

FAO SPECIES IDENTIFICATION SHEETS

FISHING AREA 51
(W. Indian Ocean)

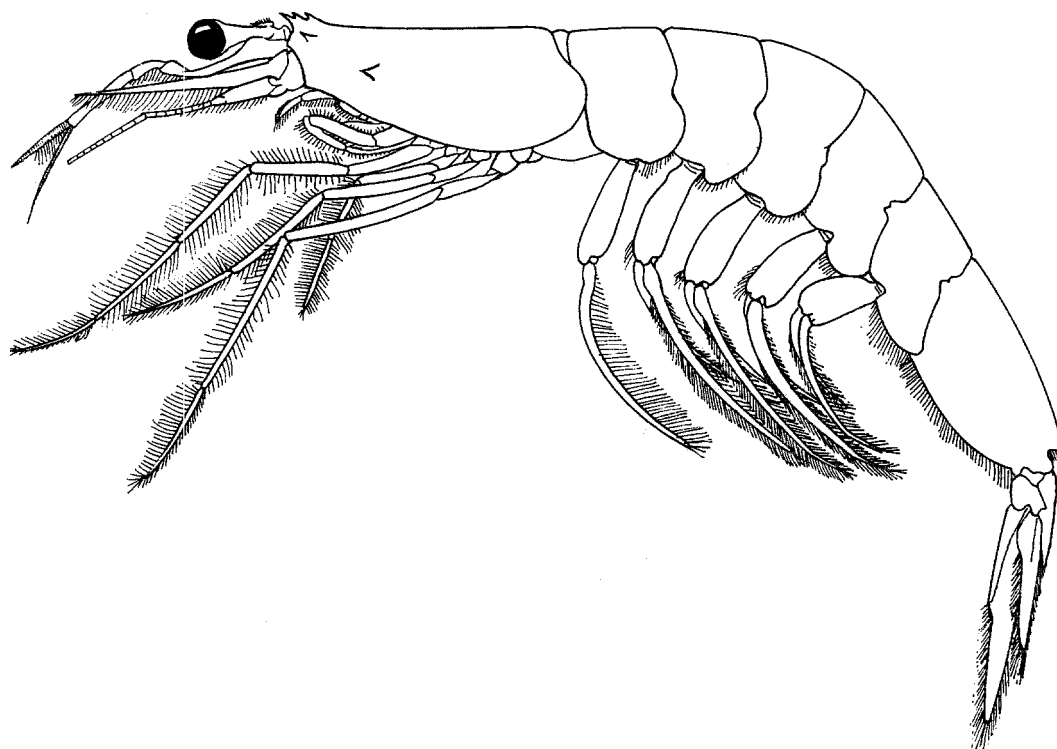
SERGESTIDAE

Sergestid shrimps

Small-sized shrimps; carapace with poorly developed crests and grooves, often wanting; rostrum shorter than the eye-stalk, generally small and sometimes even absent; branchiae few (not more than 8 on each side) or absent; pleura of first abdominal segment covering that of second somite; in males, lower antennular flagella with a clasping organ; first pair of pereopods with or without pincers; second and third pairs of pereopods with small pincers; fourth and fifth pairs of pereopods shorter than anterior legs (fifth pair strikingly shorter) or absent; in males, petasma present on first pleopods.

The representatives of this family are marine or marine and estuarine; species belonging to the genera Acetes and Sicyonella are found in shallow waters, in generally less than 50 m depth, while species of Sergestes and Sergia occur both in relatively shallow areas as well as in deeper waters (from about 30 to 1800 m depth).

In Fishing Area 51, only the species of Acetes are fished for. Although they are very small, they are regularly consumed and afford a major source of protein to the coastal population.



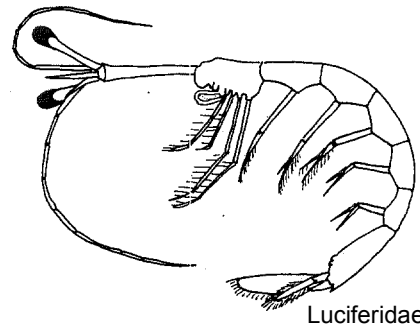
SIMILAR FAMILIES OCCURRING IN THE AREA:

Luciferidae: head greatly elongated; only third pair of pereopods with pincers; no branchiae; very small planktonic species.

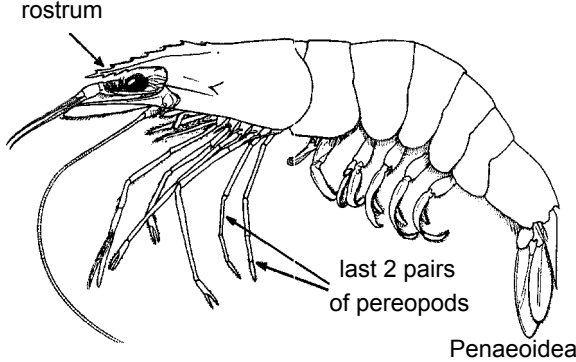
Superfamily Penaeoidea: last 2 pairs of pereopods well developed, of about the same size as the others; rostrum usually extending beyond eye; numerous branchiae (more than 8 on each side).

Shrimps belonging to the Infraorder Caridea: pleura of second abdominal segment overlapping those of first and third segments; no pincers on third pair of pereopods.

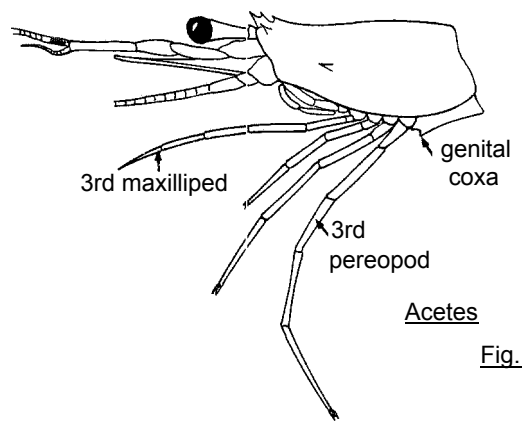
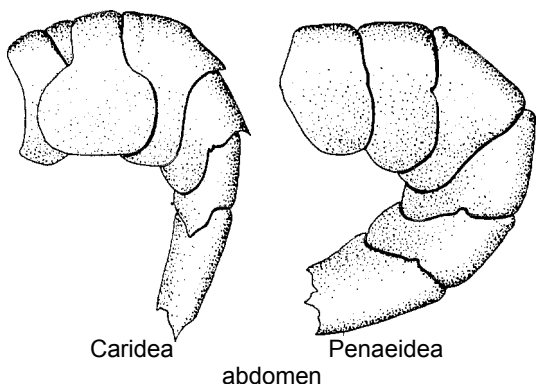
Order Mysidacea: carapace loose posterior to cervical groove, not fused with last thoracic segments; legs, usually feather-like and split; female carrying an egg-pouch below the thorax.



Luciferidae

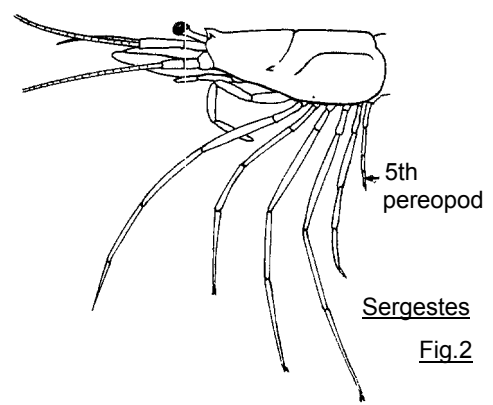


Penaeoidea



Acetes

Fig.1



Sergestes

Fig.2

KEY TO GENERA OCCURRING IN THE AREA: *

- 1a. Fourth and fifth pairs of pereopods entirely lacking except for a pair of protuberances (genital coxae) on male (Fig. 1); first maxillae and first maxillipeds without palp; second maxillae with a single undivided lobe Acetes
- 1b. Fourth and fifth pereopods well developed although fifth much shorter than fourth (Fig. 2); first maxillae and first maxillipeds with palp; second maxillae with 2 lobes .. Other genera

* Restricted to the identification of Acetes, as all other genera are of no interest to fisheries.

LIST OF SPECIES OF INTEREST TO FISHERIES OCCURRING IN THE AREA:

- Acetes erythraeus Nobili, 1905
- Acetes indicus H. Milne Edwards, 1830
- Acetes japonicus Kishinouye, 1905
- Acetes johni Nataraj, 1947
- Acetes natalensis Bernard, 1950
- Acetes sibogae Hansen, 1919

The species of Acetes are small shrimps, the adult total length ranging between 1 and 4 cm. The body is translucent or semitranslucent, with black eyes and several pairs of red pigment spots (chromatophores) on the basis and endopods of uropods. They are mainly fished with push nets and bag nets, the latter being set near the shore against the flow of the tide; boat seines and shore seines are also used. Since they are mostly fished and consumed locally, it is difficult to have a precise idea of their total catch in Fishing Area 51. Only a small part of the catch is sold as fresh shrimp, while the greater fraction is dried, salted or fermented with salt.

Because of the small size of these shrimps, identification sheets are not provided for each species, but a key for their identification, as well as their respective geographical ranges are included in this family sheet.

KEY TO SEXES OF ACETES:

- 1a. A pair of protuberances (genital coxae) between third pereopods and first pleopods (Fig.1); lower antennular flagella with 1 or 2 clasping spines or modification thereof (Fig. 3); petasma present on first pleopods male
- 1b. No protuberance in genital area; lower antennular flagella without spine; petasma absent female

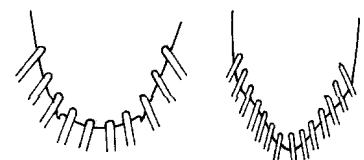


lower antennular flagellum of a male
Fig. 3

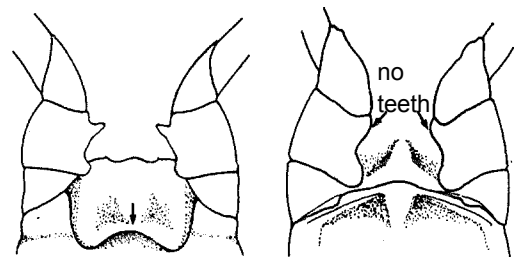
KEY TO SPECIES OF ACETES OCCURRING IN THE AREA:

Females

- 1a. Apex of telson rounded or truncated (Fig.4a)
- 2a. Third thoracic sternite produced posteriorly (Fig. 5) A. japonicus
- 2b. Third thoracic sternite not produced posteriorly (Fig. 6)
- 3a. Tooth absent on distal inner margin of coxa of third pereopods (Fig. 6)A. natalensis
- 3b. Tooth present on distal inner margin of coxa of third pereopodsA. johni



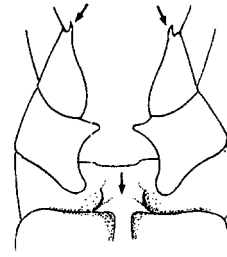
a) b)
apex of telson
Fig. 4



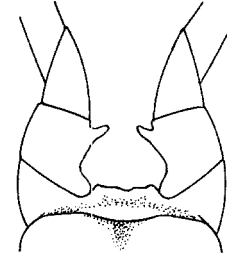
bases of third pereopods and third thoracic sternite, ventral view
A. japonicus Fig.5 A. natalensis Fig.6

1b. Apex of telson triangular (Fig. 4b)

- 4a. Procurved tooth present between bases of first pair of pleopods
 - 5a. Inner margin of basis of third pereopods with a sharply pointed projection; third and fourth thoracic sternites deeply channelled longitudinally (Fig. 7) A. indicus
 - 5b. Inner margin of basis of third pereopods without a sharply pointed projection; third and fourth thoracic sternites not channelled longitudinally (Fig. 8) A. erythraeus
- 4b. Procurved tooth absent A. sibogae



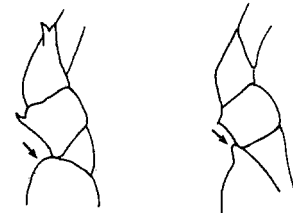
bases of third pereopods and third thoracic sternite, ventral view
A. indicus Fig. 7



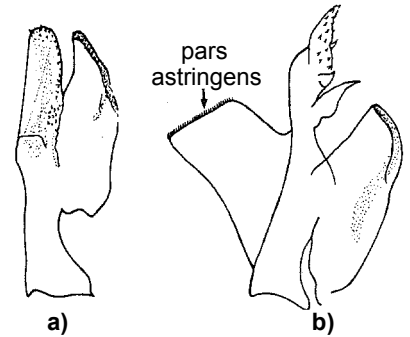
bases of third pereopods and third thoracic sternite, ventral view
A. erythraeus Fig. 8

Males

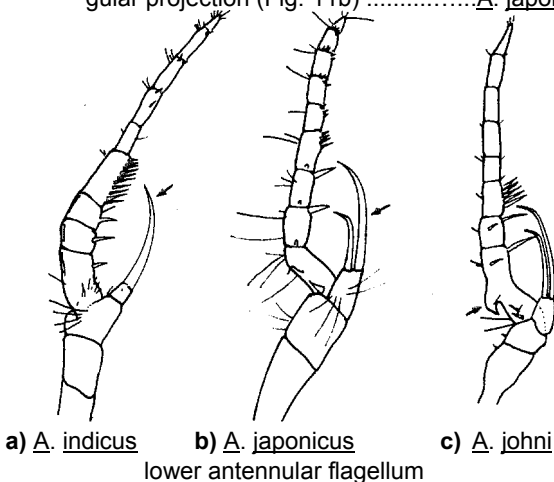
- 1a. Anterior margin of genital coxae rounded (Fig. 9a); petasma without pars astringens (Fig. 10a)
- 2a. Procurved tooth present between bases of first pair of pleopods; lower antennular flagella with 1 clasping spine (Fig. 11a) A. indicus
- 2b. Procurved tooth absent; lower antennular flagella with 2 clasping spines (Fig. 11b)
- 3a. Lower antennular flagella with a triangular projection from upper end of first segment of main branch (Fig. 11c)
- 4a. Petasma with processus ventralis; capitulum cylindrical and elongated (Fig. 12a) A. natalensis
- 4b. Petasma without processus ventralis; capitulum expanded on outer margin (Fig. 12b) A. johni
- 3b. First segment of main branch of lower antennular flagella without triangular projection (Fig. 11b) A. japonicus



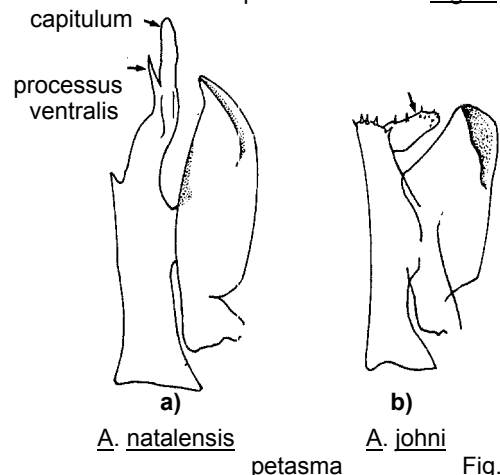
a) b)
base of third pereopod Fig. 9



a) b)
petasma Fig. 10



a) A. indicus b) A. japonicus c) A. johni
lower antennular flagellum



a) b)
A. natalensis petasma A. johni Fig. 12

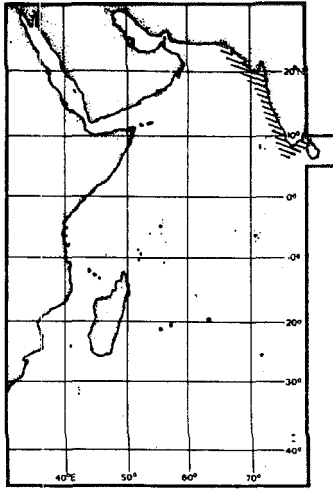
Fig. 11

Fig. 12

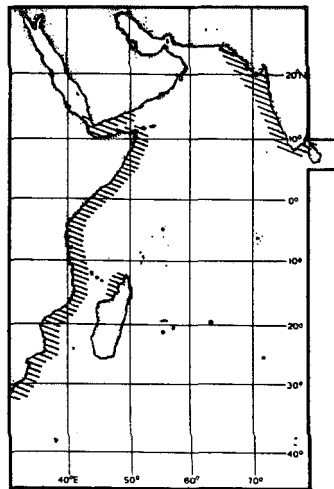
1b. Anterior margin of genital coxae pointed (Fig. 9b); petasma with pars astringens (Fig. 10b)

5a. Procurved tooth between bases of first pair of pleopods A. erythraeus

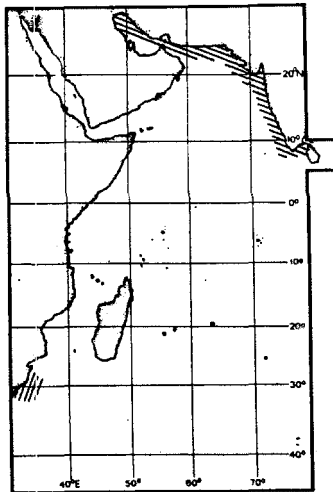
5b. Procurved tooth absent A. sibogae



Acetes indicus

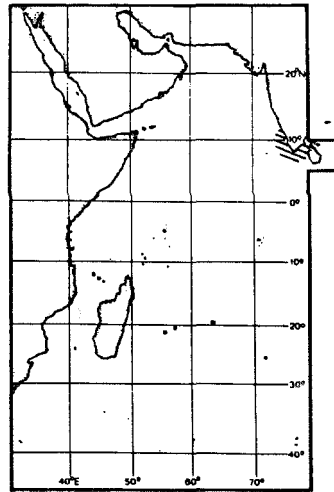


Acetes erythraeus



≡ Acetes japonicus

/// Acetes natalensis



≡ Acetes sibogae
and

/// Acetes johnei

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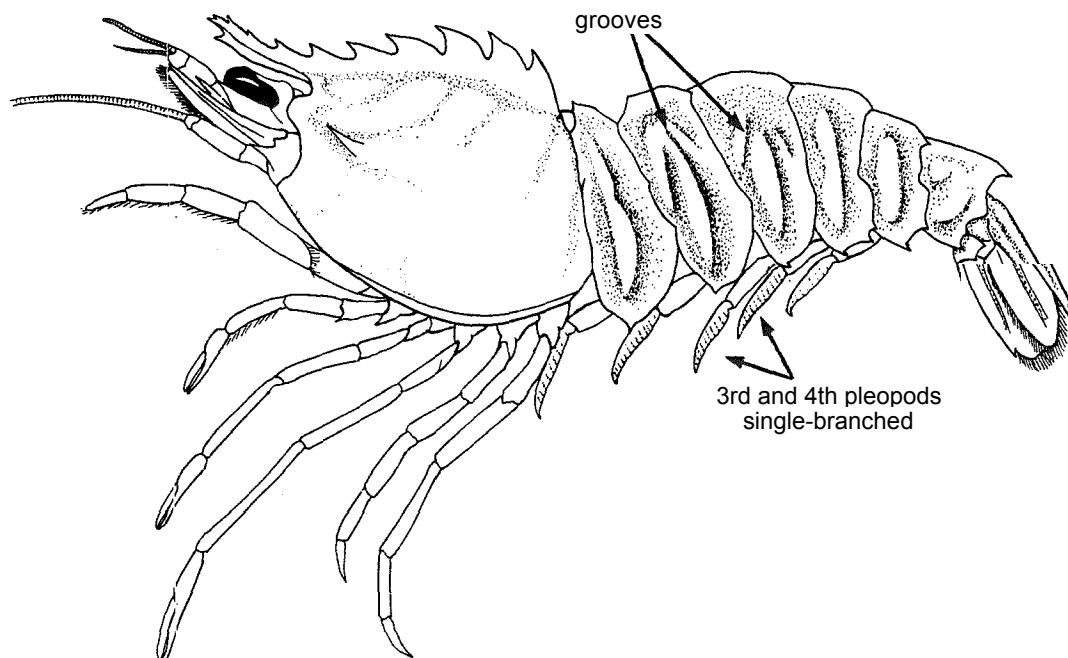
FISHING AREA 51
(W. Indian Ocean)

SICYONIIDAE

Rock shrimps

Body robust, rigid, of stony appearance. Rostrum well developed (reaching to or exceeding distal end of eye stalk) and armed with teeth; base of eyestalk with a styliform projection on its inner surface and without a tubercle on its mesial (inner) border. Carapace without postorbital spine; cervical groove very faint or absent; exopod present only on first maxilliped. Last 2 pairs of pereopods well developed; endopods of second pair of pleopods in males bearing only appendix masculine; third and fourth pairs of pleopods single-branched. Telson usually armed with a fixed spine on each side of tip. A single, well developed arthrobranch on penultimate thoracic segment (hidden beneath the carapace).

All of the representatives of this family are marine. Some species inhabit shallow waters and are sporadically entering the catches. Other species are found only in deeper waters to about 400 m.



SIMILAR FAMILIES OCCURRING IN THE AREA:

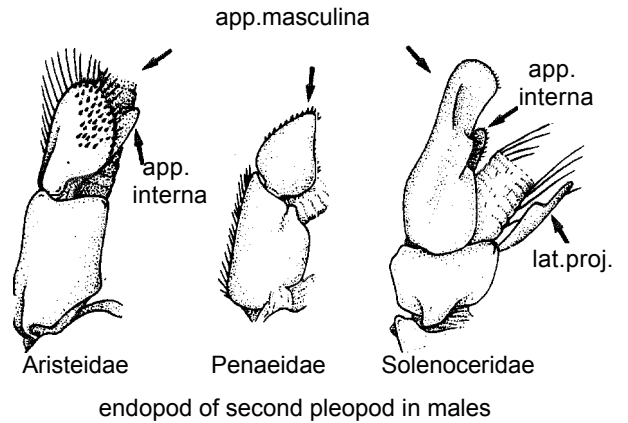
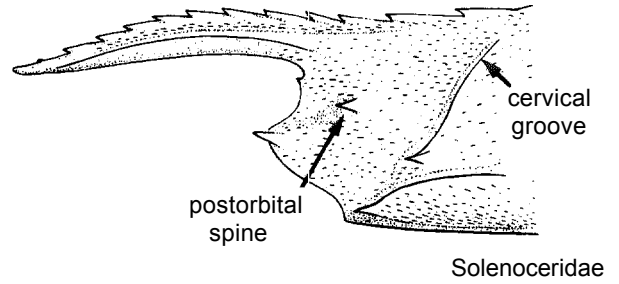
Solenoceridae, Aristeidae and Penaeidae: integument thinner and less rigid; abdomen without deep grooves or tubercles. Further distinguishing characters of these families are the following:

Solenoceridae: carapace with postorbital spines; cervical grooves long, usually ending at, or close to, dorsal midline; endopods of second pair of pleopods in males bearing appendix masculina, appendix interns and lateral projection; 2 well developed arthrobranches on penultimate thoracic segment.

Aristeidae: in most of the species cervical grooves long, ending at or close to dorsal midline; endopods of second pair of pleopods in males bearing appendix masculine and appendix interns; spines on each side of tip of telson movable; 2 well developed arthrobranches on penultimate thoracic segment.

Penaeidae: cervical grooves ending well below dorsal midline but clearly distinct; third and fourth pairs of pleopods biramous; exopods present posterior to first maxillipeds; telson without spines, or with fixed or movable spines on each side of tip.

Shrimps belonging to the Infraorder Caridea: pleura of second abdominal segment overlapping those of first and third segments; no pincers on third pair of pereopods.



KEY TO GENERA OCCURRING IN THE AREA

Sicyona only.

LIST OF SPECIES OCCURRING IN THE AREA:

- Sicyona lancifera (Olivier, 1811)
- ? Sicyona longicauda Rathbun, 1906
- Sicyona ocellata Stimpson, 1860
- ? Sicyona trispinosa De Men, 1907