

ANNELIDA: ARCHIANNELIDA

Phylum **ANNELIDA**Class **ARCHIANNELIDA****DINOPHILUS TAENIATUS** Harmer [*Harmer*, 1889, p. 119]

In rock-pools in Sound far above low water in March and April, not found in June (Harmer, 1889). Often in immense numbers in pools high on the limestone rocks below the Laboratory and in front of West Hoe Terrace; records kept by A.J.S. between 1906-24 from below the Laboratory show that it appears to be abundant from Nov. to April, but absent or very scarce between May and Oct. (E.J.A.)

Breeding, maximum period seems to be the beginning of April (A.J.S.)

DINOPHILUS GYROCILIATUS O. Schmidt [*Shearer*, 1912, p. 337]

From sandy dredgings from Cawsand Bay. Can also be obtained in scrapings from the piles in Millbay Docks. Lived well in small aquaria and became established in the Laboratory tanks (Shearer 1912 p. 342)

Breeding: all the year round in the Laboratory tanks (C.S.)

PROTODRILUS FLAVOCAPITATUS (Uljanin) [*Pierantoni* 1908, p. 167]

The first record at Plymouth is by Bles (1892, p. 343) who reared it from tow-nettings taken in September. Adults have since been found in numbers at eleven places between Salcombe and Lose, under stones and gravel near high-water mark where small fresh-water streams join the sea (Orton, 1913a, p. 86 and 1913b, p. 348): below Tinside bathing pool, 30.3.23 (J.H.O.): estuary of fresh-water stream on Wembury Beach, 15-19.7.30, calm sea, neap tides, moderately abundant from high-water neaps to low-water neaps: 28.7.30, rough sea, spring tide, no *Protodrilus* found over same region; 1.8.30, one specimen only found near neaps (C.F.A.P.)

Breeding: ripe ova 31.3.23 (J.H.O.)

CTENODRILUS SERRATUS (O. Schmidt) [*Claparède*, 1863, p. 25, as *C. pardalis*]

In the Laboratory tanks and also in pools at high-tide level below Laboratory; some years very abundant in the tanks, in other years it is absent (C.S.): what is probably this species from Cattewater, Aug-Sept. 1928, differs in certain characters and is much smaller (A.Me.)

NERILLA ANTENNATA O. Schmidt [*Goodrich*, 1912, p. 398]

First recorded by Buchanan (1893, p. 358); since found frequently in the Laboratory tanks, and also in scrapings from piles in the Cattewater (E.J.A.)

Breeding: Jan., Feb.-June in Laboratory tanks (C.S.): probably this species with numerous eggs, Nov. (J.H.O.): depositing eggs in small tanks in the Laboratory many, 5. 11.30 (A.J.S.)

SACCOCIRRUS sp. [*Goodrich*, 1901, p. 413]

Found by Orton in Cawsand Bay, together with *Protodrilus*, amongst stones and gravel just below high-water mark where a small fresh-water stream joins the sea. He thinks the species different from *S. papillocereus* Bobretzky (Orton, 1913b, p. 348)

Breeding: Command Bay shore, 25-28.5.13, Larvae obtained (J.H.O.)

POLYGORDIUS LACTEUS Schneider [*Hempelmann*, 1906, p. 527]

Dredged in clean shell gravel off the Mewstone and near the west end of the Breakwater; in clean shell gravel near the Eddystone and off Bolt Head (E.J.A.)

Class **POLYCHAETA**Family **Aphroditidae****APHRODITE ACULEATA** L. [*McIntosh*, 1900-23, I, 2, p. 247]

On most of the fine-sand grounds off Plymouth, between 20 and 30 fm. (T.V.H.: R.A.T., E.J.A.): S.S.W. of Eddystone to 42 fm. (Crawshay, 1912, p. 340)

SALCOMBE. One small specimen from Mill Bay sands (Hodgson, in Allen and Todd, 1900, p. 190)

Breeding: 28.11.21, 4. m. S.W. of Rame, spawn given off in clouds; 18.10.23, hundreds of opaque eggs which looked ripe, extruded in aquarium tank (A.J.S.): spawned in aquarium 25.9.30 (D.P.W.)

HERMIONE HYSTRIX (Savigny) [*McIntosh*, 1900-23, I, 2, p. 264]

Most frequently on gravel grounds in the neighbourhood of the Eddystone (Hodgson, 1900, p. 240): occasionally on similar ground in about 20 fm. (R.A.T., E.J.A.): S.S.W. of Eddystone to 50 fm. on rough ground (Crawshay, 1912, p. 340)

LEPIDONOTUS SQUAMATUS (L.) [*McIntosh*, 1900-23, I, 2, p. 274]

Under stones and amongst weeds, hydroids, bryozoa, etc.; from low-tide mark to 30 fm. and over, common and widely distributed (Hodgson, 1900, p. 240): S.S.W. of Eddystone to 42 fm. (Crawshay, 1912, p. 340)

SALCOMBE. Dredged in the channel between the Salstone and Snape's Point, as well as in the channel in Salcombe Harbour; also obtained under the Marine Hotel (Hodgson, in Allen and Todd, 1900, p. 190)

LEPIDONOTUS CLAVA (Montagu) [*McIntosh*, 1900-23, I, 2, p. 280]

Everywhere on the shore under stones, especially at extreme low water (Hodgson, 1900, p. 241); less frequently in dredgings from the Sound (E.J.A.)

MALMGRENIA CASTANEA McIntosh [*McIntosh*, 1900-23, I, 2, p. 379]

Commensal on the surface of *Spatangus purpureus* near the mouth of the echinoderm; not uncommon (T.V.H., E.J.A.)

GATTYANA CIRROSA (Pallas) [*McIntosh*, 1900-23, I, 2, p. 285]

Yealm Sand Bank and East shore River Yealm, commensal in tubes of *Amphitrite johnstoni* (E.J.A.): plentiful in this site 1950-56 (G.M.S.): in dredgings from the neighbourhood of the Eddystone (Hodgson, 1900, p. 242): very occasionally in *Chaetopterus* tubes from the trawling grounds 1950-56 (G.M.S.)

SALCOMBE. Found on the shore living in the tubes of *Amphitrite johnstoni* on the Salstone, south of Halwell Point and near the mouth of Salcombe Harbour (under Marine Hotel) (Hodgson, in Allen and Todd, 1900, p. 190): occasional in tubes of *Chaetopterus variopedatus*, specimens not recognizably distinct from the others (G.M.S.)

EUNOË NODOSA (M. Sars) [*McIntosh*, 1900-23, I, 2, p. 291]

One specimen from the stony ground off Prawle Point in 30 fm. (Weldon, in Allen, 1899, p. 478)

HARMOTHOË IMBRICATA (L.) [*McIntosh*, 1900-23, I, 2, p. 314]

Between tide-marks amongst *Laminaria* holdfasts on the Breakwater; amongst hydroids, bryozoa, etc., on Eddystone Grounds (Hodgson, 1900, p. 245): rare (E.J.A.)

HARMOTHOË IMPAR (Johnston) [*McIntosh*, 1900-23, I, 2, p. 353, as *Evarne*]

Common between tide-marks and amongst dredgings throughout the Plymouth area (T.V.H., E.J.A.): Eddystone Grounds (T.V.H.). S.S.W. of Eddystone in 40-42 fm. (Crawshay, 1912, p. 341): mussel bed off Neille Point, River Tamar, 3.10.28. (E.P.)

SALCOMBE. Dredged in the channel between Salstone and the mouth of Salcombe Harbour (Hodgson in Allen and Todd, 1900, p. 190)

HARMOTHOË RETICULATA (Claparède) [*Fauvel*, 1923, p. 61]

Eddystone, shell gravel area, one, 7.4.53 (G.M.S.): one between tide-marks, mouth of River Yealm, 1956 (E.C.S.)

SALCOMBE. One among sponges from 4 fm. near Great Mewstone, 1955 (Coll. G.R.F., det. E.C.S.)

HARMOTHOË AREOLATA (Grube) [*McIntosh*, 1900-23, I, 2, p. 349]

Not uncommon on Eddystone Grounds, where the dredge or trawl brings up masses of bryozoa, hydroids and *Chaetopterus* tubes (Hodgson, 1900, p. 244)

HARMOTHOË LJUNGMANI (Malmgren) [*Fauvel*, 1923, p. 63]

Amongst trawled *Chaetopterus* tubes, one, 7.4.53 (G.M.S.)

HARMOTHOË SPINIFERA (Ehlers) [*McIntosh*, 1900-23, I, 2, p. 327]

Amongst dredgings from Millbay Channel, Queen's Ground, Asia Shoal, etc., and Yealm River: common (T.V.H., R.A.T., E.J.A.): when examined in situ found to be lying alongside *Polycirrus caliendrum* in cavities of dredged stones and clinkers (G.M.S.): lying alongside *Amphitrite gracilis* in rock crevices at Mount Edgcumbe and Wembury (Davenport, 1953, p. 280)

SALCOMBE. Dredged in the channel west of the Salstone and between the Salstone and Snape's Point (Hodgson in Allen and Todd, 1900, p. 190)

HARMOTHOË LONGISETIS (Grube) [*McIntosh*, 1900-23, I, 2, p. 345 as *H. setosissima*]

Occasionally found among *Cellaria* and *Chaetopterus* tubes from the Eddystone Grounds (Hodgson, 1900, p. 244): S.S.W. of Eddystone in 43-49 fm. (Crawshay, 1912, p. 341): Rame Mud (Mare, 1942, p. 542): amongst *Chaetopterus* tubes from trawling grounds, but, uncommon (G.M.S.)

SALCOMBE. On the eastern shore of Salcombe Harbour (Hodgson, in Allen and Todd, 1900, p. 190): several examples commensal in tubes of *Chaetopterus variopedatus*, 1952-53, varying in length from 10 to 65 mm.; occasionally also in burrows of *Arenicola marina*, e.g. one, Mill Bay, 12.5.53; three, Ox Point, 2.6.54 (G.M.S.)

HARMOTHOË FRASER-THOMSONI McIntosh [*McIntosh*, 1900-23, I, 2, p. 337]

Two specimens S.S.W. of Eddystone in 49-51 fm. (Crawshay, 1912, p. 341)

HARMOTHOË LUNULATA (Delle Chiaje) [*McIntosh*, 1900-23, I, 2, p. 342]

A not uncommon tidal form. Found among holdfasts of *Laminaria* on the Breakwater, and occasionally under stones near low water (Hodgson, 1900, p. 243); Rame Mud (Mare, 1942, p. 542)

SALCOMBE. On the shore of the bay, north of Pilworthy Point (Hodgson, in Allen and Todd, 1900, p. 190): below Marine Hotel and in Mill Bay, commensal in burrows of various invertebrates (J.H.O., D.P.W., G.M.S.)

Note: At least three commensal forms are recognizable by their colour pattern, and evidently have the status of host races (implying genetically distinct populations): form A, in which the elytra become uniformly dark with age, a very local commensal in burrows of *Arenicola marina*, occurring in Salcombe Estuary, freely in some years; form E, with a strong circular elytral pattern, commensal in burrows of echinoderms, the smaller with *Acrocnida brachiata*, the larger with *Leptosynapta inhaerens* and *Labidoplax digitata*, hence apparently changing host, occurring commonly at Salcombe, also in Cornwall; form J, with the transverse marks on the elytra emphasized, found uncommonly in burrows of *Amphitrite johnstoni* in the Yealm Estuary. Association with *Amphitrite edwardsi* and the two species of *Golfingia* (=Phascolosoma) has been found at Salcombe, apparently small examples of form J (G.M.S.)

HARMOTHOË MARPHYSAE McIntosh [*McIntosh*, 1900-23, I, 2, p. 339]

Found by R. A. Todd commensal with *Marphysa sanguinea* on the shore at Mount Edgcumbe (E.J.A.): Mount Edgcumbe, 2 in galleries of *M. sanguinea* in rock crevices, 7.4.54; Rum Bay in similar site, one, 6.4.54, 13-17 mm. long, colour pink (G.M.S.)

HARMOTHOË sp. nov.

SALCOMBE. A relatively large species with pronounced oculate markings on the elytra, 43-56 mm. long, commensal in burrows of *Amphitrite edwardsi*, two below the Marine Hotel, 4.4.54, one at Mill Bay, 25.3.55 (G.M.S.)

SCALISSETOSUS PELLUCIDUS (Ehlers) [*McIntosh*, 1900-23, I, 2, p. 372, as *S. communis*]

On the shore at Mount Edgcumbe; amongst dredgings Millbay Channel and Asia Shoal (R.A.T., E.J.A.): Looe-Eddystone Grounds, several on arms of *Ophiothrix fragilis*, 12.4.54 (G.M.S.): three post-larval (7-12 setigers) in plankton off Rame Head and Whitsands Bay, Oct. 1955 (E.C.S.)

SCALISSETOSUS ASSIMILIS (McIntosh) [*McIntosh*, 1900-23, I, 2, p. 377]

Among spines of *Echinus esculentus* from Mewstone and Eddystone Grounds (T.V.H., R.A.T., E.J.A.)

LAGISCA EXTENUATA (Grube) including *L. ELISABETHAE*. McIntosh [*Fauvel*, 1923, p. 76]

Between tide-marks and in dredgings throughout the whole area to 30 fm. (Hodgson, 1900, p. 247, as *L. floccosa*): at many stations S.S.W. of the

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Eddystone to about 50 m. (Crawshay, 1912, p. 340, as *L. floccosa*): two varieties occur at Plymouth, one littoral and inshore, and a deeper water variety (E.J.A.): *L. elisabethae* is recorded from the shore at Wembury Bay and Rum Bay, not uncommon (E.J.A.): mussel bed off Neille Point, River Tamar, dredged, 3.10.28 (E.P.): Eddystone Grounds, 14.2.52 (N.T.): common among Chaetopterus tubes and in abandoned ones, apparently not commensal, Eddystone Grounds, autumn and winter 1952-53 (D.D.): occasional in Buccinum shells tenanted by Eupagurus in which *Nereis fucata* may also be present, 1955 (G.M.S.)

POLYNOË SCOLOPENDRINA Savigny [*McIntosh*, 1900-23, I, 2, p. 389; *Marenzeller*, 1874, p. 419, as *P. johnstoni*]

Commensal in tubes of *Polymnia nebulosa* on the shore at Mount Edgcumbe; in dredgings from Asia Shoal (E.J.A.): one very good specimen trawled ca 2m. N.W. of Eddystone, 20.6.12 (A.J.S.): Eddystone Grounds (Hodgson, 1900, p. 248): common, commensal with *Polymnia nebulosa* in abandoned Chaetopterus tubes, Eddystone Grounds, autumn and winter 1952-3 (D.D.)

POLYNOË CRASSIPALPA Marenzeller, 1874, p. 412

Occasional specimens are met with in Plymouth Sound (Allen, 1915, pp. 612 and 613). Regarded by Fauvel (1923, p. 80) as synonymous with *P. scolopendrina* Savigny.

LEPIDASTHENIA ARGUS Hodgson, 1900, p. 250

One broken specimen with a broken *Amphitrite edwardsi* from Rame Mud, 31.5.38 (D.P.W.): 2 m. S.W. of Mewstone, 18 fm. in fine, muddy sand, one specimen, Petersen Grab (G.A.S.): one specimen with *Amphitrite edwardsi*, Eddystone bearing 304° M. distance 4½ miles, 2.5.52 (G.R.F.)

SALCOMBE. Found in the tubes of *Amphitrite edwardsi*, on the shore between Salcombe town and Sandhill Point (under Marine Hotel) (T.V.H.): the species has since been taken on many occasions in the same locality and under the same conditions as originally described by Hodgson (E.J.A.)

TEIGNMOUTH BAY. Part of a single specimen in scoop-sampler; soil muddy sand and pebbles (Holme, 1950)

HALOSYDNA GELATINOSA (M. Sars) [*McIntosh*, 1900-23, I, 2, p. 384]

Frequently met with on the shore under stones and amongst dredgings and trawling material throughout the area, including the Eddystone Grounds (E.J.A.): one specimen taken S.S.W. of Eddystone in 49 fm. (Crawshay, 1912, p. 341): occasional in and among Chaetopterus tubes, apparently not commensal, Eddystone Grounds, winter 1953 (D.D.)

ACHOLOË ASTERICOLA (Delle Chiaje) [*McIntosh*, 1900-23, I, 2, p. 397]

In the ambulacral groove of *Astropecten irregularis*, common (T.V.H., R.A.T., E.J.A.)

SIGALION MATHILDAE Audouin and M. Edwards [*McIntosh*, 1900-23, I, 2, p. 427]

TORQUAY. Fairly common in the sand at Tor Abbey Sands and Livermead (Elwes, 1910, p., 60)

STHENELAIS BOA (Johnston) [*McIntosh*, 19.00-23, I, 2, p. 408]

Common in sand between tide-marks, Rum Bay, Drake's Island, Mount Edgcumbe, Wembury Bay, Yealm River (T.V.H., R.A.T., E.J.A.): occasionally amongst dredgings from Millbay Channel and Asia Shoal (T.V.H., E.J.A.): Mewstone Grounds (T.V.H.)

SALCOMBE. On the Salstone and near the mouth of the harbour between the Ferry House and Mill Bay, never numerous; dredged in the channel between Salstone and Snape's Point (Hodgson, in Allen and Todd, 1900, P. 191)

Breeding: Rum Bay, 16.4.12; one out of 8 extruded eggs in a jar, 22.4.12 (A.J.S.)

STHENELAIS LIMICOLA Ehlers [*McIntosh*, 1900-23, I, 2, p. 417]

One specimen in a coarse tow-net attached to the otter-trawl, 5 m. W.S.W. of Rame Head, one specimen dug in the sand bank in the upper part of the Yealm River (E.J.A.): Rame Mud (Mare, 1942, p. 542)

PHOLOË MINUTA (Fabricius) [*McIntosh*, 1900-23, I, 2, p. 437]

Common amongst dredging and trawling material over the whole Plymouth area, including Eddystone Grounds, especially abundant in Millbay Channel and on Asia Shoal (E.J.A.): Millbay Channel, 13.6.11, about 100 fine specimens out of 3 basins of dredgings (A.J.S.): Cargreen Landing, River Tamar, one specimen, 17.8.28 (E.P.)

Family **Amphinomidae****EUPHROSYNE FOLIOSA** Audouin and M. Edwards [*McIntosh*, 1900-23, I, 25 pp. 234]

Occasional specimens in dredgings from Queen's Ground, Asia Shoal and Millbay Channel (T.V.H., R.A.T., E.J.A.): Eddystone Grounds (E.J.A.): one specimen 40 m. S. 24° W. of Eddystone in 49 fm (Crawshay, 1912, p. 341): one specimen after much search, Asia Shoal, Oct. 1927 (S.M.N.)

SPINTHER MINIACEUS Grube [*McIntosh*, 1900-23, I, 2, p. 232]

Half a dozen specimens living on a sponge dredged at Duke Rock, 6.2.06 (E.J.A.): one from Winter Shoal, 23.3.53 (G.M.S.)

Breeding: ripe females depositing eggs, 6.2.06 (E.J.A.)

Family **Phyllodoceidae****PHYLLODOCE LAMELLIGERA** (Gmelin) [*McIntosh*, 1900-23, II, 1, p. 76]

Between tide-marks, Drake's Island; Breakwater; in dredgings from Millbay Channel, Asia Shoal, Duke Rock (T.V.H., E.J.A.)

PHYLLODOCE PARETTI (Blainville) [*McIntosh*, 1900-23, II, 1, p. 82]

Occasional specimens in dredgings from the Mewstone Ledge (E.J.A.): off Stoke Point (S.P.)

PHYLLODOCE MACULATA (L.) [*McIntosh*, 1900-23, II, 1, p. 89]

Common in dredgings from the Sound and inshore waters, being sometimes present in very large numbers; it is much more abundant in summer than in winter; large specimens which seem to be the same species were

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found in clean sand at Wembury Bay (E.J.A.): Rat Island, River Lynher, odd specimens, 30.8.28 (E.P.): St. John's Lake (Spooner and Moors, 1940, p. 300)

Breeding: Jan., Feb. (W.G.): Apr. to July; eggs orange-brown or green (E.J.A.)

PHYLLODOCE RUBIGINOSA Saint-Joseph [*McIntosh*, 1900-23, II, 1, p. 92]

Frequent in dredgings from Millbay Channel, Asia Shoal and other parts of the Sound; amongst dredge and trawl material from near Eddystone (E.J.A.): Crawshay (1912, p. 341) obtained several specimens S.S.W. of Eddystone in 46-49 fm.

EULALIA BILINEATA (Johnston) [*McIntosh*, 1900-23, II, 1, p. 50]

Frequent amongst dredgings from the Sound, especially from Millbay Channel and Asia Shoal; dredged off Yealm Head; amongst holdfasts of *Laminaria* from Cawsand Bay (E.J.A.)

EULALIA AUREA Grower, 1896, p. 309.

Common on all the dredging grounds in Plymouth Sound; occasional specimens are met with on most of the grounds near shore, e.g. off Yealm Head (E.J.A.). Regarded by McIntosh and Fauvel as a variety of *E. viridis* but held to be distinct by Allen.

Breeding: with eggs Jan. to August (R.A.T., E.J.A.)

EULALIA ORNATA Saint-Joseph, 1887, p. 291

In dredgings from the Sound, especially Millbay Channel and Asia Shoal; much less frequent than *E. aurea* (E.J.A.). Allen regards it as a distinct species, McIntosh and Fauvel as a variety of *E. viridis*.

EULALIA VIRIDIS (O. F. Müller) [*McIntosh*, 1900-23, II, 1, p. 55]

Common on rocky shores in the Sound and on the coast, usually among seaweeds to which the large gelatinous masses of green eggs are attached; occasionally taken in dredgings from the Sound, especially in an immature state, and specimens have even been taken on the Eddystone Grounds (E.J.A.)

SALCOMBE. From dredgings between Salstone and Snape's Point (Allen and Todd, 1900, p. 193)

Breeding: eggs in Jan. and Feb.; abundant in May and June; none found at end of July or in Aug. (A.J.S.)

EULALIA PUSILLA Oersted (*Fauvel*, 1923, p. 160]

SALCOMBE. Two among sponges at 4 fm. near Great Mewstone, 1955 (coll. G.R.F., L.E.C.S.)

EULALIA TRIPUNCTATA McIntosh, 1900-23, II, 1, p. 63 [*Saint-Joseph*, 1887, p. 285, as *E. claparedii*]

Not infrequent in dredgings from Millbay Channel, Asia Shoal, and occasionally Queen's Ground and Duke Rock; found also on the outer grounds, e.g. off Yealm Head; Cawsand Bay, among *Laminaria* holdfasts from shore (E.J.A.)

Breeding: May; eggs brick red (E.J.A.)

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- EULALIA PUNCTIFERA** (Grube) [*McIntosh*, 1900-23, II, 1, p. 53 as *E. nebulosa*]
 In dredgings from Millbay Channel, Asia Shoal and Yealm; on shore at Mount Edgecumbe and in the Yealm Estuary (E.J.A.)
 SALCOMBE. Dredged in the channel between the Salstone and Snape's Point (Allen and Todd, 1900, p. 193)
- EULALIA (PTEROCIRRUS) MACROCEROS** (Grube) [*McIntosh*, 1900-23, II, 1, p. 60]
 Occasional specimens from dredging grounds in the Sound; a number also taken in a dredging from 2 m. off Yealm Head (E.J.A.)
- EULALIA (EUMIDA) SANGUINEA** Oersted [*McIntosh*, 1900-23, II, 1, p. 66]
 Common and generally distributed in dredged material throughout the area, especially in inshore waters; frequent amongst Laminaria holdfasts from the shore (E.J.A.)
 Breeding: May to July; eggs green, occasionally reddish (E.J.A.)
- NOTOPHYLLUM FOLIOSUM** (Sars) [*McIntosh*, 1900-23, II, 1, p. 46]
 Frequent in dredgings from all the grounds in the Sound, and often met with on all the dredging and trawling grounds outside, including Eddystone Grounds (E.J.A.)
 Breeding: carrying eggs, Sept. 1927 (Y.O.)
- ETEONE LONGA** (Fabricius) [Fauvel, 1923, p. 172]
 EXMOUTH. Specimens provisionally assigned to this species common in sand and mud, Salthouse Lake area (Holme, 1949, p. 218). Previously recorded by Allen and Todd (1902, p. 319) as *E. pusilla* Oersted *nec* Malmgren)
- ETEONE PICTA** Quatrefages [*McIntosh*, 1900-23, II, 1, p. 100]
 Occasional specimens from dredgings, Millbay Channel, Asia Shoal, Queen's Ground, Barn Pool; some large specimens amongst holdfasts of Laminaria from the shore at Cawsand Bay; also taken on the shore at Wembury Bay (E.J.A.)
- MYSTIDES LIMBATA** Saint-Joseph, 1887, p. 310
 Dredged off the Mewstone in 15-16 fm. (J.T.C.): not uncommon in dredgings from Asia Shoal and Queen's Ground (New Grounds); in dredgings from Yealm River (E.J.A.)
 Breeding: female with dark green eggs in May (J.T.C.): between Melampus and New Grounds, dredge, 30.6.14, one specimen with green eggs well developed (E.J.A.)

Family **Tomopteridae**

- TOMOPTERIS HELGOLANDICA** Greet [*Abstain*, 1900, p. 35]
 Not uncommon in tow-nettings from the Channel (E.J.A.)
 Breeding: carrying eggs, June 1914, Eddystone Grounds; May, 1919 (8-10 with eggs) (A.J.S.); July 15-16, 1925, Station L 4 midnight, about a dozen specimens carrying eggs (F.S.R. and A.J.S)

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Family **Hesionidae****KEFERSTEINIA CIRRATA** (Keferstein) [*McIntosh*, 1900-23, II, 1, p. 127, as *Castalia fusca*]

On the shore under stones and amongst holdfasts of weeds from Drake's Island, Rum Bay and Mount Edgcombe; from the piles at Millbay Dock; amongst dredgings from Millbay Channel and Asia Shoal (E.J.A.): Rat Island, River Lynher; mussel bed, off Neille Point, River Tamar, common, 30.8.28, 3.10.28 (E.P.)

SALCOMBE. One nearly mature female at Salstone 10.6.37 (D.P.W.)

CASTALIA PUNCTATA (O. F. Müller) [*McIntosh*, 1900-23, II, 1, p. 121]

Common in dredgings from Millbay Channel and Asia Shoal; occasionally from Duke Rock and Queen's Ground; a few specimens from rough grounds outside the Sound, e.g. 2 m. off Yealm Head and 2 m. S.W. by W. of Eddystone (E.J.A.): 17.5 m. S. 25° W. of Eddystone in 42 fm. (Crawshay, 1912, p. 340)

OXYDROMUS PROPINQUUS (Mansion and Bobretzky, 1875, p. 51, as *Gyptis propinqua*) [*Saint-Joseph*, 1887, p. 321]

Not uncommon in dredgings from near New Grounds Buoy from Jan. to Apr. (E.J.A.)

Breeding: females with well-developed eggs, Jan. to Apr.: near the Eddystone, on edge of reef, Eddystone bearing S., dredge, 12.2.23, full of eggs (E.J.A.)

OPHIODROMUS FLEXUOSUS (Delle Chiaje) [*McIntosh*, 1900-23, II, 1, p. 117]

Three or four specimens have been obtained from the Looe-Eddystone trawling grounds; in ambulacral groove of *Luidia ciliaris* from Rame-Eddystone grounds, one specimen 13.7.20 (E.J.A.): Rame Mud (Mare, 1942, p. 542)

SALCOMBE. Commensal in the tube of a young *Amphitrite edwardsi*, Eastern bed, Mill Bay (APT.)

MAGALIA PERARMATA Mansion and Bobretzky, 1875, p. 54 [*McIntosh*, 1900-23, II, 1, p. 136]

Not uncommon in dredgings from Millbay Channel, Asia Shoal, Queen's Ground and Duke Rock; from trawl material, Rame-Eddystone ground; from scrapings from piles at Millbay Dock (E.J.A.): mussel bed off Neille Point, River Tamar; Cargreen Hard, few, dredge (E.P.)

MICROPHTHALMUS SCZELKOWI Meczniow [*Fauvel*, 1923, p. 250]

One among gravel between tidemarks, Wembury, 1955 (E.C.S.)

Family **Syllidae****SYLLIS (HAPLOSYLLIS) SPONGICOLA** Grube [*McIntosh*, 1900-23, II, 1, p. 197]

Occasional specimens have been found in dredgings from Plymouth Sound (Millbay Channel, Winter Shoal, Cawsand Bay); a considerable number of specimens were obtained from a mass of slimy sponge dredged on the Mewstone Ledge (E.J.A.): always found abundantly in *Halichondria* (dredged) and rarely in other sponges (Y.O.)

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SALCOMBE. In dredgings from the channel between Salstone and Snape's Point (Allen and Todd, 1900, p. 190 as *S. hamata* Claparède).

Breeding: season lasts the whole summer; males yellow and orange, the stolons deeply purple; females generally of dark colour due to their contained eggs (Y.O.)

SYLLIS GRACILIS Grube [*McIntosh*, 1900-23, II, 1, p. 203]

Dredgings from Millbay Channel, Asia Shoal and Queen's Ground, single specimens frequently met with; Rum Bay shore, from crevices of shale (E.J.A.): Rat Island above low water (E.P.): frequent in Laminaria holdfasts, Church Reef, Wembury (Coroner, 1940, p. 165)

Breeding: fragments in nature, each fragment develops into a complete worm by regeneration (Y.O.)

SYLLIS (TYPOSYLLIS) KROHNI Ehlers [*McIntosh*, 1900-23, II, 1, p. 192; *Langerhans*, 1879, p. 529]

Among Corallina from Rum Bay and from under a stone at Wembury Bay (E.J.A.)

Breeding: a specimen from Wembury Bay in March had a well developed stolon with four red eyes (E.J.A.): Wembury Reefs (back of Mewstone) 3.4.16, one specimen with eggs (A.J.S., E.J.A.)

SYLLIS (TYPOSYLLIS) PROLIFERA Krohn [*Langerhans*, 1879, p. 530; *Claparède*, 1864, p. 70 (530) as *Syllis armandi*; *McIntosh*, 1900-23, II, 1, as p. 166 *Pionosyllis hyalina* Grube and possibly in part, p. 161 as *Pionosyllis prolifera* (Krohn)]

Common everywhere amongst weeds, etc., on the shore, as well as in dredgings from shallow water, especially in Plymouth Sound (E.J.A.): mussel bed off Neille Point, River Tamar; Bull Point, Hamoaze, dredge and hand, 19.8.28, 3.10.28 (E.P.)

Breeding: throughout the summer. Male stolon more or less deeply pigmented, female not so, its pale green colour is due to the contained eggs. Stolonization takes place very easily and even repeats several times in the same animal in captivity (Y.O.)

SYLLIS (TYPOSYLLIS) VARIEGATA Grube [*Langerhans*, 1879, p. 532; *Marenzeller*, 1875, p. 147; *McIntosh*, 1900-23, II, 1, p. 161, as *Pionosyllis prolifera* (Krohn)]

Not uncommon in dredgings from Millbay Channel and Asia Shoal; off Yealm Head; one large specimen from the shore at Wembury Bay amongst Laminaria holdfasts (E.J.A.): S. by W. of Eddystone in 44-49 fm. (Crawshay, 1912, P. 340)

SYLLIS (TYPOSYLLIS) ARMILLARIS (Müller) [*McIntosh*, 1913, p. 83; 1900-23, II, 1, p. 188; II, 2, p. 238, as *P. altermosetosa*]

Eddystone Grounds Weldon, in Allen, 1899, p. 481): a number of specimens from 20 to 50 M. S.S.W. of Eddystone in 42-49 fm. (Crawshay, 1912, p. 339): frequent on all dredging grounds in and around Plymouth Sound; amongst ascidians from Millbay Dock; occasional specimens from the shore (E.J.A.)

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SYLLIS (EHLERSIA) CORNUTA Rathke [*McIntosh*, 1900-23, II, 1, p. 200]

Eddystone Grounds (Weldon, in Allen, 1899, p. 481): occasional specimens which are probably this species have been obtained from dredgings from Duke Rock, Queen's Ground and Asia Shoal, but the identification is not quite certain (E.J.A.)

SYLLIS (EHLERSIA) FERRUGINA Langerhans [*Fauvel*, 1923, p. 269]

Wembury, sublittoral, rare (Kitching, Macan and Gilson, 1934, p. 699): one specimen in *Laminaria digitata* holdfast at low water, Church Reef, Wembury (Colman, 1940, p. 178)

TRYPANOSYLLIS ZEBRA (Grube) [*McIntosh*, 1900-23, II, 1, p. 169]

Frequent in dredgings from Millbay Channel and Asia Shoal; occasionally from other parts of the Sound; Yealm dredging; on the shore at Wembury Bay, in a mass of yellow sponge (E.J.A.)

TRYPANOSYLLIS COELIACA Claparède [*Saint-Joseph*, 1886, p. 184]

TORQUAY. Four or five specimens, Oddicombe rocks (Elwes, 1908, p. 201)

EURSYLLIS TUBERCULATA Ehlers [*McIntosh*, 1900-23, II, 2, p. 241, as *E. paradoxa*]

Occasional specimens from Asia Shoal dredgings and from dredgings on the rocky ground south of the Breakwater; one or two from *Laminaria* holdfasts from the shore at Reny Rocks (E.J.A.): single specimen in washings of Eddystone shell gravel 29.5.33 (D.P.W.)

Breeding: a specimen with hinder segments swollen with genital products from Reny Rocks in July (E.J.A.)

ODONTOSYLLIS CTENOSTOMA Claparède [*McIntosh*, 1900-23, II, 1, p. 182]

Very abundant on the shores of the Sound and frequent in dredgings from the Sound (E.J.A.): mussel bed off Neille Point, River Tamar, dredge (E.P.)

Breeding: a specimen in the swimming stage with long setae was recorded in May (E.J.A.)

ODONTOSYLLIS FULGURANS (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 1, p. 178; *Fauvel*, 1923, I, p. 274]

Dredged at Queen's Ground (New Grounds), Mewstone Ledge, off Stoke Point and on Rame Eddystone Grounds; usually not more than one specimen on each occasion (E.J.A.)

ODONTOSYLLIS GIBBA Claparède [*McIntosh*, 1900-23, II, 1, p. 183.]

Common in dredgings from Asia Shoal, Duke Rock, Queen's Ground and Millbay Channel (E.J.A.)

PTEROSYLLIS FORMOSA Claparède [*McIntosh*, 1900-23, II, 1, p. 225, as *Amblyosyllis lineata*; *Saint-Joseph*, 1886, p. 187, as *Pterosyllis (Gattiola) spectabilis*]

Common in dredgings from Millbay Channel; less numerous Queen's Ground, Mallard and Asia Shoal (E.J.A., R.A.T., T.V.H.): sometimes in large numbers in sponges from Millbay Channel (W.G.): occurs also among *Laminaria* holdfasts from the shores of the Sound, in dredgings from outside the Breakwater, off Yealm Head and occasionally on Eddystone Grounds (E.J.A.): Winter Shoal, dredge (R.P.)

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SALCOMBE. Dredged in the channel west of Salstone (Allen and Todd, 1900, P. 190)

SYLLIDES LONGOCIRRATA Oersted [*Fauvel*, 1923, I, p. 284]

Many specimens were taken in dredgings from Cattewater in December, 1919 (E.J.A.)

PIONOSYLLIS LAMELLIGERA Saint-Joseph, 1886, p. 163

In dredgings from Duke Rock, New Grounds, between Knap and Panther Buoys, and Mewstone Ledge; among Laminaria holdfasts from Reny Rocks (E.J.A.)

PIONOSYLLIS DIVARICATA (Keferstein) [*McIntosh*, 1900-23, II, 1, p. 164]

One specimen from dredgings from New Grounds; one specimen, broken up, New Grounds, dredge, 12.2.23 (E.J.A.)

EUSYLLIS BLOMSTRANDI Malmgren [*McIntosh*, 1900-23, II, 1, p. 173, as *E. tubifex*] Allen (1915, p. 598) says "Probably the same as *E. blomstrandii* Malmgren as described by Saint-Joseph (1886, p. 171) cf. Southern, 1914, p. 32".

Very common in the Sound from the shore and in dredgings; often met with in dredgings from outside, e.g. Mewstone Ledge and Eddystone Grounds (E.J.A.)

Breeding: females with ova and swimming bristles recorded in Feb. and March (E.J.A.)

EUSYLLIS MONILICORNIS Malmgren [*Langerhans*, 1879, p. 551; *Saint-Joseph*, 1886, p. 169]

Single specimens have been taken on a number of occasions from dredgings in the Sound, at Duke Rock and Asia Shoal; 1 from Mewstone Ledge (E.J.A.). Considered as a distinct species by Allen (1915, p. 599), regarded as synonymous with *E. blomstrandii* by Fauvel (1923, p. 293)

EUSYLLIS LAMELLIGERA Marion and Bobretzky [*Fauvel*, 1923, p. 294]

Single specimen on Gigartina, Church Reef, Wembury (Colman, 1940, p. 178)

GRUBEA CLAVATA (Claparède, 1863, p. 41, Pl. XIII, figs. 28-9) [*Saint-Joseph*, 1886, p. 200]

From Laminaria holdfasts, Rum Bay shore (E.J.A.)

GRUBEA LIMBATA Claparède 1868, p. 208 [*Viguiér*, 1884, p. 103]

From Laminaria holdfasts from the Breakwater and Reny Rocks; dredged near the E. end of the Breakwater in 4-5 fm. (E.J.A.)

GRUBEA PUSILLA (Dujardin) [*Langerhans*, 1879, p. 565; *Saint-Joseph*, 1886, p. 203]

Among holdfasts of Laminaria from Rum Bay (E.J.A.)

Breeding: two females with embryos on the parapodia were seen in March (E.J.A.)

SPHAEROSYLLIS HYSTRIX Claparède [*McIntosh*, 1900-23, II, 1, p. 156]

Frequent in dredgings from the Sound; occasional specimens amongst holdfasts of weeds from the shore (E.J.A.)

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SPHAEROSYLLIS OVIGERA Langerhans, 1879, p. 567

In the Sound, near New Grounds Buoy; several specimens have been taken (E.J.A.)

SPHAEROSYLLIS ERINACEUS Claparède [*Saint-Joseph*, 1886, p. 207]

Common among holdfasts of *Laminaria* from Rum Bay; the specimens differ from the descriptions of Claparède and Saint-Joseph in having two anal cirri large and much swollen at the base (Allen, 1915, p. 597): in *Laminaria* holdfasts, Church Reef, Wembury (Colman, 1940, p. 165)

Breeding: a specimen in June had four large eggs on each segment, from Segt. 9 backwards (E.J.A.)

SPHAEROSYLLIS BULBOSA Southern, 1914, p. 20

Common in washings of shell gravel, Eddystone bearing S.S.E. 1,870 yards, 29.5.33 (D.P.W.)

EXOgone GEMMIFERA Pagenstecher [*McIntosh*, 1900-23, II, 1, p. 151]

Common on the shore amongst the holdfasts of *Laminaria* and other weeds, in the Sound and on the coast outside; frequent in dredgings from the Sound; it also occurs in dredgings from deeper water, e.g. 2 m. off Yealm Point in 15 fm. and off the Eddystone in 30-35 fm. (E.J.A.): shore above Ince Castle, River Lynher, 1.8.28 (E.P.)

Breeding: a number of specimens found amongst ascidians from the piles in Millbay Dock in June carried eggs and embryos in different stages of development (E.J.A.): single specimen from White Patch carrying embryos, 17.7.33 (D.P.W.)

EXOgone BREVIPES (Claparède) [*Fauvel*, 1923, p. 306]

Single specimen on *Laminaria* holdfast, Church Reef, Wembury (Colman, 1940, p. 179)

EXOgone VERUGERA (Claparède) [*Fauvel*, 1923, p. 307]

Single specimen on *Laminaria* holdfast, Church Reef, Wembury (Colman, 1940, p. 179)

AUTOLYTUS LONGEFERIENS Saint-Joseph, 1886, p. 217 [*McIntosh*, 1900-23, II, 2, p. 245; *Southern*, 1914, p. 39]

Two specimens were dredged on rocky ground immediately S. of the Breakwater in May, 1 from Duke Rock in June and 1 was found amongst holdfasts of *Laminaria* from Rum Bay in June (E.J.A.)

Breeding: the male (polybostricus) and female (sacconereis) forms of this species were obtained in tow-nets near the Eddystone in Feb.: from one *Sacconereis* kept in the Laboratory, the young hatched two weeks after the specimen was procured (Allen, 1915, p. 604): stolons (female bud = *A. alexandri* Malmgren) are most abundant in Feb. (Y.O.)

AUTOLYTUS RUBROPUNCTATUS (Grube) [*Marion and Brobretzky*, 1875, p. 44, as *Autolytus (Proceraea) ornatus*; *Southern*, 1914, p. 40]

Frequent in dredgings from the Sound, Asia Shoal, Queen's Ground and Duke Rock; frequent also on all the dredging and trawling grounds between Plymouth and the Eddystone and westwards to Looe (E.J.A.)

SALCOMBE. *Sacconereis*, West-Channel plankton, 26.11.15 (E.J.A.)

Breeding: no specimens with stolons were found amongst a large number examined between Jan. and June; at the beginning of July, 1 specimen was seen with a stolon just beginning to form (E.J.A.)

AUTOLYTUS PICTUS (Ehlers) [*McIntosh*, 1900-23, II, 1, p. 211]

Frequently met with in dredgings from all grounds in Plymouth Sound; especially common amongst Alcyonidium and sponges from Asia Shoal; occasional specimens on all grounds between Plymouth and the Eddystone, especially on rough ground (E.J.A.): there are two distinct forms (subspecies), the ordinary one is distinguished by white bands between two segments arranged in definite positions, certain distances apart, the other without these bands. The tentacles and dorsal cirri of the buccal segment of this sub-species are always purple in contrast with the orange colour of the other. The dentation is also more or less different. The differences in colour as well as in pattern are transmitted to the sexual buds; either male or female (Y.O.)

Breeding: three specimens with the Polybostricus head just commencing to form were found in dredgings from Asia Shoal in April (E.J.A.): a sacconereis, carrying a mass of light green eggs in a sac was obtained in the plankton, April 1927, the eggs hatched and larvae were reared for a time (D.P.W.): worms in captivity readily produce sexual buds during summer while in winter they do not produce stolons in spite of being full of ripened eggs or spermatozoa (Y.O.)

AUTOLYTUS AURANTIACUS (Claparède) [*Saint-Joseph*, 1886, p. 226, as *A. macrophthalma*; *Southern*, 1914, p. 41, as *A. macrophthalama*]

Specimens have been obtained in dredgings from Millbay Pit, Asia Shoal, New Grounds, Tinker Buoy, and 1 m. off Rame Head (E.J.A.): a single specimen of the Sacconereis was found in July in a tow-net (Y.O.)

AUTOLYTUS EHBIENSIS Saint-Joseph, 1886, p. 228 [*McIntosh*, 1900-23, II, 2, p. 243]

From Laminaria holdfasts and seaweeds from the shore at Rum Bay and amongst ascidians, etc., from Millbay Dock; dredged off Yealm Head and near Eddystone; Millbay Pit, 1.7.14 (E.J.A.)

Breeding: specimens with chains of buds in Jan., in Feb. and in April (E.J.A.)

AUTOLYTUS PUNCTATUS Saint-Joseph, 1886, p. 233

Not uncommon on Queen's Ground and on the Rame-Eddystone and Looe-Eddystone trawling grounds (E.J.A.)

Breeding: specimens with stolons were taken from May-July; the breeding season probably extends considerably beyond these months (E.J.A.)

AUTOLYTUS EDWARDSI Saint-Joseph, 1886, p. 235

This species is common in dredgings from Duke Rock and the rocky ground immediately south of the Breakwater; it often lives in tubes attached to the fronds and holdfasts of Laminaria on which Obelia is growing (E.J.A.)

Breeding: specimens with stolons were found from March-June and the breeding season probably extends beyond these months (E.J.A.): specimens

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carrying a chain of stolons are still very abundant in July, Aug. and Sept. (Y.O.)

AUTOLYTUS PROLIFER (O. F. Müller) [*Saint-Joseph*, 1886, p. 238; *Langerhans*, 1879, p. 575]

Two specimens from Millbay Pit dredgings and 1 from dredgings from the rocky ground south of the Breakwater (E.J.A.)

Breeding: a specimen in May had one stolon; in July a female had many eggs in the body segments (E.J.A.)

AUTOLYTUS LUGENS Saint-Joseph, 1886, p. 234

Three or four specimens in dredgings from Queen's Ground and Millbay Pit (E.J.A.)

Breeding: in Jan. and Feb. the stolon was just beginning to form; in July a large stolon was well developed (E.J.A.)

AUTOLYTUS INERMIS Saint-Joseph, 1886, p. 237

Occasional specimens have been taken on the principal dredging grounds in the Sound, as well as on the trawling grounds between Plymouth and the Eddystone and Eddystone and Looe (E.J.A.)

Breeding: with stolons in Dec., Jan., April, May, and June; 1 specimen in Aug. had no stolon (E.J.A.)

AUTOLYTUS CORNUTUS A. Agassiz, 1862, p. 390, Pls. X and XI

This American species appeared in Plymouth Sound during the summer of 1929; it is found abundantly (with *A. edwardsi*) on Laminaria covered with Obelia (Y.O.)

AUTOLYTUS ROSEUS Claparède, 1864, p. 566, Pl. VII, fig. 4

A specimen of this rare Sacconereis was obtained in Feb. 1929, in a bottom stramin net, near the Eddystone (F.S.R., Y.O.)

MYRIANIDA PINNIGERA (Montagu) [*McIntosh*, 1900-23, II, 1, p. 229; *Malaquin*, 1893, as *M. fasciata*]

Frequently met with in Plymouth Sound (W.G.): dredgings from Millbay Channel, Asia and Queen's Ground (T.V.H., R.A.T., E.J.A.): amongst ascidians and sponges from the piles at Millbay Dock (R.A.T., E.J.A.): feeds on the body fluid of living ascidians such as *Asciadiella aspersa*, *Phallusia mammilata*, etc. (Y.O.)

SALCOMBE. On the shore at the Salstone and dredged in the channel to the west of the Salstone (Allen and Todd, 1900, p. 190)

Breeding: Saltash Bridge, shrimp trawl, 2.2.14, with 3 buds; mouth of Cattewater, shrimp trawl, 4.2.20, several with short strings of buds (A.J.S.): Salstone, Salcombe, 3 specimens with chains of buds, 10.6.37 (D.P.W.): several specimens with buds, 26.2.48 (TRY.): in winter the worms generally do not produce stolons, while in spring it is very unusual to find them without (Y.O.)

VIRCHOWIA CLAVATA Langerhans, 1879, p. 582 [*Viguier*, 1886, p. 426; *Fauvel*, 1923, p. 324]

New Grounds, dredge, 22.10.22, no bud; 4.3.22, Asia Shoal, dredge (E.J.A.)

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Breeding: March, female bud (E.J.A.): a specimen producing the male bud was found in dredging from Sound, July 1929 (Y.O.)

PROCERASTEIA HALLEZIANA Malaquin, 1893, p. 81

Six specimens obtained from amongst ascidians from a raft moored in Cawsand Bay, 30.9.14; July 1919, living in large numbers on the hydroid *Syncoryne eximia* which was growing luxuriantly on a floating pontoon in Millbay Dock; in same position in the following winter and spring (Allen, 1921, p. 132): present for a few weeks in quantity under the same conditions at Millbay Dock in September 1928: Queen's Ground, 21.2.23, dredge, numerous specimens in tubes on *Tubularia indivisa*, most of them showing regeneration after fragmentation (E.J.A.)

Breeding: no stolons in Sept. 1914, but 1 specimen had 3 of the middle segments considerably enlarged; active stolon formation in 1919 from July onwards and in September 1928 (E.J.A.): a sacconereis carrying 8 egg-sacs was obtained off the Eddystone, Oct. 1929 (Y.O.)

Family Nereidae

MICRONEREIS VARIEGATA Claparède [*McIntosh*, 1900-23, II, 2, p. 261; *Regnard*, 1913, p. 91]

Amongst weeds and Corallina from the shore at Rum Bay; from weeds dredged in Cawsand Bay (E.J.A.)

LEPTONEREIS GLAUCA Claparède [*Ramsay*, 1914, p. 244]

From the piles of the wharf at Millbay Docks, fairly numerous (*Ramsay, loc. cit.*): mussel bed off Neille Point, River Tamar, dredge (E.P.): 3 specimens from Asia Shoal and Duke Rock, July 1952 (M.B.H.)

Breeding: heteronereid males in Feb., females filled with ova in March (*Ramsay, loc. cit.*): about two dozen male and five female heteronereis attracted to light at surface by Breakwater Fort 9 p.m.-11 1.30 p.m., 10.9.36, all seemed mature (D.P.W.): heteronereid males, May-June 1955; adults paired and larvae successfully reared in Laboratory during June (J.B.G.-B.)

NEREIS PELAGICA (L.) [*McIntosh*, 1900-23, II, 2, p. 267]

Frequent amongst weeds on rocky shores and from dredgings in all parts of the Sound; also Wembury Bay and Yealm River (T.V.H., E.J.A.)

Breeding: Feb. 1927, fertilizations made and larvae reared; male heteronereis shed sperm in laboratory, 9.1.35 (D.P.W.)

NEREIS ZONATA Malmgren [*Fauvel*, 1914, p. 177]

Common on the dredging and trawling grounds off Plymouth in depths of from 20-40 fm. (E.J.A.): dredged S.S.W. of the Eddystone in depths of 42-9 fm. (*Crawshay*, 1912, p. 342, as *N. pelagica*)

NEREIS IRRORATA (Malmgren) [*McIntosh*, 1900-23, II, 2, p. 29 1, as *N. schmardaiei*]

Not uncommon in coarse sand and gravel between tide-marks, Drake's Island, Mount Edgumbe, Jennycliff (rare), Wembury Bay, Yealm Estuary south shore; small specimens amongst dredgings from Queen's Ground and Asia Shoal (E.J.A.): 6 specimens, Duke Rock, 15.7.52 (M.B.H.)

SALCOMBE. Common in muddy gravel under Marine Hotel; also found

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on the east side of the harbour, and 1 specimen in Kingsbridge Estuary, south of Halwell Point (Allen and Todd, 1900, p. 191)

Breeding: mature heteronereids swarming in Sound, 22.9.55 (J.B.G.-B.)

NEREIS DIVERSICOLOR O. F. Müller [*McIntosh*, 1900-23, II, 2, p. 312]

Common in the mud-flats of the Tamar and Plym estuaries, seldom in the Sound; found only when the density of the water is low (E.J.A.): for distribution in Tamar estuary see Spooner and Moore (1940, p. 300) and Smith (1956, p. 81)

SALCOMBE. Numerous only in a small gully traversed by a stream of fresh water which runs into Southpool Lake; occasional specimens found in other parts of the harbour (Allen and Todd, 1900, p. 193)

Breeding: 4 specimens released eggs during preservation, 10.4.26 (S.M.N.): eggs emitted by worms in laboratory, August 1949 (M.B.H.): spawning probably in early spring (Dales, 1950): mature specimens with full-sized oocytes and motile sperm April-July 1955; successful artificial fertilizations made April and May 1955 (J.B.G.-B.)

NEREIS FUCATA (Savigny) [*McIntosh*, 1900-23, II, 2, p. 336]

In shells of *Buccinum undatum* inhabited by *Eupagurus bernhardus*, Mewstone Grounds, Rame-Eddystone, Looe-Eddystone and Eddystone Grounds (E.J.A.): found at two positions S.S.W. of Eddystone in 42-47 fm., associated with *Anapagurus laevis* by Crawshay (1912, p. 342): Yealm River (S.P.): several in *Buccinum* shells with *Eupagurus cuanensis*, Mewstone Grounds, April 1933 (J.E.F.)

SALCOMBE. From a hermit crab on Mill Bay sands (Allen and Todd, 1900, p. 193)

Breeding: May (W.G.): several specimens full of eggs, south of Eddystone, 20.5.15; from Rame-Eddystone Grounds, 8.2.23, a large specimen accidentally pricked gave out a number of spherical, ripe-looking transparent eggs from the hole (A.J.S.): mature heteronereids April-June; artificial fertilizations made and larvae reared, April and May 1955 (J.B.G.-B.)

NEREIS VIRENS Sars [*McIntosh*, 1900-23, II, 2, p. 330; *Fauvel*, 1923, p. 348]

One, about 43 cm. long, from Admiral's Hard, 27.8.52; another broken and incomplete, from the same locality, 7.1.56 (T.R.T., D.P.W.)

NEREIS LONGISSIMA Johnston [*McIntosh*, 1900-23, II, 2, p. 325]

Occasional specimens in fine sand between tide-marks on Drake's Island and Mount Edgcombe shore; recorded by Cunningham from a mud-bank in the Cattewater near Oreston (E.J.A.): 3 specimens dug from *Zostera* bed, S. side of River Yealm, near mouth, 6/7.3.16 (A.J.S.)

SALCOMBE. In fine muddy sand, especially abundant S. of Garston Point and on the S. side of the bay immediately below Halwell Point (Allen and Todd, 1900, p. 192): 1 specimen Mill Bay, 1 specimen Salstone, July 1952 (M.B.H.): not uncommon, low water near MW Bay (D.P.W.)

Breeding: the heteronereis stage is sometimes very numerous swimming in the Cattewater, the largest numbers being reported from near Laira

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Bridge; it has also been reported as numerous in the Hamoaze and it generally swims at night (E.J.A.): swimming at surface in Cattewater, Jan., Feb.; Sutton Pool, March; off Turnchapel Pier, about 1,000 at night; opposite the hotel on the Yealm, on Amphitrite ground, dug up with eggs, April (A.J.S.): large number male heteronereis swarming at surface off North Corner, 11 p.m.-1 a.m., 5/6.4.39 (D.P.W.): mature heteronereids, April and May, 1955; artificial fertilizations made and larvae reared in May (S.B.G.-B.)

PERINEREIS CULTRIFERA (Grube) [*McIntosh*, 1900-23, II, 2, p. 280 as Nereis]

Common on the shores around the Sound, Wembury Bay, Yealm Estuary, especially in muddy gravel; young specimens frequent in dredgings (E.J.A.): Rat Island, River Lynher (E.P.)

SALCOMBE. Common all round the estuary excepting in very fine mud; most common where soil is gravel mixed with sand and mud (Allen and Todd, 1900, p. 192)

Breeding: Rum Bay, 11.5.26, several specimens released eggs during preservation (S.M.N.): one from opposite hotel on the Yealm, 13.4.26, discharged eggs in petri dish (A.J.S.): artificial fertilizations made and larvae reared, April and May 1955 (S.B.G.-B.)

PERINEREIS MARIONI (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 2, p. 295, as Nereis]

Wembury, rock crevices, mid-tide level, 8.7.52 (M.B.H.): two in crevices, Rum Bay, 12.9.53 (G.E.N.)

PLATYNEREIS DUMERILI (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 2, p. 302, as Nereis]

Small specimens are common on all the dredging grounds of the Sound, the largest specimens coming from Queen's Ground; in dredgings from Yealm River; occasional specimens are obtained from the shores of the Sound and from Millbay Docks (E.J.A.)

Breeding: female swollen with large orange eggs, 10.6.37 (D.P.W.): development of eggs and larvae within adults' tubes occurred throughout 1955 (J.B.G.-B.)

PLATYNEREIS COCCINEA (Delle Chiaje) [*Fauvel*, 1923, p. 360]

In a collection of Nereis spp. collected by J.S.C. from Church Reef, Wembury, in 1937 (found by A.D.J., confirmed by N.T.)

Family **Nephtyidae**

NEPHTHYS CAECA (O. F. Müller) [*McIntosh*, 1900-23, II, 1, p. 8]

Large specimens on sandy shores, especially Drake's Island, Rum Bay and Yealm Sand-Bank (T.V.H., R.A.T., E.J.A.)

SALCOMBE. Only on the banks near the mouth of the harbour, being most numerous on the eastern sides (Allen and Todd, 1900, p. 193)

Breeding: Aug. (C.S.)

NEPHTHYS HOMBERGI Lamarck [*McIntosh*, 1900-23, II, 1, p. 17]

Shore between tide-marks especially in sand, Drake's Island, Rum Bay,

ANNELIDA: POLYCHAETA

Jennycliff Bay, Bovisand, Wembury Bay, Whitsand Bay, Yealm River (R.A.T., E.J.A.): dredged on Mewstone Amphioxus Ground (R.A.T.): and Eddystone Grounds (T.V.H.): widely distributed in mud, River Tamar up to Pentillie Quay, River Lynher, beach 100 yds. above Antony Creek, Aug. Oct. 1928 (E.P.): for notes on general distribution see Spooner and Moore (1940, p. 304)

SALCOMBE. One of the commonest shore polychaetes in Salcombe Estuary. On all grounds except the finest mud (Allen and Todd, 1900, p. 193)

Breeding: June-Aug. (Fuchs, 1911, p. 164): June-Sept. (Wilson, 1936*a*, p. 305)

NEPHTHYS CIRROSA Ehlers [*McIntosh*, 1900-23, II, 1, p. 36]

In sand between tide-marks, Drake's Island and Yealm Estuary (E.J.A.): in clean sand, River Erme, 1955 (E.C.S.)

TORQUAY. In clean sand (Elwes, 1909, p. 350)

EXMOUTH. In considerable numbers in clean sand (Allen and Todd, 1902, p. 319): in wet sand (Holme, 1949, p. 219)

Family **Sphaerodoridae**

EPHESIA GRACILIS Rathke [*McIntosh*, 1900-23, III, 1, p. 47]

Frequently met with from all dredging grounds in the Sound and outside to the Eddystone Grounds; most common Millbay Channel and Asia Shoal; also found on the shore between tide-marks, Drake's Island and Mount Edgcumbe (E.J.A.): single specimens dredged on a number of grounds S.S.W. of Eddystone in 42-47 fm. by Crawshay (1912, p. 343)

EPHESIA PERIPATUS Claparède (*non* Johnston) [*Claparède*, 1863, p. 50, as *Sphaerodorum*]

TORQUAY. Two specimens from Corbyn's Head (Elwes, 1910, p. 61)

SPHAERODORUM MINUTUM (Webster and Benedict) [*Southern*, 1914, p. 90]

Among *Laminaria* holdfasts from Rum Bay, a number of specimens; from material trawled in Cattewater (E.J.A.)

Family **Glyceridae**

GLYCERA LAPIDUM Quatrefages [*McIntosh*, 1900-23, II, 2, p. 477]

Between tide-marks Wembury Bay and Drake's Island (in shell gravel); dredged in shell gravel off the Mewstone and near Queen's Ground, not uncommon (E.J.A.)

SALCOMBE. The species recorded as *Glyceria capitata*, dredged between the Salstone and Snape's Point, is probably this form (Allen and Todd, 1900, p. 194)

GLYCERA GIGANTEA Quatrefages [*McIntosh*, 1900-23, II, 2, p. 482 as *Glyceria siphonostoma* Delle Chiaje.]

Between tide-marks, Drake's Island (W.G., R.A.T., D.P.W.): Mewstone Amphioxus Ground (E.J.A.)

ANNELIDA: POLYCHAETA

GLYCERA CONVOLUTA Keferstein [*McIntosh*, 1900-23, II, 2, p. 486, as *G. alba*]

The most common Glycera of the inshore waters; between tide-marks, Drake's Island, Jennycliff Bay, Yealm Estuary; in dredgings from Millbay Channel, Rame-Eddystone and Eddystone Grounds (E.J.A.): the *Glycera alba* Rathke recorded by Percival (1929, p. 98) from Rat Island, River Lynher, is probably this species (E.J.A.)

SALCOMBE. Nowhere abundant; 2 or 3 specimens from the shore in Salcombe Harbour (Allen and Todd, 1900, p. 194)

Breeding: June-Aug. (Fuchs, 1911, p. 164): successful fertilizations, July-Aug. 1939 (D.P.W.)

GLYCERA ROUXI Audouin and M. Edwards [*McIntosh*, 1900-23, II, 2, p. 491 as *G. goësi* Malmgren]

On the shore at Drake's Island and in other parts of the Sound, not uncommon; dredged off Stoke Point and near the Eddystone (E.J.A.): Rame Mud (Mare, 1942, p. 542)

GONIADA MACULATA Oersted [*McIntosh*, 1900-23, II, 2, p. 462]

Occasional specimens from the shores of the Sound; dredged in fine mud in the Sound (E.J.A.): common, Rame Mud (Mare, 1942, p. 542)

SALCOMBE. A few specimens from the shore near the mouth of the harbour on both sides (Allen and Todd, 1900, p. 194)

GLYCIDINDE NORDMANNI (Malmgren) [*McIntosh*, 1900-23, II, 2, p. 469; *Fauvel*, 1923, p. 394, as Eone]

TEIGNMOUTH BAY. Several taken with scoop-sampler (Holme, 1950)

Family Eunicidae

EUNICE HARASSI Audouin and Edwards [*Fauvel*, 1923, p. 399; *McIntosh*, 1900-23, II, 2, p. 425 as *E. fasciata*]

On the shore, Drake's Island, Rum Bay, Breakwater (R.A.T., E.J.A.): Wembury Bay (E.J.A.): in dredgings from Duke Rock (W.G., T.V.H.): Queen's Ground, Asia Shoal, Millbay Channel (R.A.T., E.J.A.): south of Breakwater Fort (W.G.): Rame-Eddystone Grounds (E.J.A.): 3 specimens S.S.W. of the Eddystone in 40-42 fm. (Crawshay, 1912, p. 342)

Breeding: ripe female, eggs opaque and separate, 14.8.11, Cawsand Bay (H.M.F.)

EUNICE VITTATA (Delle Chiaje) [*McIntosh*, 1900-23, II, 2, p. 431]

McIntosh (loc. cit., p. 432) gives Plymouth as a locality on the authority of C. Spence Bate. One specimen dredged 16 m. S.25 W. of the Eddystone in 42 fm. (Crawshay, 1912, p. 342)

MARPHYSA SANGUINEA (Montagu) [*McIntosh*, 1900-23, II, 2, p. 442]

Frequent on the shore in crevices of rock, especially on the bridge between Drake's Island and Mount Edgcumbe; also Rum Bay, Wembury Bay, Wembury and Yealm Estuary (W.G., T.V.H., R.A.T., E.J.A.): S. shore, mouth of River Yealm, dug in *Zostera* bed (A.J.S.)

SALCOMBE. A few specimens were found in different parts of the harbour; interesting as being the locality in which Montagu chiefly collected (Allen and Todd, 1900, p. 191)

ANNELIDA: POLYCHAETA

Breeding: Sound, 2 male specimens, 1 with active spermatozoa, the other with spermatozoa well formed, but only a few moving; 1 female with ripe eggs which ran out as single eggs when specimen was cut, 5.8.25 (E.J.A.)

MARPHYSA BELLI (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 2, p. 448]

On the shore between tide-marks, N. side of Drake's Island and Rum Bay; very common in the *Zostera* beds at the mouth of the Yealm River (E.J.A.)

SALCOMBE. Specimens were obtained on the Salstone and near the mouth of Salcombe Harbour (under Marine Hotel) (Allen and Todd, 1900, p. 191)

LYSIDICE NINETTA Audouin and M. Edwards [*McIntosh*, 1900-23, II, 2, p. 456, as *L. punctata*]

Frequent in Plymouth Sound, on the shore between tide-marks (Rum Bay, Drake's Island), and in dredgings (Asia Shoal, Millbay Channel, Queen's Ground); on the shore at Wembury Bay and Reny Rocks; dredged in Yealm River (E.J.A.)

NEMATONEREIS UNICORNIS (Grube) [*McIntosh*, 1900-23, II, 2, p. 453]

Between tide-marks, N. side of Drake's Island, Mount Edgumbe and Yealm Sand-bank; amongst dredgings from Queen's Ground, Asia Shoal and Millbay Channel (E.J.A.)

TORQUAY. Fairly common in the limestone rocks at Babbacombe (Elwes, 1910, p.61)

ONUPHIS CONCHYLEGA Sars [*McIntosh*, 1900-23, II, 2, p. 404, as *O. britannica*]

On coarse shell-gravel grounds in depths from 20-30 fm. off the Mewstone, off Stoke Point, S. of Rame Head and off the Eddystone (E.J.A., R.A.T.): found at several positions S.S.W. of the Eddystone in depths of 42-44 fm. by Crawshay (1912, p. 342)

HYALINOECIA TUBICOLA (O. F. Müller) [*McIntosh*, 1900-23, II, 2, p. 419]

Common on muddy gravel grounds from 20-30 fm.; off the Mewstone, Rame-Eddystone and Eddystone Grounds (E.J.A., R.A.T.): common and widely distributed on the area S.S.W. of the Eddystone at depths of 40-52 fm. (Crawshay, 1912, p. 342)

HYALINOECIA BILINEATA Baird [*McIntosh*, 1900-23, II, 2, p. 417, as *H. sicula*]

Dredged from shell-gravel ground off Yealm Head (E.J.A.): 4 specimens from shell gravel near Eddystone, 7.9.51 (G.E.N. and H.V.W.)

TEIGNMOUTH BAY. Single specimen taken in scoop-sampler (Holme, 1950)

IPHITIME PAGURI Fage and Legendre, 1933, p. 299

Three specimens from interiors of shells occupied by hermit crabs examined by J.B.G.-B., March to May 1956, one associated with *Eupagurus bernhardus* in an old Buccinum shell, and two with *Eupagurus prideauxi* in a shell enveloped by Adamsia; these are larger than the examples originally described, have four (not three) anterior segments lacking processes, and a relatively longer head; hence possibly may prove specifically distinct (G.M.S.)

- LUMBRICONEREIS IMPATIENS Claparède [*McIntosh*, 1900-23, II, 2, p. 379]
Occurs in dredge and trawl material from the Rame-Eddystone, Looe-Eddystone and Mewstone Grounds, especially from gravel; very abundant on Queen's Ground in the spring of 1903 (E.J.A.)
- LUMBRICONEREIS FRAGILIS (O. F. Müller) [*McIntosh*, 1900-23, II, 2, p. 372]
Two specimens (both incomplete) from a depth of 47-49 fm. S.S.W. of the Eddystone are provisionally referred to this species by Crawshay (1912, p. 342)
- LUMBRICONEREIS LATREILLI (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 2, p. 376]
Shores of the Sound between tide-marks (Drake's Island, Mount Edgcumbe, Rum Bay); amongst dredgings from Millbay Channel, Asia Shoal, Queen's Ground, Yealm River and Eddystone Grounds (E.J.A.)
SALCOMBE. A number of specimens on the west side of the harbour under the Marine Hotel; a few were found in other parts of the estuary (Allen and Todd, 1900, p. 191)
- DRILONEREIS FILUM (Claparède) [*Fauvel*, 1923, p. 436]
Rame Mud, rare (Mare, 1942, p. 542)
- ARABELLA IRICOLOR (Montagu) [*McIntosh*, 1900-23, II, 2, p. 395]
Occasional specimens at low-water mark on the shores of the Sound and Wembury Bay (E.J.A.)
- DORVILLEA RUBROVITTATA (Grube) [*McIntosh*, 1900-23, II, 2, p. 353, as *Staurocephalus*]
Frequent in dredgings from Millbay Channel, Queen's Ground, Asia Shoal, Duke Rock; also taken 2 miles off Yealm Head (E.J.A.)
- DORVILLEA RUDOLPHI (Delle Chiaje) [*Ehlers*, 1864-8, p. 434, as *Staurocephalus*]
Recorded once from Queen's Ground dredging; no further specimens have been obtained since the one entered in the 1904 List. The specimen has four eyes, an anterior pair of large eyes and a posterior pair of small ones, as described by Ehlers and Keferstein. In this respect it differs from the *S. ciliatus* of McIntosh (1900-23, II, 2, p. 359) which is described as having two eyes, black, large and distinct. *S. pallidus* Langerhans (1880, p. 300; McIntosh, 1900-23, II, 2, p. 363) is recorded once from Asia Shoal. It resembles *rudolphi* (= *ciliatus*) excepting for the absence of the posterior pair of eyes. Fauvel (1923, p. 446) regards it as synonymous with *rudolphi* (E.J.A.)
- DORVILLEA NEGLECTUS (Fauvel) [*Fauvel*, 1923, p. 447, as *Staurocephalus*]
Seven females and two males, all mature, under stone, M.T.L., Wembury, 12.5.55 (E.C.S.)
- OPHRYOTROCHA PUERILIS Claparède and Mecznirow [*McIntosh*, 1900-23, II, 2, p. 364]
Frequently met with in dredgings from the Sound, especially from Asia Shoal; sometimes very numerous in dredgings from the Cattewater; often

ANNELIDA: POLYCHAETA

common in the Laboratory tanks (E.J.A.): thousands from mouth of Cattewater (A.J.S.)

Breeding: Aug. (W.G.): 2 specimens from Millbay Docks (W. Wharf, scraped from piers) laid eggs in a dish, 7.4.13; spawned in Laboratory tanks, 6.4.16, 8.4.18, 28.8.24, in numbers; 12.10.18, 23.12.18, 20.12.21, eggs and young in a bell jar in which J.H.O. had had oysters in oil residue (A.J.S.) ripe eggs in tanks, 22.4.12 (J.H.O.)

OPHRYOTROCHA HARTMANNI Huth, 1933, p. 309

Aquarium tanks (G. Ba.)

Breeding: hermaphrodite with male elements in the first four parapodial segments; ripe eggs Oct.-Nov. 1951 (G.Ba.)

Family **Histriobdellidae**

HISTRIOBELLA HOMARI Van Beneden [*Foettinger*, 1884, p. 435; *Shearer*, 1910, p. 287]

Usually found on the eggs of lobsters taken by fishermen, but normally an inhabitant of the branchial chamber (C.S.)

Breeding: during the summer months (E.J.A.): Sept. (C.S.): April (G.M.S.)

Family **Orbiniidae**

ORBINIA LATREILLI (Audouin and M. Edwards) [*Fauvel*, 1927, p. 11, as *Aricia*]

SALCOMBE. Single specimen, female not quite mature, in dead *Zostera* bed, Mill Bay, 8.7.33 (D.P.W.)

TORQUAY. Several specimens, Tor Abbey Sands (Elwes, 1910, p. 61): several specimens near low water Tor Abbey Sands, 15.2.34 (D.P.W.)

ORBINIA CUVIERI (Audouin and M. Edwards) [*McIntosh*, 1900-23, II, 2, p. 497, as *Aricia*]

Occasional specimens dredged off the Mewstone (E.J.A.)

SCOLOPLOS ARMIGER (O. F. Müller) [*McIntosh*, 1900-23, II, 2, p. 510]

In dirty sand and between layers of shale at Rat Island (Hamoaze) (W.G.): in sand at Drake's Island, Rum Bay and the Yealm Estuary (E.J.A.)

SALCOMBE. A few specimens were found in the *Zostera* banks near the mouth of the harbour, on both the E. and W. sides (Allen and Todd, 1900, p. 194)

Breeding: 2 specimens with active sperm, Mill Bay, Salcombe, 8.6.33 (D.P.W.)

Family **Spionidae**

SCOLECOLEPIS GIRARDI (Quatrefages) [*McIntosh*, 1900-23, III, 1, p. 156, as *S. vulgaris*]

Occasional specimens from Rum Bay (E.J.A.)

SCOLECOLEPIS FULIGINOSA (Claparède) [*McIntosh*, 1900-23, III, 1, p. 160]

Very numerous in places in black mud at Rum Bay, Wembury Bay and Yealm Estuary (E.J.A.): River Tamar, Neille Point, in small pool at half tide (E.P.)

ANNELIDA: POLYCHAETA

SALCOMBE. One small one dredged between Salstone and Snape's Point (Allen and Todd, 1900, p. 194 as *Nerine vulgaris*)

Breeding: about March-April (D.P.W.); larvae described by Day (1934)

NERINE FOLIOSA (Audouin and M. Edwards) [*McIntosh*, 1900-23, III, 1, p. 142]

Wembury Bay (T.V.H.): in sand between tide-marks on the east side of Drake's Island, on the eastern side of the Sound, on Kingsand Beach (Cawsand Bay), Yealm Sand-Bank, occasional specimens in each locality (E.J.A.): Rat Island, River Lynher in mud (E.P.)

SALCOMBE. One specimen from the shore on the east side of the harbour (Allen and Todd, 1900, p. 194, as *N. coniocephala*)

EXMOUTH. Several specimens, Salthouse Lake area (Holme, 1949, p. 220)

NERINE CIRRATULUS (Della Chiaje) [*McIntosh*, 1900-23, III, 1, p. 148]

In fine gravel and sand between tide-marks on the eastern side of Plymouth Sound, occasional specimens only; Whitsand Bay, fine sand, 2 specimens (E.J.A.)

SALCOMBE. One specimen was obtained on the shore on the west side of the harbour, under the Marine Hotel (Allen and Todd, 1900, p. 194)

TORQUAY. Tor Abbey Sands; not numerous (Elwes, 1910, p. 62)

EXMOUTH. Common in clean sand, Bullhill Bank (Holme, 1949, p. 214)

LAONICE CIRRATA (Sars) [*McIntosh*, 1900-23, III, 1, p. 164]

McIntosh (loc. cit.) gives Plymouth as a locality on the authority of Spence Bate and Brooking Rowe (Allen, 1915, p. 629): Mewstone 342°, 2¾ miles, 24 fm., 15.8.28, conical dredge, 1 specimen (incomplete) (G.A.S.)

AONIDES OXYCEPHALA, (Sars) [*McIntosh*, 1900-23, III, 1, p. 186]

In the *Zostera* bed at low-water mark, eastern shore of Yealm mouth, very numerous; Yealm Sand-Bank, occasional specimens; Rum Bay and Wembury Bay, in crevices of shale; in sand at Wembury Bay (E.J.A.): 500 square metre in Rame Mud (Mare, 1942, p. 542)

TORQUAY. Numerous in rather foul mud under stones at Livermead (Elwes, 1910, p. 62)

Breeding: eggs near maturity, 19.1.11, reef at Bovisand between layers of slate in mud; 3.2.11, Rum Bay in shale and mud (J.H.O.)

SPIOPHANES BOMBYX (Claparède) [*McIntosh*, 1900-23, III, 1, p. 182; *Fauvel*, 1927, 41]

TORQUAY. A few specimens at east end of Tor Abbey Sands (Elwes, 1910, p. 62)

EXMOUTH. A few specimens, Salthouse Lake (Holme, 1949, p. 208)

SPIO FILICORNIS (Fabricius) [*McIntosh*, 1900-23, III, 1, p. 172]

In fine, clean sand at Wembury Bay, at low tide (E.J.A.)

TORQUAY. Very numerous in a limited area at a low level near middle of Tor Abbey Sands, 15.2.34 (D.P.W.-identified after *Fauvel*, 1927, p. 43)

PYGOSPPIO ELEGANS Claparède [*McIntosh*, 1900-23, III, 1, p. 189]

Forming tubes in very fine sand near the mouth of the River Yealm (E.J.A.): River Lynher shore, above Ince Castle (E.P.)

ANNELIDA: POLYCHAETA

Breeding: March (E.J.A.)

SALCOMBE. Abundant on the shore under the Marine Hotel, forming long, slender tubes or galleries of mucus covered with sand grains (Allen and Todd, 1900, p. 194 as *Spio seticornis*). These showed gills on the second setigerous segment which according to Fauvel is a character of the male (E.J.A.)

EXMOUTH. Common in clean fine sand, Salthouse Lake area (Holme, 1949)

POLYDORA CILIATA (Johnston) [*McIntosh*, 1900-23, III, 1, p. 198]

Boring in limestone of the Breakwater and in limestone dredged in Millbay Channel; boring in shells of *Nucella* and *Littorina* from Yealm Sand Bank; frequently found in oyster shells (E.J.A.): widely distributed River Tamar up to ½ m. above Halton Quay; River Lynher up to mud-flat above St. German's Bridge, in mud, cracks in rocks, shells of *Ostrea* and *Balanus* (E.P.)

Breeding: eggs laid in sacs attached to the sides of the parents' burrows; sacs found from Jan.-Oct., most common about March 1927, in shells of oysters from Yealm Estuary (Wilson, 1928, p. 569)

POLYDORA FLAVA Claparède [*McIntosh*, 1900-23, III, 1, p. 205]

At Rum Bay and Rat Island (Hamoaze), common in crevices of shale (W.G.): in holes in limestone below the Laboratory and in dredgings from Yealm River (E.J.A.)

Breeding: Feb. (W.G.)

POLYDORA CAECA (Oersted) [*Mesnil*, 1896, p. 191; *Fauvel*, 1927, p. 52]

Eddystone Grounds (T.V.H.): on the shore at Rum Bay in crevices of shale (E.J.A.)

POLYDORA HOPLURA Claparède [*McIntosh*, 1900-23, III, 1, p. 212]

Boring in limestone on the Plymouth Breakwater (E.J.A.): mussel bed off Neille Point, River Tamar (E.P.)

Breeding: egg sacs found from June-Oct. 1927, in shells of oysters from the Yealm Estuary (Wilson, 1928, p. 578)

POLYDORA GIARDI Mesnil (*Fauvel*, 1927, p. 50]

Sometimes very abundant in *Laminaria* holdfasts, Church Reef, Wembury (Colman, 1940)

Family Magelonidae

MAGELONA PAPILLICORNIS F. Müller [*McIntosh*, 1900-23, III, 1, p. 223]

In fine sand near low-water mark at Jennycliff Bay, under Batten Castle; on the south shore of the Yealm Estuary and in Wembury Bay (E.J.A.)

SALCOMBE. In fairly clean sand, Mill Bay (D.P.W.)

Breeding: larvae in tow-nets in July and Aug. (E.J.A.): Sept. (E.J.B.): fertilizations from Salcombe specimens made June-Aug. 1939 and June 1940 and larvae reared; larvae in Sound plankton, Aug. 1940 (D.P.W.)

MAGELONA CINCTA Ehlers, 1908, p. 111

Specimens provisionally identified as this species common in Rame Mud (D.P.W., and see Mare, 1942, p. 542)

ANNELIDA: POLYCHAETA

Breeding: fertilizations made and larvae reared Aug. 1939; larvae identified as belonging to this species in Sound and outside plankton, Aug.-Nov. 1939 (D.P.W.)

MAGELONA sp.

SALCOMBE. An unidentified and apparently undescribed small species of Magelona is common in clean sand near low water at Mill Bay (D.P.W.)

Breeding: this species seems to mature before *M. papillicornis*; fertilizations were made and larvae reared April-Sept 1939, but natural spawning appears to take place in the latter half of this period; the larvae are quite distinct from the other two species (D.P.W.)

Family **Disomidae**

POECILOCHAETUS SERPENS Allen, 1904a, p. 79

In sand at low tide south of Batten Castle; larvae not uncommon in the plankton during the summer months (E.J.A.): although the adults have not been seen for many years their larvae are still frequent in the plankton, in mid-century (D.P.W.)

Family **Chaetopteridae**CHAETOPTERUS VARIOPEDATUS (Renier) [*McIntosh*, 1900-23, III, 1, p. 120]

Common in muddy gravel on the Eddystone Grounds; Rame-Eddystone and Looe-Eddystone Grounds (E.J.A.): occasional specimens Duke Rock (T.V.H.): Asia Shoal (R.A.T.): Millbay Channel (R.A.T., E.J.A.): Mewstone Echinoderm Ground (R.A.T.): Stoke Point Grounds (S.P.): a few specimens at a number of positions S.S.W. of the Eddystone in depths of 40-51 fm. were taken by Crawshay (1912, p. 343)

SALCOMBE. Found on the shore at extreme low water on the west side of the Salstone and on the Zostera bank near the mouth of the harbour on the western side (Allen and Todd, 1900, p. 195): more freely in 1955 and 1956 than previously (G.M.S.)

Breeding: larvae in tow-nettings, July-Oct. (W.G.): ripe eggs and sperm in July (A.J.S., E.J.A.): with mobile spermatozoa, July (A.J.S.): successful fertilizations made in May 1939, one larva surviving until October (D.P.W.)

PHYLLOCHAETOPTERUS ANGLICUS Potts, 1914, p. 984

From material brought in by trawlers from some locality south of the Eddystone (Potts, *loc. cit.*); Fauvel (1927, p. 84) thinks this is *Ph. socialis* Claparède (E.J.A.): fairly numerous on outside of Chaetopterus tubes, 3-6 miles S.W. of Eddystone, 28.7.55 (J.L.B.)

Family **Cirratulidae**AUDOUINIA TENTACULATA (Montagu) [*McIntosh*, 1900-23, III, 1, p. 242 as Cirratulus]

Common in gravel and sand just below high-water mark on all shores both inside and outside the Sound, excepting on open sandy beaches; occasional small specimens dredged in shallow water amongst the roots of weeds (E.J.A.): St. John's Lake, Rat Island, Aug., Sept. 1928 (E.P.)

ANNELIDA: POLYCHAETA

SALCOMBE. Very common all over the estuary above half-tide mark, wherever the soil contains much mud mixed either with gravel or sand (Allen and Todd, 1900, p. 194)

Breeding: one specimen from Rum Bay extruded eggs in dish, 21.7.16 (A.J.S.): June-July 1928, fertilizations made and larvae reared (D.P.W.)

CIRRATULUS CIRRATUS (O. F. Müller) [*McIntosh*, 1900-23, III, 1, p. 249]

From crevices in the shale at Rum Bay, and from the shore below the Laboratory; small specimens have been obtained from dredgings in the Cattewater and from the scrapings of the piles in Millbay Dock (Allen, 1915, p. 632): Cawsand Bay, shore near high-water mark, 1 good-sized specimen (E.J.A.): Rat Island shore above Ince Castle, Aug.-Sept. 1928 (E.P.)

CIRRATULUS NORVEGICUS (Quatrefages) [*Southern*, 1914, p. 107]

A specimen was obtained from crevices in the shale at Rum Bay (E.J.A. confirmed by R. Southern)

HETEROCIRRUS BIOCULATUS (Keferstein) [*Fauvel*, 1927, p. 96]

Wembury, sublittoral, rare (Kitching, Macan and Gilson, 1934, p. 699)

TORQUAY. Occasionally in small pools at Babbacombe (Elwes, 1910, p. 63 as *H. viridis*)

HETEROCIRRUS ALATUS (Southern) [*Fauvel*, 1927, p. 99]

Single specimen in Laminaria holdfast, Church Reef, Wembury (Colman, 1940, p. 179)

HETEROCIRRUS CAPUT-ESOCIS Saint-Joseph [*Caullery* and *Mesnil*, 1898, p. 122]

SALCOMBE. One among sponges at 4 fm. near Great Mewstone, 1955 (coll. G.R.F., det. E.C.S.)

TORQUAY. Two or three specimens in small pools at Babbacombe (Elwes, 1910, p. 63)

HETEROCIRRUS sp.

A small cirratulid attributed to *H. zetlandicus* (McIntosh) numerous in suitable ground in Tamar estuary (Spooner and Moore, 1940, p. 306)

DODECACERIA CONCHARUM Oersted [*McIntosh*, 1900-23, III, 1, p. 255]

Boring in limestone on Plymouth Breakwater, abundant also in limestone below the Laboratory and from Millbay Channel (E.J.A.)

Breeding: N. side of Breakwater, extruding ripe eggs, 18.1.11; shore under Laboratory, containing eggs, 10.10.12, 14.1.13 (about 60 specimens) 12 and 13.2.13 (A.J.S.)

In Nov. and Dec. 1926 and Jan. 1927 specimens of a Dodecaceria obtained from the shells of living oysters from the River Yealm were undergoing asexual reproduction by fragmentation and regeneration; at that time they were identified as this species but it is probable that they should now be ascribed to *Dodecaceria caulleryi* Dehorne, 1933, p. 298 and p. 304 (D.P.W.)

STREBLOSPIO SHRUBSOLI (Buchanan) [*Fauvel*, 1927, p. 106]

Occasional specimens in mud, River Lynher up to flat above St. German's

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Bridge; River Tamar up to ½ mile above Halton Quay, June-Oct. 1928 (E.P.): mud from big ditch, Chelson Meadow, May 1914; a second specimen Nov. 11th in a coiled mud tube; 7.10.20, in very large numbers from Chelson Meadow (E.J.A.)

Family **Chlorhaemidae**

FLABELLIGERA AFFINIS Sars [*McIntosh*, 1900-23, III, 1, p. 107]

Between tide-marks at Drake's Island (R.A.T., T.V.H., E.J.A.): Reny Rocks (R.A.T., E.J.A.): under Rame Head (T.V.H.): Wembury Bay (E.J.A., A.J.S.): in dredgings from Millbay Channel, Queen's Ground (R.A.T., (T.V.H.): Mewstone Grounds (E.J.A., R.A.T.): on *Echinus acutus* (R.A.T.): shore, Cawsand, on *Echinus* (A.J.S.): Cattewater, 4 specimens on *Psammechinus miliaris* (D.P.W., H.G.V., P.G.C.)

SALCOMBE. Three on spines of *Psammechinus*, Woodville Rocks, 27.3.56 (G.M.S.)

STYLARIOIDES PLUMOSA (O. F. Müller) [*McIntosh*, 1900-23, III, 1, p. 89]

In dredgings from Millbay Channel and Asia Shoal, occasional specimens; also dredged off Stoke Point (E.J.A.): Eddystone shell gravel, 7.9.51 (H.W.W.)

DIPLOCIRRUS GLAUCUS Haase [*McIntosh*, 1900-23, III, 1, p. 96, as Stylarioides]

Two specimens 5½ m. W. of Rame, 3.9.19, coarse tow-net which had touched bottom and collected a lot of shell gravel; one specimen, 15.9.19, coarse tow-net on otter boards, Rame Head, E.N.E., Eddystone S. by E. (E.J.A.): in Rame Mud, rare (Mare, 1942, p. 542)

Family **Scalibregmidae**

SCALIBREGMA INFLATUM Rathke [*McIntosh*, 1900-23, III, 1, p. 34]

In muddy gravel at low water on the S. shore of the Yealm River, just below the junction of the two rivers, 2 specimens, 10.9.00 (E.J.A.): abundant in Rame Mud (Mare, 1942, p. 542)

SCLEROCHEILUS MINUTUS Grube [*McIntosh*, 1900-23, III, 1, p. 42]

This species was formerly frequently taken in Millbay Channel dredgings, and occasionally in dredgings from Asia Shoal and off the Mewstone. During the few years prior to 1915 no specimens were found in spite of special searching (Allen, 1915, p. 64): from Asia Shoal dredgings, 23.3.49 (G.M.S., det. D.P.W.)

Family **Opheliidae**

OPHELIA BICORNIS Savigny [*Fauvel*, 1927, p. 130]

EXMOUTH. In great numbers in loose sand on N.E. side of Polesands; in moderate numbers in similar sand on highest part of Bullhill Bank (Allen and Todd, 1902, p. 321): abundant on the Bullhill Bank in clean, well drained sand (Wilson, 1948; Holme, 1949): of recent years not as numerous on the Polesands as recorded by Allen and Todd (Wilson, 1952, p. 62)

Breeding: natural spawning takes place mainly July-Aug.; artificial fertilizations can be obtained two or three months earlier (D.P.W.)

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OPHELIA ROSCOFFENSIS Augener [*Tebble*, 1952, p. 565]

Single specimen from shell gravel 1m. E. of Eddystone, 10.6.49 (D.P.W. and N.T.): 2 specimens Eddystone shell gravel, 22.2.52 (N.T.): one each on 28.7.55 and 26.8.55, ¼ mile N.W. of Eddystone (J.L.B.)

AMMOTRYPANE AULOGASTER Rathke [*McIntosh*, 1900-23, III, 1, p. 15]

Occasionally dredged in the Sound and on the Mewstone shell gravel (E.J.A.): in mud 1 m. S. of Rame Head, about 6 specimens, dredge with fine mesh, 5.9.11 (J.H.O.): several specimens from Rame Mud (Mare, 1942, p. 542)

POLYOPHTHALMUS PICTUS (Dujardin) [*McIntosh*, 1900-23, III, 1, p. 21]

On the shore between tide-marks Wembury Bay (A.J.S.): occasionally found on all rocky shores among weeds and coralline of tide-pools (E.J.A.)

Family **Capitellidae**NOTOMASTUS LATERICEUS M. Sars [*McIntosh*, 1900-23, III, 1, p. 276]

On the shore in black, muddy sand near low-water mark in the upper parts of the Yealm Estuary; occasional specimens from the shore at Rum Bay and Wembury Bay (E.J.A.): several specimens in Rame Mud (Mare, 1942, p. 542)

SALCOMBE. One of the commonest polychaetes of the shores of the estuary; especially abundant and large in the fine mud in the upper parts of the estuary (Allen and Todd, 1900, p. 194)

Breeding: in upper parts of Salcombe Estuary, April-June 1928; fertilizations made and larvae reared (D.P.W.)

NOTOMASTUS RUBICUNDUS Keferstein [Eisig, 1887, p. 863]

In fine, clean sand on the north and south shores of the Yealm Estuary near the mouth; in fine, clean sand at Wembury Bay (E.J.A.) (See notes by Allen, 1915, pp. 637-8 and Fauvel, 1927, p. 143)

DASYBRANCHUS CADUCUS (Grube) [*Tebble*, 1954, p. 316]

One specimen, Rame Mud, October 1937 (D.P.W.)

HETEROMASTUS FILIFORMIS (Claparède) [Eisig, 1887, p. 839]

Widely distributed in stiff mud, River Tamar up to Neille Point, River Lynher up to beach 100 yds. above Antony Creek, June-Oct. 1928 (E.P.)

CAPITELLA CAPITATA (Fabricius) [*McIntosh*, 1900-23, III, 1, p. 280]

Common in black mud from between tide-marks, Wembury Bay and Rum Bay (E.J.A.): River Lynher, shore at Ince Castle, 1 specimen; Rat Island 1 specimen (E.P.)

CAPITELLIDES GIARDI Mesnil [*Fauvel*, 1927, p. 157]

Occasionally common in Laminaria holdfasts (Colman, 1940)

Family **Arenicolidae**ARENICOLA MARINA (L.) [*McIntosh*, 1900-23, III, 1, p. 59]

In fine sand between tide-marks at Rum Bay, Drake's Island, Mount Edgcumbe, Wembury Bay and Yealm River (T.V.H., R.A.T., E.J.A.): River

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Tamar, up to flat below Cargreen (R. bank); River Lynher up to junction of Tiddy and Lynher, June-Oct. (E.P.)

SALCOMBE. Common in all parts of the harbour in sand or muddy sand (Allen and Todd, 1900, p. 195)

Breeding: from Wembury Bay shore, spawned, 8.10.25 (E.J.A.): Post-larval stages in tow-nettings, Feb. (W.G., W.B.B.) and March (E.J.A.). (For an account of the spawning and larvae of this species see Newell, 1948)

ARENICOLA ECAUDATA Johnston [*McIntosh*, 1900-23, III, 1, p. 72]

With *A. branchialis* near the bases of rocks in a deposit composed of sand and small stones (F.W.G.): Rum Bay; in sand and gravel around the rocks below the Laboratory (R.A.T.): Wembury Bay (R.A.T., E.J.A.): Drake's Island (T.V.H.)

Breeding: shore, Jennycliff, 3.2.15, thousands of nearly ripe eggs in several individuals, a few segmented; N.E. corner of Drake's Island (shore) 6.1.20, "eggs and sperm appear to be ripe" (A.J.S.) 22.3.20, probably this species, Wembury Bay W., ripe ova and spermatozoa (J.H.O.)

ARENICOLA BRANCHIALIS Audouin and Edwards [*McIntosh*, 1900-23, III, 1, p. 78; Fauvel, 1927, p. 165, as *A. grubii*]

With *A. ecaudata* near the bases of rocks in a deposit composed of sand and small stones (F.W.G.): Rum Bay, Wembury Bay, Drake's Island (E.J.A.)

Family Maldanidae

EUCLYMENE MODESTA (Quatrefages) [*Arwidsson*, 1922, p. 32; Fauvel, 1927, p. 172 (footnote), however, says that the species described by Arwidsson is *not* the *Clymene modesta* of Quatrefages]

SALCOMBE. Muddy beach under Marine Hotel, 4 specimens, collected by E.J.A. and R.A.T., 11.8.00, 1 specimen collected by F.A.P., Sept. 1908; Salstone 6 specimens collected by E.J.A. and R.A.T., 11.9.00. All specimens identified and described by Arwidsson, 1922, pp. 32-6.

HETEROCLYMENE ROBUSTA Arwidsson, 1907, p. 227

Occasionally met with among trawled material from the Rame-Eddystone Grounds (E.J.A.)

CAESICIRRUS NEGLECTUS Arwidsson, 1911-12, p. 217 and 1922, p. 36

In sand and among holdfasts of *Zostera* at the mouth of the Yealm Estuary (E.J.A.)

SALCOMBE. Muddy beach under Marine Hotel, 4 specimens, collected by E.J.A. and R.A.T., 11.8.00, 10 specimens collected by F.A.P., Sept. 1908; Salstone, 10 specimens collected by E.J.A. and R.A.T., 11.9.00. All the preceding Salcombe specimens identified and described by Arwidsson, 1922, pp. 36-41. Abundant in sand near low water, Mill Bay (D.P.W.)

Breeding: spawning appears to take place about Oct. and to be of limited duration (D.P.W.)

LEIOCHONE LEIOPYGOS (Grube) [*Arwidsson*, 1922, p. 18]

SALCOMBE. Sandy beach, opposite the Marine Hotel, 17 specimens, collected by F.A.P. Sept 1908; Salstone, 1 posterior end, collected by E.J.A.

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and R.A.T., 11.9.00. All specimens identified and described by Arwidsson, 1922, pp. 18-23.

TORQUAY. Numerous at extreme low water in the centre of Tor Abbey Sands (Elwes, 1910, p. 64, as *L. clypeata*, Saint-Joseph): numerous in same locality, 15.2.34; the place will only be uncovered by exceptionally low spring tides (D.P.W.)

Breeding: one apparently mature female, Mill Bay, Salcombe, 10.7.33 (D.P.W.)

PROCLYMENE MULLERI (M. Sars) [Arwidsson, 1907, p. 129; Fauvel, 1927, p. 186; Allen, 1915, p. 639, as *Nicomache lumbricalis* (Fabricius) var.]

One anterior end from Rame-Eddystone Grounds, among trawled material, 12.7.06, identified by Arwidsson (E.J.A.)

NICOMACHE LUMBRICALIS (Fabricius) [Fauvel, 1927, p. 190]

SALCOMBE. N.E. shore of harbour, in muddy sand and gravel with *Lanice conchilega*, 20.8.55 (J.L.B.)

MICROMALDANE ORNITHOCHAETA Mesnil, 1897, p. 146 [Southern, 1914, p. 134]

Found once on the shore at Rum Bay (E.J.A.): common in Laminaria holdfasts (Colman, 1940, p. 167)

SALCOMBE. Eight among sponges at 4 fm. near Great Mewstone, 1955 (coll. G.R.F., det. E.C.S.)

Family **Oweniidae**

OWENIA FUSIFORMIS Delle Chiaje [McIntosh, 1900-23, III, 1, p. 356]

In fine sand near low-water mark at Jennycliff Bay and under Batten Castle (Allen, 1915, p. 632)

SALCOMBE. In clean, fine sand at Mill Bay (Allen and Todd, 1900, p. 195)

TORQUAY. Abundant in the Tor Abbey sands (Elwes, 1910, pp. 62-3; Wilson, 1932)

Breeding: March-Aug; fertilizations made and larvae reared (Wilson, 1932)

Family **Sabellariidae**

SABELLARIA ALVEOLATA (L.) [McIntosh, 1900-23, IV, 1, p. 22]

Common attached to rocks on sandy shores at Whitsand Bay (E.J.A.): Wembury Bay, Cawsand Bay (A.J.S.): Mothecombe, common near low water, east side, 1949 (D.P.W.)

EXMOUTH. Common on Maer Rocks (N.A.H., D.P.W.)

DUCKPOOL near BUDE, N. CORNWALL. Extensive colonies on rocks near low water (D.P.W.): also at Millook south of Bude (D.B.C.)

Breeding: Jan., March (A.J.S.): March, April (J.H.O.): throughout greater part of the year (Wilson, 1929, p. 222)

SABELLARIA SPINULOSA Leuckart [McIntosh, 1900-23, IV, 1, p. 12]

Occasional specimens attached to shells, etc., from all dredging grounds in the Sound, and from outside dredging and trawling grounds to the Eddystone (E.J.A.): found in small numbers at many positions S.S.W. of the Eddystone by Crawshay (1912, p. 348)

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Breeding: May (W.G.): Sept. (E.J.A.): Jan.-Sept., fertilizations made and larvae reared (Wilson, 1929, p. 222)

PALLASIA MURATA Allen, 1904*b*, p. 299

Two or three specimens have been obtained from gravel off Stoke Point and from shell gravel near the Mewstone; empty tubes are frequently found on the latter ground (E.J.A.): Rame bearing N. $\frac{1}{2}$ W. 5 m. 27.6.12, dredge (A.J.S.): Crawshay obtained tubes or portions of tubes at a large number of positions S.S.W. of the Eddystone in depths of 40-50 fm.; living specimens were obtained at three positions, the largest number being from 23.3 m. S. 28° W. of the Eddystone, at a depth of 45 fm., where portions of six worms were taken (Allen, 1915, p. 646)

Breeding: a larva probably belonging to this species was obtained in the plankton in Feb. 1927 (Wilson, 1929, p. 242)

Family **Amphictenidae**PECTINARIA KORENI (Malmgren) [*McIntosh*, 1900-23, IV, 1, p. 49, as *Lagis*]

Common in sand near low-water mark S. of Batten Castle (Allen, 1915, p. 637)

SALCOMBE. Two specimens recorded as *P. belgica* from the shore may be this species (Allen and Todd, 1900, p. 198): not uncommon in sand between Ferry House and Mill Bay, near low water (D.P.W.): also freely below Marine Hotel, 1951 and 1952 (G.M.S.)

GREAT WEST BAY. Common about 6-8 m. S.E. of Berry Head, in a depth of about 55 metres, taken in scoop-sampler (Holme, 1950)

Breeding: fertilizations made April 1933 (Wilson, 1936*a*)

PECTINARIA AURICOMA (Müller) [*Malmgren*, 1865, p. 357, as *Amphictene*; *Fauvel*, 1927, p. 222]

Eddystone Grounds (T.V.H.): one immature male N.E., sandy patch, Drake's Island, 8.6.33 (D.P.W.)

SALCOMBE. Not uncommon in sand near low water on east side of harbour (D.P.W.): less numerous than *P. koreni*, 1949-52; once below the Marine Hotel (G.M.S.)

GREAT WEST BAY. A few specimens taken with scoop-sampler (Holme, 1950)

PETTA PUSILLA Malmgren, 1865, p. 361 [*Fauvel*, 1927, p. 224]

Two specimens dredged S.S.W. of the Eddystone in 42 fm. (Crawshay 1912, p. 346): 1 specimen taken with scoop-sampler, Eddystone shell gravel, 21.7.50 (N.A.H.)

Family **Ampharetidae**AMPHARETE GRUBEI Malmgren [*Fauvel*, 1927, p. 227]

St. John's Lake, opposite Rifle Range, 1 specimen, 16.9.28 (E.P.): abundant in St. John's Lake (Spooner and Moore, 1940, p. 307): Rame Mud, rare (Mare, 1942, p. 542)

EXMOUTH. Abundant in muddy places, Salthouse Lake (Holme, 1949, p. 223)

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Breeding: apparently nearly mature specimens from West Muds, Tamar, examined in Oct. and Nov. 1937 and 1938 (D.P.W.)

AMPHICTEIS GUNNERI (Sars) [*McIntosh*, 1900-23, IV, 1, p. 70; *Fauvel*, 1927, p. 231]

One specimen dredged 4 m. S.W. by S. of Rame Head (Allen, 1915, p. 637): from several places roughly 3 m. S. of Mewstone in depth of about 25 fm., 27.7.28, grab and conical dredge (G.A.S.): Rame Mud, rare (Mare, 1942, p. 542)

MELINNA CRISTATA (Sars) [*Fauvel*, 1927, p. 237]

SALCOMBE. Female, containing disc-shaped eggs (G.A.S.)

MELINNA PALMATA. Grube [*Fauvel*, 1927, p. 239]

Very common in soft mud in Plymouth Sound, found both on the shore at low water and also by dredging (E.J.A.): River Lynher, Wivelscombe Lake, Rat Island, shore (E.P.): West Muds, Tamar, common (Spooner and Moore, 1940, p. 307): Rame Mud, common (D.P.W.)

SALCOMBE. In fine mud in the upper parts of Salcombe and Kingsbridge Estuary in very great abundance. Probably the *Sabella curta* of Montagu (Allen and Todd, 1900, p. 197)

Breeding: apparently about Sept. (D.P.W.)

Family Terebellidae

AMPHITRITE GRACILIS (Grube) [*McIntosh*, 1900-23, IV, 1, p. 122, as *A. scylla*]

Common in sand between tide-marks and between layers of shale in Rum Bay and at Mount Edgcumbe, Yealm Sand-bank and Wembury Bay; dredged at Millbay Channel and Eddystone Grounds (E.J.A.)

AMPHITRITE JOHNSTONI Malmgren [*McIntosh*, 1900-23, IV, 1, p. 117, as *A. figulus*]

In sand and gravel near low-water mark along the southern shore of the Yealm River; most common on the east shore where the stream divides (R.A.T., E.J.A.): occasional specimens from Rum Bay (E.J.A.)

SALCOMBE. Very abundant on the Salstone, especially on the north-east and south-east sides; occasionally met with on the shore in all parts of the Kingsbridge Estuary and Salcombe Harbour, being abundant on the western shore near the mouth of the harbour, under Marine Hotel (Allen and Todd, 1900, p. 195)

Breeding: near mouth of River Yealm, 23.3.20, full of light red eggs, River Yealm, south shore, *Zostera* bed near ferry house, 5.4.23, with ripening eggs (J.H.O)

AMPHITRITE EDWARDSI (Quatrefages) [*McIntosh*, 1900-23, IV, 1, p. 114, as *A. gigantea*]

One specimen, with *Lepidasthenia argus*, Eddystone bearing 304° N., distance 4½ m., 2.5.52 (G.R.F.)

SALCOMBE. In the *Zostera* banks near the mouth of Salcombe Harbour, being especially abundant on the western side, under Marine Hotel; in the latter locality *A. johnstoni* is also found, but is more abundant at a some

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what lower tidal level; *A. edwardsi* was never found in the Kingsbridge Estuary, where *A. johnstoni* was common (E.J.A.). The burrows of *A. edwardsi* were generally occupied by the polynoid *Lepidasthenia argus* (Allen and Todd, 1900, p. 196)

Breeding: 13.4.22, Salcombe, under Marine Hotel, females with ripe eggs (J.H.O.): a specimen under circulation discharged eggs, 13.4.28 (D.P.W.)

TEREBELLA LAPIDARIA (L.) [*McIntosh*, 1900-23, IV, 1, p. 165, as *Leprea*]

Common in crevices of shale at Rum Bay (R.A.T., E.J.A.): also at Wembury and Portwrinkle (G.M.S.)

SALCOMBE. Extremely abundant in a bank of shaley gravel of terrigenous origin about ¼ mile below Kingsbridge, May 1954 (R.I.S.)

LANICE CONCHILEGA (Pallas) [*McIntosh*, 1900-23, IV, 1, p. 137]

Common on sandy shores inside and outside the Sound; occasionally dredged on Queen's Ground; Eddystone Ground (T.V.H., R.A.T., E.J.A.): empty tubes were dredged S.S.W. of the Eddystone at depths from 42-49 fm. by Crawshay (1912, p. 343): St. John's Lake; Rat Island; shore near Ince Castle, June-Oct. 1928 (E.P.)

SALCOMBE. Extremely abundant in patches of clean sand near the mouth of the harbour on both sides, and in sheltered parts of sandy bays outside the harbour; found only occasionally in the upper parts of the estuary (Allen and Todd, 1900, p. 196)

Breeding: post-larvae found in the plankton in the spring, also in Nov. 1926; these larvae have been reared to a stage at which it was possible to determine the species (D.P.W.)

LOIMIA MEDUSA (Savigny) [*Malmgren*, 1865, p. 380, *McIntosh*, 1900-23, IV, 1, p. 147, as *L. montagui* McIntosh]

Among shell gravel near low-water mark on the N. side of Drake's Island; from the shore in Yealm River; tubes dredged on Queen's Ground (E.J.A.): several specimens roughly 3 m. S. of Mewstone, Aug. 1928, Petersen Grab (G.A.S.): 2 specimens N.E. shore Drake's Island, 8.6.33 (D.P.W.)

SALCOMBE. One specimen under Marine Hotel, 27.3.33 (D.P.W.): one or two regularly taken at L.W.S.T., 1949-56, both sides of estuary, especially eastern side (G.M.S.)

Breeding: post-larvae very common in tow-nets, spring and summer (M.V.L., D.P.W.): scarcer in mid-century (D.P.W.)

POLYMNIA NEBULOSA (Montagu) [*McIntosh*, 1900-23, IV, 1, p. 129]

Very common between tide-marks at Mount Edgcumbe (R.A.T., E.J.A.): occasional specimens on the shore at Rum Bay and in dredgings from Millbay Channel, Asia Shoal, Queen's Ground and Yealm River (R.A.T., E.J.A.): Eddystone Grounds (T.V.H.): dredged at a number of stations S.S.W. of the Eddystone in 40-50 fm. (Crawshay, 1912, p. 343): common in abandoned Chaetopterus tubes and among occupied ones, Eddystone Grounds, autumn and winter 1952-3 (D.D.)

SALCOMBE. Dredged in the Channel west of the Salstone (Allen and Todd, 1900, p.197)

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- POLYMNIA NESIDENSIS** (Delle Chiaje) [*McIntosh*, 1900-23, IV, 1, p. 126]
Between tide-marks at Rum Bay, Mount Edgcumbe, Wembury Bay; dredged at Asia Shoal, Yealm River and Cawsand Bay (E.J.A.): 1 specimen dredged S.S.W. of the Eddystone at a depth of 49 fm. (Crawshay, 1912, p. 343)
- NICOLEA VENUSTULA** (Montagu) [*Saint-Joseph*, 1894, p. 207]
Seven specimens obtained 32 m. S. of Start Point (40-3 fm.) (E.J.A.): dredged at a number of stations S.S.W. of the Eddystone at depths of 42- 50 fm. (Crawshay, 1912, p. 343)
- NICOLEA ZOSTERICOLA** (Oersted) [*Malmgren*, 1865, p. 381]
Common between tide-marks on Reny Rocks; less frequent on the N. side of Drake's Island; also obtained from dredgings in Yealm River (E.J.A.)
- PISTA CRISTATA** (O. F. Müller) [*McIntosh*, 1900-23, IV, 1, p. 158; *Fauvel*, 1927, p. 266]
Mewstone 342° 1½ m. 22 fm., 22.7.28, Petersen Grab (G.A.S.)
- THELEPUS CINCINNATUS** (Fabricius) [*McIntosh*, 1900-23, IV, 1, p. 170]
Common on the trawling grounds in the neighbourhood of the Eddystone, 20-40 fm. (E.J.A.): obtained at a number of stations S.S.W. of the Eddystone in depths of 40-50 fm. (Crawshay, 1912, p. 344)
SALCOMBE. It is doubtful whether the species found at Salcombe should be assigned to *T. setosus* or to *T. cincinnatus* (Allen and Todd, 1900, p. 197)
- STREBLOSOMA BAIRDI** (Malmgren) [*Fauvel*, 1927, p. 275]
Common in Rame Mud (Mare, 1942, p. 542)
- POLYCIRRUS CALIENDRUM** Claparède [*McIntosh*, 1900-23, IV, 1, p. 197]
Common in dredgings from all parts of the Sound, especially in Millbay Channel; dredged also in Yealm River; occasional specimens among weeds and Laminaria holdfasts from the shore (Allen, 1915, p. 636)
SALCOMBE. Dredged between Salstone and Snape's Point (Allen and Todd, 1900, p. 197)
- POLYCIRRUS HAEMATODES** (Claparède) [*McIntosh*, 1900-23, IV, 1, p. 198]
Not uncommon in dredgings from the Sound, especially from Millbay Channel and Asia Shoal; much less numerous than *P. caliendrum* (E.J.A.)
- LYSILLA LOVENI** Malmgren [*Fauvel*, 1927, p. 286]
One specimen taken with anchor dredge, Eddystone bearing 181° T. distance 4 m. 32 fm., 22.2.52. Lying against the Lysilla, in a mass of sand was an *Ophiodromus flexuosus*, presumably commensal (G.R.F., D.P.W.)
- TRICHOBRANCHUS ROSEUS** (Malmgren) [*Hessle*, 1917, p. 132]
Abundant in Rame Mud (Mare, 1942, p. 542)
- TEREBELLIDES STROEMI** Sars [*McIntosh*, 1900-23, IV, 1, p. 209]
One specimen dredged 4 m. S.W. by S. of Rame Head (E.J.A.): Mewstone 342°, 2¾ m. 24 fm., 15.8.28, conical dredge (G.A.S.): Rame Mud, rare (Mare, 1942, p. 542)

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Family Sabellidae

SABELLA PAVONINA Savigny [*McIntosh*, 1900-23, IV, 1, p. 223, as *S. penicillus* L.]

Common on the shore in Yealm River and also found in Yealm dredgings; common on the shore in the Cattewater, near the entrance to Hooe Lake; Looe-Eddystone, Rame-Eddystone and Eddystone Grounds, common among hydroids and Cellaria (E.J.A.): dredged S.S.W. of the Eddystone at a number of positions in depths of 40-51 fm. (Crawshay, 1912, p. 346)

SALCOMBE. Very abundant on the shore at the Salstone and on the mud in Kingsbridge Estuary, S. of Garston Point; absent from the banks near the mouth of Salcombe Harbour (Allen and Todd, 1900, p. 198). These estuarine specimens were of large size (E.J.A.)

Breeding: Aug.-Sept. (C.S.)

SABELLA PAVONINA Savigny var. BICORONATA Hornell [*Ewer*, 1946, p. 427]

Trawled at Laira and in the Tamar estuary near Saltash Bridge (D.W.E.)

BISPIRA VOLUTACORNIS (Montagu) [*McIntosh*, 1900-23, IV, 2, p. 254]

In cracks between rocks at extreme low-tide mark on Reny Rocks and in Jennycliff Bay (E.J.A.): occasional in rock cracks at Wembury (D.P.W.): generally distributed on rocky grounds outside the Sound, L.W.S.T. to about 5 fm. (G.R.F.)

SALCOMBE. East side near mouth of harbour in sheltered rock-pool exposed at half tide; a small cluster grew out from a crevice, 21.9.23 (N.J.B.)

POTAMILLA RENIFORMIS (O. F. Müller) [*McIntosh*, 1900-23, IV, 1, p. 232]

Large specimens from the shore at Rum Bay and Jennycliff Bay in crevices of shale; occurs also attached to rocks below the Laboratory, at Wembury Bay and other rocky shores; not uncommon in holes in limestone from Plymouth Breakwater (E.J.A.)

POTAMILLA TORELLI Malmgren [*McIntosh*, 1900-23, IV, 1, p. 239]

Common in dredgings from Millbay Channel, Asia Shoal and Yealm River (E.J.A.)

BRANCHIOMMA VESTICULOSUM (Montagu) [*McIntosh*, 1900-23, IV, 1, p. 247]

Occasional specimens on the shore, Yealm Sand-bank and Rum Bay (R.A.T.): Drake's Island; S. shore of Yealm near the mouth; Barn Pool; shore S. of Batten Castle (E.J.A.)

SALCOMBE. In Salcombe Estuary, abundant where the soil is composed of gravel; it is found at a higher level than *Sabella pavonina* and *Myxicola infundibulum*; most numerous on the Salstone and in the upper parts of Salcombe Harbour (Allen and Todd, 1900, p. 199)

Breeding: in Salcombe Estuary, June-Aug; fertilizations made and larvae reared (Wilson, 1936)

DASYCHONE BOMBYX (Dalyell) [*Saint-Joseph*, 1894, p. 309]

Among Laminaria holdfasts from the shores of the Sound, and among ascidians from Millbay Dock; occurs on all the dredging grounds in the Sound and outside to Eddystone Grounds (E.J.A.): St. John's Lake opposite

ANNELIDA: POLYCHAETA

Rifle Range, 1 specimen (E.P.): dredged at a number of positions S.S.W. of the Eddystone in depths of 40-49 fm. (Crawshay, 1912, p. 346)

AMPHIGLENA MEDITERRANEA (Leydig) [*McIntosh*, 1900-23, IV, 2, p. 270]

Among Laminaria holdfasts from the rocks below the Laboratory; in crevices of shale at Wembury Bay (E.J.A.): sometimes common in Laminaria holdfasts, Church Reef, Wembury (Colman, 1940)

FABRICIA SABELLA (Ehrenberg) [*McIntosh*, 1900-23, IV, 2, p. 264]

Very abundant among mud scraped from piles at Millbay Dock (E.J.A.): large numbers in Laminaria holdfasts, Rum Bay, 19.4.39 (D.P.W.): very abundant in Laminaria holdfasts, Church Reef, Wembury (Colman, 1940)
Breeding: Feb. (E.J.A.)

ORIDIA ARMANDI (Claparède) [*McIntosh*, 1900-23, IV, 2, p. 268, as *Oria*]

Among ascidians from the piles at Millbay Dock (E.J.A.): Common in Laminaria holdfasts, Church Reef, Wembury (Colman, 1940)
SALCOMBE. Eighteen among sponges at 4 fm. near Great Mewstone, 1955 (coll. G.R.F., det. E.C.S.)

MANAYUNKIA AESTUARINA (Bourne) [*Bourne*, 1883, p. 176, as *Haplobranchus aestuarinus*; *McIntosh*, 1900-23, IV, 2, p. 305]

In tide pools not far from the mouth of the Yealm (Buchanan, 1893, p. 359)

JASMINEIRA ELEGANS Saint-Joseph, 1894, p. 316 [*McIntosh*, 1900-23, IV, 2, p. 301]

Among dredgings from Duke Rock and Asia Shoal (E.J.A.): in scrapings from Millbay Docks (D.P.W.)
SALCOMBE. Seven among sponges at 4 fm. near Great Mewstone, 1955 (coll. G.R.F., det. E.C.S.)

JASMINEIRA CAUDATA Langerhans [*Fauvel*, 1927, p. 332]

Frequent in washings of shell gravel, Eddystone bearing S.S.E. 1,870 yds., 29.5.33 (D.P.W.)

DIALYCHONE ACUSTICA Claparède [*Fauvel*, 1927, p. 333]

Many with *Fabricia sabella* from Millbay Docks, 10.2.54 (H.M.F.)

MYXICOLA INFUNDIBULUM (Renier) [*McIntosh*, 1900-23, IV, 2, p. 311]

Found occasionally on the shore, N. side of Drake's Island (R.A.T.): Barn Pool (E.J.A.): Ram's Cliff Point (S.P.)
SALCOMBE. Very frequent on all parts of the Salstone and on the *Zostera* flat immediately to the S. of Pilworth Point; occasionally specimens in the lower parts of Salcombe Harbour (Allen and Todd, 1900, p. 199)

MYXICOLA AESTHETICA (Claparède) [*McIntosh*, 1900-23, IV, 2, p. 317]

Common in dredgings from Millbay Channel and Asia Shoal; occasional specimens in dredgings from all parts of the Sound; from the shore at Rum Bay in crevices of shale (E.J.A.)

ANNELIDA: POLYCHAETA

Family **Serpulidae****SERPULA VERMICULARIS** L. [*McIntosh*, 1900-23, IV, 2, p. 353]

Occasional specimens in the Sound; in small numbers from Mewstone Grounds, Looe-Eddystone, Rame-Eddystone and Eddystone Grounds (E.J.A.): obtained at a number of positions S.S.W. of the Eddystone in depths of 42-49 fm. (Crawshay, 1912, p. 346); large masses were obtained by a diver somewhere in the Hamoaze, and brought to the Laboratory (Allen, 1915, p. 643)

Breeding: specimens from Eddystone Grounds in Aug. and Sept. were ripe (C.S.): ripe 12.4.20, successfully fertilized (H.O.)

HYDROIDES NORVEGICA (Gunnerus) [*Saint-Joseph*, 1898, p. 440]

Common on stones and shells from the shore to 30 fm., increasing in abundance in the deeper water (E.J.A.): dredged at a number of positions S.S.W. of the Eddystone in depths of 40-49 fm. (Crawshay, 1912, p. 347)

Breeding: Aug. (C.S.)

POMATOCEROS TRIQUETER (L.) [*McIntosh*, 1900-23, IV, 2, p. 362]

Common, attached to shells and stones on all grounds from the shore to 30 fm. (E.J.A.): River Tamar, up to Hole's Hole, dredged from main channel, and collected on bank; River Lynher, up to beach 100 yds. above Antony Creek, dredge and hand, June-Oct. 1928 (E.P.): dredged at several positions S.S.W. of Eddystone in depths of 42-51 fm. (Crawshay, 1912, p. 347)

SALCOMBE. Common in dredge material from Salcombe Harbour and the Kingsbridge Estuary (Allen and Todd, 1900, p. 199)

Breeding: March-April, successfully fertilized, Rum Bay, Wembury, below Laboratory (J.H.O., H.O.): almost any time of year, successfully fertilized (M.V.L.)

FILOGRANA IMPLEXA Berkeley [*McIntosh*, 1900-23, IV, 2, p. 339]

In quantity from Millbay Channel, from piles on the Promenade Pier (E.J.A.): on piles at the entrance to Millbay Docks (R.A.T.): on the Breakwater (T.V.H.): occasionally met with in all dredgings from the Sound and on the outer grounds to the Eddystone (E.J.A.): recorded at three stations S.S.W. of the Eddystone in 42-43 fm. (Crawshay, 1912, p. 347)

Breeding: July, Aug. and Sept. (C.S.)

SALMACINA DYSTERI (Huxley) [*Fauvel*, 1927, p. 377]

In scrapings from Millbay Dock, Sept. 1956; probably common and previously mistaken for *Filograna* (R.P.D.)

PROTULA TUBULARIA (Montagu) [*McIntosh*, 1900-23, IV, 2, p. 332]

Found on the Mewstone Grounds, Rame-Eddystone Grounds and Eddystone Grounds (R.A.T., E.J.A.): dredged at four positions S.S.W. of the Eddystone, in depths of 42-49 fm. (Crawshay, 1912, p. 347)

Breeding: females with ripe eggs from Eddystone Grounds in June (A.J.S.) Aug. and Sept. (C.S.)

APOMATUS SIMILIS Marion and Bobretzky [*Fauvel*, 1927, p. 385]

One specimen on a stone from Asia Shoal, Oct. 1947; shed sperm (H.M.F.)

ANNELIDA: MYZOSTOMARIA

MERCIERELLA ENIGMATICA Fauvel [*Fauvel*, 1927, p. 360]

Chelson Meadows, temporarily established in 1939 (seen 23 March) in the northern main ditch, its tubes forming thick masses on stones lying in the ditch and around the waterline on the masonry of a stone bridge; in company with *Sphaeroma hookeri* and *Gammarus chevreuxi*: by January 1946 it had died out but remains of tubes could still be identified (G.M.S.)

SPIROBIS SPIRILLUM (L.) [*McIntosh*, 1900-23, IV, 2, p. 391]

Dredged at a number of positions S.S.W. of Eddystone in 42-51 fm.; it occurred commonly on hydroids, especially on *Sertularia abietina* (Crawshay, 1912, p. 347): River Tamar, Neille Point, on stone, 17.8.28 (E.P.)

SPIROBIS PAGENSTECHEI Quatrefages [*Fauvel*, 1927, p. 394]

Common on intertidal rocks below Laboratory; on stones from Asia Shoal (L.B.H.)
Breeding: eggs and larvae in opercula chamber, 11.6.52 (L.B.H.)

SPIROBIS BOREALIS Daudin [*McIntosh*, 1900-23, IV, 2, p. 409]

Common on weeds, especially *Fucus*, and on stones on all shores (E.J.A.): Rat Island on stones and *Fucus* above low water (E.P.)

SALCOMBE. Common in dredge material from Salcombe Harbour and the Kingsbridge Estuary (Allen and Todd, 1900, p. 199)

var. TRIDENTATUS Levinsen [*Borg*, 1916, p. 24]

Common on stones, lower tidal zone, below Laboratory and Hoe, with larvae, 11.6.52 (L.B.H.)

SPIROBIS GRANULATUS (L.) [*Fauvel*, 1927, p. 403; *Borg*, 1916, p. 28]

Three specimens alive on shell, New Grounds; many empty tubes on shells and stones, Asia Shoal and Duke Rock, 12.6.52 (L.B.H.)

Class MYZOSTOMARIA

MYZOSTOMA CIRRIFERUM Leuckart [*Benham*, 1896, p. 343; *Fauvel*, 1927, p. 448]

Common on *Antedon bifida* from Sound (E.J.A.)

ANNELIDA: OLIGOCHAETA

Class **OLIGOCHAETA**Family **Enchytraeidae**

ENCHYTRAEUS PELLUCIDUS Friend [*Michaelsen*, 1900, p. 92]

Under stones near high-water mark where fresh water enters sea, Wembury Bay, Rum Bay, 1914 (H.F.)

LUMBRICILLUS VERRUCOSUS (Claparède) [*Michaelsen*, 1900, p. 80]

Plymouth district, locality unknown (H.F.)

LUMBRICILLUS SCOTICUS Elmhirst and Stephenson, 1926, p. 469

Fairly common on Ascophyllum, particularly among tufts of Polysiphonia, Church Reef, Wembury (Colman, 1940, p. 179)

LUMBRICILLUS PUMILIO Stephenson, 1932, p. 902

In tufts of Polysiphonia on Ascophyllum; a few among Lichina, Church Reef, Wembury (Colman, 1940)

PACHYDRILUS LINEATUS (O. F. Müller) [*Michaelsen*, 1927, p. 11]

Under stones between tide-marks, Reny Rocks, 24.9.28; male gonoducts and gonads developed, female developing, spermatheca developed, cocoons with embryos (A.Me.)

Family **Tubificidae**

CLITELLIO ARENARIUS O. F. Müller [*Beddard*, 1889, p. 69]

Mud at Drake's Island, and on the shores of the Sound (F.E.B.): River Tamar, up to mile above Calstock Bridge, in stiff mud and sandy places, under stones in muddy places; River Lynher, shore above Ince Castle, June-Oct. (E.P.)

CLITELLIO ATER Claparède [*Beddard*, 1889, p. 70]

Mud on Drake's Island and on shores of Sound (F.E.B.)

EXMOUTH. Common in muddy sand, Salthouse Lake (Holme, 1949)

PELOSCOLEX BENEDENI Udekem [*Michaelsen*, 1927, p. 18]

Up to shore at Neille Point; in River Lynher up to mud-flat above St. Germans Bridge; in stiff mud and sandy places, June-Oct. (E.P.)

TUBIFEX TUBIFEX O. F. Müller [*Michaelsen*, 1909, p. 37]

River Tamar down to within mile of Calstock Bridge; River Tiddy near Tideford, in tidal region, July -Oct. 1928, hand collecting, typical fresh-water species (E.P.)

TUBIFEX COSTATUS (Claparède) [*Michaelsen*, 1927, p. 18]

River Tamar up to mile above Calstock; River Lynher up to mud -flat immediately above St. Germans Bridge, June-Oct. (E.P.)

Class **HIRUDINEA**

PONTOBDELLA MURICATA (L.) [*Van Beneden and Hesse, 1863, p. 23*]

Occasionally on the outside grounds, parasitic on the skate (S.P.): Mewstone Ledge, Stoke Point Grounds, dredge, 19.7.09 (A.J.S.)

Breeding: July (E.W.L.H.): one with two batches of eggs, Mewstone Ledge, dredge, 10.5.09; two, one large, attached to old whelk shell, on which were 18 Pontobdella eggs; Looe-Eddystone Grounds 6 m. W. of Rame, trawl, 25.10.21 ; 1 large specimen off Mewstone Ledge, 1 egg capsule (early embryos), Agassiz trawl, 12.12.23 (A.J.S.): 2 specimens S.W. of Eddystone, 44-6 fm., four lots of eggs on valves of *Chlamys opercularis*, 1912 (L.R.C.)

JANUSION SCORPII (Malmgren) [*Leigh-Sharpe, 1933c, p. 256*]

Three specimens in ten years; one on *Cottus scorpius* in Cawsand Bay, 16.5.32 (Leigh-Sharpe, 1933)

BRANCHELLION TORPEDINIS Savigny, 1820, p. 109 [*Leigh-Sharpe, 1933c, p. 258*]

Whitsand Bay, plaice-seine, 9.45 p.m., 7.6.11, identified by W. A. Harding (A.J.S.)

BRANCHELLION BOREALE Leigh-Sharpe, 1933, p. 258

One specimen on *Raia clavata*, 3½ miles S.W. of Stoke Point, 22.1.32 (Leigh-Sharpe, 1933)

CALLIOBDELLA LOPHII Van Beneden and Hesse, 1863, p. 36 [*Leigh-Sharpe, 1914, p. 204*]

On a large *Lophius piscatorius*, 4 specimens externally on skin, between gill covers and pelvic fins, 2 on each side, 12.5.13 (H. L.-S.)