

CONSEIL INTERNATIONAL POUR L'EXPLORATION DE LA MER

Zooplankton.
Sheet 54.

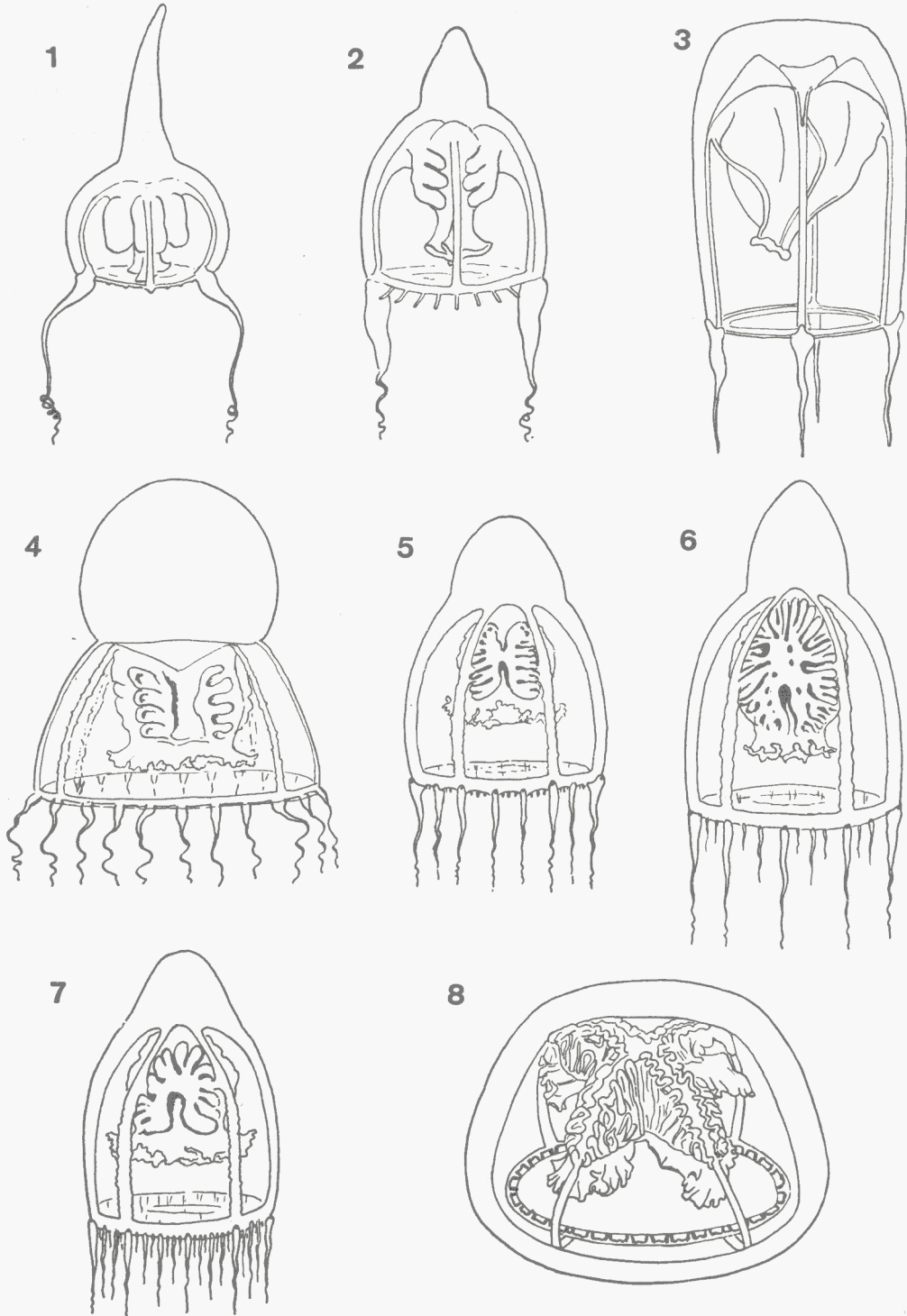
HYDROMEDUSAE

Families: Pandeidae

and Tiarannidae

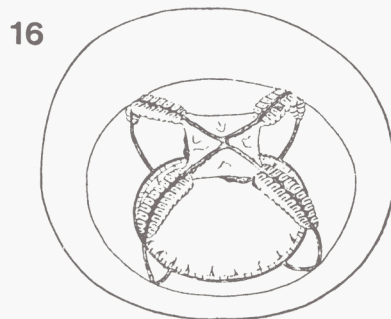
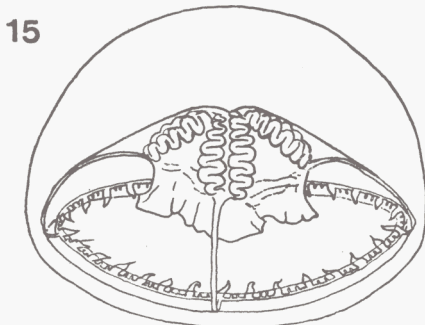
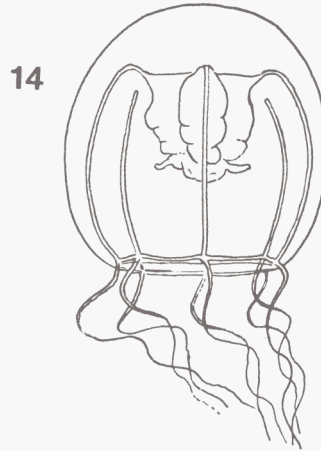
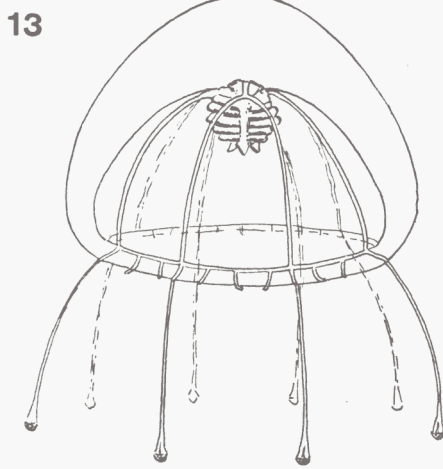
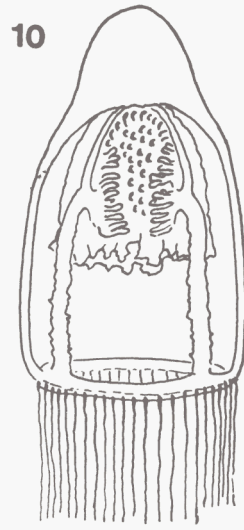
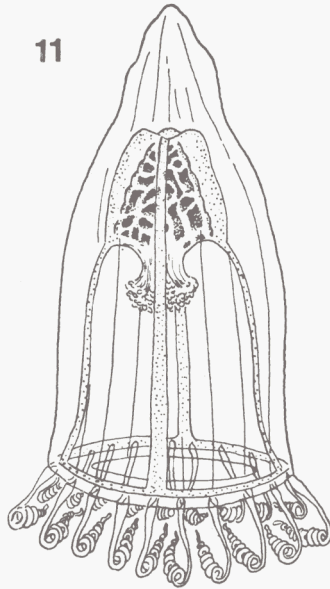
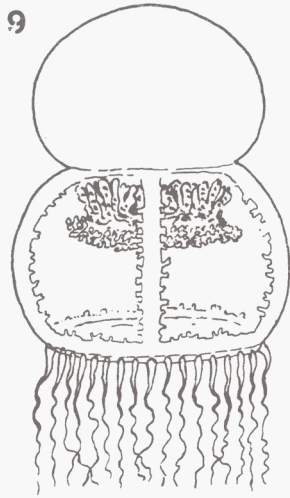
(By F. S. Russell)

1955.



1. *Amphinema dinema*. 3. *Paratiara digitalis*. 5. *Leuckartiara octona*. 7. *L. brevicornis*.
2. *A. rugosum*. 4. *Halitholus cirratus*. 6. *L. nobilis*. 8. *Annatiara affinis*.

(After various authors).



9. *Catablema vesicarium*.
10. *Neoturris pileata*.

11. *Pandeia conica*.
13. *Bythotiarra murrayi*.

14. *Calycopsis simplex*.
15. *Tiaranna rotunda*.

16. *Chromatonema rubrum*.

(After various authors).

Family PANDEIDAE

Mouth with four simple or crenulated lips. Gonads simple or folded, situated adradially or interradially on stomach wall, rarely on perradii of subumbrella. Two, four or more marginal tentacles with swollen bases, or without basal swellings and with terminal nematocyst clusters: with or without rudimentary marginal tentacles, warts or tentaculæ.

Sub-family Amphineminae

Simple mouth lips. Two perradial marginal tentacles with basal swellings.

Genus AMPHINEMA Haeckel:

Characters as sub-family.

1. *Amphinema dinema* (Péron & Lesueur). Simple unfolded adradial gonads. 14—24 small marginal warts. Height up to 6 mm.
2. *A. rugosum* (Mayer). Folded adradial gonads, with 3 or 4 folds sloping obliquely downwards towards interradii. 16—24 small marginal tentaculæ. Height up to 6 mm.

Sub-family Protiarinae

Simple mouth lips. Four perradial marginal tentacles with basal swellings.

Genus PARATIARA Kramp & Damas:

Characters as sub-family.

3. *Paratiara digitalis* Kramp & Damas. Simple unfolded interradiial gonads. 8 or more marginal tentacles. Height 10 mm.

Sub-family Pandeinae

Crenulated mouth lips. Folded gonads. Up to eight or more marginal tentacles with basal swellings.

Genus HALITHOLUS Hartlaub:

Slightly crenulated mouth lips. Peduncle present. Base of stomach attached to subumbrella along arms of perradial cross. Folded interradiial gonads, horse-shoe shaped with horizontal folds directed towards perradii.

4. *Halitholus cirratus* Hartlaub. Up to 120 marginal tentacles. Height up to 16 mm.
[*H. pauper* Hartlaub, with only 8 marginal tentacles, which occurs in Greenland waters, has been recorded from the north-west coast of Iceland by Kramp (1926).]

Genus LEUCKARTIARA Hartlaub:

Crenulated mouth lips. No peduncle. Attachment of stomach extending on to subumbrella surface to form "mesenteries". Folded interradiial gonads, horse-shoe shaped with horizontal folds directed towards perradii.

5. *Leuckartiara octona* (Fleming). 16—23 marginal tentacles with basal abaxial exumbrellar spurs. With ocelli. Height up to 15 mm. or more.
6. *L. nobilis* Hartlaub. 40 or more marginal tentacles, without well-developed basal abaxial exumbrellar spurs. With ocelli. Height up to 27 mm.
7. *L. brevicornis* (Murbach & Shearer). Up to 140 marginal tentacles, without well-developed basal abaxial exumbrellar spurs. No ocelli. Height up to 45 mm.

Genus ANNATIARA Russell:

Exumbrellar nematocyst tracks. Much crenulated mouth lips. Folded interradiial gonads.

8. *Annatiara affinis* (Hartlaub). Up to 44 marginal tentacles without well-developed basal abaxial exumbrellar spurs. With ocelli. Diameter up to 23 mm.

Genus CATABLEMA Haeckel:

Much crenulated mouth lips. Broad radial canals with distinctly denticulate edges. Complicated interradiial gonads with irregular folds running from upper edge of stomach and from perradii.

9. *Catablema vesicarium* (A. Agassiz). 30—40 marginal tentacles, and equal number of rudimentary tentacles. Height 30 mm.
[*C. multicirrata* Kishinouye, with up to 120 marginal tentacles, has been recorded off Greenland (Kramp, 1926).]

Genus NEOTURRIS Hartlaub:

Crenulated mouth lips. Folded interradiial gonads with adradial folds directed towards interradii and with isolated interradiial pits.

10. *Neoturris pileata* (Forskål). Up to 90 marginal tentacles. Height 30—35 mm.

Genus PANDEA Lesson:

With or without exumbrellar nematocyst ribs. Folded interradiial gonads with irregular network of ridges with pits between.

11. *Pandea conica* (Quoy & Gaimard). With exumbrellar nematocyst ribs. Gonad network coarse-meshed. Marginal tentacle bases laterally compressed. Subumbrella colourless. Height 20—30 mm.
12. *Pandea rubra* Bigelow. Without exumbrellar nematocyst ribs. Gonad network close-meshed. Marginal tentacle bases not laterally compressed. Subumbrella deeply pigmented. Height up to 75 mm.

Sub-family Calycopsinae*)

Marginal tentacles without basal swellings, and (where known) with terminal nematocyst clusters.

*) Should probably have Family rank.

Genus BYTHOTIARA Günther:

With four branching radial canals; without centripetal canals.

13. *Bythotiara murrayi* Günther. Four primary radial canals, each bifurcating once. Gonads with horizontal folds not divided longitudinally. Eight marginal tentacles. Height up to 20 mm.

Genus CALYCOPSIS Fewkes:

With four unbranched radial canals. With centripetal canals.

14. *Calycopsis simplex* Kramp & Damas. Four centripetal canals. Eight marginal tentacles. Height 8 mm.

Family TIARANNIDAE

Umbrella tending towards hemispherical Leptomedusan form. Folded gonads on interradial walls of stomach, or forming adradial pouches in extensions of stomach along radial canals. Marginal tentacles with swollen bases. With spindle-shaped marginal "cordylus"-like structures with nematocysts at distal end.

Genus TIARANNA Hartlaub:

Folded interradial gonads on stomach.

15. *Tiaranna rotunda* (Quoy & Gaimard). 16—28 marginal tentacles. Diameter up to 22 mm.

Genus CHROMATONEMA Fewkes:

Gonads forming pouches along radial canals.

16. *Chromatonema rubrum* Fewkes. 20—24 marginal tentacles. Diameter up to 27 mm.

Further Information on Identification

1. *A. dinema*: Mayer, 1910, p. 109, Textfig. 60, Pl. IX, Figs. 8—10, Pl. X, Figs. 1—4 (as *Stomotoca*); Hartlaub, 1914, p. 261, Fig. 215 (as *Tiarula coeca*); Russell, 1953, p. 180, Pl. X, Figs. 1, 2, 4, Pl. XI, Figs. 1, 3.
2. *A. rugosum*: Mayer, 1910, p. 112, Pl. X, Figs. 5, 6, Pl. XI, Figs. 1, 2 (as *Stomotoca*); Hartlaub, 1914, p. 259, Figs. 214, 216, 217 (as *A. dinema*); Russell, 1953, p. 183, Textfig. 90, Pl. X, Fig. 3, Pl. XI, Figs. 2, 4.
3. *P. digitalis*: Kramp & Damas, 1925, p. 273, Figs. 18—20.
4. *H. cirratus*: Hartlaub, 1914, p. 274, Figs. 225—234; Kramp, 1926, p. 74, Pl. II, Fig. 4.
[*H. pauper*: Hartlaub, 1914, p. 272, Figs. 223, 224; Kramp, 1926, p. 71, Pl. II, Figs. 1—3.]
5. *L. octona*: Hartlaub, 1914, p. 285, Figs. 238—252; Kramp, 1926, p. 76, Textfig. 35, Pl. II, Figs. 5—7; Russell, 1953, p. 188, Textfigs. 91—96, Pl. XI, Figs. 5, 6, Pl. XII, Fig. 3, Pl. XXXI.
6. *L. nobilis*: Hartlaub, 1914, p. 308, Figs. 257—260; Kramp, 1926, p. 83, Textfig. 36, Pl. II, Fig. 9; Russell, 1953, p. 195, Textfig. 97, Pl. XII, Fig. 4.
7. *L. brevicornis*: Murbach & Shearer, 1903, p. 170, Pl. XVIII, Figs. 1, 2; Hartlaub, 1914, p. 304, Figs. 254—256; Russell, 1953, p. 198, Textfigs. 99, 100, Pl. XII, Fig. 2.
8. *A. affinis*: Hartlaub, 1914, p. 269, Figs. 220, 221 (as *Tiaranna*); Kramp, 1920, p. 6, Pl. I, Fig. 1; 1926, p. 68, Pl. I, Figs. 15—17 (as *Tiaranna*); Russell, 1953, p. 200, Textfigs. 101—103.
9. *C. vesicarium*: Hartlaub, 1914, p. 315, Figs. 264—267; Kramp, 1926, p. 87, Pl. II, Figs. 10, 11.
10. *N. pileata*: Hartlaub, 1914, p. 326, Figs. 270, 273, 274—281; Kramp, 1926, p. 92, Textfig. 37, Pl. II, Figs. 13, 14; Russell, 1953, p. 203, Textfigs. 104—106, Pl. XII, Fig. 1.
11. *P. conica*: Hartlaub, 1914, p. 338, Figs. 283, 286, 287; Ranson, 1936, p. 84, Pl. I, Figs. 1—6; Russell, 1953, p. 207, Textfigs. 107—110.
12. *P. rubra*: Bigelow, 1913, p. 14, Pl. II, Figs. 1—7; Hartlaub, 1914, p. 340, Fig. 288; Kramp, 1926, p. 96, Pl. II, Fig. 15; Russell, 1953, p. 211, Textfigs. 111, 112.
13. *B. murrayi*: Hartlaub, 1914, p. 355, Figs. 304—306; Kramp, 1926, p. 97, Textfigs. 38—40; Ranson, 1936, p. 98, Pl. I, Fig. 12; Russell, 1953, p. 215, Textfigs. 113—116, Pl. XIII, Fig. 1.
14. *C. simplex*: Kramp & Damas, 1925, p. 283, Fig. 23.
15. *T. rotunda*: Hartlaub, 1914, p. 266, Figs. 218, 219; 1917, p. 411, Figs. 341—343 (as *Rotundula brochii*); Kramp, 1920, p. 6, Pl. I, Figs. 2—4; Kramp & Damas, 1925, p. 275, Figs. 21, 22; Kramp, 1926, p. 68; Russell, 1953, p. 219, Textfigs. 117—119.
16. *C. rubrum*: Kramp, 1919, p. 7, Textfig. 3, Pl. I, Figs. 1—8; 1920, p. 8, Pl. I, Figs. 5, 6; 1933, p. 552, Figs. 14, 15; Ranson, 1936, p. 102, Pl. II, Fig. 13; Russell, 1953, p. 223, Textfigs. 120, 121.

Distribution Species

Gulf of Bothnia	—
Gulf of Finland	4
Baltic proper	4, 5, 6
Belt Sea	4, 5, 10
Kattegat	5, 10, 13, 15
Skagerak	2, 5, 7, 9, 15
Northern North Sea	5
Southern North Sea	1, 2, 5
English Channel (eastern)	1, 2, 5
English Channel (western)	1, 2, 5, 10
Bristol Channel and Irish Sea	—
South and West Ireland and Atlantic	1, 2, 5, 6, 7, 8, 9, 11, 12, 13, 16
Faeroe Shetland Area	5, 15
Faeroe Iceland Area	3, 5, 6, 7, 10, 16
Norwegian Sea	3, 5, 9, 10, 13, 14, 15, 16
Barents Sea	3, 4, 9

References to Work on Biology

(Numbers after references give species referred to.)
 Kramp (1926) 6, 7, 10, (1927) 4, 5, 10, (1930) 5,
 (1947) 6; Russell (1953) Summaries of 1, 2, 5, 6,
 7, 10, 11, 12, 13, 15, 16.

References

- Bigelow, H. B., 1913. Proc. U.S. nat. Mus., **44**, pp. 1—119.
- Hartlaub, Cl., 1914. Nordisches Plankton, Zool., **6**, Craspedote Medusen II, pp. 237—363.
- Hartlaub, Cl., 1914. Nordisches Plankton, Zool., **6**, Craspedote Medusen II, pp. 365—418.
- Kram p, P. L., 1920. Rep. sci. Res. "M. Sars" N. Atlant. Deep-Sea Exped. 1910, **3**, Pt. II, (1913—21) (1932).
- Kram p, P. L., 1926. Danish Ingolf-Exped., **5**, Pt. 10.
- Kram p, P. L., 1927. K. danske vidensk. Selsk. Skr., nat. math. Afd., **8**. Rk., **12**, 1.
- Kram p, P. L., 1930. Mém. Mus. nat. Belg., 45.
- Kram p, P. L., 1947. Danish Ingolf-Exped., **5**, Pt. 14.
- Kram p, P. L. & Damas, D., 1925. Vidensk. Medd. dansk naturh. Foren. København, **80**, pp. 217—323.
- Mayer, A. G., 1910. *The Medusae of the World*, **1—3**, Washington, D. C.
- Murbach, L. & Shearer, C., 1903. Proc. zool. Soc. London, **2**, 7, p. 164.
- Ranson, G., 1936. Rés. Camp. sci. Monaco, **92**, pp. 1—26.
- Russell, F. S., 1953. *The Medusae of the British Isles*, pp. 530, Cambridge Univ. Press.