

ON THE OCCURRENCE OF *ATHANAS DORSALIS* (STIMPSON)
(DECAPODA-ALPHEIDAE) IN THE GULF OF MANNAR*

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BANNER (1960) in a revision of the genus *Athanas* Leach has provided a key for the identification of the species belonging to this genus from the Indo-Pacific region. The genus *Athanas*, which was once separated from a closely related genus *Arete* Stimpson based on the number of segments of carpus in the second pereopod (5 in *Athanas* and 4 in *Arete*) and biunguiculate third pereopod in *Arete* and uniunguiculate in *Athanas*, has already been merged together (Banner 1960) and *Arete* now stands as a synonym of *Athanas*. Of the 28 species so far known from the whole of the Indo-Pacific region, only 8 species are known to occur in Indian Ocean. Out of the above 8 species, only 1 species is on record from the coasts of Indian Peninsula (Kemp 1915). Except for *A. orientalis* Pearson and *A. polymorphus* Kemp, which appear to be endemic in distribution (*A. orientalis* was reported from Ceylon and *A. polymorphus* from Chilka Lake), the rest of the 6 species have all a very wide range of distribution at least from the east coast of Africa to Indonesia. This evidently indicates that alpheids as a whole is so far a little known group as far as Indian region is concerned and except for the exhaustive accounts by Couitière (1903 & 1906), who made a thorough study of alpheids of the Laccadive and Maldivé Archipelagos, there is practically no work dealing with this group of decapods.

The only male specimen of *A. dorsalis* was collected on 3-11-1961 from *Stomopneustes* sp. which is found attached to the undersides of rocks in the Gulf of Mannar near the shore at a depth of about one metre, a little towards the west of C.M.F.R.I. pier. The shrimp is practically invisible on the sea-urchin since it is jet-black thereby completely merging with the dark colour of sea-urchin. Despite further attempts no more specimens could be collected. Though *A. dorsalis* is already known to occur as commensal on sea urchin, till now there has been no account of its occurrence from the coasts of Indian Peninsula, although Couitière (1903) reports the species from Laccadives and Maldives.

Athanas dorsalis (Stimpson)

Arete maruteensis var. *salibabuensis*, deMan, 1911, p. 169.

Athanas dorsalis, Banner, 1960, p. 151.

Material. A male.

Locality. Mandapam Camp in the Gulf of Mannar.

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Description. Rostrum is lance-shaped, dorso-ventrally flattened at the base, but a little laterally compressed at the tip, non-spiny, curving smoothly downwards towards the tip; tip reaching a little beyond the middle of the second segment of antennular peduncle. Dorsal surface of rostrum is without any prominent longitudinal carina, but on closer examination shows a faint ridge running posteriorly a little beyond the posterior border of orbit. Extra corneal tooth is quite distinct.

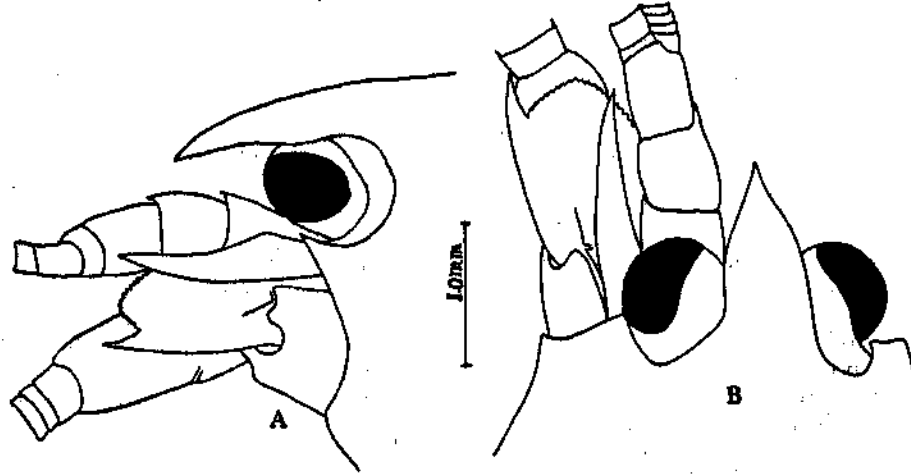


FIG. 1. A. Lateral view of carapace with antennules and antennae. B. Dorsal view of carapace.

Borders of pleura of abdominal segments form a smooth rounded curve except that of the last pleura, where pleura form a right angle at the posterior end.

Stylocerite is horn-like, has a little convex outer border, but a straight inner border and its pointed tip does not reach the distal end of the antennular peduncle. First segment of antennular peduncle is about two-third the length of second segment and has a thin transparent, vertical, triangular projection on the ventral inner side at the base of the segment (projections of either side lying close together). Second segment of antennular peduncle is as long as broad, whereas third segment is a little longer than second. Scaphocerite is broad, with a prominent spine on the outer distal end, with its tip projecting beyond its flat lamina and antennular peduncle; its outer border is more or less straight. Basal segment of antennal peduncle has a semicircular thin, transparent projection on the ventral side. Antennal peduncle projects a little beyond the antennular peduncle. Immediately below the scaphocerite at the base, there is a spiny projection.

First pereiopods of either side are very dissimilar in size and chelate. Ischium of larger pereiopod has two spinules on the outer border and one on the inner border. Merus, carpus and propodus are unarmed and polished. Inner distal end of merus is excavated to accommodate the enlarged distal end of carpus in flexion. Propodus is laterally compressed and its height is a little less than half the length. Length of dactylus is nearly half the length of propodus. Fixed finger has two triangular projections on its cutting edge. Tips of the fingers are pointed and prominently curved.

Smaller first pereiopod has essentially the same features as the larger one except for the smaller size and absence of spinule on the inner border of ischium. Height

of propodus is nearly one-third its length and dactylus is more than half the length of propodus.

Merus of second pereiopod is longer than ischium, its carpus is four-jointed with the first carpal segment of the right side showing a partial segmentation near the distal end; second and third segments are equal and fourth twice as long as second and third. Propodus is twice as long as fourth carpal segment and dactylus.

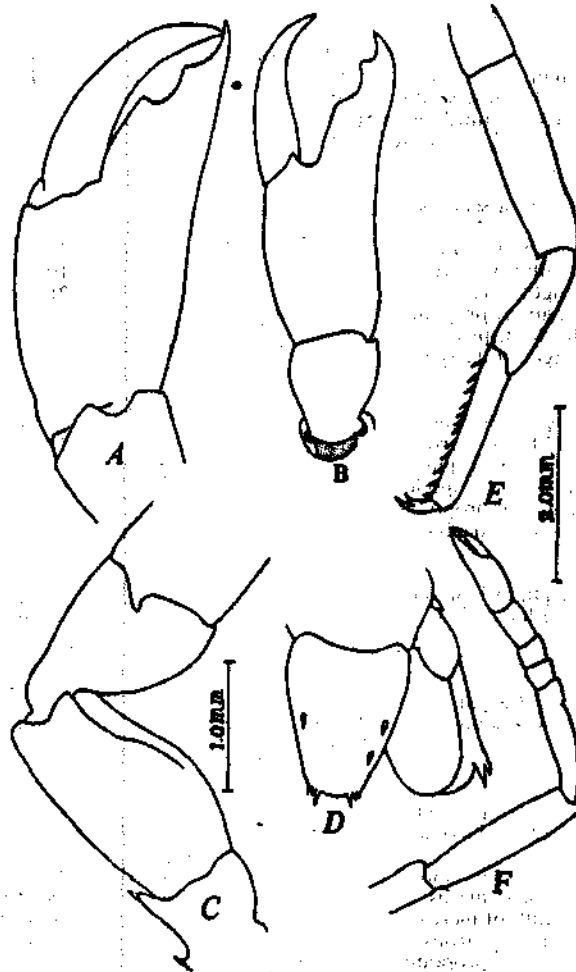


FIG. 2. A. Outer view of larger chela. B. Outer view of smaller chela. C. Merus and carpus of larger chela. D. Telson and urupod. E. Walking leg. F. Second pereiopod.

Length of third, fourth and fifth pereiopods reduced progressively in that order; ventral borders of propodus have two rows of movable spines; dactyli end in two claws. Length of dactyli of all the legs are equal. Length of merus is about 3.5 times its breadth.

Telson is three times as long as its breadth at the tip. Of the two pairs

TABLE

Measurements		In % of carapace length	In mm.	
	Length of carapace	*94	6.48	
	Length of rostrum	14.89	0.96	
Antennula peduncle	Length of exposed part of 1st segment	5.32	0.34	
	Length of second segment	7.45	0.48	
	Breadth of second segment	7.45	0.48	
	Length of third segment	8.51	0.55	
	Length of stylocerite	22.34	1.45	
	Length of scaphocerite	21.28	1.38	
First pereopod (large)	Length of merus	32.98	2.14	
	Breadth of merus	19.15	1.24	
	Length of carpus	21.28	1.38	
	Length of propodus	81.91	5.31	
	Height of propodus	31.91	2.07	
	Length of dactylus	40.43	2.62	
First pereopod (small)	Length of merus	25.53	1.65	
	Breadth of merus	14.89	0.96	
	Length of carpus	18.09	1.17	
	Length of propodus	55.32	3.59	
	Height of propodus	19.15	1.24	
	Length of dactylus	32.98	2.14	
	Length of ischium	22.34	1.45	
	Length of merus	29.79	1.93	
Second pereopod	Carpal segments	First	32.34	1.45
		Second	4.26	0.27
		Third	4.26	0.27
		Fourth	8.51	0.55
	Length of propodus	17.02	1.10	
	Length of dactylus	8.51	0.55	
Third pereopod	Length of ischium	21.28	1.38	
	Length of merus	38.30	2.48	
	Breadth of merus	10.64	0.69	
	Length of carpus	24.47	1.59	
	Length of propodus	28.72	1.86	
	Length of dactylus	7.45	0.48	
Telson	Length	28.72	1.86	
	Breadth at the posterior end	9.57	0.62	
	Greatest breadth	21.28	1.38	

* In micrometer divisions. (29 divisions = 2.0 mm.)

of movable spinules on the dorsal surface of telson, the distal pair is represented by one on the right side, left one being absent.

A movable scale is present at the base of uropod.

Distribution. This species has a very wide distribution from east coast of Africa, Gulf of Aden to Hong Kong and Central America. The present account reports the occurrence of the species for the first time from the Indian Peninsular coast.

SUMMARY

The present account describes *Athanas dorsalis* (Stimpson) which is the first record of its occurrence from the coasts of Indian Peninsula.

ACKNOWLEDGEMENT

I wish to express my sincere thanks to Dr. S. Jones, Director, Central Marine Fisheries Research Institute, for all his encouragements and interest shown in my work.

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