

## A New Species of the Genus *Hypererythrops* (Crustacea, Mysida, Mysidae) from the Sulu Sea

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**Abstract** A new species belonging to the genus *Hypererythrops* is described based on the specimens collected from the Sulu Sea during the KH-72-1 cruise by R/V *Hakuho Maru*, Ocean Research Institute, University of Tokyo. The new species, *Hypererythrops suluensis*, is distinguished from all the known species of the genus by a combination of the broadly rounded rostrum, the anterior margin of carapace without a pair of supra-ocular spines, the eyes without papilliform process, the antennal scale with a short terminal lobe, and less number of the lateral spines of the telson. Key to the species of *Hypererythrops* is dealt with.

**Key words:** Taxonomy, Mysidae, *Hypererythrops*, Sulu Sea, new species

The genus *Hypererythrops* was instituted by Holt and Tattersall (1905) for *H. serriventer* collected from the offing of the western coast of Ireland. Thereafter, seven species, *H. spinifera* (Hansen, 1910) from Misool Is., Indonesia, *H. caribbaea* Tattersall, 1937, from the northwestern Caribbean Sea, *H. zimmeri* Ii, 1937, from Japan, *H. richardi* Băcescu, 1941, from the Mediterranean, *H. elegantula* Nouvel, 1974, from Madagascar, *H. semispinosa* Wang, 1998, from the northern South China Sea, and *H. varidisaeta* Fukuoka and Murano, 2002, from the Andaman Sea, have been referred to this genus. The present specimens were collected from the Sulu Sea during the scientific cruise (KH-72-1) by R/V *Hakuho Maru*, Ocean Research Institute, University of Tokyo. All the specimens examined are lodged in the National Museum of Nature and Science (NSMT).

### *Hypererythrops suluensis* sp. nov.

(Figs. 1–3)

**Type series.** Holotype (NSMT-Cr 20992), adult male (8.4 mm), allotype (NSMT-Cr 20993), adult female with embryos (7.3 mm), paratypes (NSMT-

Cr 20994), 2 adult males (8.4, 8.5 mm), 1 adult female (7.8 mm), 5 immature males (7.7, 7.5, 6.1 mm and 2 damaged specimens) and 3 immature females (7.0, 5.8 mm and 1 damaged specimen), Sulu Sea, 08°12.7'N 117°59.6'E to 08°11.8'N 117°58.4'E, 26 May 1972, 285–306 m, plankton net installed at mouth of 3-m beam trawl, coll. M. Murano.

**Description.** Carapace (Fig. 1A, B) slightly produced into broadly rounded rostral plate, leaving whole eyes exposed, rather long posteriorly, leaving dorsally posterior half of last thoracic somite uncovered. Median spiniform process (Fig. 1A) present below pseudorostral plate. No sternal process between thoracic limbs.

Eyes (Fig. 1A, B) big, barely extending to distal margin of first segment of antennular peduncle, shorter than broad, somewhat depressed dorso-ventrally. Cornea (Fig. 1A, B) reniform, occupying most part of eye, much broader than stalk. Eyestalk (Fig. 1A, B) without papilliform process on dorsal surface.

Antennular peduncle of male (Fig. 1A) more robust than that of female; first segment with antero-lateral corner produced anteriorly and tipped with several setae; second segment short, with 1

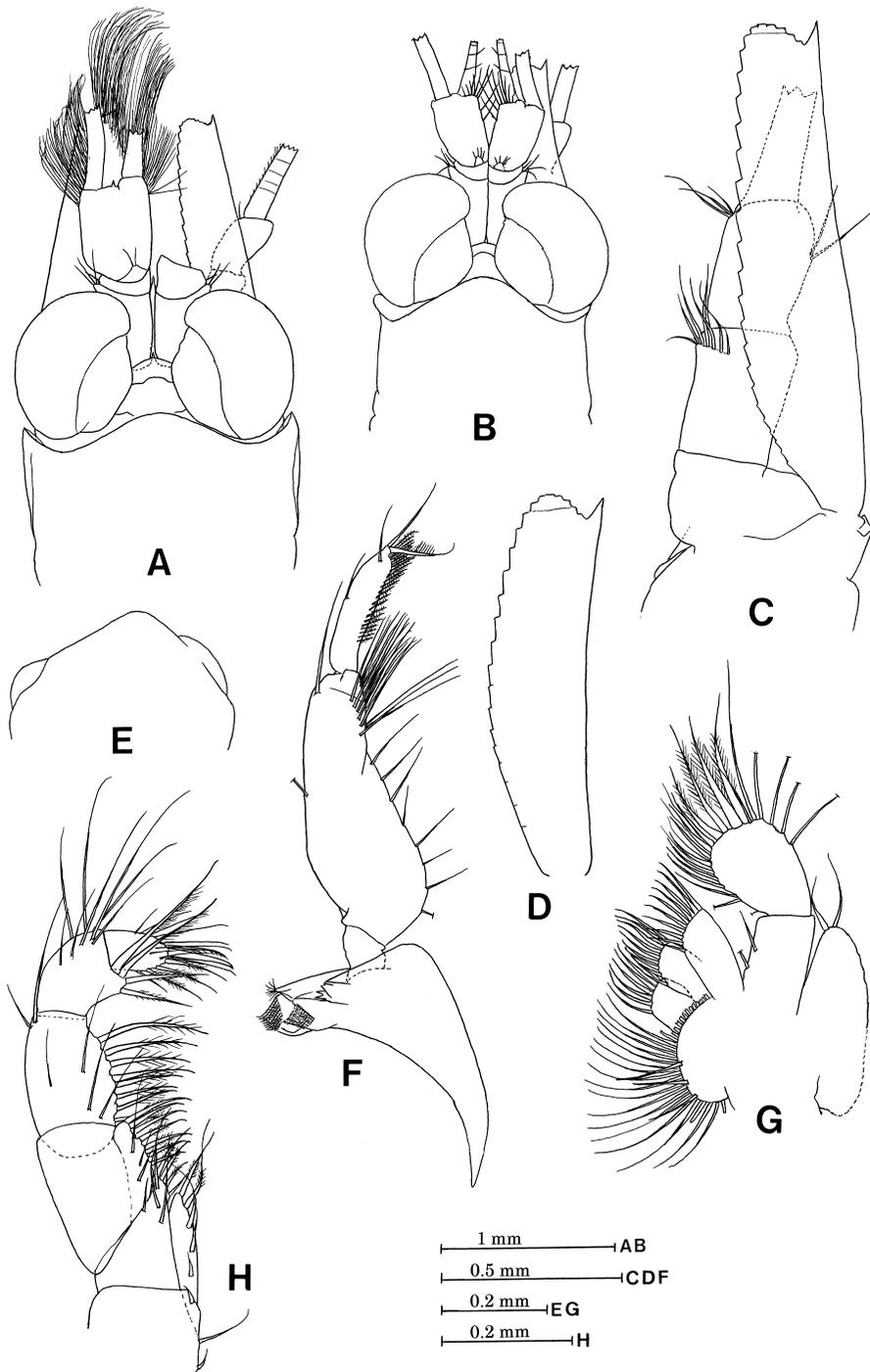


Fig. 1. *Hypererythrops suluensis* sp. nov.: A, C, E–H, holotype; B, D, allotype. — A, B, Anterior part of body; C, antenna; D, antennal scale; E, anterior half of labrum; F, mandible and mandibular palp; G, maxilla; H, endopod of first thoracic limb.

seta on outer margin; third segment as long as first and second segments combined; appendix masculina developed and hirsute. Antennular peduncle of female (Fig. 1B); third segment about as long as first, armed with 2 setae on distal half of inner margin and about 7 setae on inner distal margin.

Antennal scale (Fig. 1A–D) overreaching distal end of antennular peduncle for 1/5 of its length, 4.5 times as long as broad in male and 4 times as long as broad in female; lateral margin nearly straight or slightly concave, naked, terminating in strong triangular acute process, beyond which apex of scale does not extend; apical suture obscure. Antennal peduncle (Fig. 1A–C) shorter than antennular peduncle, second segment as long as third, armed with 7 setae on inner surface near distal end. Sympod (Fig. 1C) with inconspicuous process at outer distal corner.

Labrum (Fig. 1E) with frontal margin rounded.

Mandibular palp (Fig. 1F) rather slender; second segment armed densely with about 30 long setae on distal 1/5 part of outer margin; third segment half of second in length, armed with many barbed setae arranged regularly on distal 4/5 part of outer margin. Maxilla (Fig. 1G); second segment of endopod 1.3 times as long as broad.

Endopod of first thoracic limb (Fig. 1H) robust; basis, ischium and carpopropodus armed with spine-like setae on inner margin, terminal claw long and stout. Endopod of second thoracic limb (Fig. 2A) long and robust; merus longest, slightly curved inwardly, slightly broadened distally; dactylus relatively long, 2/5 length of carpopropodus, hirsute in distal half, terminal claw short. Endopod of one of anterior thoracic limbs (Fig. 2B); merus equal to combined length of carpopropodus and dactylus, armed with 8 short and long setae on outer distal margin; dactylus narrowing distally, slightly shorter than distal subsegment of carpopropodus, 6 times as long as broad at base, terminal claw distinct. Endopod of eighth thoracic limb (Fig. 2C) slender; merus shorter than carpopropodus; dactylus less than 1/3 of distal subsegment of carpopropodus in length, terminal claw distinct. Exopod (Fig. 2A,

C) with 12-segmented flagellipart.

Genital organ of male (Fig. 2D) slightly curved anteriorly, becoming gradually broader towards middle part, then narrower towards distal end at which 2 curved setae are grown.

First abdominal somite 1.2 times longer than second; second to fifth somites subequal in length; sixth somite twice longer than fifth.

Pleopods of male developed to biramous natorial organ; first pleopod (Fig. 3A) with 10-segmented exopod and unsegmented endopod, endopod naked, extending beyond third segment of exopod; second to fifth pleopodal exopods (Fig. 3B–E) 10-segmented, armed with one short naked seta on penultimate segment; posterior 4 pleopodal endopods as long as exopods, 9- or 10-segmented; both rami without modified setae. Pseudobranchial lobe from basal segment of first to fifth pleopodal endopods broadened distally.

Exopod of uropod (Fig. 3F) slightly curved outwardly, overreaching posterior end of telson for 3/5 of its length. Endopod of uropod (Fig. 3F, G) tapered, extending beyond posterior end of telson for 1/2 of its length, armed with 4 graded slender spines on inner ventral margin of statocyst region.

Telson (Fig. 3F, H) 2/3 length of sixth abdominal somite, 1.2 times as long as broad at base; lateral margin slightly concave, armed on distal 2/5 with 5, rarely 6, spines, which become progressively longer posteriorly; posterior margin subtruncate, 1/4 of maximum width at base, armed with pair of median plumose setae and 3 pairs of spines, inner pair of spines minute, middle pair longest, longer than 1/3 of telson length, outer pair 2/3 length of middle pair, twice longer than distalmost lateral spine.

*Etymology.* The specific name, *suluensis*, is derived from the locality in which the present specimens were collected.

*Remarks.* The new species is characterized by (1) the broadly rounded rostrum unarmed with a pair of supra-ocular spines, (2) the eyes without papilliform process, (3) the terminal spine of the outer margin of the antennal scale extending to the apex of the scale, and (4) the tel-

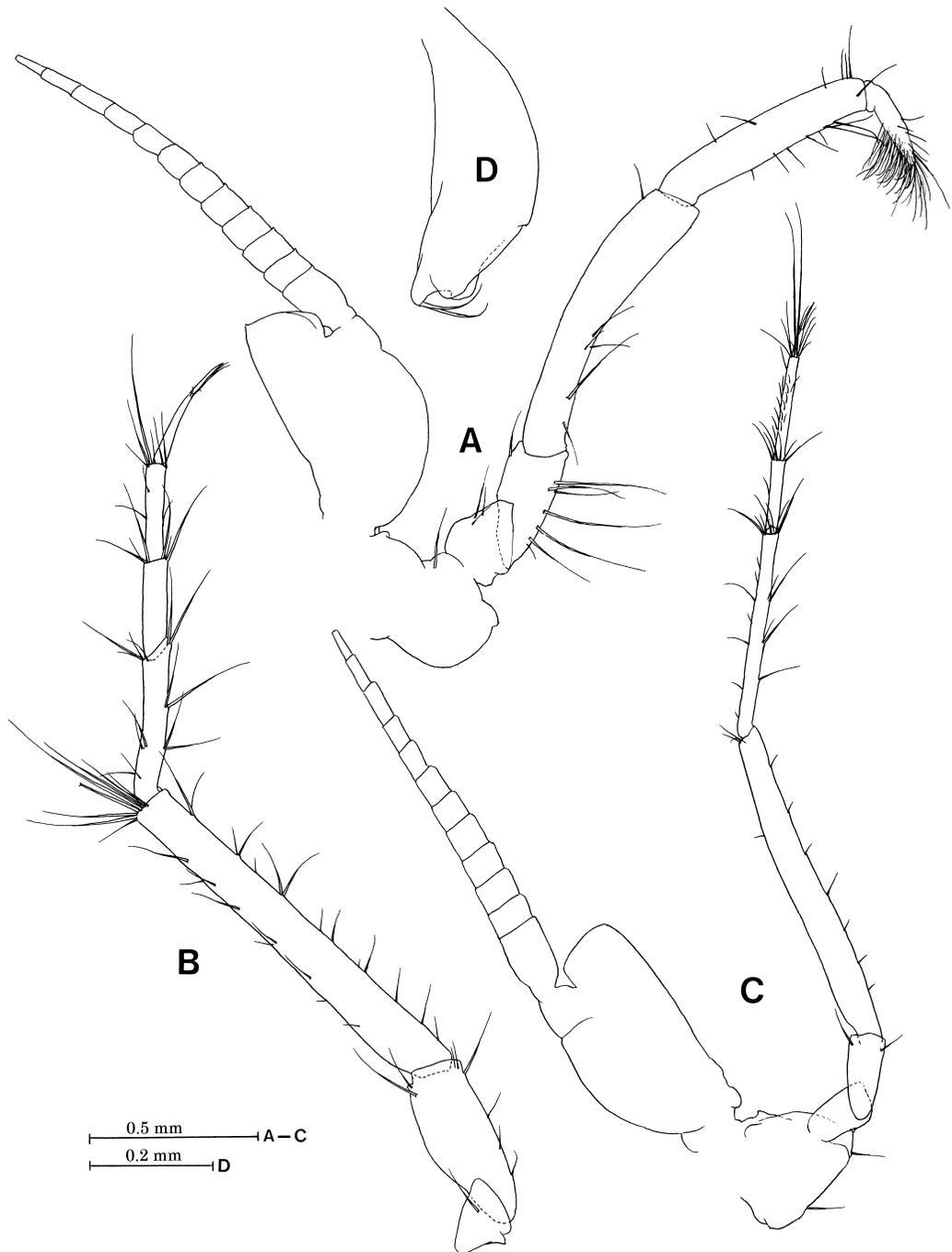


Fig. 2. *Hypererythrops suluensis* sp. nov., holotype. — A, Second thoracic limb; B, endopod of one of anterior thoracic limbs; C, eighth thoracic limb; D, genital organ.

son armed with 5 or 6 spines restricted in posterior 2/5 part of the lateral margin.

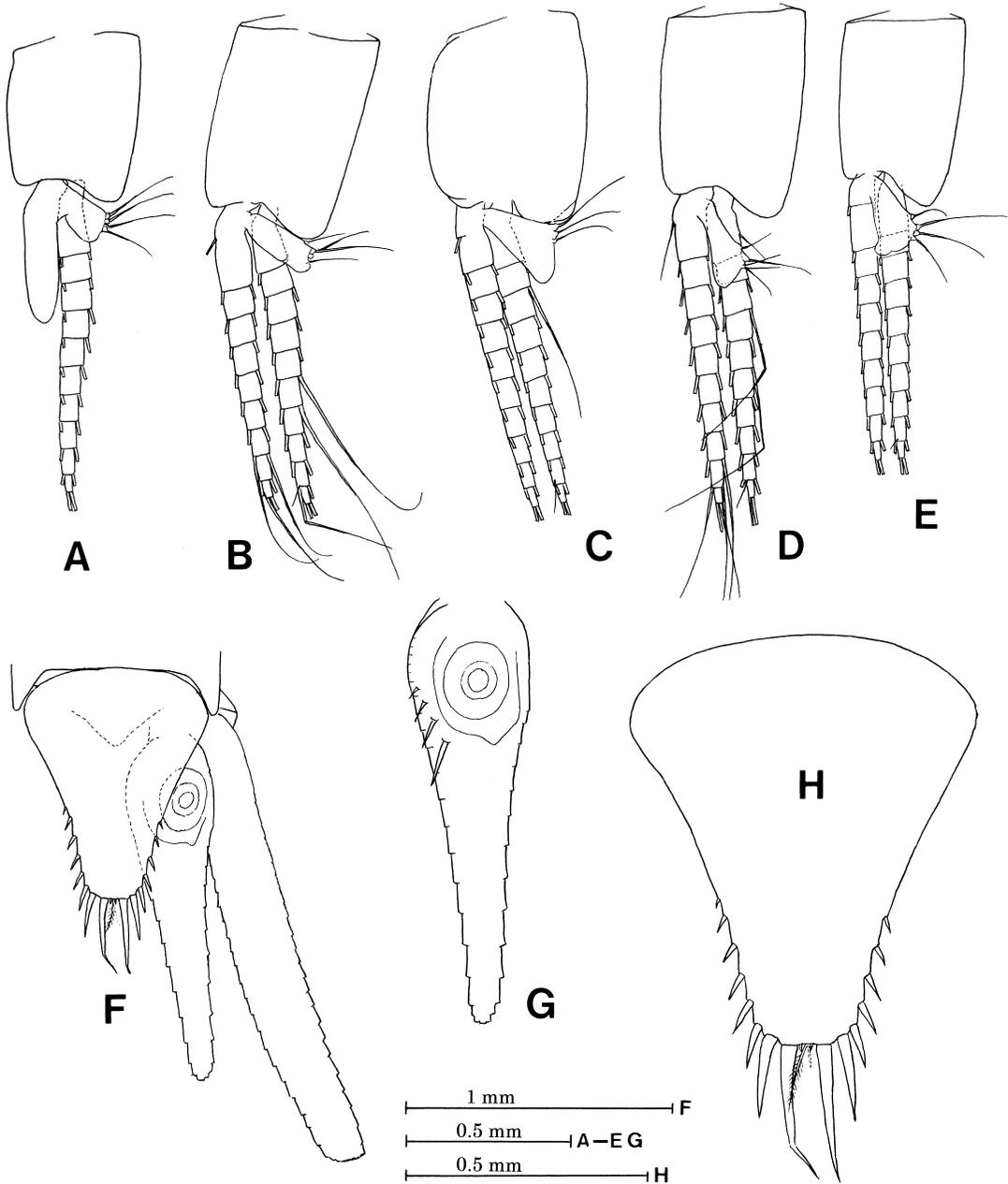


Fig. 3. *Hypererythrops suluensis* sp. nov., holotype. — A–E, First to fifth pleopods; F, uropod and telson; G, endopod of uropod (ventral); H, telson.

**Key to the Species of the Genus *Hypererythrops***

- 1. Lateral margin of telson armed with spines along whole length or distal 3/4 part. . . . . 2
- 1'. Lateral spines of telson confined to distal half of lateral margin. . . . . 7
- 2. Lateral margin of telson armed with less than 9 spines on distal 3/4 to 4/5 part. . . . . 3
- 2'. Lateral margin of telson armed with more than 10 spines along whole length. . . . . 5

3. Rostrum pointed. A pair of supra-ocular spines present on anterior margin of carapace. . . . .  
 . . . . . *H. elegantula* Nouvel, 1974
- 3'. Rostrum rounded. Supra-ocular spines absent on anterior margin of carapace. . . . . 4
4. Antennal scale 3 times as long as broad; its terminal lobe 3 times as long as terminal spine of outer margin of scale and distinctly longer than broad. . . . .  
 . . . . . *H. serriventer* Holt and Tattersall, 1905
- 4'. Antennal scale 4.5 times as long as broad in male, 5.5 times as long in female; its terminal lobe twice as long as terminal spine of outer margin. . . . . *H. validisaeta* Fukuoka and Murano, 2002
5. Eyes with a small anterior lobe. . . . . *H. richardi* Băcescu, 1941
- 5'. Eyes without anterior lobe. . . . . 6
6. Anterior margin of carapace with a pair of supra-ocular spines. . . . . *H. zimmeri* Ii, 1937
- 6'. Anterior margin of carapace without a pair of supra-ocular spines. . . . . *H. spinifera* (Hansen, 1910)
7. Endopod of uropod armed with no spine on inner ventral surface. Endopod of fourth male pleopod with single modified seta terminally. . . . . *H. semispinosa* Wang, 1998
- 7'. Endopod of uropod armed with spines on inner ventral surface. Endopod of fourth male pleopod without modified seta terminally. . . . . 8
8. Endopod of uropod armed with 2 spines on inner ventral surface. Antennal scale extending to distal margin of antennular peduncle. . . . . *H. caribbaea* Tattersall, 1937
- 8'. Endopod of uropod armed with 4 spines on inner ventral surface. Antennal scale extending far beyond distal margin of antennular peduncle. . . . . *H. suluensis* sp. nov.

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