

3.3 FAMILY SEPIOLIDAE Leach, 1817

SEPIOL

Sepiolidae Leach, 1817, Zool.Misc., 3(30):137.

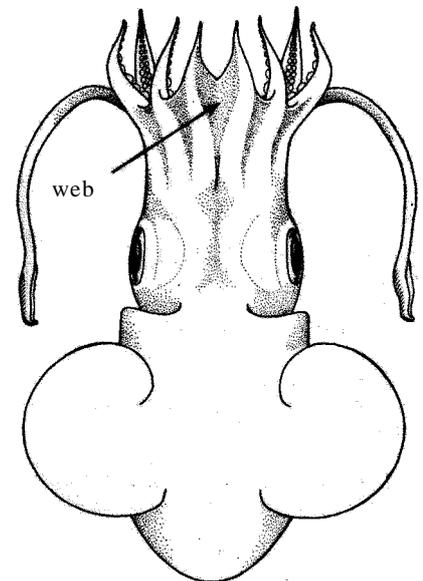
FAO Names : En - Bobtail squids, Mickey mouse squids
 Fr - Sépioles
 Sp - Globitos, Rondeletiolas, Sepietas, Sepiolas

Diagnostic Features : Mantle short, broad, sac-like, with large, rounded fins inserted at mid-length. Eyes covered with “corneal” membranes. One or both dorsal arms, or one dorsolateral arm, hectocotyized; no protective membranes on arms. Gladius (inner shell) greatly reduced, non-calcified. Colour: generally pinkish to maroon, darkest dorsally.

General Remarks on the Family : Small-sized (up to 10 cm mantle length), compact squid-like cephalopods of such heterogeneity that 3 subfamilies and 13 genera are known. This is the most divergent and speciose family of sepioids with representatives in all oceans and seas ranging from intertidal to deep-sea benthic and even mesopelagic habitats; very little is known about their biology. Most species are unsuitable for a directed large-scale fishery because of their small size, scattered distribution, or relatively poor quality of flesh.

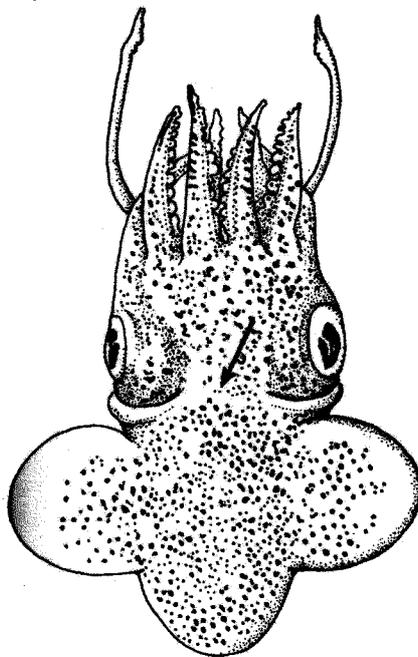
Key to Subfamilies and Genera :

- 1a. All arms except the fourth pair (IV) united by a broad web (Fig. 1); orbital pores closed; pelagic **Subfamily Heteroteuthinae Sepiolina***
- 1b. Only third (III) and fourth (IV) arms united by a broad web (Fig. 2); orbital pores open; benthic
 - 2a. Dorsal border of mantle fused with head (Fig. 2a) **Subfamily Sepiolinae**

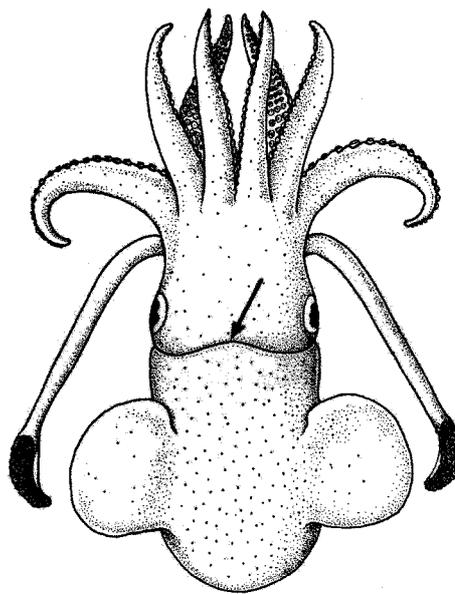


Heteroteuthinae
(Sepiolina)
dorsal view

Fig. 1



a.
Sepiolinae
(sepiolina)



b.
Rossinae
(Rossia)

dorsal view

Fig. 2

* Plus four other genera lacking interest to fisheries and therefore not included here

3a. Light organs present on ink sac

4a. Gladius rudimentary; up to 16 tentacular club suckers in transverse series across the club; usually 2 suckers in transverse rows on arms (Fig. 3a); light organs not saddle-shaped

5a. Suckers at tip of arm IV occasionally 4 in a row; 8 tentacular club suckers in transverse rows; light organs ear-shaped (Fig. 4) Sepiola

5b. Suckers at tip of arm IV always 2 in a row; 16 tentacular club suckers in transverse rows; light organs not ear-shaped (Fig. 5) Rondeletiola

4b. Gladius absent; tentacular club with more than 16 suckers in a row, but in 2 rows at bases and tips (Figs 6, 3b); light organ saddle-shaped Euprymna

3b. Light organs absent from ink sac

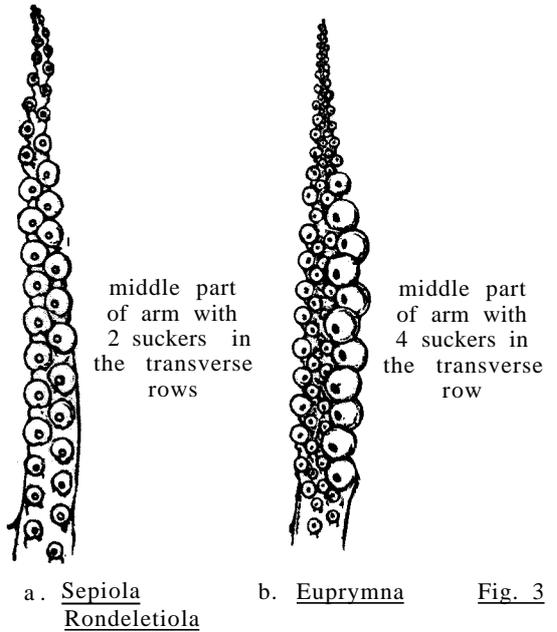


Fig. 3

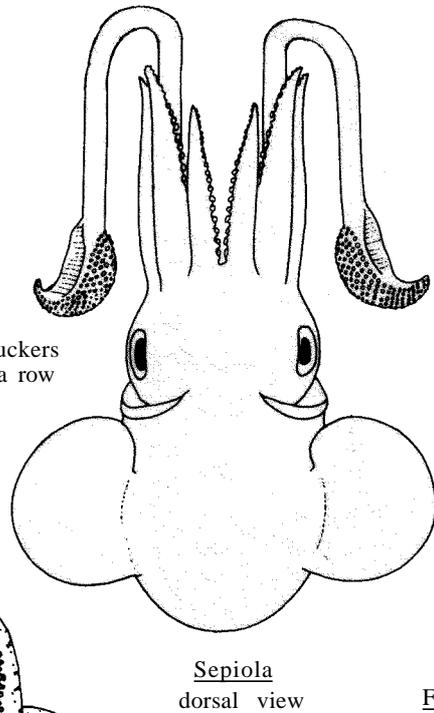


Fig. 4

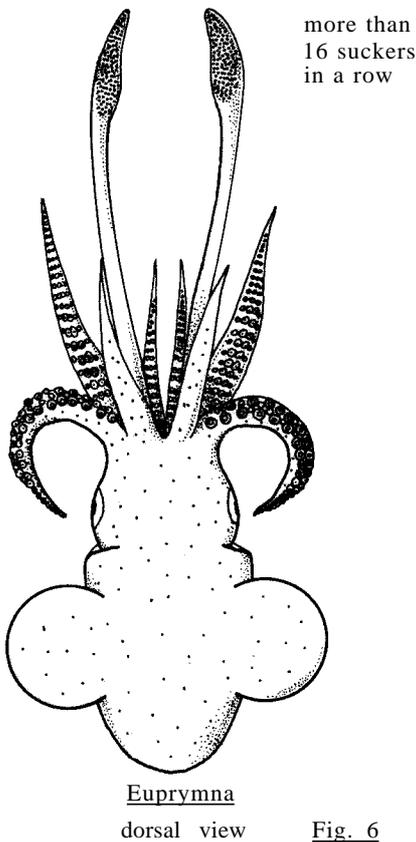


Fig. 6

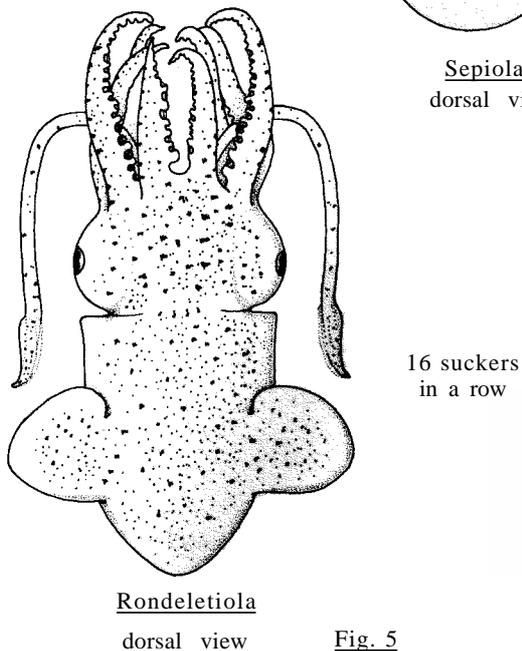


Fig. 5

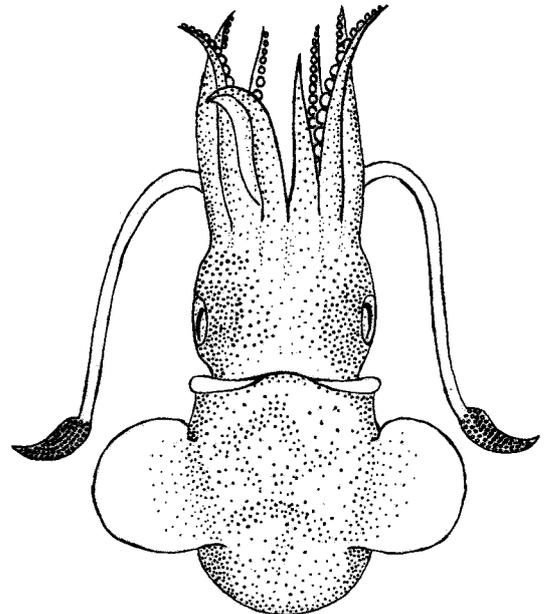
6a. Left dorsal arm (I) hectocotyized by a broad, suckerless, concave zone between sucker rows; arms III in males slightly S-shaped (Fig. 7a,b) Sepietta

6b. Left dorsal arm (I) hectocotyized with a large, fleshy protrusion at base; arms III in males strongly S-shaped, curved towards mouth (Fig. 8) Iniotheuthis

2b. Dorsal border of mantle not fused with head Fig. 2b **Subfamily Rossinae**

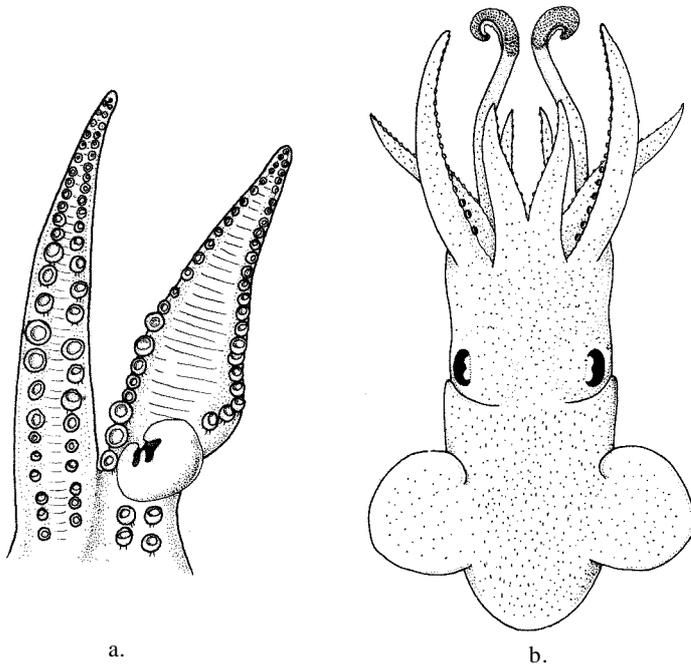
7a. Light organs present on ink sac; right dorsal arm (I) of male hectocotyized (Fig.9) Semirossia

7b. Light organs absent from ink sac; both dorsal arms (I) of males hectocotyized (Figs 10, 11)



Semirossia
dorsal view

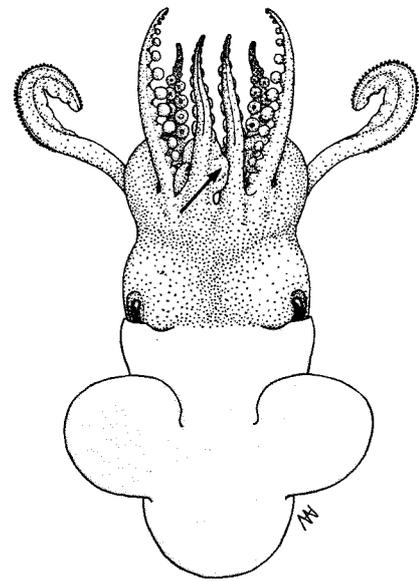
Fig. 9



a.
left arm I
hectocotyized

b.
Sepietta
dorsal view

Fig. 7



Iniotheuthis
dorsal view

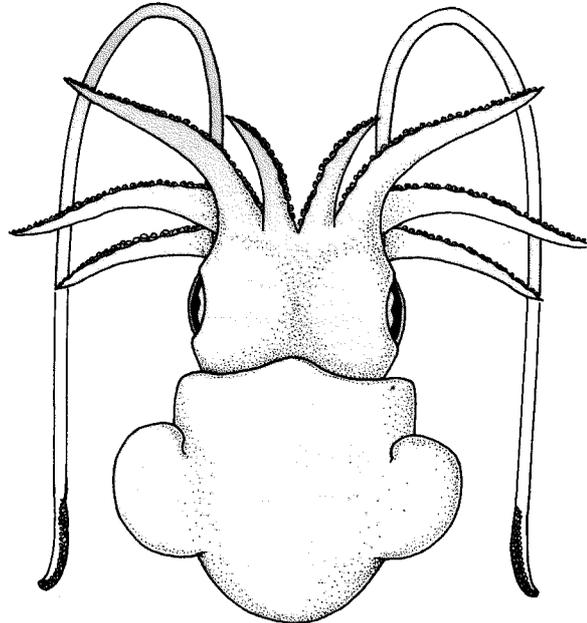
Fig. 8

8a. Ink sac functional; anal flaps well-developed (Figs 10, 12a) **Rossia**

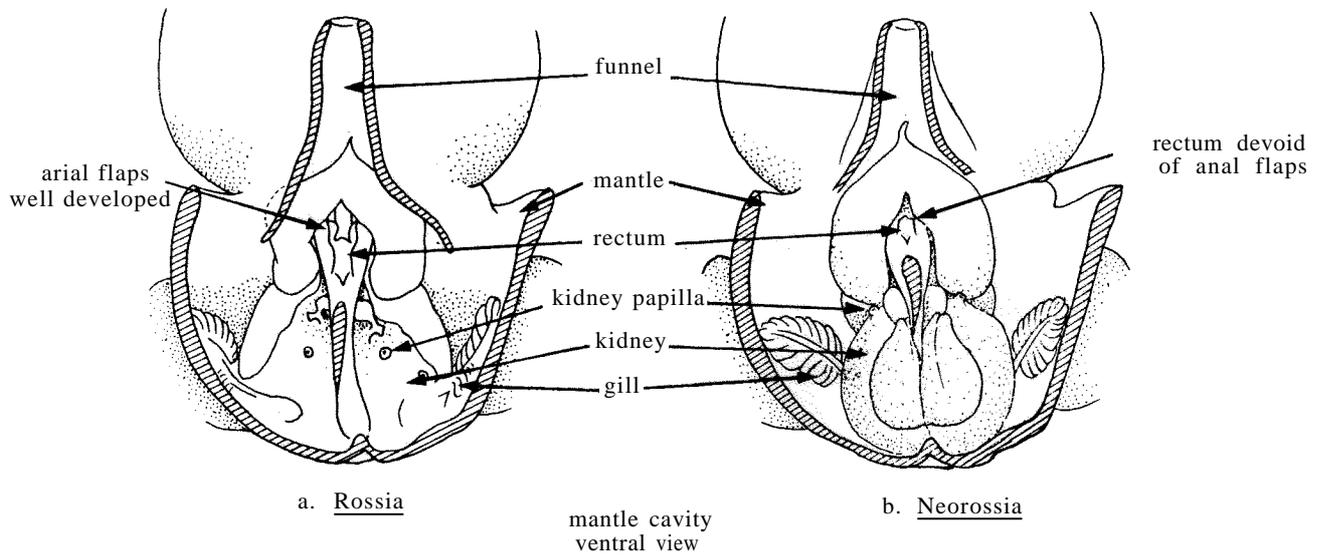
8b. Small ink sac non-functional, anal flaps very poorly developed, degenerate (Figs 12b, 11) **Neorossia**



Rossia
dorsal view Fig. 10



Neorossia
dorsal view Fig. 11



a. Rossia

b. Neorossia

mantle cavity
ventral view

Fig. 12

Sepiolina nipponensis (Berry, 1911)

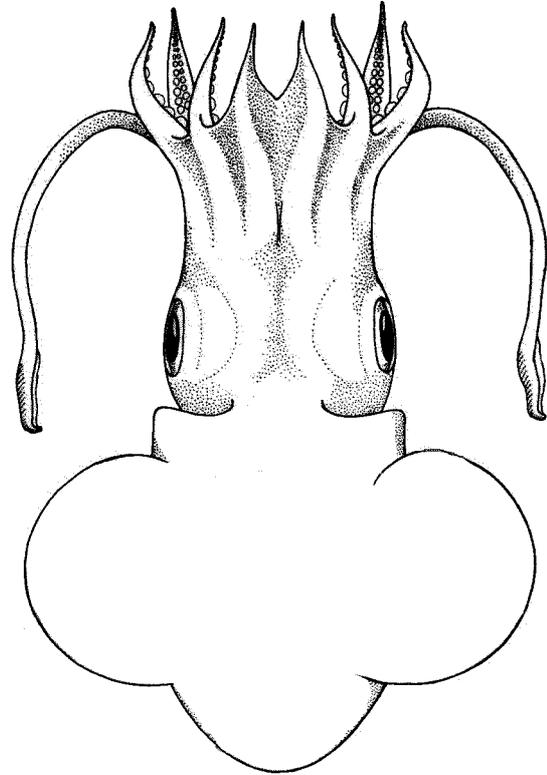
SEPIOL Sepioli 1

Stoloteuthis nipponensis Berry, 1911, *Zool.Anz.*, 37(2):39.

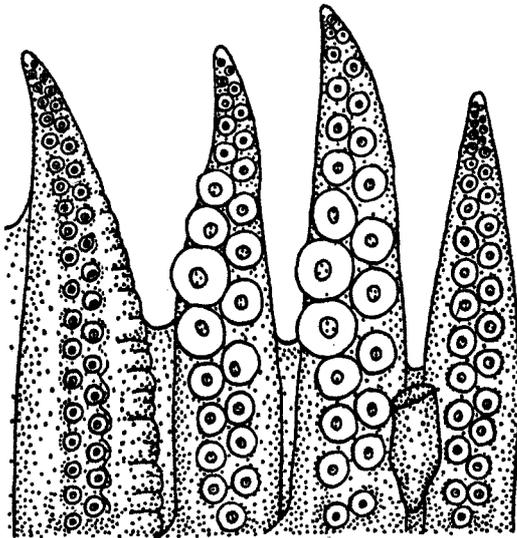
Synonymy : *Stoloteuthis nipponensis* Berry, 1911.

FAO Names : En - Japanese bobtail
Fr - Sépiole gros yeux
Sp - Sepiolina

Diagnostic Features : Mantle purse-shaped, fused to head, 3/4 as wide as long. Fins large, deeply lobed anteriorly. Head broad. Tentacular clubs with 16 minute, subequal, subglobular suckers in transverse rows; swimming keel narrow, extending for a short distance along stalk. Arms short; all of them, except arms IV fused by a broad web; arm suckers biserial; in females numerous, small throughout, in males fewer and enlarged on arms II to IV, especially II and III; both dorsal arms (I) hectocotylized by minute, widely separated suckers on very short stalks.



dorsal view



arms of left side of male
(oral view)

Geographical Distribution : Western Pacific Ocean: recorded from southern Japan and the Philippines.

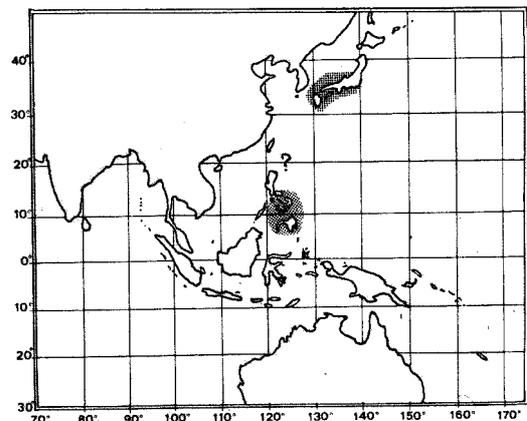
Habitat and Biology : A neritic species occurring on the continental shelf down to 200 m depth.

Size : Maximum mantle length 4 cm.

Interest to Fisheries : Undetermined.

Local Names :

Literature : Okutani (1980).



Sepiola atlantica Orbigny, 1840

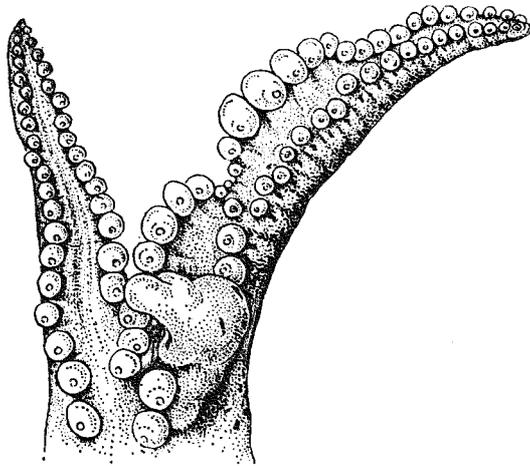
SEPIOL Sepiol 2

Sepiola atlantica Orbigny, 1840 (in 1834-1848), Hist.Nat.Ceph.Acet.Viv.Foss., 235.

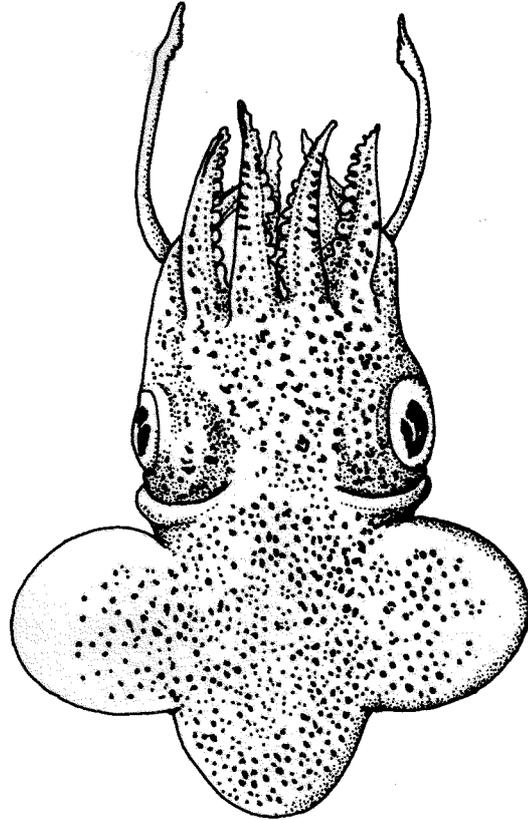
Synonymy : None.

FAO Names : En - Atlantic bobtail
Fr - Sépiole grandes oreilles
SP - Sepiola atlántica

Diagnostic Features : Tentacular clubs with 8 suckers in transverse rows. Left arm I hectocotylyzed by a large swollen bulb, with secondary lobes basally; suckers of dorsal row swollen basally, followed by 3 or 4 greatly reduced suckers, then by 4 or 5 greatly swollen suckers in midportion.



left arm of male
hectocotylyzed



dorsal view

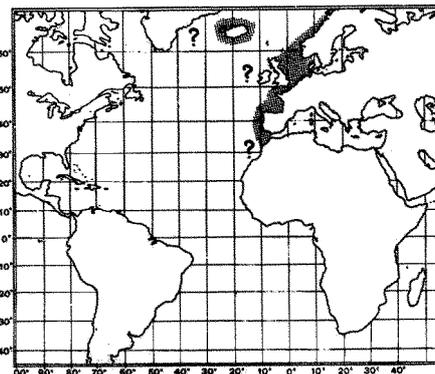
Geographical Distribution : Northeast Atlantic Ocean: from Iceland and Norway to northwest Africa.

Habitat and Biology : No information available.

Size : Maximum mantle length 1.5 cm.

Interest to Fisheries : Undetermined.

Local Names:



Sepiola birostrata Sasaki, 1918

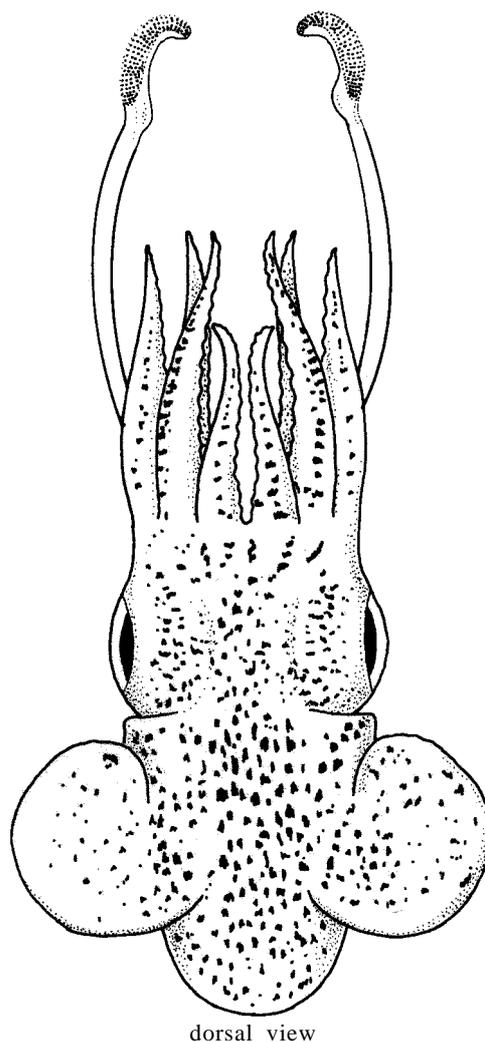
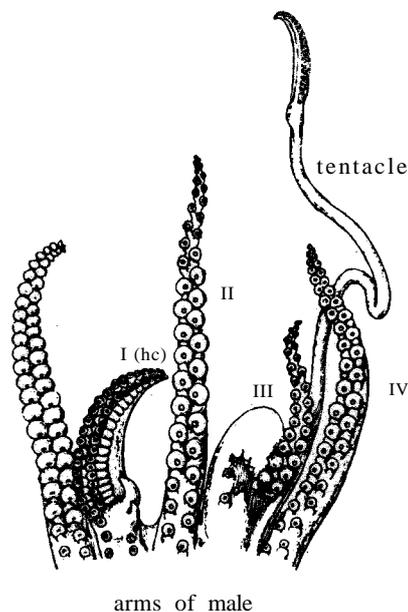
SEPIOL Sepiol 3

Sepiola birostrata Sasaki, 1918, Zool.Mag.Tokyo, 30:235-6.

Synonymy : None

FAO Names : En - Butterfly bobtail
Fr - Sépiole papillon
Sp - Sepiola mariposa

Diagnostic Features : Mantle relatively elongate. Tentacles slender, 2 times longer than arms, their clubs about 1/4 of tentacle length, slightly expanded; swimming keel very narrow distally, with a broad, thick, semilunar flap proximally, opposite the carpus; club suckers minute, subequal, largest and numbering 4 in a series across the club proximally, diminishing in size and increasing to 16 in each transverse row more distally. Left arm I hectocotylized, 1/2 to 4/5 of the length of right arm I, much thickened; 4 or 5 minute suckers basally, followed by a large swelling of 2 recurved, pointed rostrae; remaining suckers much reduced, attached to closely packed, prism-like stalks.



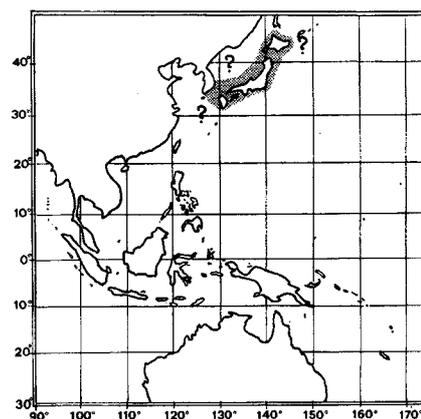
Geographical Distribution : Western Pacific Ocean: Japan and Cape Clonard, Republic of Korea.

Habitat and Biology : Depth range undetermined.

Size : Maximum mantle length undetermined.

Interest to Fisheries : Reported to be locally consumed in China, but its actual and potential interest to fisheries has not been assessed.

Local Names :



Sepiola rondeleti Leach, 1817

SEPIOL Sepiol 1

Sepiola rondeleti Leach, 1817, *Zool.Misc.*, 3(30):140.

Synonymy : None.

FAO Names : En - Dwarf bobtail
Fr - Sépiole naine
Sp - Globito

Diagnostic Features : Ventral margin of mantle markedly produced anteriorly. Tentacular clubs well developed, 8 suckers in the transverse rows, well developed, markedly enlarged in proximal part of dorsal longitudinal rows. Left dorsal arm (I) hectocotylyzed, blunt, laterally compressed, strongly curved laterally into a loop; 3 slightly enlarged suckers at base followed by a large, swollen, eyelet-like bulb; suckers of dorsal row much larger than those of ventral row. Light organs ear-shaped, attached laterally to ink sac. Gladius rudimentary. Colour: ventral margin of mantle with a dense border of chromatophores; outer surface of tentacular clubs heavily pigmented with chromatophores.

Geographical Distribution : Throughout the Mediterranean; in the eastern Atlantic, it extends from the North Sea to Senegal.

Habitat and Biology : An epibenthic species occurring from very shallow waters down to about 450 m depth over sandy and muddy bottoms. It is common in *Posidonia* seaweed beds (down to about 35 m). In the western Mediterranean, the spawning season extends from March through November. Longevity is estimated at 1½ years.

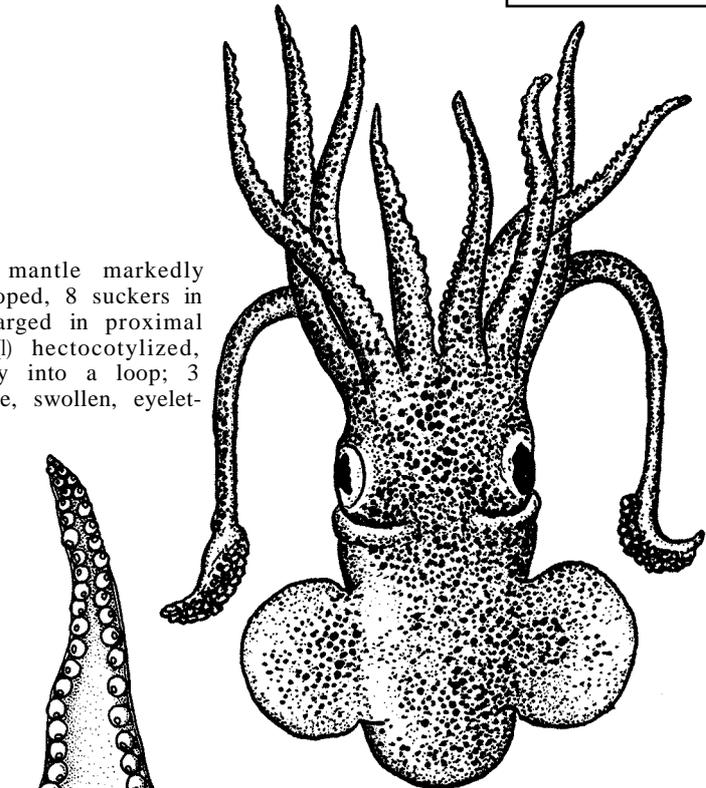
It feeds on crustaceans and small fishes.

Size : Maximum mantle length 6 cm; common to 4 or 5 cm. All females above 3 cm mantle length are mature.

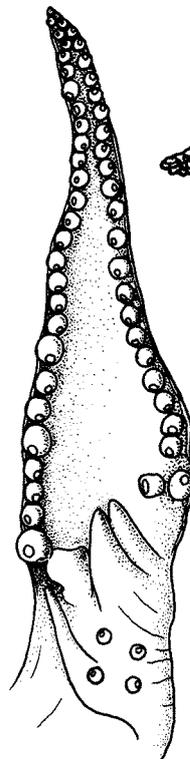
Interest to Fisheries : Caught with purse seines, drift nets and occasionally with bottom trawls. The flesh is very tasty though difficult to preserve. Separate statistics are not reported for this species.

Local Names : ALGERIA: Poulpe sèche, Sepietta, Sépiole, Seppiolo; FRANCE: Anchou souchot, Bougie, Glaouchau, Sepieta, Sépiole, Sepion, Sepiou, Sepioun, Supieta, Tantenà; GERMANY (FR): Kleiner Tintenfisch; GREECE: Soupitza; ITALY: Babuccia, Babbucciedda, Beccaficu, Calamaretto, Cape'e chiuove, Malnascui, Porpo-seppia, Scarpetta, Scartoccio, Seccetta, Sepietta, Sepiola, Sepiolina, Seppetta, Sponce currienti, Totanino, Tutariedde, Zotoleto, Zotolo; MALTA: Dakkra; MONACO: Süpiola; MOROCCO: Sépiole; NETHERLANDS: Dwerginktvis; PORTUGAL: Pota, Zula; ROMANIA: Sepiola; SPAIN: Choco, Fotesa, Frenética, Globito, Morralet; TURKEY: Derinsu süyesi; YUGOSLAVIA: Bobic.

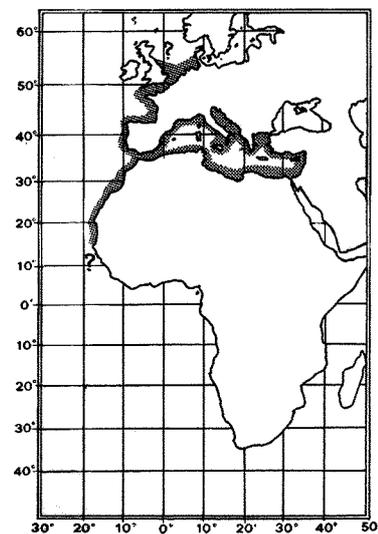
Literature : Mangold-Wirz (1963, biology, western Mediterranean); Fischer (ed., 1973, Species Identification Sheets, Mediterranean and Black Sea, fishing area 37).



dorsal view



left arm I
of male
hectocotylized



Euprymna berryi Sasaki, 1929

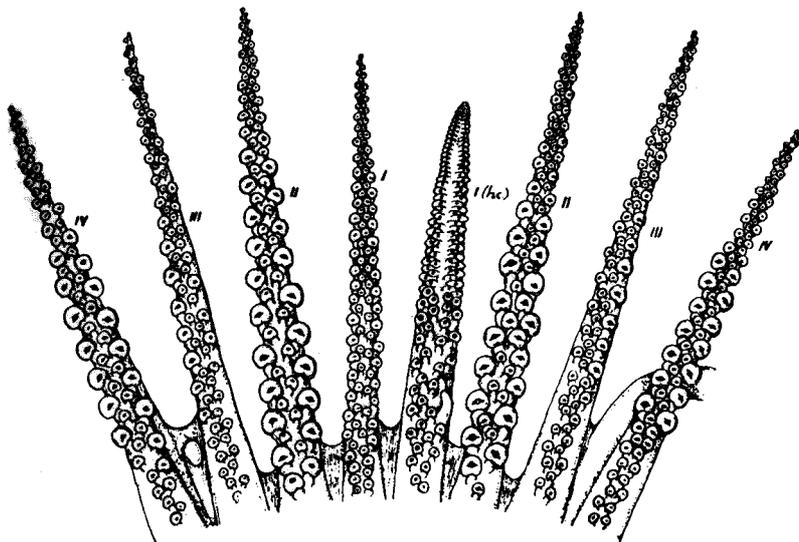
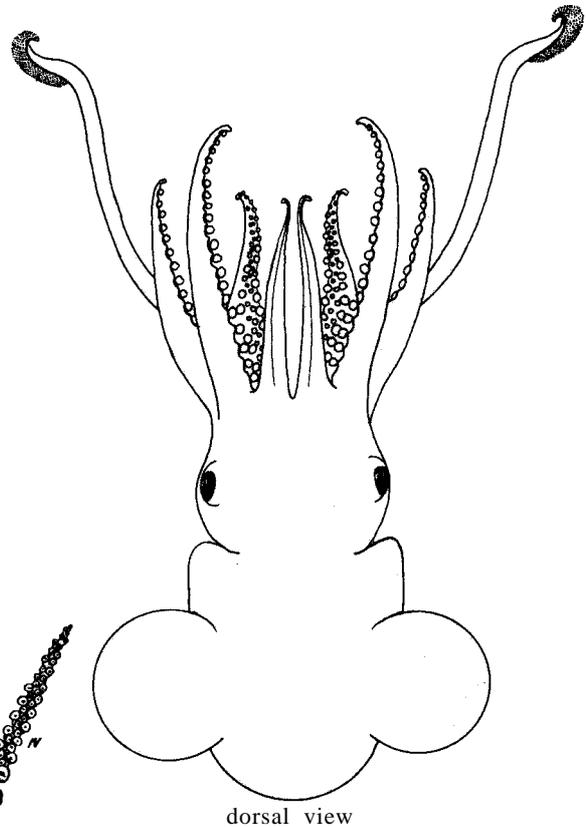
SEPIOL Eup 1

Euprymna berryi Sasaki, 1929, *J.Coll.Agric., Hokk.*, 20:143.

Synonymy : None.

FAO Names : En - Double-ear bobtail
Fr - Sépiole colibri
SP - Sepiola colibrí

Diagnostic Features : Tentacular clubs with swimming keel extending proximally along stalk; suckers extremely numerous, minute, elongated, goblet-shaped. Arm suckers in 4 longitudinal rows, those on lateral (dorsal and ventral) rows of arms II and IV greatly enlarged, globular. Left arm I hectocotylized, much thicker, shorter and more blunt than right arm I; suckers normal on proximal half, in 2 to 4 oblique rows; at 1/4 arm length 2 prominent, suckerless, nipple-like papillae in ventral sucker row; distal half of arm with 70 to 80 closely-packed, palisaded papillae in 2 to 4 rows, with minute rudimentary suckers.



Geographical Distribution : Along the coasts of China (South to Hong Kong and Japan), Andaman Islands and Sri Lanka.

Habitat and Biology : A pelagic coastal species occurring down to 60 m depth. Females grow much larger than males.

Size : Maximum mantle length 3 cm in males, 5 cm in females.

Interest to Fisheries : Currently not exploited commercially in Hong Kong, but reported to be consumed locally in China.

Local Names : CHINA: Leung yee jai.

Remarks : The species has been reared successfully in aquaculture experiments (Choe, 1966).

