

***Sepiola parva* Sasaki, 1913**

Fig. 239

Sepiola parva Sasaki, 1913, *Dobutsugaku Zasshi* [Zoological Magazine Tokyo], 25: 252. [In Japanese] [type locality: Japan, Tokyo Bay].

Frequent Synonyms: None.

Misidentifications: None.

FAO Names: **En** – Spotty bobtail squid; **Fr** – Sépiole mouchetée; **Sp** – *Sepiola manchada*.

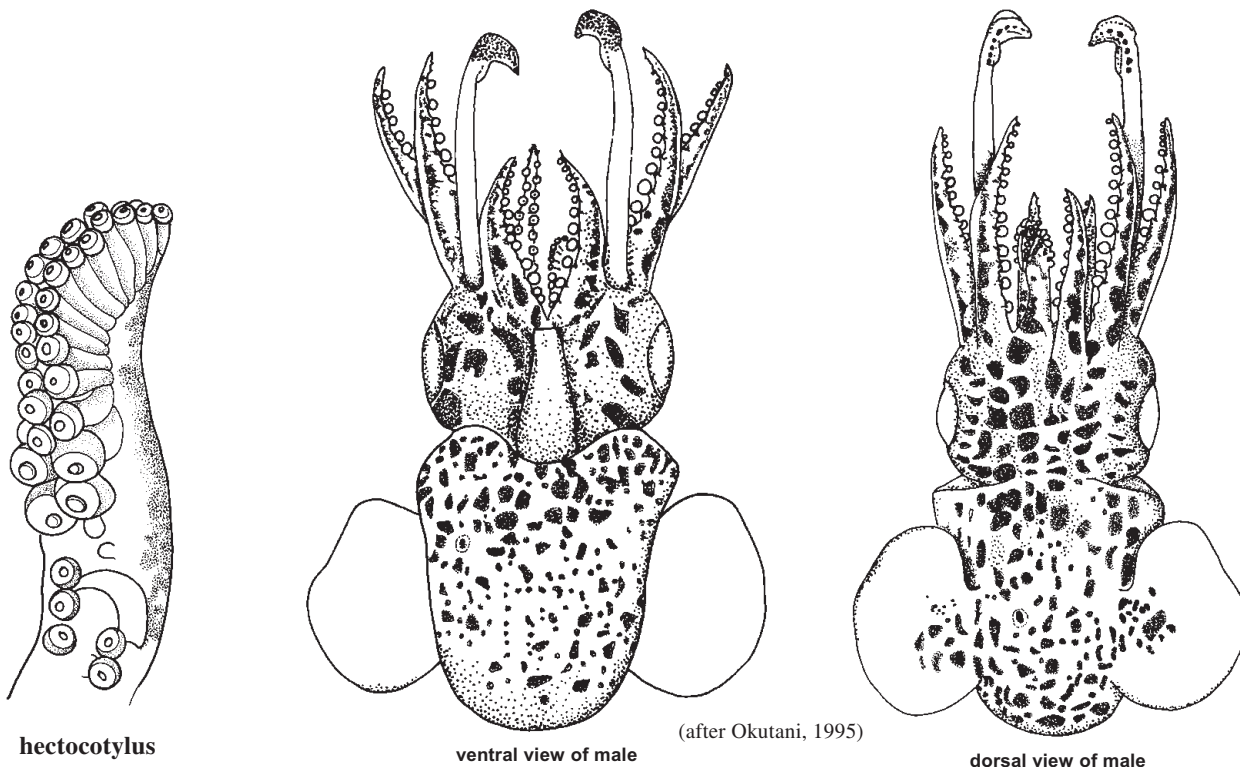


Fig. 239 *Sepiola parva*

Diagnostic Features: Mantle dome-shaped. Dorsal mantle fused to head. Fins narrow, ear-shaped, short; do not exceed length of mantle anteriorly or posteriorly. Head broad, narrower than mantle. Non-hectocotylized arm sucker arrangement same in both sexes: arm suckers biserial. Hectocotylus present, left dorsal arm modified: proximal end with **fleshy hook-like papilla** formed from enlarged sucker pedicel; 2 rows of suckers on arm proximal to hook-like papilla; distal end of hectocotylized arm with sucker pedicels enlarged and tightly packed forming two double rows of columnar structures; suckers reduced with tiny, fleshy, slit-like openings. Club with 8 suckers in transverse rows; dorsal and ventral marginal longitudinal series of suckers smaller than medial suckers (medial suckers 1.6 times larger than marginal ones). Internal gladius absent. Paired, kidney-shaped light organs present inside mantle cavity on each side of ink sac.

Size: Up to 10 mm mantle length.

Geographical Distribution: Northwestern Pacific: southern Japan to northern Philippines (Fig. 240).

Habitat and Biology: Upper sublittoral. This species seems to prefer the subtidal zone with hard substrates, unlike *S. birostrata* Sasaki, 1918, which is abundant in shallow water with sandy or muddy substrates.

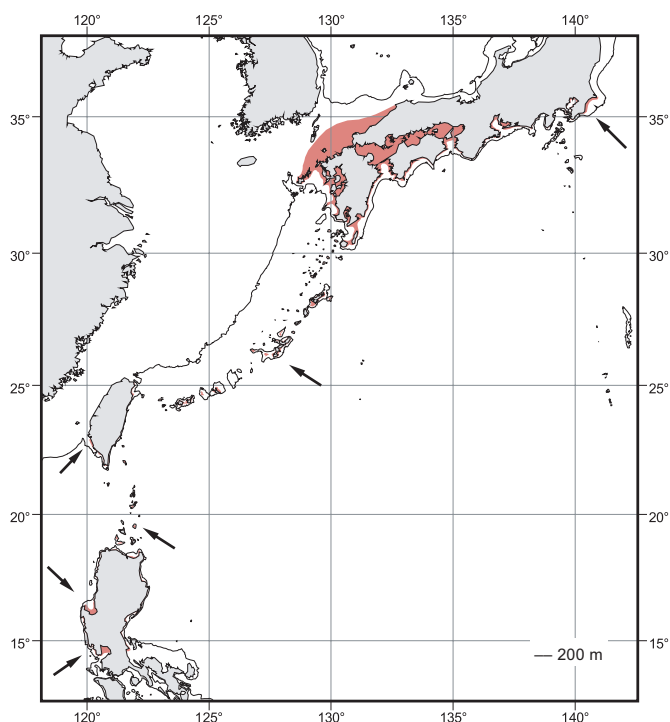


Fig. 240 *Sepiola parva*
 Known distribution

Interest to Fisheries: The species is occasionally caught and consumed locally.

Remarks: This species closely resembles *S. birostrata*. The 2 species, however, can be distinguished by differences in the dentition of the chitinous rings on the tentacle-club suckers, regardless of maturity and sex. In *Sepiola parva*, the club-sucker rings have three rows of polygonal processes bearing bush-like papillae. *Sepiola birostrata* Sasaki, 1913 has 4 rows of polygonal processes; the inner 2 rows bear blunt, flat-topped pegs. The 2 or 3 hook-like processes on the hectocotylized arm arise from a common elevated base in *S. birostrata*, unlike that of *S. parva*, in which a single process arises directly from the arm flesh.

Literature: Takayama and Okutani (1992), Okutani (1995), Reid and Norman (1998).

***Sepiola robusta* Naef, 1912**

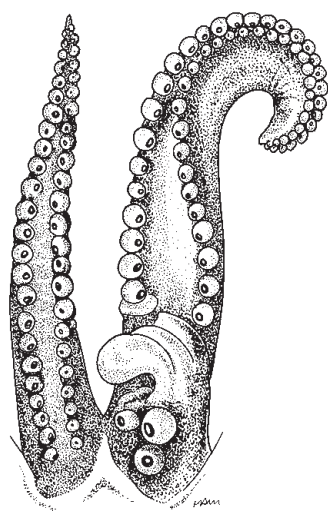
Fig. 241

Sepiola robusta Naef, 1912a, *Zoologischer Anzeiger*, 39(7): 271 [type locality: Tyrrhenian Sea].

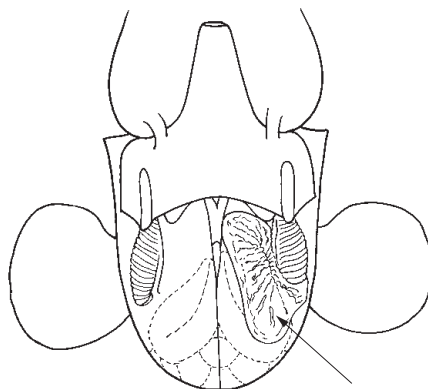
Frequent Synonyms: None.

Misidentifications: None.

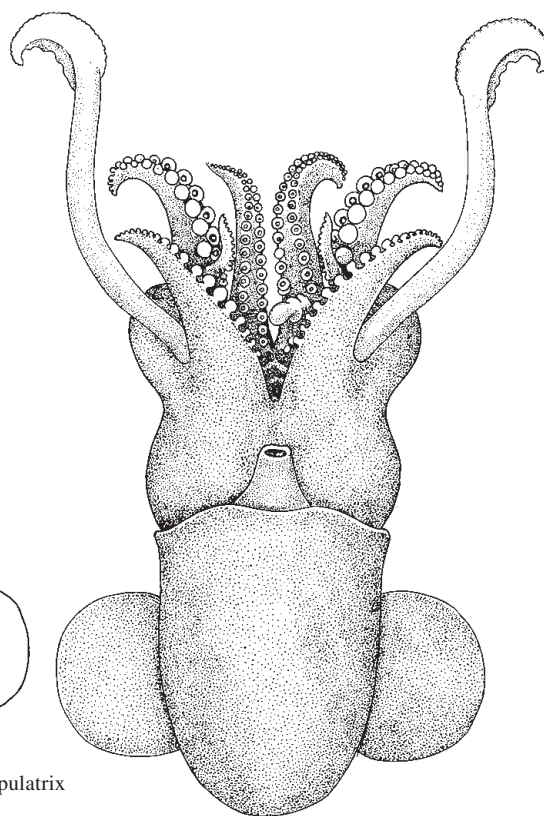
FAO Names: En – Robust bobtail squid; Fr – Sépiole robuste; Sp – *Sepiola robusta*.



dorsal arms of males
(hectocotylus)



mantle cavity of female



ventral view of male

Fig. 241 *Sepiola robusta*

Diagnostic Features: Ventral mantle normal, **not strongly produced anteriorly**. Fins short, do not exceed length of mantle anteriorly or posteriorly. Hectocotylus present, left dorsal arm modified: proximal end with fleshy pad formed from enlarged and fused sucker pedicels; copulatory apparatus a **complexly twisted lobe (very variable) consisting of 3 hook-like structures**; horn of copulatory apparatus slightly recurved, but does not form a small hole; base of hectocotylus with one sucker of ventral row markedly enlarged; distal end of hectocotylized arm with normal suckers (not enlarged or modified); arm slightly widened distal to copulatory apparatus and sharply bent distally; arm without groove on inner side. Arm often narrower at level of fifth and sixth sucker rows distal to copulatory apparatus. **Club large with 8 suckers in transverse rows; suckers in dorsal rows in widest part of club markedly enlarged. Female bursa copulatrix moderately large (exceeds length of gill insertion posteriorly); caecum absent; posterior left side of mantle cavity in females without mantle constrictor muscle (cutaneous muscle extending from mantle septum to base of left gill). Paired, kidney-shaped light organs (photophores) present inside mantle cavity on each side of ink sac.**

Size: Males up to 25 mm mantle length; females up to 28 mm mantle length.

Geographical Distribution: Mediterranean Sea: absent in Marmara and Black Sea (Fig. 242).

Habitat and Biology: Outer shelf. Depth range from 26 to 498 m. Mating takes place when the male grasps the female's 'neck' region, and spermatophores are placed in the females' bursa copulatrix. Males have been observed to guard females during courtship.

Interest to Fisheries: *Sepiolo robusta* is one of the most frequently captured Mediterranean *Sepiolo*, where it contributes (although in low numbers) to the bobtail squid catches by local trawlers.

Local Names: ITALY: *Seppiolo robusta*, Cappuccetto.

Remarks: The doubtful record from Galizia (Spain, northeastern Atlantic) noted by Guerra (1984) has not subsequently been confirmed; the species is considered to be a Mediterranean endemic (Guerra, 1992).

Literature: Naef (1923), Boletzky *et al.* (1971), Boletzky (1983b), Nesis (1987), Guerra (1984), Belcari *et al.* (1989), Orsi Relini and Bertuletti (1989), Guerra (1992), Bello (1995), Jereb and Di Stefano (1995), Volpi *et al.* (1995), Jereb *et al.* (1997).

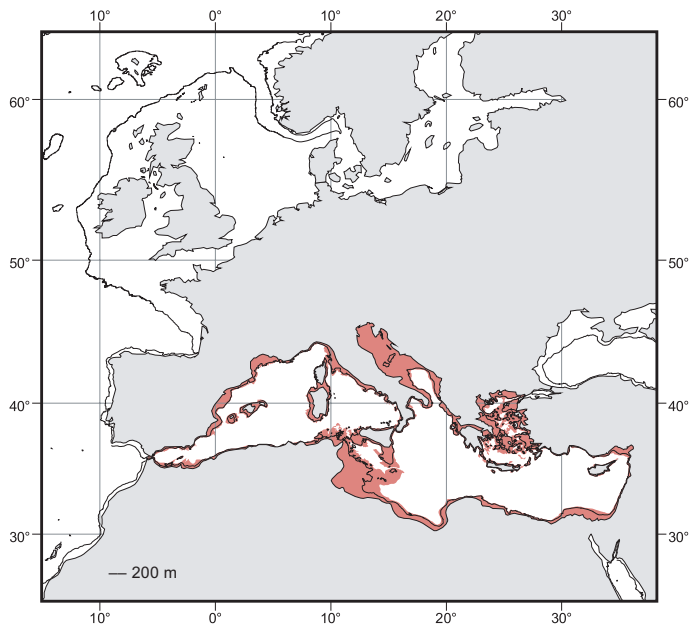


Fig. 242 *Sepiolo robusta*
Known distribution

***Sepiolo rondeleti* Leach, 1834**

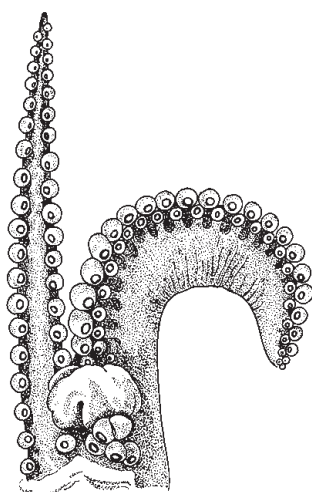
Fig. 243

Sepiolo rondeleti Leach, 1834 (in Férussac and d'Orbigny, 1834–1848), *Histoire Naturelle Générale et Particulière Céphalopodes Acétabulifères Vivants et Fossiles*, 230 [type locality: Mediterranean Sea].

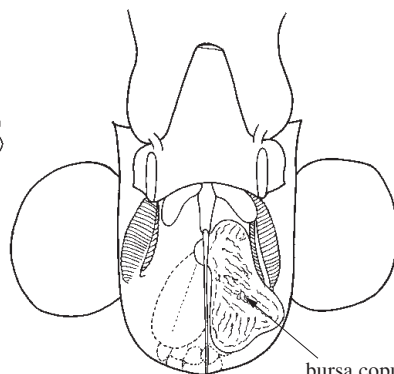
Frequent Synonyms: None.

Misidentifications: None.

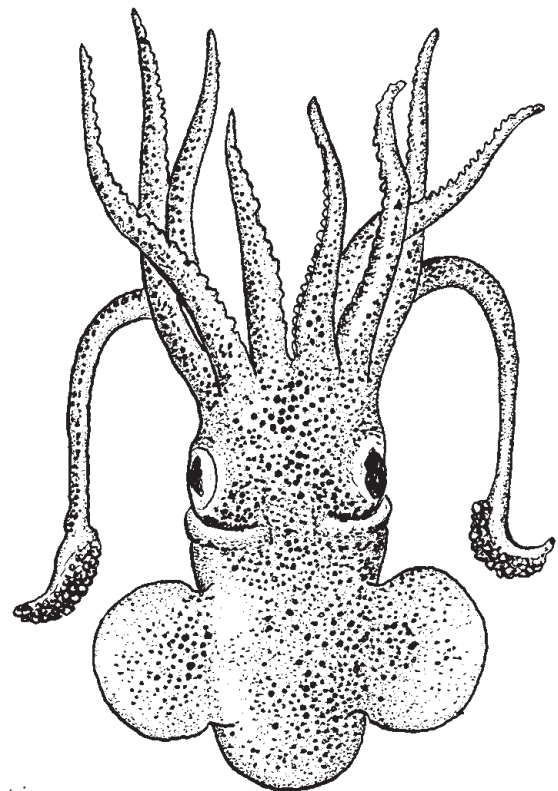
FAO Names: En – Dwarf bobtail squid; Fr – Sépiole naine; Sp – *Sepiolo enana*.



(after Naef, 1912)
dorsal arms of male
(hectocotylus)



mantle cavity of female



dorsal view of female

Fig. 243 *Sepiolo rondeleti*

Diagnostic Features: Ventral mantle margin **projects markedly anteriorly**. Fins short, do not exceed length of mantle anteriorly or posteriorly. Hectocotylus present, left dorsal arm modified: proximal end with fleshy pad formed from enlarged and fused sucker pedicels; **horn of copulatory apparatus recurved to form a small hole**; base of hectocotylus with equal sized suckers; distal end of hectocotylized arm with some enlarged suckers; ventral row of suckers distal to copulatory apparatus much smaller than those in dorsal row; arm without groove on inner side. **Club with 8 suckers in transverse rows; dorsal marginal series of suckers enlarged on proximal end of club**. Female bursa copulatrix large; extends posteriorly beyond gill insertion; caecum present, small; barely protrudes into right half of mantle cavity. Posterior left side of mantle cavity in females without mantle constrictor muscle (cutaneous muscle extends from mantle septum to base of left gill). Internal gladius present, rudimentary, chitinous. Paired, kidney-shaped light organs present inside mantle cavity, on each side of ink sac. Anterior ventral mantle margin with dense border of chromatophores. Outer surface of tentacular clubs heavily pigmented with chromatophores.

Size: Males up to 25 mm mantle length; females up to 60 mm mantle length (but most commonly from 40 to 50 mm mantle length).

Geographical Distribution: Northeastern Atlantic and Mediterranean Sea: including Strait of Sicily, Aegean Sea, Adriatic Sea, Sea of Marmara and Levantine Sea. In the northeastern Atlantic it extends from the North Sea to Senegal (Fig. 244).

Habitat and Biology: Sandy and muddy substrates, common in *Posidonia* seagrass beds down to 35 m. Epibenthic, or mesobenthic, *Sepioloa rondeleti* has been recorded from very shallow waters down to around 450 m. Mating takes place when males grasp the female's 'neck' region, and spermatophores are placed in her bursa copulatrix. In the western Mediterranean, the spawning season extends from March to November, with longevity estimated at 18 months. The species feeds on crustacea and small fishes. All females over 30 mm mantle length are mature.

Interest to Fisheries: Captured during bottom trawls and occasionally with purse seines and drift nets. It is consumed locally; the flesh is very tasty, though difficult to preserve.

Local Names: ITALY: Seppiola di Rondelet, Cappuccetto.

Remarks: *Sepioloa rondeleti* is known to preferentially inhabit waters shallower than 50 m throughout the year. Deeper records from the Mediterranean were long considered doubtful (Mangold-Wirtz 1963, Bello 1983–84). However, more recent evidence has confirmed a greater depth distribution for this species than previously thought, verifying the maximum recorded depth of 450 m (Dieuzeide, 1955).

Literature: Joubin (1895, 1902a), Naef (1912b), Naef (1923), Boletzky *et al.* (1971), Bello (1983–84), Roper *et al.* (1984), Guerra (1992), Bello (1995), Orsi Relini and Bertuletti (1989), D'Onghia *et al.* (1996), Jereb *et al.* (1997).

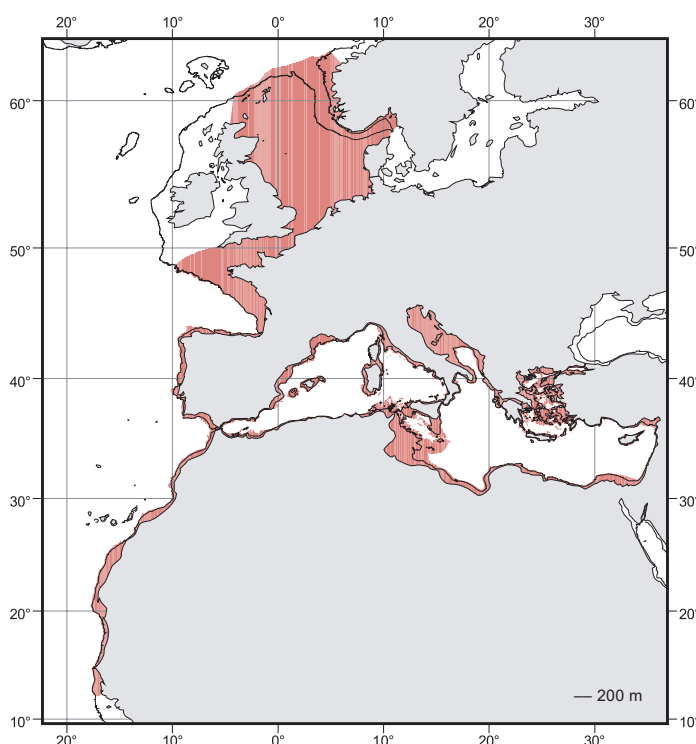


Fig. 244 *Sepioloa rondeleti*
■ Known distribution