

THREE NEW SPECIES OF MYSIDACEA FROM KERALA COAST

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The paper deals with the descriptions of three new species of Mysidacea from the samples taken by M. V. BLUEFIN off the southwest coast of India. They are *Pseudomysidetes cochinensis* sp. nov., *Katerythrops triangulata* sp. nov. and *Pleurerythrops constricta* sp. nov.

INTRODUCTION

The Mysidacea dealt with in the present paper were collected off the coast of Kerala during the cruises of M. V. BLUEFIN of the Central Institute of Fisheries Operatives in 1970. The samples were obtained by vertical hauls with HT square net. In the present paper, three new mysids are described, namely *Pseudomysidetes cochinensis*, *Katerythrops triangulata* and *Pleurerythrops constricta*, all belonging to the sub-family Mysinae.

DESCRIPTION OF SPECIES

Order: Mysidacea
Suborder: Mysida
Family: Mysidae
Subfamily: Mysinae

Genus *Pseudomysidetes* Tattersall, 1936

Pseudomysidetes cochinensis sp. nov. (Fig. 1).

Material: One young male, 3.5 mm and two juveniles, 2.3-2.5 mm from 09°48'N, 75°39'E, 180-O m. 9 April, 1970.

Carapace broadly rounded in front and not produced into a rostral plate leaving eyes, eyestalks and antennular peduncle completely uncovered. Eyes large, somewhat widely separated, projecting considerably beyond lateral margins of carapace. Antennular peduncle robust, first and third segments subequal, middle much shorter, first segment with prominent blunt spine-like projection on outer margin. Antennal scale short, extending almost to distal end of antennular peduncle. scale setose all round with small terminal joint marked off by distinct suture; peduncle short with three equal segments, prominent spine present on outer distal corner of sympod. Mouth parts strongly built. Maxillule with large outer lobe with nine strong spines and small inner lobe with few setae. Maxilla with inner margin of distal joint of palp armed proximally with about nineteen closely set slender spines with secondary spinules at distal end and distally with five very powerful triangular spines, strongly serrated, and distal simple spine; exopod small and feebly developed with about eight to ten setae on outer margin. First thoracic appendage strongly

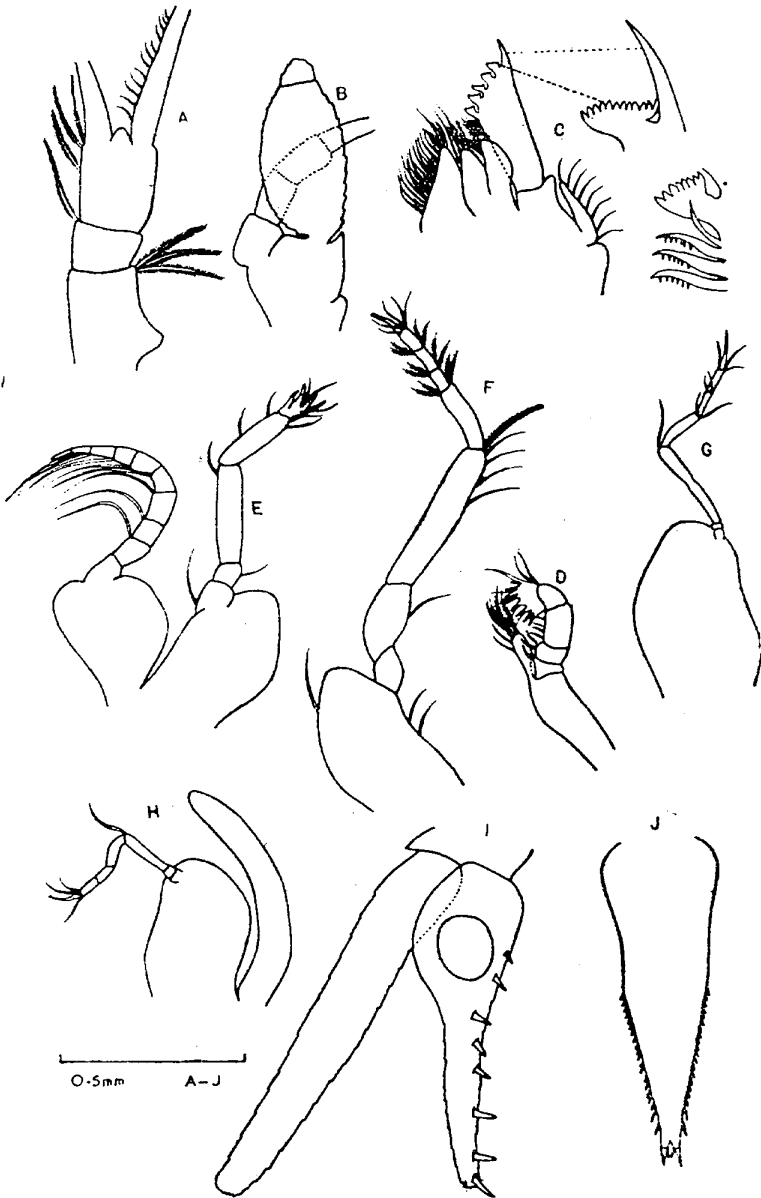


Fig. 1. *Pseudomysidetes cochinensis* sp. nov. (Male) A - antennule; B - antenna; C - maxilla; D - first thoracic endopod; E - second thoracic endopod; F - third thoracic endopod; G - fifth thoracic endopod; H - eighth thoracic endopod with the genital appendage; I - uropod; J - telson.

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built; basis with well developed gnathobasic lobe, with group of plumose setae on distal margin; next two segments comparatively broad, but not produced, terminal joint short and expanded, distal border armed with eight strong spines and few setae. Second thoracic limb with third and fourth joints very short and fifth long, longer than sixth; seventh joint short and expanded at tip and terminates in four strong spines and few simple setae. Third and fourth limbs similar, with sixth joint divided into four subjoints. From fifth thoracic appendage onwards, gradual reduction in size of endopods; sixth joint divided into three subjoints. Male appendage of eighth limb long and tubular and extends forward. Basis of all thoracic appendages large and broadly expanded. Exopod of thoracic limbs with basal plate rounded; flagelliform part nine jointed. Sixth abdominal segment one and one third times as long as fifth. Telson long, longer than last abdominal segment and narrowly lanceolate with slightly widened basal part which is two and two third times as long as broad at base followed by waist like constriction tapering to narrowly truncate apex with minute apical cleft but without plumose setae; distal half with twenty short lateral spines on each side; apices of telson carry two spines, outer one about three times as long as inner. Endopod of uropod shorter than exopod with eight short stout spines along inner border; statocyst conspicuously large; exopod setose all round.

Remarks: In the shape of the body, structure of mouth parts especially the peculiar and powerful armature of the maxilla, the gradual reduction in size of thoracic endopods and the enormous development of the male appendage, the present species appears to be related to *Pseudomysidetes russelli* Tattersall (1936), the type species of the genus which has so far been monospecific. But the two species can be easily distinguished by the following characters: 1. The proximal inner margin of the palp of maxilla in *P. cochiniensis* has about nineteen slender spines with secondary spinules whereas there are only fifteen simple spines without secondary spinules in the type form. 2. In *P. cochiniensis* the third and fourth thoracic endopods have four carpopropodal segments each, as against five in the third and four in the fourth endopod of *P. russelli*. 3. In *P. russelli* there is a gradual reduction of the fourth carpopropodal segment from the fifth limb onwards till in the eighth it disappears altogether leaving only three segments. But in *P. cochiniensis* all the remaining limbs have three carpopropodal segments. 4. The seventh joint of the second thoracic endopod terminates in four spines as against two in *P. russelli*. 5. In *P. cochiniensis* the endopod of the uropod is armed with eight short spines on the inner margin which are absent in the type form. 6. The main difference is found in the shape and armature of the telson. In *P. russelli* the telson has a well marked shoulder defined by a blunt process on each margin, a short distance distal to the base and the apex is entire without an apical cleft whereas in *P. cochiniensis*, the telson has no such shoulder and has a minute apical cleft. The lateral margin of the telson has twenty spines as against fifteen in the type form.

Genus *Katerythrops* Holt and Tattersall, 1905.

Katerythrops triangulata sp. nov. (Fig. 2).

Material: Four adult females with well developed brood sacs, 3.5 - 4 mm and two juveniles 2.3 - 2.6 mm from 08°34'N 76°E, 1100-O m, 10 April, 1970.

General form short and clumsy; cephalothorax much wider than abdomen. Front margin of carapace broadly and evenly rounded and not produced into rostral plate; anterolateral corners rounded, posterior border emarginate, leaving the last thoracic somite dorsally exposed; cephalic region inflated. Eyes rather

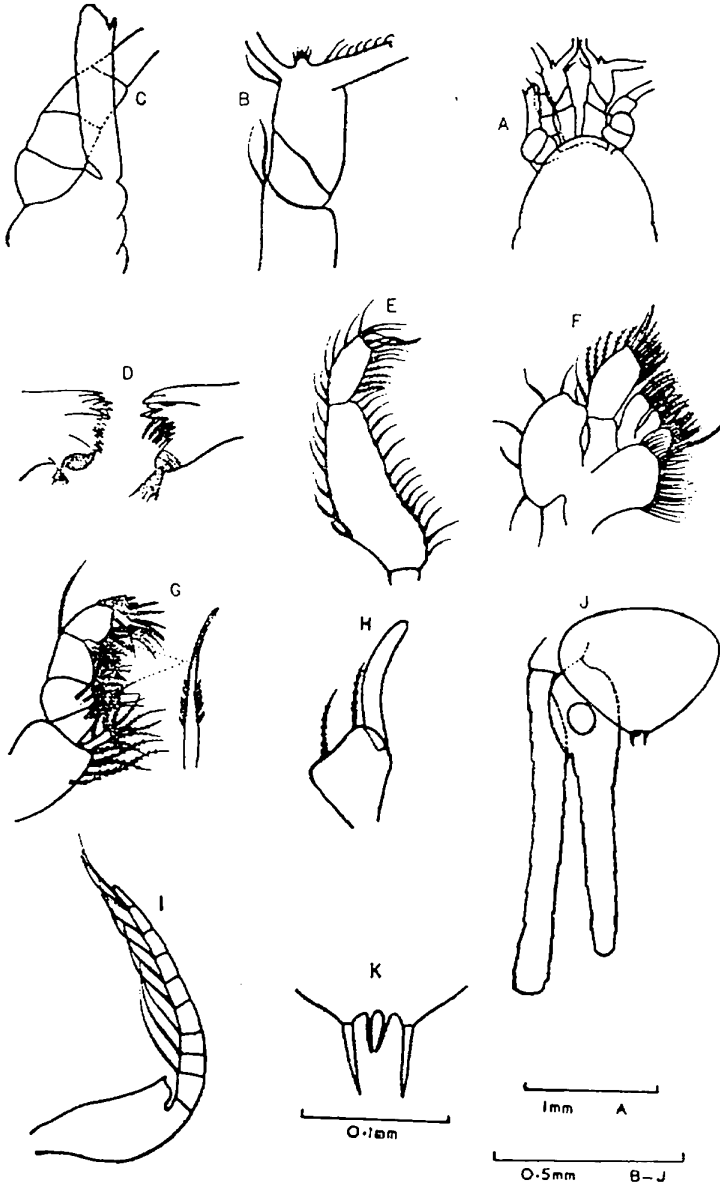


Fig. 2. *Katerythrops triangulata* sp. nov. (Female) A - anterior end of body; B - antennule; C - antenna; D. E. - mandible; F - maxilla; G - first thoracic endopod; H - fourth thoracic endopod; I - thoracic exopod; J - posterior end of body; K - tip of telson enlarged.

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small and set widely apart. Antennular peduncle short and robust, distal segment equal in length to the other two together and beset dorsally between the insertion of flagella with tubercle tipped with denticle and few setae. Antennal scale small and narrow, extends beyond middle of third joint of antennular peduncle, outer margin entire and terminates in small denticle, apex of scale rounded and projects beyond denticle; peduncle short and stout and composed of three subequal short joints. Labrum rounded. Mandible with well developed masticatory processes and conspicuously plumose three segmented palp. Maxillule, inner lobe flattened and armed with three long barbed spines and about seven pectinate setae; outer lobe distally armed with ten spines arranged in two rows. Inner lobe of maxilla expanded and with stout spine seta besides a row of plumose setae; exopod sparsely setose. First thoracic limb with well developed endites from second and third joints. Endopod of second to eighth thoracic limbs broken off in all specimens except in one female where the third and fourth are remaining and seem to be in rudimentary condition, finger like in shape; basis of all thoracic appendages expanded as flat plates. Exopod ten jointed and with denticle on outer distal corner of basal plate. Abdomen cylindrical and not tapering posteriorly. Last abdominal segment twice as long as fifth. Female with two pairs of oostegites. Pleopods of female reduced to unjointed plates. Telson, a broad triangular plate, broader than long, about one-third the length of last abdominal somite, lateral margins almost straight and without spines, converging to a narrowly truncate apex which is about one tenth the breadth at the base and armed with two pairs of spines, outer pair strong and twice as long as slender inner pair, no median plumose setae. Uropod long and slender, exopod about three times as long as telson and setose all round; endopod shorter than exopod, outer margin near statocyst produced into a blunt angle, no spines on inner margin.

Remarks: The marked inflation of the cephalic region observed in the present form is found in a number of genera such as *Katerythrops*, *Teraterythrops* and *Meterothrops*. But in the general form of the body, the spacing of the widely separated eyes, the very small narrow antennal scale with a relatively robust antennal peduncle and especially in the form and armature of the telson the present species come closest to *Katerythrops*. Somewhat the same condition is encountered in *Teraterythrops tanakai* Ii (1964) which in turn closely resembles the species of *Katerythrops* in most of the characters except in the armature of the telson. Among the species of *Katerythrops*, *K. oceanae* Holt and Tattersall (1905) and *K. vesimora* O. S. Tattersall (1955) differs from others in having long and pear shaped telson. The present form, *K. triangulata* comes closest to *K. parva* Zimmer (1914) and *K. tattersalli* Illig (1930) in having a very short telson shaped like an equilateral triangle with the lateral margins almost straight and converging to a narrow apex. Of these *K. parva* is described as an aberrant form in having blind eyes and differs from other species of the genus in having apical median pair of simple bristles on the telson. *K. tattersalli* differs from *K. triangulata* in having long antennal scale which extends beyond the antennular peduncle. In *K. triangulata* the telson is a broad triangular plate, broader than in the other two forms distinguishing this species from all the other species of the genus.

Genus Pleurethrops Ii (1964)

Pleurethrops constricta sp. nov. (Fig. 3)

Material: One adult female with empty brood sac, 3.5 mm from 09°25'N, 75°58'E, 75-O m, 25 February, 1970.

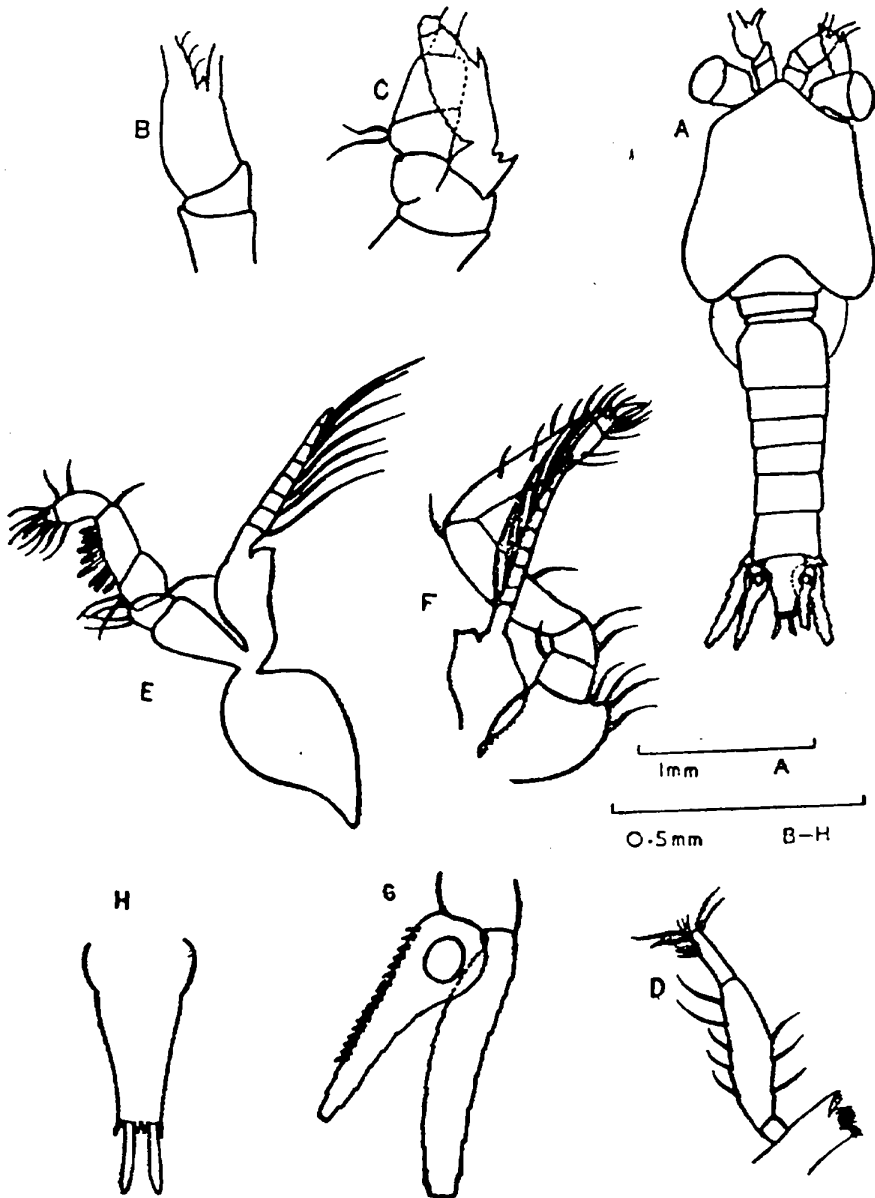


Fig. 3. *Pleurerythrops constricta* sp. nov. (Female) A - adult female; B - antennule; C - antenna; D - mandible; E - first thoracic endopod; F - second thoracic endopod; G - uropod; H - telson.

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General form robust; cephalothorax wider than abdomen and constricted at joint between the thorax and abdomen. Front margin of carapace produced into broadly triangular rostral plate, posteriorly it leaves ultimate and dorsal part of penultimate thoracic somite uncovered. Eyes moderate size, cornea little wider than stalk. Antennular peduncle short and stout, third joint as long as other two together and little wider than the rest, beset dorsally between insertion of flagella with tubercle; second joint very short. Antennal scale just overreaches antennular peduncle, outer margin entire and terminates in spine, terminal lobe large, occupying distal half of scale, small distal joint marked off by suture, scale about two and a half times as long as broad; peduncle short and stout, second joint widens distally with its outer margin about one and a half times as long as outer; first joint narrower than other two; two spinous processes present on outer distal corner of sympod. Mouth parts as in type form *Pleurerythrops inscita* Ii (1964). First thoracic endopod without any lobes. Second thoracic endopod stouter than first, sixth joint elongated and longer than fifth; seventh joint small and with nail. All remaining endopods are broken off. Exopod with denticle on outer distal corner of basal plate, flagelliform part nine jointed. Telson subtriangular, about one and a half times longer than last abdominal somite, about two times as long as broad at base, lateral margins entire and with distinct constriction in widened basal part, a short distance distal to base; apex broadly truncate and furnished with two pairs of spines, outer pair very short, inner pair long, about four times as long as outer and somewhat swollen at middle and outwardly curved; between stout spines is a median pair of setae (distal end broken off). Uropod with endopod armed with 16-17 short spines along ventral inner margin, extending from statocyst to near distal end; exopod longer than endopod and plumose all round.

Remarks: The character which is unique to the present genus and by which it is distinguished from the allied genus is the modification of fifth pleopod of male furnished with modified setae on distal joints of endopod; other characters are waist like constriction at junction of thorax and pleon, peculiarly developed pleural plates of abdominal somites and blade shaped apical spines of the telson. The original description of the genus is based on a male specimen. Since the sole specimen available is a female the characters afforded by the waist like constriction and the apical armature of the telson seem to be sufficient enough for the generic recognition. *Pleurerythrops constricta* may be distinguished from the type species *P. inscita* by the following points:

1. Carapace in *P. constricta* is produced in front into a broadly triangular rostral plate whereas in *P. inscita* it is obtusely rounded.
2. In the present species the outer distal angle of the antennal sympod is armed with two spinous processes which are absent in the type form.
3. The sternal processes present in *P. inscita* are absent in *P. constricta*.
4. In *P. constricta* the lateral margin of telson has a distinct constriction a short distance distal to base; in *P. inscita* the lateral margins are entire without any constriction.
5. In *P. constricta* inner border of endopod of uropod is armed with 17 spines as against 11-12 in *P. inscita*.

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