CONSEIL INTERNATIONAL POUR L'EXPLORATION DE LA MER

Zooplankton
Sheet 84

ROTATORIA I

ORDER: MONOGONONTA

SUB-ORDER: PLOIMA

Family: Synchaetidae

Genus: SYNCHAETA

(By Bruno Berzins)

1960

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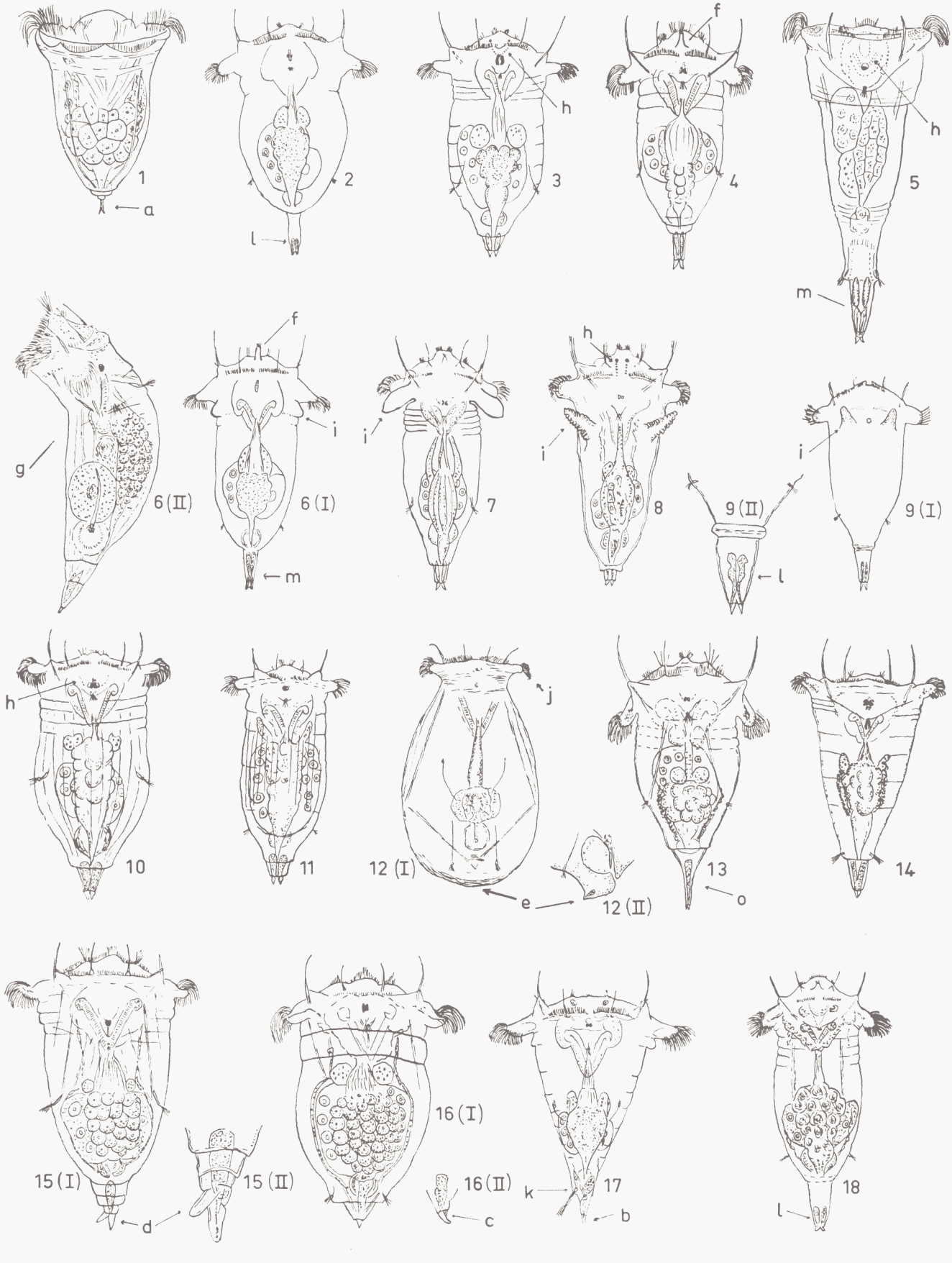
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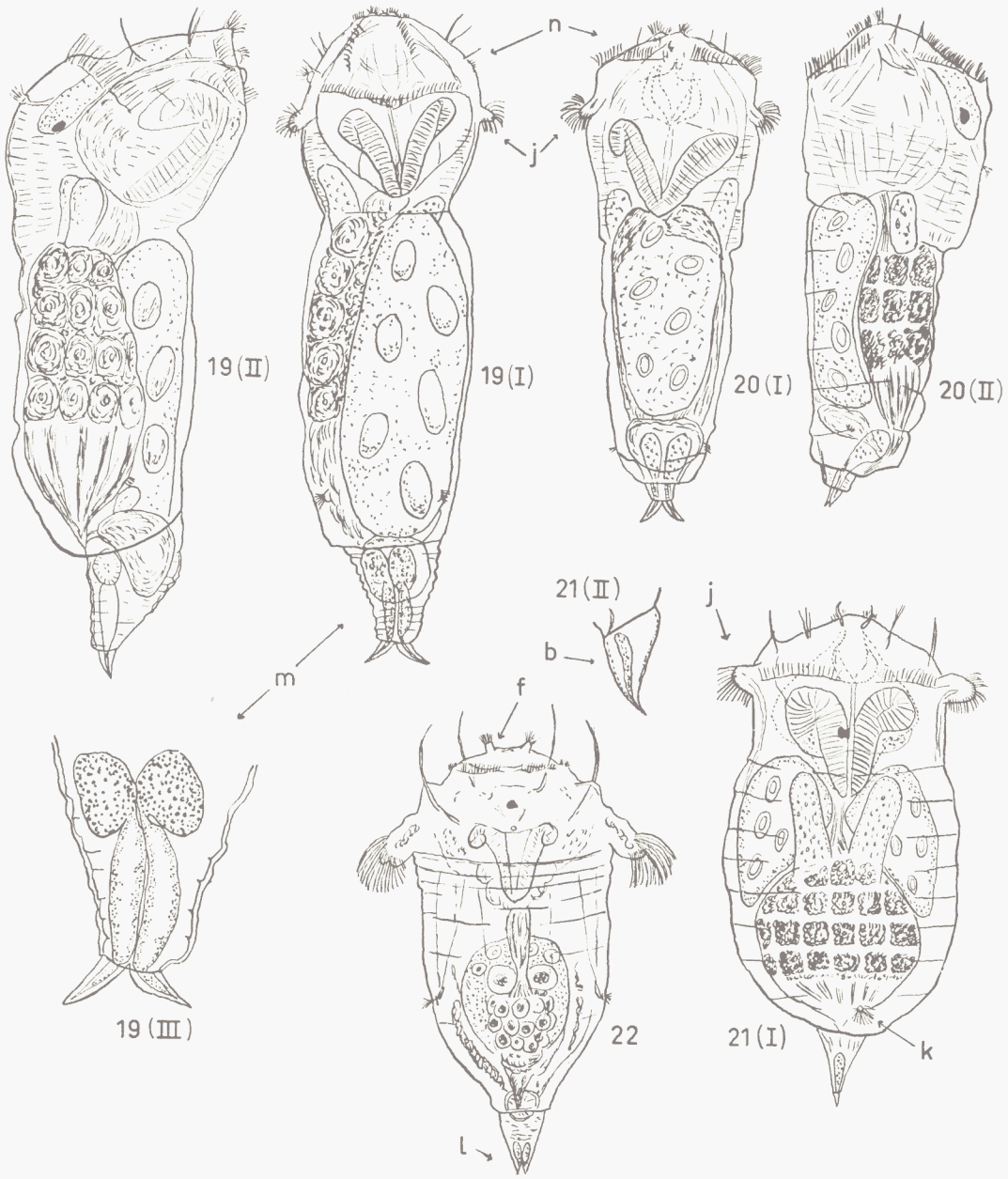

1, *Synchaeta atlantica*. 2, *S. baltica*. 3, *S. littoralis*. 4, *S. vorax*. 5, *S. grimpei*. 6(I) & (II), *S. curvata*. 7, *S. fennica*. 8, *S. bicornis*. 9(I) & (II), *S. baccilifera*. 10, *S. gyrina*. 11, *S. tavina*. 12(I) & (II), *S. monopus*. 13, *S. stylata*. 14, *S. tremula*. 15(I) & (II), *S. neapolitana*. 16(I) & (II), *S. cecilia*. 17, *S. triophthalma*. 18, *S. johanseni*. 19(I—III), *S. hyperborea*. 20(I) & (II), *S. glacialis*. 21(I) & (II), *S. tamara*. 22, *S. pectinata*. (After various authors.)

a = toes needle-like, b = only one toe, c = one toe reduced, bump-like, d = one toe only little reduced, e = without foot, toes reduced, f = rostrum, g = body curved when fixed, h = eye with pigment row, i = appendices under auricles, j = small auricles, k = one lateral antenna, asymmetrical, l = pedal glands terminal, m = pedal glands in two parts, n = head stout, o = foot long.

Genus Synchaeta Ehrenberg 1832

Body more or less conical or bell-shaped, terminated into a foot with toes; but in a few cases the foot or toes are reduced. Corona convex, with four prominent sensory bristles; front furnished laterally with two ciliated auricles. Mastax virgate (rod-shaped).

Species	Head with or without rostrum	Auricles	With or without appendices under auricles	Head in front convex	Foot length : body length	Foot length : width
1. *Synchaeta atlantica* Zelinka	Without	Ordinary	Without	Slightly convex	1 : 20	1 : 1
2. *S. baltica* Ehrenberg	Without	Large	Without	Ordinary convex	1 : 6	3 : 1
3. *S. littoralis* Rousselet	Without	Large	Without	Ordinary convex	1 : 15	1 : 1
4. *S. vorax* Rousselet	With 1, very small	Large	Without	Strongly convex	1 : 9	3 : 1
5. *S. grimpei* Remane	Without	Small	Without	Flat	1 : 5	3 : 1
6. *S. curvata* Lie-Pettersen	With 1	Large	2 small, laterally	Ordinary convex	1 : 7	3 : 1
7. *S. fennica* Rousselet	With 1, very small	Large	With 2 large, laterally	Ordinary convex	1 : 12	2 : 1
8. *S. bicornis* Smith	Without	Ordinary or large	With 2, horn-like	Ordinary convex	1 : 20	1 : 1
9. *S. baccilifera* Smirnov	Without (front indented)	Ordinary	With 2 ordinary, dorsally	Ordinary convex	1 : 6	2 : 1
10. *S. gyrina* Hood	Without	Large	Without	Flat, or slightly convex	1 : 10	2 : 1
11. *S. tavina* Hood	Without	Ordinary	Without	Flat	1 : 15	1 : 1
12. *S. monopus* Plate	Without (corona no wider than body)	Small	Without	Flat	0 : 1	—
13. *S. stylata* Wierzejski	Without	Large	Without	Ordinary convex	1 : 4	4 : 1
14. *S. tremula* Mueller	Without	Ordinary	Without	Flat	1 : 7	2 : 1
15. *S. neapolitana* Rousselet	Without	Large	Without	Slightly convex	1 : 8	1 : 1
16. *S. cecilia* Rousselet	Without	Large	Without	Slightly convex	1 : 10	2 : 1
17. *S. triophthalma* Lauterborn	Without	Large	Without	Ordinary convex	1 : 10	2 : 1
18. *S. johanseni* Harring	With 1, very small	Ordinary	Without	Strongly convex	1 : 5	3 : 1
19. *S. hyperborea* Smirnov	Without	Small	Without	Strongly convex	1 : 5	2 : 1
20. *S. glacialis* Smirnov	Without	Small	Without	Strongly convex	1 : 25	1 : 1
21. *S. tamara* Smirnov	Without	Small	Without	Ordinary convex	1 : 7	2 : 1
22. *S. pectinata* Ehrenberg	With 2	Large	Without	Strongly convex	1 : 7	1 : 1

Shape of body and foot	Toes	Pedal glands in whole length of foot or in part	Lateral antennae situated on trunk	Red eyes (normally)
Bell-shaped, foot small	2 long, needle-like	In whole	Not known	Without eyes?
Bell-shaped, foot separated	2 small	Only terminal	2, below last third	Double
Cylindrical, posterior conical	2 small	In whole	2, below last third	Double, with rows of pigments
Bell-shaped, foot long and cylindrical	2 ordinary	In whole	2, toward last third	Double when fused, single
Conical	2 small	In whole, in 2 parts	2, on posterior end of body	With 2 rows of pigments
Body and foot conical, dorsally curved when fixed	2 small, blunt	In whole, in 2 parts	2, below last third of body	Single or double
Cylindrical, abdomen conical	2 small	In whole	2, toward last third	Double and with pigment row
Conical, foot small	2 small, blunt	In whole	Not known	Double, with rows of pigment
Bell-shaped, foot separated	2 small	Only terminal	2, below last third	Single
Cylindrical, foot conical	2 small	In whole	2, toward middle of body	Double
Cylindrical	2 ordinary	Also into trunk	2, below last third of body	Single or double
Bag-shaped, without foot	Very strongly reduced, or without	—	2, near posterior margin of trunk	Single
Conical; foot long, thin, conical	2 very small	In whole	2, toward last third of body	Double (or fused)
Conical	2 small, close together	In whole	2, on the posterior end of body	Single, often with surrounding pigments
Bell-shaped, foot ordinary, segmented	1 ordinary, 1 small, oblique	In whole	2, toward last third	Double
Bell-shaped, stout, foot small	1 ordinary, 1 reduced to a bump	In whole	2, on posterior end of trunk	Double
Bell-shaped, foot small	Only 1 toe	In whole, in 2 parts	1, asymmetrical, with basis of foot	Double, with 2 rows of pigments
Cylindrical, foot stout	2 ordinary	Only terminal	2, below last third	Without eyes?
Cylindrical, foot stout	2 strong	In whole, in 2 parts	2, below last third	Single
Cylindrical, foot small	2 ordinary	Also into body	2, below last third	Single
Cylindrical, stout, foot conical	Only 1 toe	Not whole length	1, asymmetrical, at distal end of trunk	Double
Bell-shaped, foot conical	2 small	In distal part	2, toward last third	Double

References to Descriptions and Figures

1. *S. atlantica:* Zelinka, 1907, p. 5, Pl. 1, Figs. 1—11; Remane, 1929, p. 126; Voigt, 1957, p. 397, Pl. 86, Fig. 16.
2. *S. baltica:* Ehrenberg, 1838, p. 437, Pl. 53, Fig. 5; Hudson & Gosse, 1889, I, p. 126, Pl. 13, Fig. 1; Levander, 1894, p. 18, Pl. 1, Fig. 4; Rousselet, 1902, p. 309, Pl. 6, Fig. 11; Lie-Pettersen, 1905, p. 15; Lauterborn, 1905, p. 26; Remane, 1929, p. 125, Fig. 136; Voigt, 1957, p. 400, Pl. 86, Fig. 2, Pl. 62, Fig. 22.
3. *S. littoralis:* Rousselet, 1902, p. 398, Pl. 7, Fig. 15; Lauterborn, 1905, p. 27; Remane, 1929, p. 126; Hollowday, 1949, p. 243, Fig. 1c; Voigt, 1957, p. 402, Pl. 86, Fig. 13.
4. *S. vorax:* Rousselet, 1902, p. 408, Pl. 8, Fig. 19; Lie-Pettersen, 1905, p. 19, Pl. 1, Figs. 4—5; Lauterborn, 1905, p. 26; Remane, 1929, p. 125; Hollowday, 1949, p. 245, Fig. 1D, Fig. 2A; Margalef, 1956, p. 134; Ridder, 1959, p. 6; Voigt, 1957, p. 399, Pl. 86, Fig. 9.
5. *S. grimpei:* Remane, 1929, p. 122, Fig. 128; Galliford, 1946, p. 15, Figs. 1—5 (as *procera*); Voigt, 1957, p. 399, Pl. 86, Fig. 7.
6. *S. curvata:* Lie-Pettersen, 1905, p. 27, Fig. 2, Pl. 1, Fig. 8; Remane, 1929, p. 122, Fig. 131; Voigt, 1957, p. 402, Pl. 86, Fig. 21.
7. *S. fennica:* Rousselet, 1909, p. 170, Pl. 5, Fig. 1; Remane, 1929, p. 122; Voigt, 1957, p. 402, Pl. 86, Fig. 20.
8. *S. bicornis:* Smith, 1904, p. 121, Pl. 18; Remane, 1929, p. 125; Voigt, 1957, p. 403, Pl. 86, Fig. 19.
9. *S. baccilifera:* Smirnov, 1933, p. 85 and 90, Figs. 4—11.
10. *S. gyrina:* Hood, 1887, p. 149, Fig.; Hudson & Gosse, 1889, Suppl., p. 18; Lie-Pettersen, 1905, p. 26, Pl. 1, Fig. 6; Lauterborn, 1905, p. 25; Remane, 1929, p. 126; Voigt, 1957, p. 402, Pl. 86, Fig. 12.
11. *S. tavina:* Hood, 1893, p. 382, Pl. 17; Lauterborn, 1905, p. 26; Remane, 1929, p. 126; Voigt, 1957, p. 401, Pl. 86, Fig. 14.
12. *S. monopus:* Plate, 1889, p. 1; Levander, 1894, p. 21, Pl. 1, Figs. 1—2; Lauterborn, 1905, p. 29; Remane, 1929, p. 120; Voigt, 1957, p. 396, Pl. 86, Fig. 6.
13. *S. stylata:* Wierzejski, 1893, p. 404; Remane, 1929, p. 126; Voigt, 1957, p. 398, Pl. 86, Fig. 5.
14. *S. tremula:* Mueller, 1786, p. 289, Pl. 41, Figs. 4—7; Hudson & Gosse, 1889, I, p. 126, Pl. 13, Fig. 2; Lauterborn, 1905, p. 31; Remane, 1929, p. 125; Voigt, 1957, p. 400, Pl. 86, Fig. 10.
15. *S. neapolitana:* Rousselet, 1902, p. 410, Pl. 5, Fig. 9; Lie-Pettersen, 1905, p. 23, Fig. 1; Lauterborn, 1905, p. 28; Runnström, 1926, p. 2; Remane, 1929, p. 121; Margalef, 1956, p. 133; Voigt, 1957, p. 397, Pl. 86, Fig. 18.
16. *S. cecilia:* Rousselet, 1902, p. 406, Pl. 7, Fig. 16; Lie-Pettersen, 1905, p. 25, Pl. 1, Fig. 7; Lauterborn, 1905, p. 28; Remane, 1929, p. 121; Voigt, 1957, p. 397, Pl. 86, Fig. 17.
17. *S. triophthalma:* Lauterborn, 1894, p. 212, Fig. 1; Lie-Pettersen, 1905, p. 21, Pl. 1, Figs. 2—3; Lauterborn, 1905, p. 29, Fig. 8; Remane, 1929, p. 121, Fig. 125; Hollowday, 1949, p. 242, Fig. 1A—B; Margalef, 1956, p. 134, Fig. B; Voigt, 1957, p. 397, Pl. 86, Fig. 22.
18. *S. johanseni:* Harring, 1921, p. 13, Pl. 1, Fig. 3; Remane, 1929, p. 129; Voigt, 1957, p. 400, Pl. 86, Fig. 3.
19. *S. hyperborea:* Smirnov, 1932, pp. 44 and 52, Figs. 19—26.
20. *S. glacialis:* Smirnov, 1932, pp. 41 and 52, Figs. 13—18.
21. *S. tamara:* Smirnov, 1932, pp. 38 and 51, Figs. 1—12; Smirnov, 1933, p. 81, Figs. 1—2.
22. *S. pectinata:* Ehrenberg, 1838, p. 437, Pl. 53, Fig. 4; Hudson & Gosse, 1889, I, p. 125, Pl. 13, Fig. 3; Lauterborn, 1905, p. 31; Remane, 1929, p. 121; Voigt, 1957, p. 401, Pl. 86, Fig. 8.

Distribution	Species (Uncertain data given in brackets)
Gulf of Bothnia	2, 7, 12, 13, 14, 22
Gulf of Finland	2, (3), (4), 7, 10, 12, 13, 14, 22
Gulf of Riga	2, 7, 12, 14, 19, 22
Baltic proper	2, 6, 7, 10, 12, 17
Belt Sea	2, 3, 5, 6, 7, 10, 11, 12, 14, 16, 17, 22
Kattegat	2, 3, 6, 10, 12, 16, 17
Skagerak	2, 3, 4, 6, 10, 15, 16, 17
Northern North Sea	2, 3, 4, 6, 10, 11, 15, 16, 17
Southern North Sea	2, 3, 4, 6, 8, 10, 11, 15, 16, 17
English Channel, eastern	4, 15, 17
English Channel, western	3, 4, 10, 15, 17
Bristol Channel and Irish Sea	2, 3, 4, 5, 10, 16, 17, 22
South and West Ireland and Atlantic	1, (2), 4, 11, 15, 17
Faroe-Shetland area	1, (10), 11
Faroe-Iceland area	1, (18)
Norwegian Sea	1, 2, 4, 6, 10, 14, 16, 17
Barents Sea	2, 9, 19, 20, 21

There are more freshwater species of *Synchaeta* found in the inner Baltic (e.g., *S. oblonga*, *S. kitina*), which are sporadic in estuaries. *S. johanseni* has not yet been found in the area covered, but could be expected around Iceland. Species 1—2, 7, 9, 12, 15, 17, and 18—21 are pelagic; species 3—6, 8, 10—11, and 16 are more littoral; species 13, 14, and 22 are freshwater, but often occur in estuaries.

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