

Chapter 9

Non-penaeid prawns

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The non-penaeid prawns constitute a characteristic fishery resource along the northwest coast of India bordering Maharashtra and Gujarat states, which accounts for nearly 90% of their landings in the country. The resource comprises the tiny epipelagic shrimps occurring in coastal waters. They are predominantly caught by the bag nets ('dol nets') operated in the sea where strong tidal currents enable the bag nets to sustain horizontally and catch them along with other pelagic resources of the region such as Bombay-duck, Golden anchovy and Ribbonfishes.

Major species contributing to the non-penaeid prawn fishery are *Acetes indicus*, *Nematopalaemon tenuipes* and *Exhippolysmata ensirostris*. The epipelagic prawns belonging to the genus *Acetes* are represented by four species namely *A.indicus*, *A. johni*, *A. japonicus* and *A. sibogae* in Maharashtra. *Exopalaemon styliferus*, a species close to *N. tenuipes*, occurs in estuarine waters and forms small percentage of non-penaeid prawns in the inshore. They are distributed all along the Indian coasts but commercially exploited along the northeast and the northwest coasts.

Acetes indicus H.Milne Edwards, 1830
(Jawala Paste Shrimp)

Only one large and curved clasping spine with serrated inner margin on the lower antennular flagellum of adult males; basal segment of antennular peduncle in females about the same length as that of the two distal segments put together; in males the second segment more slender than in females; third segment elongated, much longer than the first; in male third maxilliped reaches a little beyond the tip of 3rd pereopod, in female, much beyond end of antennular peduncle; a large procurved tooth between the bases of the 1st pleopods in both sexes; each half of petasma with a more or less crescent shaped outer lobe with its antero-external border strongly thickened; telson with sharply pointed apex, reaching well beyond the middle of inner uropod. Outer uropods with a prominent tooth on the external border separating the ciliated and non-ciliated portion.

Acetes johni Nataraj, 1947

Two small clasping spines on the lower antennular flagellum of adult males; serrated margins on distal inner surface of clasping spines less prominent; presence of thumb like projection in the segment preceding the one with the clasping spine; In females the external maxillipeds reach the tip of third antennular peduncle; fourth thoracic sternite acutely pointed at ends with median margin broadly grooved; telson less than half length of inner uropod; tip of telson with two spinules at the corners; red mark on ventral side of last abdominal segment; when fresh eyestalk yellow in colour.

Acetes japonicus Kishinouye, 1905
(**Akiami Paste Shrimp**)

Two small clasping spines on the lower antennular flagellum of adult males; prominent serrated margins on distal inner surface of clasping spines; in females the lower antennular flagellum is 11 to 14 segmented.; in males the lower antennular flagellum is 10 to 12 segmented; distal part of the capitulum of petasma is expanded like a bulb and has numerous hooks; ppendix masculina has 2 hooks; endopod of the uropod has 1 red spot on the proximal part in both females and males.

Nematopalaemon tenuipes (Henderson, 1893)
(**Spider Prawn**)

Rostrum straight and longer than carapace with an elevated basal crest of 4-7 teeth on the dorsal side; teeth present both in the ventral and dorsal side; branchiostegal spine present but branchiostegal groove absent on the carapace. Second abdominal segment overlaps first and third segments. Only first two pereiopods chelated; 2nd pair of pereiopod longer than 1st pair and

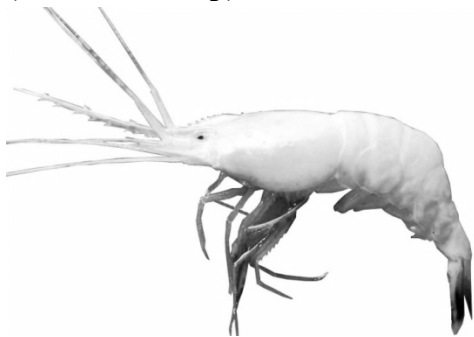
carpus not subdivided; dactyla of the last 3 pair of pereopod longer than propodus; distal part of rostrum dark reddish brown; a reddish brown spot on bases of uropods.

Exopalaemon styliferus (H. Milne Edwards, 1840)
(Roshna Prawn)



Rostrum with 5-7 teeth on basal crest, 6-10 ventral teeth; antennular peduncle with distolateral spine on basal segment barely over reaching adjacent distal margin of segment; posterior four abdominal somites not sharply carinate in dorsal mid-line; distal part of rostrum dark reddish brown and some darker spots on tips of uropods and telson.

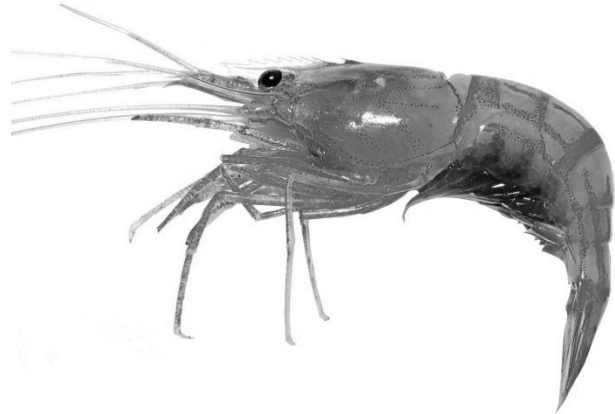
Exhippolysmata ensirostris (Kemp, 1914)
(Hunter Shrimp)



Rostrum straight, longer than carapace with an elevated basal crest of 7-12 teeth on dorsal side; antennal and pterygostomian spines present on carapace; pleura of the 5th abdominal segment sharply pointed; teeth present both in the ventral and dorsal side; 2nd pair of pereopod with small pincers and carpus subdivided into more than 7 articles; dactyla of the last 3 pair of

pereiopod much shorter than propodus; lateral margin of telson concave; apex of telson sharply pointed without any spines.

Lysmata vittata (Stimpson, 1860)
(Indian Lined Shrimp)



Rostrum shorter than carapace without elevated crest; antennal and pterygostomian spines present on carapace; teeth present both in the ventral and dorsal side; dactyla of the last 3 pair of pereiopod much shorter than propodus; lateral margin of telson convex; apex of telson blunt with a pair of spines.

Key to species of family *Sergestidae*

1. Procurved spine present between 1st pair of pleopods.....2
 - No procurved spine between 1st pair of pleopods.....3
- 2(1) Basis of 3rd pereiopod with teeth on inner free margin; petasma without membranous coupling folds.....*Acetes indicus*
 - Basis of 3rd pereiopod without tooth on inner free margins; petasma with a pair of folded coupling membranes armed with hooks.....*Acetes erythraeus*
- 3(1) External antennular flagellum in male with two clasping spines; apex of telson rounded or truncated.....4
 - External antennular flagellum in male with single clasping spine; apex of telson triangular.....*Acetes sibogae*
- 4(3) Segment preceding the one bearing the clasping spines with angular process pointing backwards; apex of telson truncated and with a tooth at each corner.....*Acetes serrulatus*

Segment preceding the one bearing the clasping spines without any process; apex of telson round and third thoracic sternite produced posteriorly as large plate in female.....5

- 5(4) Ciliated and non ciliated portions of external border of exopod of uropod not separated by a tooth; distal portion of pars externa without tubercles..... *Acetes japonicas*

Key to species of family *Hippolytidae*

1. Dentate crest in midline at base of rostrum. Telson tapering rather regularly to sharp posterior point.....*Exhippolysmata*
Without dentate crest in midline at base of rostrum. Telson not tapering regularly to sharp posterior point.....2
2. Prominent epipods on 4 anterior pairs of pereopods.....*Lysmata*
3. Colour semitransparent with numerous fine red longitudinal lines.....*Lysmata vittata*
4. Rostrum armed with 7-16 ventral teeth. Carapace not noticeably uneven or coarsely pitted..... *Exhippolysmata ensirostris ensirostris*
Rostrum armed with 17-23 ventral teeth. Carapace with longitudinal furrows on anterior portion of branchiostegite and dorsal to branchiostegite, causing dorsal flattening of posterior 1/3 of carapace and coarse, dense pitting on branchiostegite.....*Exhippolysmata ensirostris punctate*

Key to species of family *Palaemonidae*

Dactylus of last three pereopods very long and slender, 4th and 5th pair excessively long, flagelliform with dactylus much longer than carapace; pleopods very long; 1st pair much longer than carapace, carpus of 2nd pereopod much more than half as long as palm; basal crest of rostrum with almost seven teeth.....*Nematopalaemon tenuipes*

Dactylus of last three pereopods not abnormal in length than 3rd scarcely ½ length of propodus and that of 5th almost 1/3 length of propodus. Pleopods normal in length; one or more subapical dorsal teeth on rostrum. Last four abdominal somites bluntly carinate dorsally.....*Exopalaemon styliferus*