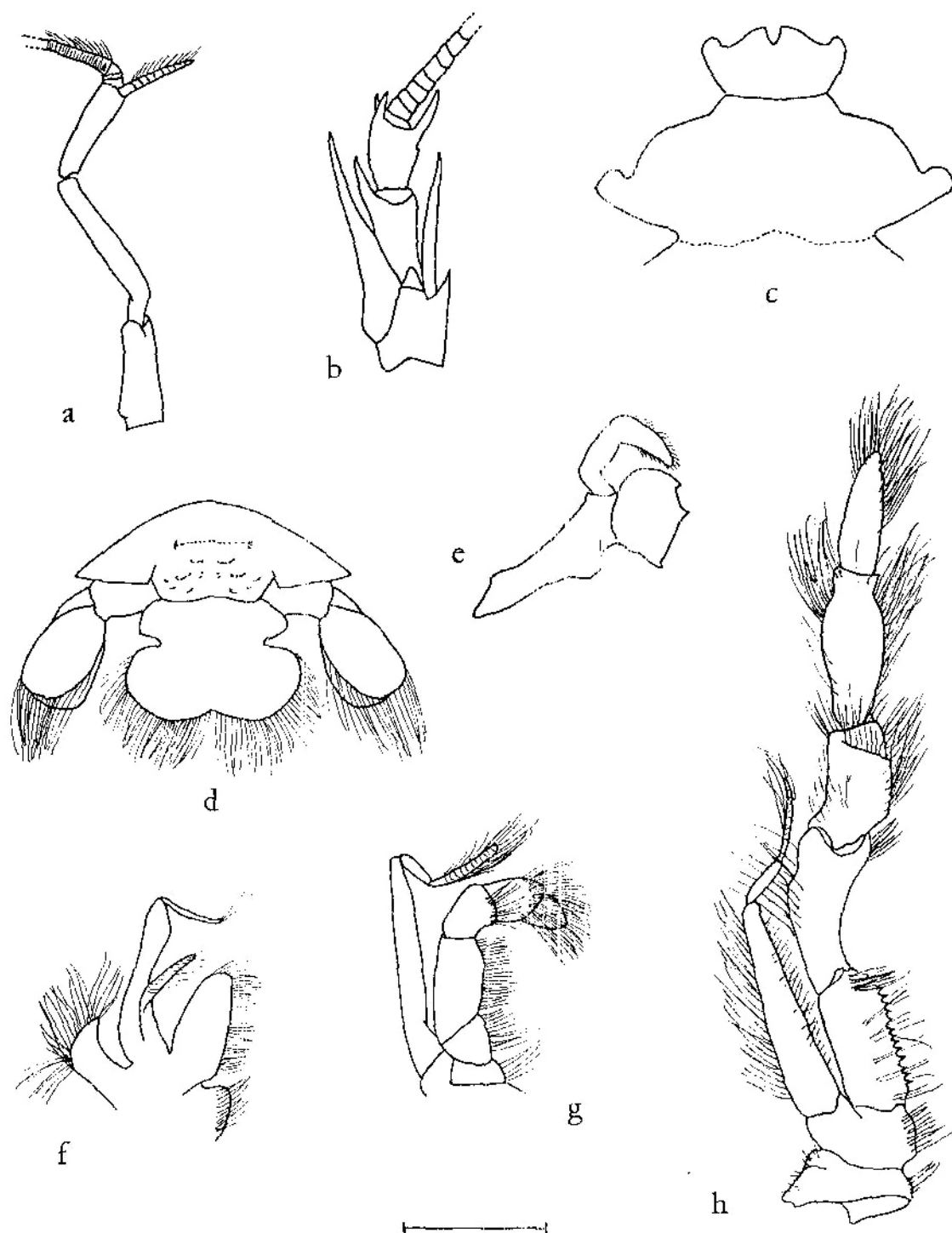


Fig. 2. *Pseudomunida fragilis* n. sp. (paratype). a, right antennule, lateral view; b, left antenna, ventral view (first segment of peduncle not shown); c, sternum of third maxillipeds and chelipeds; d, uropods and telson; e, left mandible, internal face; f, left first maxilliped, internal face; g, left second maxilliped, internal face; h, left third maxilliped, internal face. Scale = 6 mm for d and 3 mm for a-c, e-h.

Male pleopods unknown. Females with paired pleopods on abdominal segments 2 to 5.

Measurements of holotype (in millimeters): Length of carapace with rostrum, 19.8; rostrum, 5.2 (tip broken); greatest breadth of carapace, 14.4. Length of cheliped: merus, 37; carpus, 4.0; palm, 24; dactyl, 11.5. Length of first walking leg: merus, 15; carpus, 4.2; propodus, 13; dactyl, 4.5.

Derivation of name: From Latin "fragilis", fragile or brittle, because of the condition in which the type-specimens were collected.

Remarks. — The two specimens on which the new species is based were very much broken up when collected; fortunately, because of the tough integument, they were only disarticulated and the parts of diagnostic importance were not crushed. Maxillules and several walking legs were missing, as were both eyes of the holotype. Debris included fragments of what appeared to be a maxilla.

Relationships. — A. Milne-Edwards & Bouvier (1894: 299-300, 308-310, 312-313) showed that the Chirostylidae fall into two natural groups. One, which they called "tribu des Diptyciens", contains the genera now known as *Uroptychus* and *Chirostylus* (and also *Gastroptychus*, if it is accepted as distinct from *Chirostylus*; see Miyake & Baba, 1968: 381). The other, "tribu des Eumunidiens", was created for *Eumunida* alone. These groups were separated by the following characters:

"Diptyciens"	"Eumunidiens"
Carapace without transverse striae	Carapace with transverse striae
Rostrum rather broad, at least at base	Rostrum slender, styliform
No supraorbital spines	Two pairs of supraorbital spines
Basal article of antennular peduncles armed with spines	Basal article of antennular peduncles unarmed
Mandibles strongly dentate	Mandibles feebly dentate
No epipod on first maxillipeds	First maxillipeds with an epipod
Third maxillipeds broadly separated at base	Third maxillipeds nearly contiguous at base
Two pairs of gonopods in males	No gonopods in males

Pseudomunida is much more closely related to *Eumunida*, with which it shares a number of characters, than to the other chirostylid genera, and should obviously be placed with it in the "Eumunidiens" group. The principal characters which set it apart from *Eumunida* are the presence of a single pair of supraorbital spines, and the absence of hepatic spines on the dorsal surface of the carapace. The transverse striae of the carapace are much more feebly developed than in *Eumunida*. Only females are known at this time, but *Pseudomunida* will probably prove to agree with *Eumunida* in the absence of male gonopods.

ACKNOWLEDGEMENTS

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RÉSUMÉ

Un nouveau genre, *Pseudomunida*, de la famille des Chirostylidae, est créé pour une nouvelle espèce, *P. fragilis*, qui fut récoltée en eau profonde aux îles Hawaï. *Pseudomunida* est voisin d'*Eumunida*, de laquelle elle diffère principalement par la présence d'une seule paire d'épines supraorbitales et par l'absence d'épines hépatiques sur la surface dorsale de la carapace.

REFERENCES

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