

Zooplankton

Sheet 97

CEPHALOPODA

SUB-ORDER: TEUTHOIDEA

**Families: Octopoteuthidae
Gonatidae
Onychoteuthidae
Histioteuthidae
Brachioteuthidae**

(BY B. J. MUUS)

1963

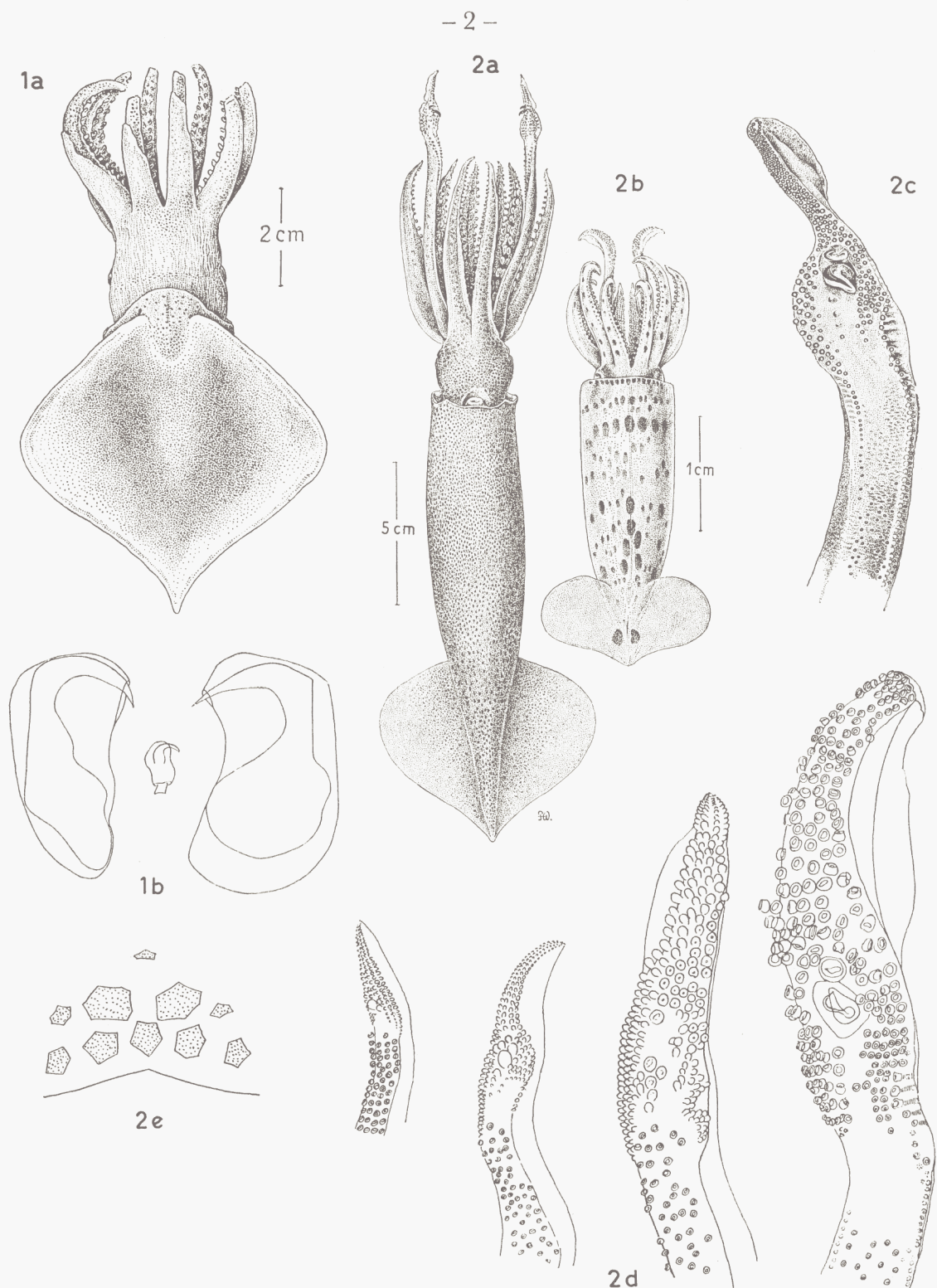


PLATE I

1. *Octopoteuthis sicula*; a, adult animal; b, hooks at mantle length 22 mm. — 2. *Gonatus fabricii*; a, adult animal; b, larva; c, tentacle club from adult animal; d, tentacle clubs at mantle lengths: 10, 13, 18 and 21.5 mm; e, chromatophores at the back of the head at mantle length 6–18 mm. (Figs. 1b, 2d, e from DEGNER; remainder original).

Family Octopoteuthidae (Plate I)

Head very big, mantle conical. The fins form an almost square continuous dorsal plate. Tentacles always missing in adult animals.

Genus OCTOPOTEUTHIS Rüppell

Skin partly jelly-like. Arms with two rows of suckers modified into hooks covered by membraneous hoods.

1. *Octopoteuthis sicula* Rüppell. Tentacles missing in animals with mantle length > about 13 mm (Fig. 1a).

Family Gonatidae (Plate I)

Terminal heart-shaped fins. Arms with four rows of suckers. In the three upper pairs of arms the two central rows of suckers are modified into hooks. Tentacle club with big central hooks and a characteristic fixing apparatus.

Genus GONATUS Gray

With the characters of the family.

2. *Gonatus fabricii* (Lichtenstein). At a mantle length > about 17 mm, the hooks on arms and tentacles are not yet developed. Young animals with a characteristic colour pattern (Fig. 2b, e).

Family Onychoteuthidae (Plate II)

Terminal rhombic fins. Arms with two rows of small suckers. Proximally the club of the tentacles usually has a circular group of suckers modified into a fixing apparatus. Central rows of suckers in the carpal part of the club modified into hooks.

Genus ONYCHOTEUTHIS Lichtenstein

Back of the head with a system of longitudinal skin folds. Front part of the funnel pit more or less pointed.

3. *Onychoteuthis banksi* (Leach). Tentacle club in juvenile specimens with four rows of suckers. In more advanced stages the suckers are modified into a proximal circular fixing apparatus and a carpal part with the two central rows of suckers modified into long hooks while the lateral rows degenerate (Fig. 3b).

Family Histioteuthidae (Plate II)

Head and arms big. Mantle short and conical terminal semicircular fins reaching beyond the hinder end of the mantle. Eyes asymmetrically developed. Especially the ventral surface of the animal with a regular pattern of oval light organs.

Genus CALLITEUTHIS Verrill

With weakly developed umbrella.

4. *Calliteuthis reversa* Verrill.

Genus HISTIOTEUTHIS Orbigny

With a strongly developed umbrella occupying more than 50 % of the length of the arms.

5. *Histioteuthis bonelliana* (Ferrussac). Umbrella well developed at a mantle length > about 10 mm.

Family Brachioteuthidae (Plate II)

Terminal rhombic fins. Arms with two rows of suckers. 1st and 4th pair of arms feebly developed. Tentacle club slender the proximal part with a great number of small densely set suckers, the distal part with 5–6 longitudinal rows of big suckers.

Genus BRACHIOTEUTHIS Verrill

With the characters of the family.

6. *Brachioteuthis riisei* (Steenstrup). Characteristic are four pigment spots upon the head.

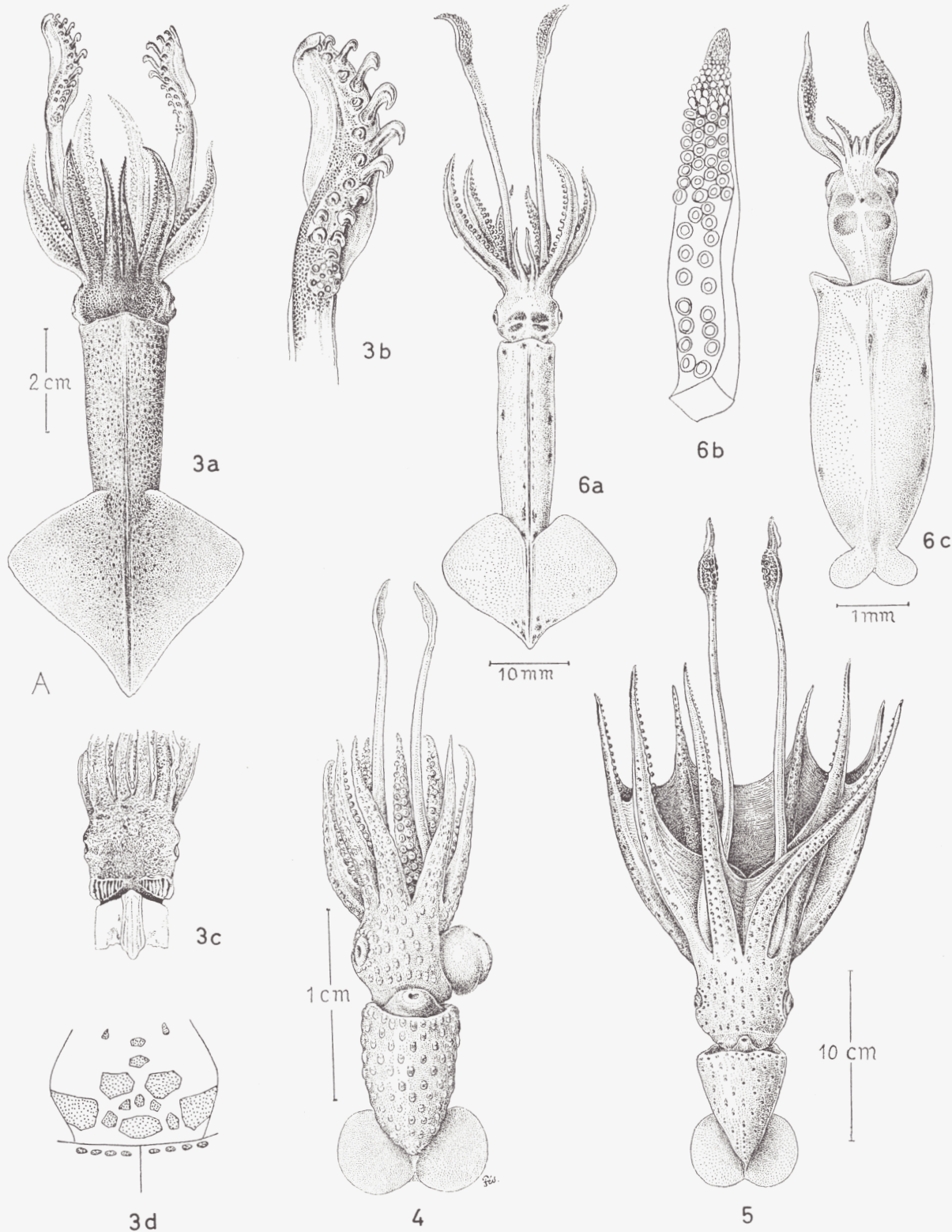


PLATE II

3. *Onychoteuthis banksi*; a, adult animal; b, tentacle club; c, back of the head of adult; d, chromatophores of the back of the head at mantle length 9-10 mm. — 4. *Calliteuthis reversa*. — 5. *Histoiteuthis bonelliana*. — 6. *Brachioteuthis riisei*; a, adult animal; b, tentacle club; c, larva. (Fig. 3c from PFEFFER; Figs. 3d and 6b from DEGNER; remainder original).

Further Information on Identification

1. *Octopoteuthis sicula*: ADAM, 1952, p. 71, Fig. 28. DEGNER, 1925, p. 14, Fig. 8. NAEF, 1923, p. 334, Textfigs. 163-167. PFEFFER, 1912, p. 213, Pl. 19, Figs. 1-16.
2. *Gonatus fabricii*: DEGNER, 1925, p. 7, Figs. 2-4. NAEF, 1923, p. 244, Textfigs. 114-116. PFEFFER, 1912, p. 230, Pl. 15, Figs. 17-24.
3. *Onychoteuthis banksi*: DEGNER, 1925, p. 10, Figs. 5-7. JAECKEL, 1958, p. 587, Fig. 58. NAEF, 1923, p. 313, Textfigs. 153-157. PFEFFER, 1912, p. 70, Pl. 3, Figs. 13-25; Pl. 4, Figs. 1-5; Pl. 5, Figs. 1-15; Pl. 6, Figs. 1-14.
4. *Calliteuthis reversa*: DEGNER, 1925, p. 20, Figs. 11-13. NAEF, 1923, p. 352, Textfigs. 173-180, Pl. 3, Fig. 5. PFEFFER, 1912, p. 250, Pl. 20, Figs. 1-10; Pl. 21, Figs. 1-14; Pl. 22, Figs. 1-8. VOSS, 1962, p. 169, Figs. 1-3.
5. *Histioteuthis bonelliana*: DEGNER, 1925, p. 16, Figs. 9, 10. NAEF, 1923, p. 362, Textfigs. 182-185, Pl. 3, Fig. 2. PFEFFER, 1912, p. 297, Pl. 23, Figs. 1-10; Pl. 24; Pl. 25.
6. *Brachioteuthis riisei*: DEGNER, 1925, p. 44, Figs. 34, 35. JAECKEL, 1958, p. 595, Fig. 62. NAEF, 1923, p. 370, Textfigs. 186, 187. PFEFFER, 1912, p. 355, Pl. 26, Figs. 1-20; Pl. 27, Figs. 1-9.

Distribution

Species
(Species in brackets occur only exceptionally)

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

References to Work on Biology are so few and scattered that they have been disregarded for this sheet.

References

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DEGNER, E., 1925. Rep. Danish Oceanogr. Exp. 1908-1910, **2**, C 1: 1-94.

JAECKEL, G. A., 1958. Tierwelt d. Nord- und Ostsee, Lief. 37, Teil 9, b3: 479-723.

NAEF, A., 1923. Fauna e Flora d. Golfo d. Napoli, 35. Monogr., Teil 1, **1**: 1-863.

PFEFFER, G., 1912. Ergebn. d. Plankton-Exp., **2**, F.a.: 1-815.

VOSS, Nancy A., & VOSS, Gilbert L., 1962. Bull. Mar. Sci. Gulf Caribb., **12**: 169-200.