

CEPHALOPODA
SUB-ORDER: SEPIOIDEA

(By B. J. Muus)

1963

CEPHALOPODA IN THE NORTH ATLANTIC¹⁾

- | | |
|--|--------------------------|
| 1. Eight sessile arms and two tentacles. Suckers stalky with chitinous armature. Fins present | DECAPODA 2 |
| Eight arms. Suckers not stalky and without chitinous armature. Fins absent or present | OCTOPODA ²⁾ |
| | |
| 2. Body either broad and flattened with long and narrow lateral fins, the internal shell being a voluminous calcified structure or the body is saccular with rounded posterior end and circular lateral fins, the internal shell being chitinous | SEPIOIDEA |
| Body torpedo-shaped or saccular. Terminal or subterminal fins | TEUTHOIDEA ³⁾ |

¹⁾ Comprises the region N of 40°N Lat.

²⁾ See Sheet No. 98.

³⁾ See Sheets Nos. 95–97.

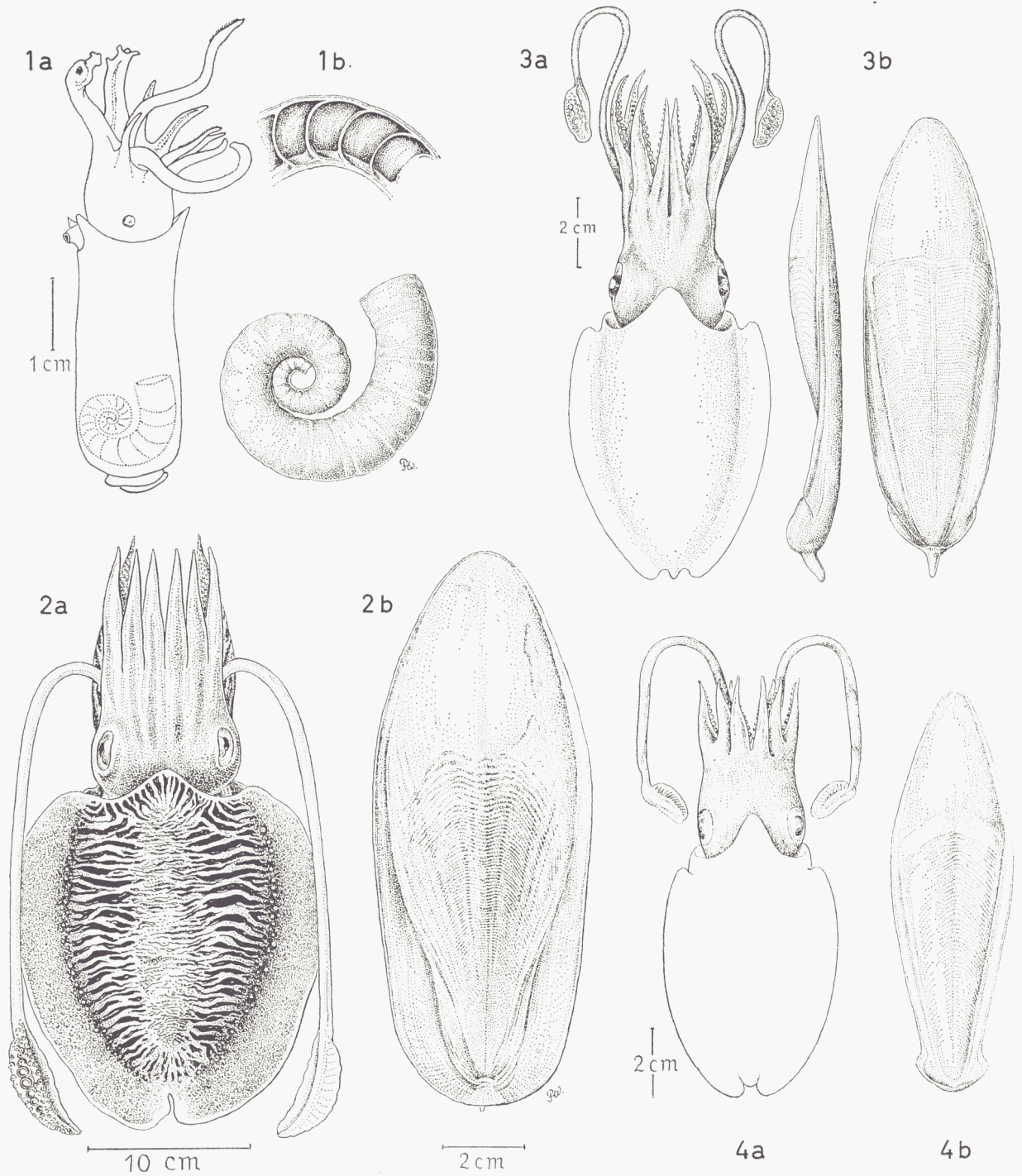


PLATE I

Adult specimens and inner shell of: 1. *Spirula spirula*. — 2. *Sepia officinalis*. — 3. *S. orbignyana*. — 4. *S. elegans* (Figs. 3a, b and 4a, b from ADAM; remainder original).

SUB-ORDER: SEPIOIDEA

Usually four rows of globular suckers on the arms. The club of the tentacles with eight rows of suckers.

Family Spirulidae (Plate I)

Inner shell calcified and coiled. The body is cylindrical with terminal, semicircular fins.

Genus SPIRULA Lamarck

Characters as family. One species.

1. *Spirula spirula* (Linné). The gasfilled shell may also be found drifting.

Family Sepiidae (Plate I)

Inner shell is an oval calcified body lighter than water. Body flattened, flanked by narrow fins which never join posteriorly. Left ventral arm of the male hectocotylized.

Genus SEPIA Linné

Surface of the mantle without conspicuous glandular pores. The shell has no expansions posteriorly.

2. *Sepia officinalis* Linné. The mantle projects in an obtuse angle behind the head. Shell with almost parallel sides. Max. dorsal mantle length 400 mm.
3. *S. orbignyana* Ferussac. The mantle projects in an acute angle behind the head. Suckers in four rows on the arms. Shell with a conspicuous apical spine. Max. dorsal mantle length 100 mm.
4. *S. elegans* D'Orbigny. Mantle projects in an acute angle behind the head. Suckers in two rows on the arms. Shell slender, with a small apical spine. Max. dorsal mantle length 80 mm.

Family Sepiolidae (Plate II)

Inner shell chitinous and rudimentary. Body saccular with rounded posterior end and lateral well separated circular fins. Left dorsal or both dorsal arms hectocotylized.

Sub-family Rossiinae

Mantle edge free. Arms not connected by a membrane reaching half their length.

Genus ROSSIA Owen

Arms with four rows of suckers.

5. *Rossia macrosoma* (Delle Chiaje). Skin smooth. Proximal parts of the arms with two, rest of the arm with four sometimes irregular rows of suckers. Max. ventral mantle length about 60 mm.

Genus ALLOROSSIA Grimpe:

Arms with two rows of suckers.

6. *Allorossia glaucopis* Lovén. Dorsal part of head and mantle with small whitish papillae. Normally two rows of suckers, locally three or four rows dependent on state of contraction of the arms. Max. ventral mantle length 40 mm.

Sub-family Heteroteuthinae

Dorsal mantle edge free or fused with the head. Half the length of the arms connected by a membrane.

Genus HETEROTEUTHIS Gray

The fins are placed subterminally. Dorsal mantle edge free, ventrally the mantle projects and covers most of the head. The two right dorsal arms hectocotylized.

7. *Heteroteuthis dispar* Gray. Two dorsal pairs of arms more delicate and shorter than the rest. Max. ventral mantle length 20 mm.

Sub-family Sepiolinae

Dorsally the mantle edge is fused with the head. Only the dorsal or ventral arms might be connected part of their length by a membrane.

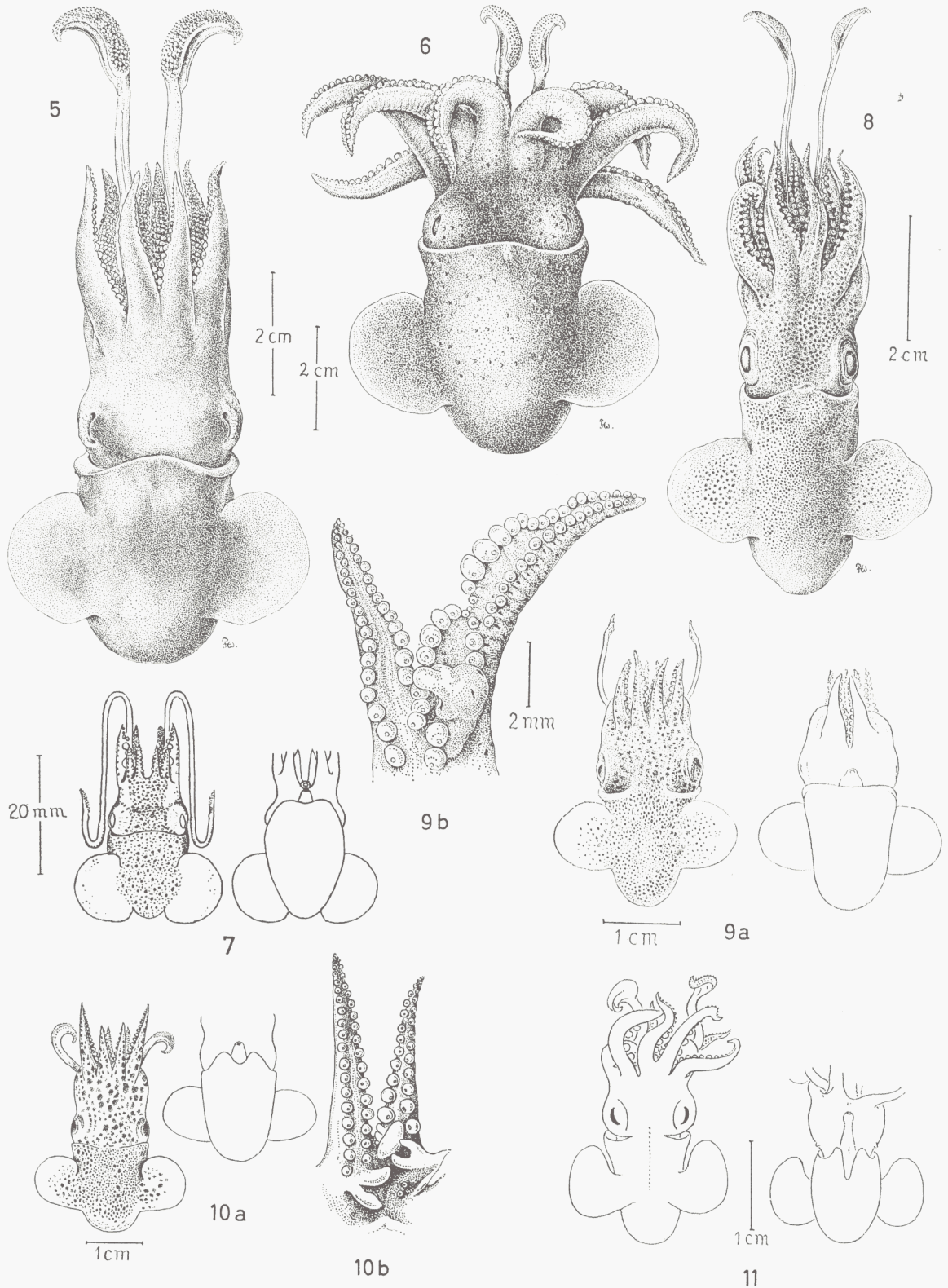


PLATE II

5. *Rossia macrosoma*. — 6. *Allorossia glaucopis*. — 7. *Heteroteuthis dispar*; dorsal and ventral view. — 8. *Sepietta oweniana*. — 9. *Sepiolo atlantica*; a, dorsal and ventral view; b, hectocotylus. — 10. *S. aurantiaca*; a, dorsal and ventral view; b, hectocotylus. — 11. *S. pfefferi*; dorsal and ventral view. (Figs. 7 and 10a, b from NAEF; Fig. 11 from GRIMPE; remainder original).

Genus SEPIETTA Naef

The dorsal arms proximally connected by a membrane, the cleft between them being less deep than between the other arms. Tentacles with 16–32 longitudinal rows of very small suckers.

8. *Sepietta oweniana* (D'Orbigny). Body longer and more slender than *Sepiola*. Left dorsal arm hectocotylized. Max. ventral mantle length 50 mm.

Genus SEPIOLA Naef

Dorsal armpair not connected proximally by a membrane. Tentacles with 8 longitudinal rows of suckers.

9. *Sepiola* (*Heterosepiola*) *atlantica* D'Orbigny. Distal parts of ventral arms with 4–8 rows of suckers. Left dorsal arm hectocotylized. Max. ventral mantle length 21 mm.
10. *S.* (*Hemisepiola*) *aurantiaca* Jatta. All arms with two rows of suckers. Ventral mantle edge with a u-formed cut round the funnel. Both dorsal arms hectocotylized. Max. ventral mantle length 15 mm.
11. *S.* (*Hemisepiola*) *pfefferi* Grimpe. All arms with two rows of suckers. Ventral mantle edge with a deep v-formed incision. Only left dorsal arm hectocotylized. Max. ventral mantle length 13 mm.

Further Information on Identification

1. *Spirula spirula*: NAEF, 1923, p. 506, Textfigs. 276–81.
2. *Sepia officinalis*: ADAM, 1941, p. 84. JAECKEL, 1958, p. 568. NAEF, 1923, p. 547, Textfigs. 302–09.
3. *S. orbignyana*: ADAM, 1952, p. 28, Textfig. 9, Pl. II, Figs. 1–3. JAECKEL, 1958, p. 570, Fig. 44. NAEF, 1923, p. 555, Textfigs. 310–14.
4. *S. elegans*: ADAM, 1952, p. 22, Textfig. 7, Pl. III, Figs. 1,2. JAECKEL, 1958, p. 570, Fig. 45. NAEF, 1923, p. 560, Textfigs. 315–20.
5. *Rossia macrosoma*: JAECKEL, 1958, p. 571, Fig. 46. NAEF, 1923, p. 590, Textfigs. 338–340.
6. *Allorossia glaucopis*: JAECKEL, 1958, p. 573, Figs. 47, 48.
7. *Heteroteuthis dispar*: NAEF, 1923, p. 595, Textfigs. 341, 342, Pl. VIII, Figs. 1–6; Pl. XIX, Fig. 10.
8. *Sepietta oweniana*: JAECKEL, 1958, p. 578, Fig. 51. NAEF, 1923, p. 645, Textfigs. 379–381.
9. *Sepiola* (*Heterosepiola*) *atlantica*: JAECKEL, 1958, p. 575, Fig. 49.
10. *S.* (*Hemisepiola*) *aurantiaca*: JAECKEL, 1958, p. 577. NAEF, 1923, p. 612, Textfigs. 357–360.
11. *S.* (*Hemisepiola*) *pfefferi*: GRIMPE, 1925, p. 19, Textfig. 7, Pl. Fig. 5.

Distribution

Species

(Species in brackets occur only exceptionally)

Gulf of Bothnia.....	—
Gulf of Finland.....	—
Baltic proper.....	—
Belt Sea.....	8, 9
Kattegat.....	(2), (5), (6), 8, 9
Skagerak.....	(2), 5, 6, 8, 9, (11)
Northern North Sea.....	(2), (3), (4), 5, 6, 8, 9, 11
Southern North Sea.....	2, (3), (4), (5), (8), 9
English Channel (eastern)...	2, 3, 4, (5), (8), 9
English Channel (western) ..	2, 3, 4, 5, 8, 9, 10
Bristol Channel and Irish Sea	2, 3, 4, 5, 7, 8, 9
South and West Ireland and Atlantic.....	(1), 2, 3, 4, 5, 6, 7, 8, 9, 10, ?, 11
Faroe-Shetland Area.....	(1), 5, 6, 8, 9, 11
Faroe-Iceland Area.....	(1), 5, 6, 8, 9
Norwegian Sea.....	5, 6, 8, 9
Barents Sea.....	6

References to Work on Biology

are so few and scattered that they have been disregarded for this sheet except for species 1, 2 and 5. BRUUN (1943) 1. RACOVITZA (1894) 5. TINBERGEN (1939) 2.

References

- | | |
|--|--|
| ADAM, W., 1941. Rés. Sci. Crois. Navire-École "Mercator", III, Mém. Mus. Hist. nat. Belg., sér. 2, fasc. 21: 83–162. | JAECKEL, G. A., 1958. Tierwelt d. Nord- und Ostsee, Lief. 37, Teil 9 b3: 479–723. |
| — 1952. Rés. Sci. Exp. Océan. Belge Atlant. Sud, 3 (3): 123–93. | NAEF, A., 1923. Fauna e Flora d. Golfo d. Napoli, 35. Monogr., Teil 1, 1 : 1–863. |
| BRUUN, A. F., 1943. Dana-Report, 4 , 24: 1–44. | RACOVITZA, E. G., 1894. Arch. Zool. Exp. Gén., 2 : 23–49. |
| GRIMPE, G., 1925. Wiss. Meeresunt. Abt. Helgoland., N.F., 16 , 1, 1: 1–124. | TINBERGEN, L., 1939. Arch. Néerl. Zool., 3 (2–3): 323–64. |