

FICHES D'IDENTIFICATION DU ZOOPLANCTON

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FICHE NO. 164

TRACHYMEDUSAE

Families: Geryonidae
Ptychogastridae
Halicreatidae

by

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1. *Liriope tetraphylla* (after RUSSELL, 1953). - 2. *Botrynema brucei* (after RUSSELL, 1953). - 3. *Botrynema ellinorae* (after HARTLAUB, 1909, from BROCH, 1929). - 4. *Halicreas minimum* (after VANHÖFFEN, 1902). - 5. *Haliscera bigelowi* (after RUSSELL, 1953). 6. *Ptychogastria polaris* (portion of umbrella margin, after BROWNE, 1903).

Order TRACHYMEDUSAE

Family Geryonidae

Stomach with peduncle; 4 or 6 radial canals, with centripetal canals; flattened leaf-shaped gonads on radial canals; marginal tentacles of two kinds, hollow and solid.

Genus *Liriope* Lesson

Geryonidae with 4 radial canals and 4 gonads

1. *Liriope tetraphylla* (Chamisso and Eysenhardt)

Stomach with small peduncle: radial canals broad: 1–3 (or more) centripetal canals in each interradius. Gonads on radial canals variable in shape. Four long hollow perradial marginal tentacles with nematocyst rings and 4 small solid interrarial tentacles with adaxial nematocyst clusters. Eight marginal sense organs. Diameter of umbrella 10–30 mm.

Family Ptychogastridae

Stomach with 8 mesenterial partitions: 8 radial canals: gonads on sides of 8 stomach lobes

The following two species live on the bottom and only occur by chance in the plankton. They are included here, but figures of the whole medusa are not given, since there are no satisfactory drawings of them. A diagram (after BROWNE, 1903, Pl. V, Fig. 6) of a portion of the umbrella margin of *Ptychogastris polaris* is however given as Figure 6.

Genus *Ptychogastris* Allman

Marginal tentacles grouped in clusters at different levels, some with adhesive discs

Ptychogastris polaris Allman

Umbrella hemispherical or somewhat conical, with 16 exumbrellar radial ridges; velum very wide. Stomach half as long as umbrella cavity, 8-rayed basally with 4 mouth lips. Sixteen separate gonads on sides of 8 stomach lobes. About 48 somewhat triangular groups of solid marginal tentacles, each with 3 upper filiform tentacles and numerous smaller tentacles below with terminal adhesive discs; with presumably one large filiform tentacle between each group. Sixteen marginal sense organs. Subumbrella pink, stomach deep red, and gonads scarlet. Diameter of umbrella 18–22 mm.

Genus *Tesserogastris* Beyer

Marginal tentacles at 3 to 5 levels, not in clusters; no adhesive tentacles

Tesserogastris muscolosa Beyer

Eight radial canals; 8 gonads on stomach; about 300 marginal tentacles. Height and width of umbrella 2 mm.

Family Halicreatidae

With wide circular stomach and broad radial canals. Numerous marginal tentacles, each with flexible proximal portion and stiff distal portion; marginal sense organs as free sensory clubs.

Genus *Botrynema* Browne

Halicreatidae with 8 radial canals; gonads on radial canals; 8 solitary perradial marginal tentacles and two groups of numerous marginal tentacles in a single row in each octant.

2. *Botrynema brucei* Browne

Umbrella with thick apical jelly and apical knob. Gonads oval on proximal halves of radial canals. Eleven or twelve marginal tentacles in each of 16 groups; usually 3 marginal sense organs in each interrarial space between groups of tentacles and 1 or 2 on either side of each solitary perradial tentacle. Diameter of umbrella up to 25 mm.

3. *Botrynema ellinorae* Hartlaub

As *B. brucei* except that it lacks an apical knob, although the apex is thickened and more or less conical according to Hartlaub.

Genus *Halicreas* Fewkes

Halicreatidae with radial gelatinous papillae on exumbrella; with 8 radial canals; with continuous row of marginal tentacles.

4. *Halicreas minimum* Fewkes

Umbrella disc-like with thick jelly, with apical projection of varying size; 8 radial canals, broad and band-like; broad ring canal; flattened gonads along greater part of radial canals; up to 640 marginal tentacles; marginal sense organs, 3-4 in each octant. Diameter of umbrella 30-40 mm.

Genus *Haliscera* Vanhöffen

Halicreatidae with 8 radial canals; with continuous row of marginal tentacles; with no papillae on exumbrella.

5. *Haliscera bigelowi* Kramp

Umbrella hemispherical with thick jelly thinning towards margins; 8 radial canals and ring canal broad; oval gonads on middle portion of radial canals, slightly nearer to stomach than to umbrella margin; about 12 marginal tentacles in each octant. Diameter of umbrella 15-17 mm, height 9-10 mm.

FURTHER INFORMATION ON IDENTIFICATION

- Liriope tetraphylla*: RUSSELL, 1953, p. 419. KRAMP, 1952, p. 242; 1959, p. 193; 1961, p. 238.
Ptychogastris polaris: BROWNE, 1903, p. 24. BROCH, 1929, p. 491. KRAMP, 1959, p. 180; 1961, p. 241.
Tesserogastris musculosa: BEYER, 1959, p. 121. KRAMP, 1961, p. 242.
Botrynema brucei: RUSSELL, 1953, p. 439. KRAMP, 1959, p. 183; 1961, p. 244.
Botrynema ellinorae: KRAMP, 1942, p. 73; 1959, p. 184; 1961, p. 244.
Halicreas minimum: VANHÖFFEN, 1902, p. 68. RUSSELL, 1953, p. 452. KRAMP, 1959, p. 181; 1961, p. 245.
Haliscera bigelowi: RUSSELL, 1953, p. 456. KRAMP, 1947, p. 8; 1959, p. 182; 1961, p. 246.

DISTRIBUTION

All the planktonic species are oceanic and widely distributed in the North Atlantic, except *Botrynema ellinorae* which is an arctic species. *Liriope tetraphylla* is a warmer water species. Of the two bottom-living species *Ptychogastris polaris* is arctic and *Tesserogastris musculosa* has only been recorded from Oslo Fjord.

REFERENCES

- BEYER, F., 1959. A new bottom-living Trachymedusa from the Oslo Fjord. *Nytt Mag. Zool.*, 6:128-43, 2 Pls.
 BIGELOW, H. B., 1909. Report of the Scientific Results of the Expedition to the Eastern Tropical Pacific by the U.S. Fish Commission Steamer 'Albatross'. XVI. The Medusae. *Mem. Mus. comp. Zool. Harv.*, 37:1-243, 48 Pls.
 BROCH, H., 1929. Craspedote Medusen, Teil II. Trachylinen (Trachymedusen und Narcomedusen). *Nord. Plankt.*, 21(12):481-580.
 BROWNE, E. T., 1903. Report on some Medusae from Norway and Spitzbergen. *Bergens Mus. Arb.*, 4:1-36.
 HARTLAUB, C., 1909. Méduses. *Crois. océanogr. Belgica Mer du Grönland* (1905), 463-482, Pls. 76-77.
 KRAMP, P. L., 1942. Medusae. *Meddr Grönland*, 8(1):1-168.
 KRAMP, P. L., 1947. Medusae. Part III. Trachylinen and Scyphozoa with zoogeographical remarks on all the Medusae of the North Atlantic. *Dan. Ingolf-Exp.*, 5:1-66, 5 Pls.
 KRAMP, P. L., 1959. The Hydromedusae of the Atlantic Ocean and adjacent waters. *Dana Rep.*, 46:1-238, 2 Pls.
 KRAMP, P. L., 1961. Synopsis of the Medusae of the world. *J. mar. biol. Ass. U.K.*, 40:1-469.
 RUSSELL, F. S., 1953. The Medusae of the British Isles. Cambridge Univ. Press. 1-530, 35 Pls.
 VANHÖFFEN, E., 1902. Die Craspedoten Medusen der deutschen Tiefsee-Expedition 1898-1899. I. Trachymedusen. *Wiss. Ergebn. dt. Tiefsee-Exp. 'Valdivia'*, 19(5):191-233, 1 Pl.