

FICHES D'IDENTIFICATION DU ZOOPLANCTON

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FICHE NO. 152

SCYPHOMEDUSAE OF THE NORTH ATLANTIC

Order: CORONATAE

Families: Atollidae
Nausithoidae
Paraphyllinidae
Periphyllidae

by

F. S. Russell

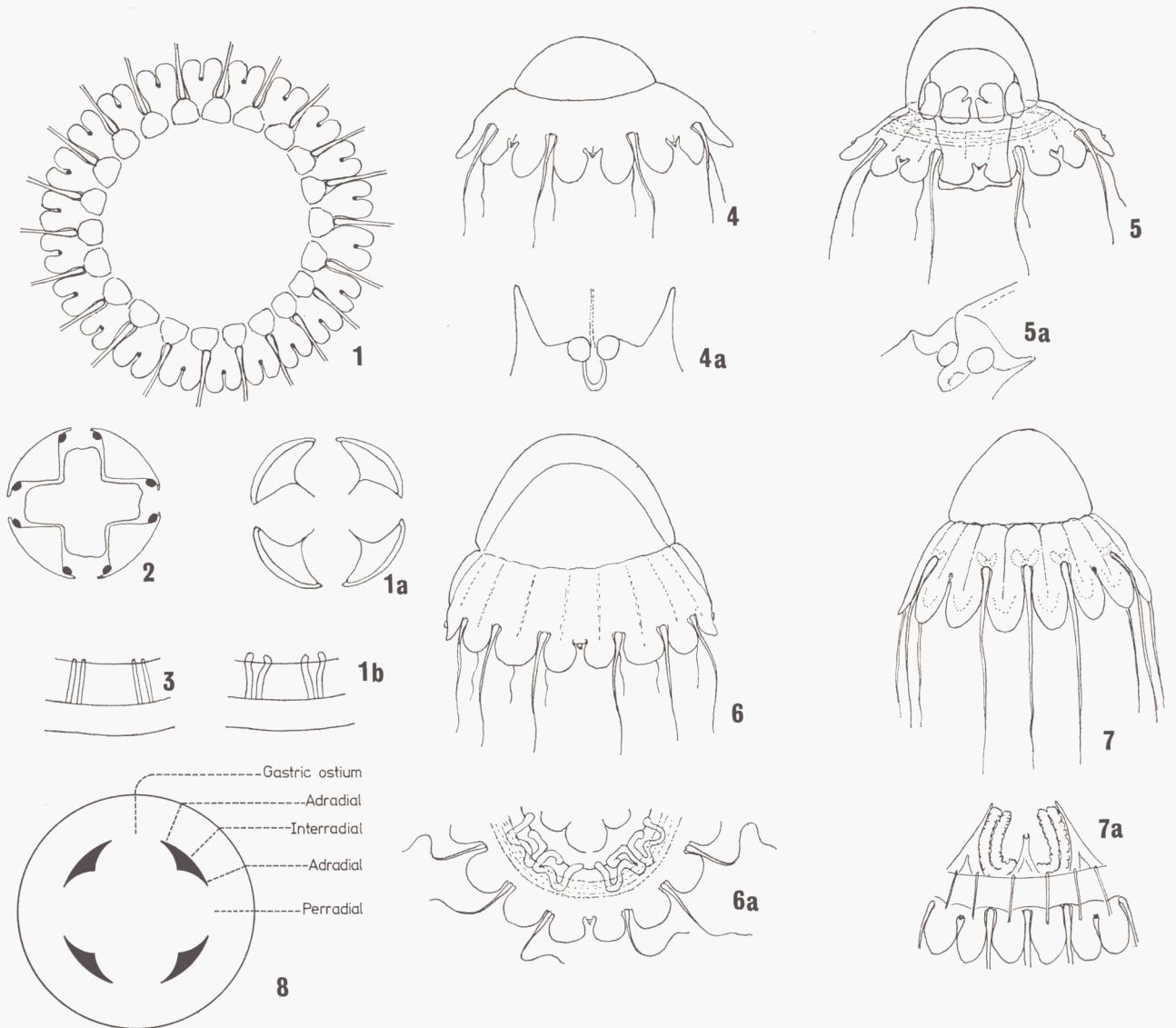
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1. *Atolla wyvillei* (semi-diagrammatic); 1 a, outline of base of stomach; 1 b, radial septa. 2. *Atolla vanhoeffeni*; outline of base of stomach. 3. *Atolla parva*; radial septa. 4. *Nausithoë atlantica*; 4 a, marginal sense organ. 5. *Nausithoë globifera*; 5 a, marginal sense organ. 6. *Paraphyllina ransoni*; 6 a, showing shape of gonad. 7. *Periphylla periphylla*; 7 a, showing shape of gonad. 8. Diagram to define the position of the radii in the Coronatae. The perradius coincides with the opening from the stomach (gastric ostium) which is essentially the same position as that of the emergence of the radial canal from the stomach in the Hydromedusae. Figures after Russell, 1970.

ORDER CORONATAE

The Coronatae are Scyphomedusae characterized by the presence of a circular, coronal furrow in the exumbrella. All the species described here are deep-water oceanic forms.

Family Atollidae

With numerous (more than eight) marginal sense organs alternating with an equal number of marginal tentacles.

Genus *Atolla* Haeckel*

With eight adradial gonads. Umbrella disc flattened.

1. *Atolla wyvillei* Haeckel. Umbrella up to 150 mm in diameter. Usually 22 marginal tentacles. Base of stomach in shape of 4-leaved clover (Fig. 1 a). Radial septa diverging at centripetal ends and extending beyond inner margin of coronal muscle (Fig. 1 b).
2. *Atolla vanhoeffeni* Russell. Umbrella up to 30 mm in diameter. Usually 20 marginal tentacles. Base of stomach cross-shaped with eight dark pigment spots, one on either side of each gastric osteum (Fig. 2).
3. *Atolla parva* Russell. Usually small. Umbrella up to 33 mm in diameter, but has been recorded up to 63 mm in equatorial waters. 20, 24 or 26 marginal tentacles. Base of stomach in shape of 4-leaved clover. Radial septa straight, not or only just extending beyond inner margin of coronal muscle (Fig. 3).

Family Nausithoidae

With 8 adradial marginal tentacles alternating with 4 perradial and 4 interradial marginal sense organs.

Genus *Nausithoë* Kölliker

With 8 adradial gonads.

4. *Nausithoë atlantica* Broch. Umbrella up to 28 mm in diameter, somewhat flattened and uniformly coloured chocolate red. Marginal sense organ with rhopalium with large flat wedge-shaped basal cushion with straight exumbrellar carina (Fig. 4 a).
5. *Nausithoë globifera* Broch. Umbrella up to 17 mm in diameter, with high dome-shaped central disc, usually colourless. Stomach purple red. Marginal sense organ with rhopalium with small high wedge-shaped basal cushion with exumbrellar carina bent downwards at right angles (Fig. 5 a).

Note. The identity of *Nausithoë limpida* Hartlaub (1909) from East Greenland remains uncertain.

Family Paraphyllinidae

With 4 perradial marginal sense organs. With 4 or more marginal tentacles.

Genus *Paraphyllina* Maas

With 12 marginal tentacles and 16 marginal lappets.

6. *Paraphyllina ransoni* Russell. Umbrella up to 35 mm in diameter with dome-shaped apex. Marginal tentacles in groups of three between adjacent perradial marginal sense organs which have no ocelli. Eight adradial gonads W-shaped (Fig. 6 a). Whole medusa coloured deep chocolate red.

Family Periphyllidae

With 4 interradial marginal sense organs.

Genus *Periphylla* Haeckel

With 12 marginal tentacles and 16 marginal lappets. With eight gonads.

7. *Periphylla periphylla* (Péron and Lesueur). Umbrella up to 200 mm in diameter, usually higher than wide with pointed or dome-shaped apex. Marginal tentacles in groups of three between adjacent interradial marginal sense organs. Stomach and umbrella dark purplish or reddish brown. Umbrella margin and gonads shown in Figure 7 a.

*) A fourth species of *Atolla*, *A. russelli*, has been described by Repelin (1962, Bull. Inst. fr. Afr. noire, 24, Ser. A. (3):664-78, Figs 1-5) off the coast of south west Africa.

FURTHER INFORMATION ON IDENTIFICATION

1. *Atolla wyvillei*: Russell, 1959, p. 33. Russell, 1970, p. 38, gives full references. (See also Kramp, 1961).
2. *Atolla vanhoffeni*: Russell, 1957, p. 275, Pl. I, Text-Fig. 1. Russell, 1970, p. 49.
3. *Atolla parva*: Russell, 1959, p. 33. Repelin, 1964, p. 19, Pls II-IV, Text-Fig. 4. Repelin, 1966, p. 24, Fig. 2. Russell, 1970, p. 52.
4. *Nausithoë atlantica* and
5. *Nausithoë globifera*: Broch, 1913, p. 9, Pl. I, Text-Fig. 5. Russell, 1956b, p. 363, Pl. I, Text-Figs 1-6. Russell, 1970, pp. 30 and 33.
6. *Paraphyllina ransoni*: Russell, 1956a, p. 105, Pls I-II. Repelin, 1965, p. 81. Russell, 1970, p. 155.
7. *Periphylla periphylla*: Russell, 1970, p. 60, gives full references. (See also Kramp, 1961).

DISTRIBUTION

The distribution of the three species of *Atolla* has been reviewed by Kramp (1972). *A. wyvillei* and *A. parva* have been recorded from the following areas: Greenland, Faroe-Iceland, Faroe-Shetland, Norwegian Sea, and south and west of Ireland. They are probably deep-water cosmopolitans. *A. vanhoffeni*, which is also cosmopolitan, appears to be a warmer water species and has not so far been recorded farther north than south and west of Ireland.

Nausithoë atlantica has not been recorded farther north than 48°29'N, while *N. globifera* has been taken as far north as south of Iceland.

The most northerly of the rare records of *Paraphyllina ransoni* is 48°26'N 9°42'W.

Periphylla periphylla is cosmopolitan with a wide distribution in the Atlantic, except the Arctic.

Distribution in the Scottish area is given in Fraser, 1972.

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