Notes on the Littoral Polychæta of Torquay (Part III).

By
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Aphroditidæ.

A SYNOPSIS of the Aphroditidæ of the English Channel by Mr. T. V. Hodgson is given in the *Journal Marine Biological Association*, Vol. VI, No. 2, 1900.

APHRODITA ACULEATA, Lin. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 247.

This species is sometimes found in some numbers, thrown up on the shore after heavy weather, especially at Anstey Cove and Tor Abbey Sands. It is recognized by the fishermen as a "curiosity."

LEPIDONOTUS SQUAMATUS, Lin. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 274.

Only two or three examples found under stones on Babbacombe beach.

LEPIDONOTUS CLAVA, Mont. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 280.

Occasionally found on all the beaches. Numerous specimens were found on a large buoy in Torquay Harbour.

LAGISCA FLOCCOSA, Sav. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 298.

Fairly common under stones.

LAGISCA EXTENUATA, Gr. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 307. Hornell, *Fauna of Liverpool Bay*, 1892, p. 136, Pl. XIII, Fig. 8.

Very common in roots of Laminaria and under stones. The scales have the groups of papillæ surrounded by lines as represented by Hornell.

EVARNE IMPAR, Johnst. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 358.

Rare. Recorded by Gosse from Anstey's Cove.

HARMOTHÖE SPINIFERA, Ehlers. *McIntosh, Mon. Brit. Ann.*, Vol II, p. 327.

One example only.

HALOSYDNA GELATINOSA, M. Sars. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 384.

One specimen under a stone on Babbacombe beach.

POLYNOE SCOLOPENDRINA, Sav. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 389.

Not uncommon at Corbyn's Head.

STHENELAIS BOA, Johnst. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 408.

Not uncommon in the sand at Tor Abbey Sands.

SIGALION MATHILDÆ, Aud. and Edw. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 427.

This is the only one of the Torquay Aphroditidæ which has not been also recorded from Plymouth. It is fairly common in the sand at Tor Abbey Sands and Livermead.

PHOLOË MINUTA, O. Fabricius. *McIntosh, Mon. Brit. Ann.*, Vol. II, p. 437.

The most numerous of all the Torquay Aphroditidæ, inhabiting especially the Laminaria roots.

Glyceridæ.

GLYCERA CONVOLUTA, Kef. *De St. Joseph, Ann. Sci. Nat. Zool.*, Vol. XVII, 1894, p. 27.

Fairly numerous in Tor Abbey Sands and at Livermead.

GLYCERA LAPIDUM, Qfg. *McIntosh*, "On the British Glyceridæ," *Ann. Nat. Hist.*, S. 7, Vol. XV, p. 39, 1905.

One specimen in the inner harbour of Torquay and one on the Babbacombe beach.

Eunicidæ.

This family is represented at Torquay by five littoral species. For the key to the Eunicidæ of the English Channel the papers by Baron de St. Joseph, entitled "Les Annélides Polychètes des Côtes de Dinard" and "Les Annélides Polychètes des Côtes de France," the "Notes on the British Eunicidæ," by Professor McIntosh, *Annals of Natural History*, Vol. XI, p. 553, 1903, and the *Cambridge Natural History*, Vol. II, have been consulted.

LYSIDICE NINETTA, Aud. and Edw. *Johnst., Catalogue of Worms*, p. 140.

Small specimens thirty to fifty millimetres in length; extremely common amongst Laminarian roots and limestone rocks.

NEMATONEREIS UNICORNIS, Grube. *De St. Joseph, Ann. Sci. Nat.*, V, 1888, p. 207.

Fairly common in the limestone rocks at Babbacombe, but as is the case with the last species it is very rarely perfect.

STAUROCEPHALUS RUBROVITTATUS, Grube. *De St. Joseph, Ann. Sci. Nat.*, V, 1888, p. 235.

One specimen obtained at an unusually low spring tide at Corbyn's Head.

OPHRYOTROCHA PUERILIS, Clpd. and Meczn. *Cambridge Nat. Hist.*, Vol. II, p. 319, Fig. 170.

This little worm is frequently seen on the sides of glass vessels containing roots and pieces of rocks. On one occasion a small aquarium in the museum of the Torquay Natural History Society was found to be swarming with this species.

LUMBRICONEREIS LATREILLI, Aud. and Edw. *De St. Joseph, Ann. Sci. Nat. Zool.*, V, 1898, p. 276.

Three or four in rather coarse gravel on Babbacombe beach.

Sphœrodoridæ.

EPHESIA GRACILIS, Rathke. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 33. *McIntosh, Ann. Nat. Sci.*, S. 8, Vol. II, 1908, p. 528 and 540.

Two or three from Meadfoot beach.

EPHESIA PERIPATUS, Clpd. nee Johnst. *Claparède, Beob. über Anat. und Ent. wirbellosen thiere*, p. 50, *de St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 41.

Two specimens from Corbyn's Head. According to de St. Joseph this species differs from *E. gracilis* by several characters, but he only mentions two, viz. the composite bristles and the absence of the "l'éventail de papilles" below the feet which exists in *E. gracilis*. The bristles of *E. peripatus* of the Torquay examples seem, besides being compound, to be not quite so stout and not so much bulged as those of *E. gracilis*.

Ariciidæ.

ARICIA LATREILLI, Aud. and Edw. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 85.

Several examples were dug up from the sand at Tor Abbey Sands. In this species there are about thirty bristle-bearing segments in the anterior region, while in *A. cuvieri* there are only twenty-one.

Spionidæ.

In preparing the accompanying key to the Spionidæ of the English Channel Mesnil's paper, entitled "Études de Morphologie externe chez les Annélides" and Professor McIntosh's "Notes on the British Spionidæ," *Annals of Nat Hist.*, S. 8, Vol. III, have been consulted.

Scolecolepis vulgaris, Johnst. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, 1909, p. 159.

At the west end of Tor Abbey Sands; rare.

Scolecolepis fuliginosa, Clpd. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, 1909, p. 160.

Very numerous at west end of Tor Abbey Sands and at Livermead. In December numbers were found coiled up together under stones.

Nerine cirratulus, Delle Chiaje. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, 1909, p. 158.

Tor Abbey Sands; not numerous.

Aonides oxycephala, Sars. *Mesnil, Bull. Sci. France et Belgique*, XXIX, 1896, p. 242.

Numerous in rather foul mud under stones at Livermead.

Polydora ciliata, Johnst. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, p. 169.

Very numerous in the small pools in the limestone boulders on the shore.

Polydora flava, Clpd. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, p. 169.

Numerous on rocks and in pools.

Spiophanes bombyx, Clpd. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, p. 167.

A few specimens at the east end of Tor Abbey Sands. Mesnil remarks that he found this species in company with *Echinocardium cordatum*; this sea urchin is also common on Tor Abbey Sands.

Magelonidæ.

Magelona papillicornis, Fr. Müller. *McIntosh, Annals of Nat. Hist.*, S. 8, Vol. III, p. 174.

One example at a very low spring tide on Tor Abbey Sands.

Ammocharidæ.

Owenia fusiformis, Delle Chiaje. *De St. Joseph, Ann. Sci. Nat. Zool.*, V, 1898, p. 397.

The tubes of this species are very numerous on Tor Abbey Sands; they appear to be loose in the sand, not fixed vertically, as is usual with tube-dwelling annelids in sand. They are largest in the middle, tapering towards both ends, made chiefly of small pieces of shell placed edgeways.

Cirratulidæ.

In the accompanying key to the Cirratulidæ of the Channel the classification of Caullery and Mesnil in *Les formes épitoques et l'evolution des Cirratuliens* is adopted.

AUDOUINIA TENTACULATA, Montagu. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 49.

Numerous at Meadfoot, Hope's Nose, and Tor Abbey Sands in rather foul mud; young ones about 40 mm. in length appear to live in crevices in rocks.

DODECACERIA CONCHARUM, Oersted. *Caullery et Mesnil, Annales de l'Université de Lyon*, Fasc. XXXIX, 1898, p. 11.

Very numerous in the limestone boulders at Babbacombe.

HETEROCIRRUS VIRIDIS, Lang. = *H. flavoviridis*, de St. Joseph. *Caullery et Mesnil, Ann. de l'Université de Lyon*, Fasc. XXXIX, 1898, p. 117.

Found occasionally in small pools in limestone rocks at Babbacombe.

HETEROCIRRUS CAPUT ESOCIS, de St. Joseph. *Caullery et Mesnil, Ann. de l'Université de Lyon*, Fasc. XXXIX, 1898, p. 122.

Two or three examples found in the same localities as the last species. I have not seen any British records of these two species of Heterocirrus.

Terebellidæ.

The accompanying key to the Terebellidæ is founded on the table given by Baron de St. Joseph in "Les Annélides Polychètes des Côtes de Dinard," *Ann. Sci. Nat. Zool.*, XVII, 1894, p. 180.

POLYMNIA NEBULOSA, Montagu. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 219.

Occasional specimens at Corbyn's Head and in rocks between Oddicombe and Babbacombe beaches.

POLYMNIA NESIDENSIS, de St. Joseph. *Ann. Sci. Nat. Zool.*, XVII, 1894, p. 211.

Very common in Laminaria roots, etc.

LANICE CONCHILEGA, Pallas. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 211.

Numerous on Tor Abbey Sands, especially at the east end.

Ampharetidæ.

MELINNA ADRIATICA, Marenzeller. *Sitzb. d. k. Akad. Wiss. zu Wien*, LXIX, p. 472.

Two at extreme low water at Livermead amongst Zostera roots.

Maldanidæ.

CLYMENE ŒRSTEDII (?), Clpd. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 137.

On the east side of Tor Abbey Sands; not common.

LEIOCHONE CLYPEATA, de St. Joseph. *Ann. Sci. Nat. Zool.*, XVII, 1894, p. 139.

Numerous at extreme low water in the centre of Tor Abbey Sands.

Capitellidæ.

NOTOMASTUS LATERICEUS, Sars. *De St. Joseph, Ann. Sci. Nat.*, XVII, 1894, p. 117.

Under stones, Corbyn's Head and Livermead.

Opheliidæ.

POLYOPTHALMUS PICTUS, Duj. *De St. Joseph, Ann. Sci. Nat. Zool.*, V, 1898, p. 385.

Common amongst Corallines, etc., in rock pools.

Arenicolidæ.

ARENICOLA MARINA, L. *Gamble, Quart. Journ. Micro. Sci.*, XLIII, p. 419.

Common on Tor Abbey Sands.

ARENICOLA ECAUDATA, Johnst. *Gamble, Quart. Journ. Micro. Sci.*, XLIII, p. 419.

This species seems to be very different in its habits to *A. marina*; instead of burrowing in soft mud and sand it lies under stones in gravel at Hope's Nose and Babbacombe beach.

Chlorhœmidæ.

SIPHONOSTOMA AFFINIS, M. Sars. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 96.

Under stones at Corbyn's Head.

Sabellidæ.

The accompanying key to the Sabellids of the English Channel is founded on the table given by Baron de St. Joseph in "Les Annélides

Polychètes des Côtes de Dinard," *Ann. Sci. Nat. Zool.*, XVII, 1894, p. 248.

SABELLA PAVONINA, Sav. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 267.

I was somewhat surprised to find several examples of this large worm in the inner harbour at Torquay only a few yards from the "Strand." They were living in mud and gravel which could hardly be called clean.

POTAMILLA RENIFORMIS, O. F. Müller. *Soulier, Revision des Annélides de la region de Cette*, p. 120, Fig. 4.

This species is found on the sides of the cave under the men's bathing-place at Petit Tor. This is the cave mentioned by Gosse in the *British Sea Anemones and Corals*, where he found the sea anemones *Halcampa microps* and *Edwardsia carnea*.

POTAMILLA TORELLI, Mgr. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 296.

Common in the small rock pools in the limestone rocks between Oddicombe and Babbacombe beaches.

FABRICIA SABELLA, Ehr. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 319.

A little Sabellid which appears to be referable to this species is very common in the little pools in the rocks at Babbacombe, in company with the last species, *Polydora* and *Dodecaceria*. It lives in small holes in the rocks, with a tube of mud projecting a little from the opening.

ORIA ARMANDI, Clpd. *Soulier, Revision des Annélides de la region de Cette*, 1902, p. 114, Fig. 2.

One specimen from Babbacombe rock pools. As de St. Joseph remarks, the eyes in this species quickly disappear, while in *F. sabella* they are persistent even in Balsam preparations. I have also obtained this species at Newquay, Cornwall.

JASMANEIRA ELEGANS, de St. Joseph. *Ann. Sci. Nat. Zool.*, XVII, 1894, p. 316.

Found occasionally crawling up the sides of glass vessels containing roots of Laminaria and pieces of limestone rock. It was first recorded as a British species by Miss Newbiggin in 1900.

AMPHIGLENA MEDITERRANEA, Clpd. *Soulier, Revision des Annélides de la region de Cette*, p. 109, Fig. 1.

Found under the same conditions as the last species.

Serpulidæ.

In preparing the key to the Serpulids of the English Channel the table given by Baron de St. Joseph in the *Annales des Sciences naturelles Zool.*, XVII, 1894, p. 259, and, for the genus Spirorbis, the papers by Caullery and Mesnil, "Études sur la morphologie, etc., chez les Spirorbes," have been consulted.

SERPULA VERMICULARIS, Lin. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 328.

On shells thrown up on the shore at Tor Abbey Sands.

POMATOCEROS TRIQUETER, Lin. *De St. Joseph, Ann. Sci. Nat. Zool.*, XVII, 1894, p. 353.

Extremely common on stones.

HYDROIDES NORVEGICA, Zunn. *De St. Joseph, Ann. Sci. Nat. Zool.*, V, 1898, p. 440.

On a stone at Petit Tor beach; numerous on buoys in Torquay Harbour.

SPIRORBIS BOREALIS, Daudin. *Caullery et Mesnil, Bull. Scien. de la France et de la Belgique*, XXX, 1897, p. 211.

Very common on Fucus.

SPIRORBIS SPIRILLUM, Lin. = *lucidus*, Mont. *Caullery et Mesnil, Bull. Scien. de la France et de la Belgique*, XXX, 1897, p. 198.

On *Sertularia abietina* thrown up on the shore.

Hermellidæ.

SABELLARIA ALVEOLATA, Linn. *Cambridge Nat. Hist.*, Vol. II, Figs. 131 and 135.

Very common all along the Torquay coast.

KEY TO THE GENERA OF THE EUNICIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

Five prostomial tentacles.	Two frontal palps simulating stunted tentacles arising from the anterior border of the prostomium.	Two tentacular cirri on the second segment	Onuphis, Aud. and Edw.
		No tentacular cirri on the second segment	Hyalinœcia, Mgr.
	No frontal palps as above.	Two tentacular cirri on the second segment	Eunice, Cuv.
		No tentacular cirri on the second segment	Marphysa, Qfg.
Four tentacles.	Two dorsal and two ventral tentacles		Ophryotrocha, Clpd.
Three tentacles.	Branchiæ present, consisting of one filament		Amphiro, Kbg.
	No branchiæ		Lysidice, Sav.
Two tentacles.	Palps long. Denticles of upper jaw numerous, more than thirty. Feet with two branches		Staurocephalus, Gr.
One tentacle.	No branchiæ		Nematonereis, Schmarda.
No tentacles.	Compound bristles with toothed terminal pieces or simple hooked crotchets or both in some at least of the feet, in addition to simple winged capillary bristles		Lumbriconereis, Blv.
	Simple winged capillary bristles only.	Minute form parasitic in Syllids	Labrorostratus, de St. Joseph.
		Mandibles small or absent, the three anterior pairs of denticles consisting of simple hooks	Drilonereis, Clpd.
		Mandibles massive, the three anterior pairs of denticles consisting of toothed plates, or of one pair of hooks and two pairs of toothed plates	Arabella, Gr.

KEY TO THE SPECIES OF EUNICIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

Genus ONUPHIS.

Tentacular cirri arise from the anterior border of the second segment. Tube flattened, made of small stones and shells	*O. conchylega*, M. Sars.

Genus HYALINŒCIÆ.

Branchiæ commence 23–26th foot. Tube translucent, quill-like. L., 100 mm.	*H. tubicola*, O. F. Müller.
Branchiæ commence on 4th segment. Brown bands on dorsum permanent in spirit. Tube of small shells and stones. L., 60 mm.	*H. Grubii*, Marenz.

Genus EUNICE.

Body with numerous olive brown bands and spots, speckled with white. Maximum number of filaments of branchiæ, sixteen. L., 120 mm.	*E. fasciata*, Risso = *Harassi*, Aud. and Edw.
Three reddish bands on the back of each segment. Maximum number of filaments of branchiæ, five, on the 30th foot. L., 60 mm.	*E. vittata*, Delle Chiaje = *limosa*, Ehlers.

Genus MARPHYSA.

Branchiæ commence on 21st foot, filaments of branchiæ, arising from nearly the same spot, forming a tuft. Maximum number of filaments, eight. L., 400 to 600 mm.	*M. sanguinea*, Montagu.
Branchiæ commence on 14th foot, forming a comb. Maximum number of filaments, about twenty-five. L., 160 mm.	*M. Bellii*, Aud. and Edw.
Branchiæ consisting of a single filament. L., 15 mm.	*M.* fallax*, Mar. and Bohr.

Genus OPHRYOTROCHA.

Small form. Segments with a girdle of cilia. L., 4 mm.	*O. puerilis*, Clpd. and Meczn.

Genus AMPHIRO.

Four eyes. Branchiæ commence on 16th segment. L., 9 mm.	*A.* Johnstoni*, Lang.

Genus LYSIDICE.

Head broad, flattened, with a median notch ; tentacles short. Red spotted with white, the 4th segment entirely white. L., 100 mm.	*L. ninetta*, Aud. and Edw.

KEY TO SPECIES OF EUNICIDÆ—*continued.*

Genus Staurocephalus.

Palps earlike, not jointed.	Back with brilliant red bands. L, 20 mm.	*S. rubrovittatus*, Gr.
Palps and tentacles jointed.	Body colourless, covered with small glands, 4 eyes. L., 18 mm. . .	*S. ciliatus*, Kef.
Palps and tentacles jointed.	Body colourless, no small glands, 2 eyes. L., 15 mm.	*S. pallidus*, Lang.

Genus Nematonereis.

Body greyish, very narrow, 1 mm. 2 eyes with short subulate tentacle arising between them. L., 200 mm.	*N. unicornis*, Gr.

Genus Lumbriconereis.

No jointed bristles in any of the feet.	Large forms.	Simple winged capillary bristles only in the anterior segments. Spines black. L., 120 mm.	*L. fragilis*, O. F. Müller.
		Simple winged capillary bristles accompanied by winged hooked crotchets in the anterior segments. Spines yellow. L., 500 mm.	*L. impatiens*, Clpd.
	Small forms.	Three winged hooked crotchets, no capillary bristles in the posterior segments. Front edge of mandibles furnished with very small double teeth. L., 21 mm.	*L.* labrofimbriata*, de St. Joseph.
		One winged hooked crotchet and one capillary bristle in the posterior segments. Supports of the maxillæ very long and narrow. L., 14 mm.	*L.* paradoxa*, de St. Joseph.
Jointed bristles present in some of the feet.		The jointed bristles in the anterior segments with very long terminal pieces. Head conical	*L. Latreilli*, Aud. and Edw. = *Nardonis*, Gr. = *Edwardsi*, Clpd. = *tingens*, Kef.
		The jointed bristles in the anterior segments with short terminal pieces. Head conical	*L. gracilis*, Ehlers.
		Head globular. Stalk of jointed bristles short and massive	*L.* coccinea*, Ren.

Genus Drilonereis.

Upper dental apparatus with five pairs of jaws. Left maxilla with several small teeth at the base. L., 20 mm.	*D.* macrocephala*, de St. Joseph.
Upper dental apparatus with four pairs of jaws. Left maxilla not toothed at the base. L., 90 mm. .	*D.* filum*, Clpd.

Genus Arabella.

Upper dental apparatus with five pairs of jaws. Lower part of the maxillæ with numerous small teeth. L., 250 to 450 mm.	*A. iricolor*, Montagu = *Maclovia gigantea*, Gr.

* Not yet recorded from the British area.

KEY TO THE GENERA OF SPIONIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

A. Fifth segment not enlarged, without special strong bristles.

Head without lateral horn-like projections.	Branchiæ on the second and a number of succeeding segments.	Branchiæ on all the bristle-bearing segments, including the first		*Spio*, Fabr.
		No dorsal winged hooks.	Anal cirri present. Dorsal lamella free from branchia	*Microspio*, Mesnil.
			Anus funnel-shaped. Dorsal lamella attached to branchia	*Nerenides*, Mesnil.
		Dorsal-winged hooks in some of the segments.	Anal cirri present. Dorsal lamina free from branchia	*Aonides*, Clpd. (*sensu* Mesnil).
			Anus funnel-shaped. Dorsal lamina more or less attached to branchia	*Nerine*, Johnston.
	Branchiæ present or absent from second segment. Absent from several of the following segments. Present on the twelfth to thirteenth segment and following segments			*Pygospio*, Clpd.
Head with lateral horn-like projections.	No branchiæ. Two of the ventral bristles of the first foot much thicker than the others			*Spiophanes*, Grube.
	Branchiæ on all the bristle-bearing segments			*Scolelepis*, Blv. (*sensu* Malmgren).

B. Fifth segment enlarged, furnished with special strong bristles.

Branchiæ commence on the second segment	*Boccardia*, Carrazzi.
No branchiæ before the sixth segment	*Polydora*, Bosc.

KEY TO THE SPECIES OF SPIONIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

Genus Spio.

Prostomium rounded in front, usually four eyes, winged crotchets with two points commence at thirteenth to fifteenth segment. Anal cirri, four. L., 30 mm. . . . . *S. martinensis*, Mesnil. =*filicornis*, Fabr. (?).

Genus Microspio.

Prostomium terminated by two rounded bosses, eyes four, anal cirri four. Winged crotchets commence ventrally on eighth foot. L., 10 mm. . . . . *M. atlantica*, Langh. (?).

Genus Nerenides.

Prostomium very pointed, four eyes, lamella as long as and joined to branchia. Winged crotchets with two points. L., 70 to 100 mm. . . . . **N. longirostris*, de St. Joseph.

Genus Aonides.

Prostomium pointed, four eyes in a line. About twenty pairs of branchiæ. Eight anal cirri. Winged crotchets with two points. L., 80 mm. . . . . *A. oxycephala*, Sars.

Genus Nerine.

Winged crotchets with one point.
- Dorsal lamella longer than and completely attached to the branchia in the first fifty segments ending in an obtuse point. L., 160 mm. . . . . *N. foliosa*, Sars.
- Dorsal lamella attached for about three-quarters of the length of the branchia, then diverging and ending in a sharp point. L., 60 mm. . . . . **N. Bonnieri*, Mesnil.

Winged crotchets with two points. Head terminating in a sharp point; colour green. L. 70 mm. . . *N. cirratulus*, Delle Chiaje.

Genus Pygospio.

Branchiæ on second bristled segment present. Stalks of winged crotchets without a distinct swelling. L., 10 mm. . . . . *P. seticornis* (Œrsted *nec* Fabr.).

No branchiæ on second segment. Stalks with a distinct swelling. L., 10 mm. . . . . *P. elegans*, Clpd., Mesnil.

Genus Scolelepis.

Winged crotchets with three points. L., 180 mm. . . . . *S. vulgaris*, Johnston, McIntosh.

Winged crotchets with two points. Head and back marked with black pigment. L., 75 mm. . . *S. fuliginosa*, Clpd.

* Not yet recorded from the British area.

KEY TO THE SPECIES OF THE SPIONIDÆ—*continued.*

Genus Spiophanes, Gr.

Tube dweller. Number of winged crotchets, eleven to fourteen. Anal cirri, two. L., 50 mm. . .	*S. bombyx*, Clpd.

Genus Polydora.

Abnormal bristles of fifth segment with a comb-like fibrous crest. Branchiæ commence on seventh bristle-bearing segment. Dorsal bristles present on first segment. L., 8 mm.		**P. Caulleryi*, Mesnil.
Abnormal bristles ending in a single hook without lateral teeth or spines. Branchiæ commence on the eighth bristle-bearing segment. Number of winged crotchets usually three or four	Posterior segments with two or three needle-like spines. L., 20 mm.	*P. cœca*, Œrsted.
	Posterior segments without needle-like spines but with bundles of very fine bristles tapered at each end. L., 20 to 50 mm.	*P. flava*, Clpd. = *pusilla*, de St. Joseph.
Abnormal bristles with lateral teeth or projections in addition to main hook. — Stem of winged crotchets with a bulge. Branchiæ commence on seventh segment. Number of winged crotchets usually eight . . .	Posterior segments with large dorsal bristles terminating in a strong hook. L., 50 mm.	*P. hoplura*, Clpd.
	Posterior segments without strong hooks. Extremities with more or less black pigment. L., 20 mm. . . .	*P. ciliata*, Johnst.
Stem of winged crotchets without a bulge. Number of crotchets from three to five .	Branchiæ commence on the eighth bristle-bearing segment. Abnormal bristles ending in a truncated tip with nearly equal teeth, sometimes with a brush of fibres. L., 10 to 25 mm.	*P. quadrilobata*, Jac.
	Branchiæ commence on tenth segment. Abnormal bristles with a small tooth on concave side. L., 8 mm. . .	**P. Giardi*, Mesnil.
	Branchiæ commence on seventh segment. Abnormal bristles with a kind of hood on convex side, wings of hood forming two unequal points on the concave side. L., 5 mm. .	*P. armata*, Lang.

Genus Boccardia.

Fifth segment with two different kinds of large bristles. L., 15 mm. . . .	**B. polybranchia*, Hasw.

* Not yet recorded from the British area.

KEY TO THE GENERA AND SPECIES OF THE CIRRATULIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

- **A transverse row of tentacular filaments (not distinctly thicker than the gill filaments) across one of the anterior segments.**
  - Tentacular filaments appear on the same segment as the first lateral gills
    - No eyes. All the bristles capillary. L., 26 to 40 mm. — **Cirratulus filiformis*, Kef.
    - Eyes present. Two kinds of bristles, capillary and crotchets. L., 125 mm. — *Cirratulus cirratus*, Müller.
  - Lateral gills appear on one or more of the segments in front of the segment which carries the tentacular filaments — No eyes. L., 200 mm. — *Audouinia tentaculata*, Aud.
- **A pair of tentacular filaments (distinctly thicker than the gill filaments) present.**
  - Gill filaments (few, four to eight pairs). Tentacular filaments inserted below gill filaments. L., 25 mm. — *Dodecaceria concharum*, Œrsted.
  - More than eight pairs of gill filaments. Tentacular filaments inserted above gill filaments.
    - Crotchets and eyes present.
      - Crotchets truncate at apex. Capillary bristles present in all the neuropods. L., 16 mm. — *Heterocirrus caput esocis*, de St. Joseph.
      - Crotchets bifid. No capillary bristles in neuropods after the third segment — *Heterocirrus viridis*, Lang = *flavoviridis*, de St. Joseph.
    - Crotchets and eyes absent. Bristles all capillary — **Tharynx* (*Heterocirrus*) *Marioni*, de St. Joseph.

* Not yet recorded from the British area.

KEY TO THE GENERA AND SPECIES OF THE MALDANIDÆ ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

Funnel of anal segment with numerous teeth or cirri.	No small papillæ on posterior segments . .	Back of head with several indentations. Teeth of anal funnel equal or unequal. The three segments preceding the anal segment without bristles. Breadth, 8 mm. L., 150 mm.	*Clymene* (*Euclymene*) *lumbricoides*, Qfg.
		Back of head not indented. Teeth of anal funnel very unequal, sometimes with one long ventral cirrus. The two segments preceding the anal segment without bristles. Breadth, 1 mm. L., 80 mm. . . .	*Clymene* (*Euclymene*) *Œrstedi*, Clpd.
	Papillæ arranged in two longitudinal rows in posterior segments . .	Anal funnel with teeth of equal length. Crotchets of first three bristle-bearing segments ending with three little teeth and one large tooth directed upwards	**Johnstonia clymenoides*, Qfg.
Anal segment without teeth or cirri.		Anal segment cup-shaped, with a central conical anus. Twenty-five to twenty-nine bristle-bearing segments. Breadth, 3 mm. L., 200 mm.	*Leiochone clypeata*, de St. Joseph.
		Anal segment with a concave leaf-like appendage, on the surface of which the anus opens. Twenty-two bristle-bearing segments. Breadth, 3 mm. L., 130 mm.	**Petaloproctus terricola*, Qfg.

* Not yet recorded from the British area.

KEY TO THE SPECIES OF TEREBELLIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

- **Capillary bristles with very fine saw-like teeth near the end. Three or two pairs of gills.**
  - Capillary bristles in the thoracic region only. Uncini with six rows of transverse teeth which are numerous in the upper rows.
    - Each gill consists of a tuft of unbranched filaments. Three pairs of gills. Capillary bristles in seventeen segments. Tentacles with brown marks. L., 80 mm. . . . . → *Amphitrite cirrata*, O. F. Müller.
    - Each gill consists of a main stem with numerous branches.
      - Capillary bristles in twenty-four segments. Three pairs of gills. Tentacles white. L., 200 mm. . . . . → *Amphitrite Johnstoni*, Mgr.
      - Capillary bristles in seventeen segments. Three pairs of gills. Tentacles orange. L., 230 mm. . . . . → *Amphitrite Edwardsi*, Qfg.
      - Capillary bristles in seventeen to twenty segments. Two pairs of gills. Tentacles white, body very red in front. Uncini in front part of abdomen in double rows. Eyes present. L., 100 mm. . . . → *Amphitrite gracilis*, Grube.
  - Capillary bristles throughout the body. Uncini with three or four rows of three to six teeth. Tentacles red. Eyes present. L., 55 mm. . . . . → *Terebella* (*Lepræa*) *lapidaria*, L.
- **Capillary bristles with smooth tips in seventeen segments. Three pairs of branched gills.**
  - Uncini with two transverse rows of one, two, or three teeth.
    - The eighth to seventeenth bristle-bearing segments with a double row of uncini interlocking half-way. Body red or brown, spotted with white. Tentacles white or reddish. Eyes present. L., 200 mm. . . . . → *Polymnia nebulosa*, Mont.
    - The eighth to seventeenth bristle-bearing segments with a single row of uncini. Body red or brown. Tentacles bright orange. Eyes present. L., 50 mm. . . . . → *Polymnia nesidensis*, Delle Chiaje.
    - The eighth to seventeenth segments with a double row of uncini placed back to back. Lower thoracic shields intensely red. Tube fringed at the ends with strings of sand. L., 100 to 270 mm. . . . . → *Lanice conchilega*, Pallas.
  - Uncini without transverse rows of teeth, comb-like, with four to six teeth; the terminal divisions of the gills very fine and numerous . . . . . → *Loimia medusa*, Sav.

KEY TO THE SPECIES OF TEREBELLIDÆ—*continued.*

Capillary bristles with smooth tips in fifteen to seventeen segments; two (rarely three) pairs of branched gills.	Uncini with two transverse rows, with three to five teeth. The eighth to seventeenth segment with a single row of uncini. Body red, spotted with white. Tentacles dark red, short. Eyes present. L., 50 mm. . . .	*Nicolea venustula*, Mont. =*zostericola*, Oerst. (?).
	Uncini with three to five transverse rows of three to twelve teeth, and a very long projection at the posterior angle of the base. Gills brush-like, with spirally arranged branches. Body and tentacles reddish. L., 75 mm. .	*Pista cristata*, Müller.
Capillary bristles with smooth tips in sixteen segments; one pair of branched gills.	Uncini with three transverse rows of three to six teeth. Body red, spotted with brown. Tentacles red, sometimes spotted with brown. L., 60 mm.	*Scione maculata*, Dalzell.
Capillary bristles with smooth tips in numerous (over thirty) segments. Uncini with two transverse rows of two to three teeth. Gills, consisting of simple filaments, arranged in rows.	Body orange, without any pattern on the skin. Tentacles spotted with red. Gills on two segments. L., 120 mm.	*Thelepus cincinnatus*, Fabr.
	Body marked in a pattern with white lines. Gills on three segments. L., 160	*Thelepus setosus*, Qfg.
Capillary bristles with smooth tips in eighteen segments. One gill, consisting of four comb-like plates arising from a single peduncle.	Crotchets with a long stalk in front part of body. Uncini, in posterior part, comb-like. L., 60 mm.	*Terebellides Stroemi*, Sars.

KEY TO THE SPECIES OF TEREBELLIDÆ—*continued.*

Capillary bristles with smooth tips in fifteen segments. Gills, three pairs, each gill consisting of a single filament.		Crotchets with a long stalk in front part of body. Uncini in posterior part. Body orange. Tentacles violet. L., 30 mm.	*Trichobranchus glacialis*, Mgr.
No gills and no blood-vessels.	Capillary bristles smooth. None of them winged.	Number of segments with capillary bristles about twenty-eight to sixty. Uncini appear at ninth bristle-bearing segment. Six pairs of nephridia. L., 30 to 100 mm.	*Polycirrus caliendrum*, Clpd.
	Body and tentacles orange.	Number of segments with capillary bristles about twenty-eight to forty. Uncini appear at seventh to ninth bristle-bearing segment. Three pairs of nephridia. L., 80 to 100 mm.	*Polycirrus aurantiacus*, Grube.
	Capillary bristles smooth. Some of them slightly winged.	Conspicuous red blood. No uncini in the first twelve bristle-bearing segments. Six pairs of nephridia. L., 16 mm.	**Polycirrus hæmatodes, Clpd.*
		Entirely colourless. Uncini appear at the seventh to tenth bristle-bearing segment. Three pairs of nephridia. L., 16 mm. . . .	**Polycirrus tenuisetis*, Langhs.
	Capillary bristles denticulated.	Colourless, or very slightly tinged with yellow. Number of segments, with capillary bristles, about fifteen	**Polycirrus denticulatus*, de St. Joseph.

* Not yet recorded from the British area.

KEY TO THE GENERA AND SPECIES OF THE SABELLIDÆ FOUND ON THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

A. Ventral bristles of the thorax of two different kinds, namely simple winged capillary bristles and uncini.

Peristomium produced to form a collar.	Gill filaments arising from a spiral base.	The two parts of the branchial crown unequal. Dorsal bristles of the thorax of one kind. L., 260 mm.			*Spirographis Spallanzii*, Viv.
		The two parts of the branchial crown equal. Dorsal bristles of the thorax of two kinds. L., 130 mm.			*Bispira voluticornis*, Mont.
	Gill filaments not forming a spiral.	No eyes near the end of the gill filaments.	Dorsal bristles of the thorax of one kind. No eyes.	Tube of mud. Gill filaments long, 40 mm. L., 200 mm. . . .	*Sabella pavonina*, Sav.
			Dorsal bristles of the thorax of two kinds, namely narrow winged bristles and shorter spathulate bristles.	Eyes on the lower part of some of the gill filaments. L., 75 mm. .	*Potamella reniformis*, Müller.
				No eyes on gill filaments. Two eyes on peristomium, and six or eight on anal segment . No otocysts. L., 20 mm.	*Potamilla Torelli*, Mgr.
				No eyes on gill filaments. Two eyes on peristomium, and six or eight on anal segment . Two otocysts. L., 20 mm.	*Potamilla incerta*, Lang.
		Eyes near the end of gill filaments. Tube of sand, small stones, and fragments of shells. L., 100 mm.			*Branchiomma vesiculosum*, Mont.
Peristomium without a collar.	Eyes in peristomium and anal segment. Two otocysts in first bristled segment. Gill filaments five on each side. Number of segments about forty. L., 8 mm. . .				*Amphiglena mediterranea*, Clpd.

KEY TO THE GENERA AND SPECIES OF THE SABELLIDÆ—*continued.*

B. Ventral bristles of the thorax of one kind, namely, either uncini or crotchets with a long stalk.

- **Ventral bristles of thorax uncini** — Each gill filament carries a number of eyes. Two clublike dorsal appendages arise from near each pair of eyes. L., 30 mm. . . . . → *Dasychone bombyx*, Dalyell.
- **Ventral bristles of thorax crotchets with a long stalk.**
  - Gill filaments not connected by a fine membrane.
    - Dorsal bristles of thorax of one kind, namely, capillary bristles with long tapering ends
      - Uncini in abdomen. Secondary branches of gills of unequal length reaching the same level.
        - Crotchets in abdomen with a long stalk. Gill filaments five on each side. No long secondary branches to the filaments. L., 6 mm. → *Haplobranchus æstuarinus*, Bourne.
        - Gill filaments three or four on each side. Peristomial collar present. Eyes in anterior and anal segments. Bristle-bearing segments in abdomen, six to seven. L., 6 mm. → *Oria Armandi*, Clpd.
        - Gill filaments three on each side. No peristomial collar. Eyes in anterior and anal segments. Bristle-bearing segments in abdomen, three. L., 3 mm. . . . . → *Fabricia sabella*, Ehr.
    - Dorsal bristles of thorax of two kinds, namely, bristles with long tapering ends, and others with short spathulate ends . . → Gill filaments eight to twelve on each side. Secondary branches short, of equal length. Two eyes in anterior segments. Number of segments, thirty-five to forty. L., 15 mm. → *Jasmaneira elegans*, de St. Joseph.
  - Gill filaments connected by a fine membrane reaching nearly to their tips.
    - No eyes on peristomium. Gill filaments not enlarged near the ends, mud-dweller, tube gelatinous. Large worm. L., 220 mm. . . → *Myxicola infundibulum*, Renier.
    - Eyes present on peristomium. Gill filaments enlarged near their tips; inhabits oyster shells . . . . . → *Myxicola Dinardensis*, de St. Joseph.

KEY TO THE GENERA AND SPECIES OF THE SERPULIDÆ OF THE FRENCH AND ENGLISH COASTS OF THE CHANNEL.

Uncini with many teeth, the last tooth longer, broader, and blunter than the others. Tube spiral.

Operculum on the right of the median dorsal line.	No brood pouch in operculum.	Tube semi-transparent. Common on *Sertularia abietina*. Ten to sixteen bristle-bearing segments in the abdomen	*Spirorbis spirillum*, L. = *lucidus*, Mont.
		Tube opaque on lobsters and crabs. Sixteen to twenty bristle-bearing segments in the abdomen	*Spirorbis sinistrorsus*, Mont. = *armoricanus*, de St. Joseph.
	Brood pouch in operculum.	Operculum resembling a barrel. No sickle-shaped bristles in the third bristle-bearing segment	*Spirorbis corrugatus*, Mont.
		Operculum smooth. Sickle-shaped bristles in the third bristle-bearing segment . Hepatic pigment violet .	**Spirorbis Pagenstecheri*, Qfg.
		Hepatic pigment red .	**Spirorbis pusillus*, de St. Joseph.
Operculum on the left of the median dorsal line.	No brood pouch in operculum. Operculum not strongly convex at end.	Four bristle-bearing segments in the thorax	**Spirorbis Malardi*, Caullery and Mesnil.
		Three bristle-bearing segments in the thorax. No teeth or excrescence on operculum .	*Spirorbis borealis*, Daudin.
		Teeth or excrescences present on operculum	*Spirorbis cornu arietis*, Phil.
	Brood pouch in operculum. Operculum strongly convex at end.	Top of operculum with serrated edges	**Spirorbis militaris*, Clpd.
		No serrated ridges, a smooth rim round the operculum . . .	*Spirorbis granulatus*, L. *nec* Lang.

* Not yet recorded from the British area.

KEY TO THE GENERA AND SPECIES OF THE SERPULIDÆ—*continued.*

Uncini deeply hollowed out at back with very numerous and very small teeth, terminated by a stout spine. Tube not spiral	No operculum. No sickle-shaped bristles present in the thorax. L, without gills, 20 to 45 mm.	*Protula tubularia*, Mont.
	Operculum globular, transparent. Some sickle-shaped bristles with winged stalks present in thorax. L., 8 to 15 mm.	*Apomatus similis*, Mar. and Bohr.
Uncini with about fourteen teeth, last tooth broader, blunter, and larger than the others. Tubes very slender, intertwining	Two opercula at the end of stems with secondary branches. Ends of gills not enlarged. L., 5 mm.	*Filograna implexa*, Oken.
	No operculum. Ends of gills club-shaped and hollowed out. L., 6 mm.	*Salmacina Dysteri*, Huxley.
Uncini with eight or nine teeth, the last tooth hollowed out underneath like a gouge	Tube adherent usually with three ridges, the centre ridge projecting in a sharp tooth over the orifice. Operculum with two projections on the stem, flat at the top or conical, with or without one to three spines	*Pomatoceros triqueter*, L.
Uncini with five to seven teeth, the last tooth stronger than the others, but pointed like them	Operculum funnel-shaped, margin crenate. Gills about thirty on each side. Number of teeth in uncini of thorax five. L., 20 to 50 mm.	*Serpula vermicularis*, L.
	Operculum funnel-shaped with a circle of spines, with thorns on their spines arising from the centre. Number of teeth in uncini of thorax seven. Gills about fifteen to seventeen on each side. L., 20 mm.	*Hydroides norwegica*, Gunn.