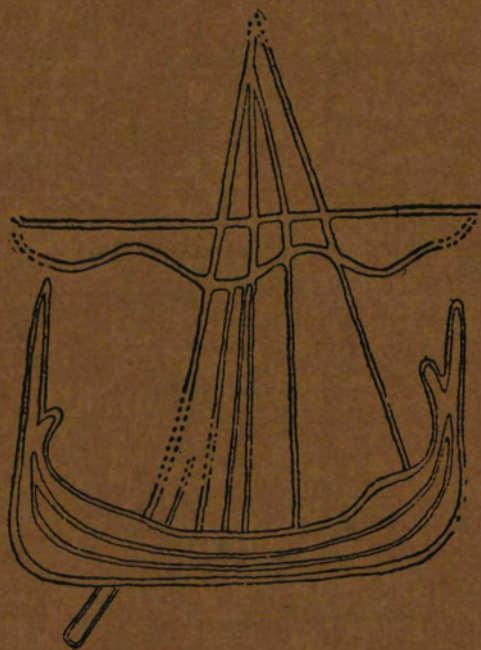


MARINE FAUNA
OF THE
ISLE OF MAN



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MARINE FAUNA

OF THE

ISLE OF MAN

Compiled by
HILARY B. MOORE, Ph.D.

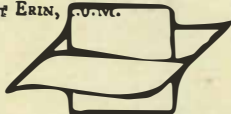
Editor :
R. J. DANIEL, D.Sc.
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WITH THREE CHARTS

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1937

PREFATORY NOTE

Dr. H. B. Moore, the compiler of the Marine Fauna of the Isle of Man, was a member of the Port Erin Biological Station Staff from November, 1930, to March, 1934.

During that period grants were made to the Station by H.M. Development Commission, in order that an intimate survey of the shore fauna and flora, together with associated physical conditions, might be carried out.

Moore's work, as Zoologist under the scheme, included a systematic study of the fauna of Manx waters and observations upon breeding periods of animals to be found in the inter-tidal zone.

These activities are reflected in the present Fauna List and I am sure that students who visit Port Erin, and others, will be grateful to Dr. Moore for his labours. His own indebtedness to fellow-workers is acknowledged in the Introduction.

Direct financial aid towards publication of the List has been received from the Joint Committee on Research of the University of Liverpool, and from the Liverpool Biological Society which this year celebrates its ' Jubilee '.

The Manx Museum and Ancient Monument Trustees have also identified themselves with the Publication. There is additional welcome in this, because one of the projects that attracted the late P. M. C. Kermodé, who had so much to do with the establishment of the Museum, was the production of such a Manx Fauna List.

R. J. DANIEL.

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INTRODUCTION

HISTORICAL

The study of marine biology in the Isle of Man owes its origin to Edward Forbes (1818-1854), who collected chiefly in the north end of the island, and published various lists of the fauna in the British Association Reports and elsewhere. In his "Malacologia Monensis" (1838) he gave a detailed account of the distribution of the mollusca of the island, both land and aquatic, so far as these were then known. Following him, the Liverpool Marine Biological Committee, with Herdman as founder and leader, made visits to the island both for shore collecting and dredging. The first Biological Station at Port Erin was opened in 1892, and was the successor of the Puffin Island station, founded by the L.M.B.C. in 1887; the present station at Port Erin was opened in 1902, and transferred to the University of Liverpool in 1919. The successive annual reports of these three laboratories, which have been included in the Proceedings and Transactions of the Liverpool Biological Society, contain details of various collecting expeditions round the Isle of Man, as well as reports on special groups by visiting workers. In the last volume of the *Fauna of Liverpool Bay*, a complete list was given of all the species recorded up to then from the Liverpool Bay area, but not specifying which of these were known from the Isle of Man. An appendix bringing this list up to date was published in the 33rd Annual Report of the Port Erin Biological Station (1919). In the 14th Annual Report of the station (1900), Herdman published lists and charts of the fauna of Port Erin Bay and its immediate neighbourhood. These were intended to indicate the distribution of the commoner species only, and did not include the rarer forms. For the sandy beach area of Port Erin Bay, these lists have been brought up to date by Pirrie, Bruce and Moore (1932),* and for the region of the bay below low water by Moore (1933).†

* *J. Mar. biol. Ass. U.K.*, N.S., Vol. XVIII, pp. 279-296.

† *Proc. malac. Soc. Lond.*, Vol. XX, Pt. 6, pp. 285-294.

The plankton of the south end of the island, together with the seasonal changes in the abundance of the various species, has been described by Johnstone, Scott, and Chadwick (1924)*, this being a summary of the results of continuous observations from 1907 to 1920. Here again only the more important forms are dealt with, notes on rarer forms appearing from time to time in annual reports and elsewhere.

The Isle of Man Natural History and Antiquarian Society has, at various times, published notes on individual records, as well as fauna lists, two of the most important of the latter, so far as marine forms are concerned, being a general dredging report for the Isle of Man (place of publication untraced) in 1884, and Crellin's list of the Manx fishes in 1888†. In the Manx Museum at Douglas are a certain number of preserved specimens which are referred to in the present list, and in the Natural History section of their catalogue, so far as I am aware, they give the only published records of Manx seals and Cetacea. Birds, although many of them are of considerable importance from a marine economic aspect, are not included here, but they have been well described by Ralfe (1905 and 1925)‡. The marine algae of the island are described in Manx Algae (Knight and Parke, 1931)§ and in subsequent appendices in Port Erin annual reports. A list of some of the littoral diatoms is given by Ghazzawi (1933)||.

The present list is an attempt to bring together the known data with regard to the distribution and breeding of all the marine animals recorded from the Isle of Man. The area treated comprises the shore of the island between tide marks, and the surrounding sea to a distance of about five miles. At the south-west end, the area has been extended,

*The Marine Plankton. Liverpool University Press, pp. 1-194.

†List of the Fishes of the Isle of Man. *Proc. Is. Man. Nat. Hist. Soc.*, Vol. I, (1879-84), p. 160.

‡RALFE, P. G. The Birds of the Isle of Man. Edinburgh, David Douglas, 1905.

RALFE, P. G. Supplementary Notes to the Birds of the Isle of Man. Edinburgh, Douglas and Foulis, 1924.

§Manx Algae. L.M.B.C. Memoir No. XXX, University Press of Liverpool, 1931.

||GHAZZAWI, F. M. The Littoral Diatoms of the Liverpool and Port Erin shores. *J. Mar. biol. Ass. U.K.*, N.S., Vol. XIX, No. 1, 1933.

to include the deep water muddy area about seven miles off-shore. The original specimens on which the older records are founded are in most cases no longer available, but the lists, and in the case of most recent new records, the specimens also, have as far as possible been submitted to specialists for criticism. I wish to express my very great indebtedness to all those who have helped both in this connection and in the collecting of records and the preparation of the list, including the staffs of the Zoology Library and the Zoology Department of the University of Liverpool, and Miss E. C. Herdman and Dr. R. J. Daniel in particular; also to Mr. M. Burton, Dr. W. T. Calman, Mr. L. R. Crawshay, Dr. N. B. Eales, Dr. J. Omer-Cooper, Dr. G. P. Farran, Mr. E. Ford, Mr. R. Palmer, Dr. L. Giltay, Dr. I. Gordon, Mr. C. C. A. Monro, Dr. Th. Mortensen, Mr. F. S. Russell, Mr. R. Winckworth, Dr. A. C. Stephen, and all those whose initials are included in the list on p. 23. The chart of Port Erin Bay is based on one produced by Mr. J. R. Bruce and reproduced by his permission.

In general the nomenclature and arrangement of the "Plymouth Marine Fauna" (2nd Ed., 1931) has been adhered to, the principal exception being the Mollusca, where Winckworth's list and its supplements have been followed.* As far as possible all doubtful records have been excluded. For some species the records have proved so numerous that it has been necessary to summarise them. On the other hand some groups are obviously inadequately represented, and I feel bound to repeat Herdman's statement, made in connection with his 1900 list, that "I am painfully conscious of many omissions."

THE ISLE OF MAN—GENERAL

A detailed account of the topography of the Isle of Man can be found in Lamplugh's "Geology of the Isle of Man" (Mem. of the Geol. Survey, London, 1903). In brief the island is very hilly at the south end, with cliffs dropping sheer into the sea, and indented by a number of sandy or rocky bays such as Fleshwick, Port Erin, and Perwick.

* *J. Conch.*, Vol. XIX, No. 7, 1932; *Idem*, Vol. XIX, No. 10, 1933; *Idem*, Vol. XX, No. 1, 1934; *Idem*, Vol. XX, No. 2, 1934.

The northern part of the island is flatter, and the shore more sandy, ending in the sand dune area of the Point of Ayre in the extreme north (*Chart A*). The sea, between the island and the English and Scottish coasts, is shallow. Towards the east it hardly exceeds twenty fathoms in depth; north, towards Scotland, there is a channel dropping to thirty-one fathoms, and south towards Anglesea the water deepens considerably to 30-50 fathoms. Finally, to the west, and lying some miles off the shore, there is a channel of water with a depth of 60-70 fathoms, which runs up the Irish Sea, and deepens further north to as much as 108 fathoms.

Details of the tidal streams may be found in the "West Coast of England Pilot." The flood tide sets southwards along the west coast from Contrary Head to the Calf, and north-east from Contrary Head to the Point of Ayre. On the east coast conditions are locally complicated by eddies. At Port Erin the extreme tidal range is 20 feet; at mean neap tides it is 8 feet, and at mean springs it is 17 feet. Details of the seasonal changes in the sea temperature at Port Erin are given by Bruce (1928).*

THE SHORES ROUND PORT ERIN

A detailed account is given below of the fauna of a small area of Port Erin Bay—the Dub Reef, and for the other collecting grounds a general description only is given, together with a note of any particularly interesting species found there.

The Fauna of the Dub Reef—[*Chart C*]*—*the rocky region of Port Erin Bay lying between Traie Vane and the swimming baths. This list is intended to indicate the species which are found commonly in this area and the nature and level of their habitat. All the species listed are regularly taken, and 80 per cent. of these were found by students in the habitat indicated in a single afternoon's collecting on a spring tide in April, 1934. As the list is likely to be of most use to Easter class students, a note is made of those animals the spawn of which is usually to be found about Easter.

* *J. Mar. biol. Ass. U.K.*, N.S., Vol. XV., pp. 535-552.

ABOVE HIGH WATER OF NEAP TIDES.

On rock surfaces.

Littorina neritoides. *L. saxatilis* [= *L. rudis*]. *Patella vulgata*.

Under stones.

Littorina saxatilis.

Ligia oceanica. *Gammarus marinus*. *G. locusta*. *Petrobius*
[= *Machilis*] *maritimus*.

In pools.

Littorina saxatilis. *Patella vulgata*.

Tigriopus fulvus. *Carcinus maenas*. *Lipura maritima* (on surface
of water).

Actinia equina.

HIGH WATER NEAPS TO MEAN SEA LEVEL.

On rock surfaces.

Patella vulgata. *Littorina saxatilis*. *L. littorea*. *L. littoralis* [= *L.*
obtusata] (a few).

Nucella [= *Purpura*] *lapillus* (with egg capsules). *Gibbula cineraria*.

Balanus balanoides.

Halichondria panicea. *Hymeniacidon sanguinea*.

Under stones.

Lasaea rubra (in crevices).

Gammarus marinus. *G. locusta*. *Idotea granulosa*.

Procerodes [= *Gunda*] *ulvae* and *Protodrilus flavocapitatus*, where
there is a trickle of fresh water.

In pools.

Patella vulgata. *Nucella* [= *Purpura*] *lapillus*.

Leander serratus. *Verruca stroemia*. *Balanus balanoides* (a few).

Jassa falcata. *Carcinus maenas*. *Idotea granulosa*.

Lipura maritima (on surface of water).

Halosydna gelatinosa. *Harmothoë impar*. *Pterosyllis formosa*.

Polydora polybranchia. *Spirorbis borealis*.

Tealia felina. *Cereus pedunculatus*. *Anemonia sulcata*. *Sagartia nivea*. *Actinia equina*. *Bunodactis verrucosa*. *Obelia geniculata*. *Dynamena* [= *Sertularia*] *pumila*.

Hymeniacion sanguinea. *Leucosolenia botryoides*. *Grantia compressa*. *Sycon ciliatum*. *Halichondria panicea*.

Cribrilina radiata.

Amaroucium argus. *Botryllus schlosseri*.

Asterina gibbosa. *Amphipholis squamata*.

Blennius pholis. *Gobius pictus*.

MEAN SEA LEVEL to LOW WATER NEAPS.

On rock surfaces.

Patella vulgata. *Littorina saxatilis*. *L. littorea*. *L. littoralis*. *Nucella* [= *Purpura*] *lapillus*. *Gibbula cineraria*. *Calliostoma zizyphinum*. *Mytilus edulis* (in crevices, a few).

Balanus balanoides.

Actinia equina.

Cirratulus cirratus (in crevices). *Spirorbis borealis* (on algae).

Under stones.

Phyllodoce maculata. *P. laminosa*. *Nereis pelagica*. *Cirratulus cirratus*.

Lineus gesserensis. *L. longissimus*. (Both with spawn at Easter.)

Fecampia erythrocephala (encysted stage).

Carcinus maenas. *Portunus puber*. *Cancer pagurus*, young. *Nebalia bipes*. *Gammarus marinus*. *G. locusta*.

Grantia compressa. *Hymeniacion sanguinea*.

Lepadogaster gouani. *Centronotus* [= *Pholis*] *gunnellus*.

In pools.

Aplysia punctata. *Modiolus phaseolinus*.

Eupagurus bernhardus (young). *Athanas nitescens*. *Leander serratus*.

Sycon ciliatum. *Grantia compressa*.

Anemonia sulcata. *Tealia felina*. *Actinia equina*. *Sagartia nivea*. *Cereus pedunculatus*. *Bunodactis verrucosa*. *Dynamena* [= *Sertularia*] *pumila* (on algae).

Gobius pictus. *Blennius pholis*.

Polydora polybranchia (in tubes in Lithothamnion)

Amaroucium argus. *Clavelina lepadiformis*.

LOW WATER NEAPS TO LOW WATER SPRINGS.

On rock surfaces.

Spirorbis borealis (on rocks and algae). *Cirratulus cirratus* (in crevices).

Patelloida [= *Acmaea*] *virginica*. *Patina* [= *Helcion*] *pellucida* (on Laminaria). *Patella vulgata*. *Littorina littorea*. *L. littoralis*. *Nucella* [= *Purpura*] *lapillus*. *Calliostoma zizyphinum*. *Gibbula cineraria*.

Halichondria panicea. *Hymeniacion sanguinea*. *Grantia compressa*.

Membranipora membranacea. *M. lineata*. Both on Laminaria.

Echinus esculentus.

Gnathia maxillaris (in crevices).

Under stones.

Pilumnus hirtellus. *Cancer pagurus*. *Carcinus maenas*. *Portunus puber*. *Porcellana longicornis*. *Galathea squamifera*. *Gammarus marinus*. *Verruca stroemia*. *Balanus crenatus*. *B. porcatus* (a few).

Patelloida [= *Acmaea*] *virginica*. *P. tessulata*. *Gibbula cineraria*. *Archidorus britannica*. *Aeolidia* [= *Eolis*] *papillosa* (both with spawn at Easter). *Trivia monacha*. *Lamellaria perspicua* (with spawn at Easter). *Anomia ephippium*.

Tonicella rubra. *Lepidochitona cinerea*.

Arenicola ecaudata (in gravel). *A. branchialis* (in gravel). *Harmothoe imbricata*. *H. lunulata*. *Pomatoceros triqueter*. *Cirratulus cirratus*. *Halosydna gelatinosa*.

Psammechinus miliaris. *Asterina gibbosa* (with spawn at Easter). *Asterias rubens*. *Ophiothrix fragilis*.

Lepadogaster gouani. *Liparis montagui*. *Centronotus* [= *Pholis*] *gunnellus*. *Onos tricirratus*.

Fecampia erythrocephala (encysted stage).

Lineus gesserensis. *L. longissimus* (both with spawn at Easter).

Alcyonium digitatum.

Gromia oviformis.

In pools.

*Aplysia punctata.**Sycon ciliatum. Grantia compressa.**Botryllus schlosseri. Botrylloides leachi.**Amphipholis squamata.*

Anemonia sulcata. Tealia felina. Actinia equina. Sagartia nivea.
Cereus pedunculatus. Bunodactis verrucosa. Tubularia larynx.
Dynamena [=Sertularia] pumila. Coryne muscoïdes.

Filograna implexa (on *Laminaria* roots).

Gobius pictus. Blennius pholis. Onos tricirratulus. Nerophis
lumbriciformis.

Eupagurus bernhardus (young).

Port Erin Bay [*Chart C*], in which the biological station is situated, offers good general collecting of different types. Along the east side, from Spaldrick to the old biological station, there is a considerable extent of reefs, well provided with pools, and intersected by areas of boulder beach.

The anemones in the pools in this area are particularly good; and in a trickle of fresh water near the top of the stony beach in Traie Vane, *Protodrilus flavocapitatus* is to be taken, along with *Procerodes* [= *Gunda*] *ulvae*. The south side of the bay is mainly boulder beach, and yields good collecting, especially for worms and crustacea. On the ruined breakwater at the mouth of the bay *Echinus esculentus*, *Alcyonium digitatum*, and various anemones, including *Metridium senile*, are abundant. It is best visited in a rowing boat. The sandy beach contains a typical sand fauna—*Arenicola marina*, with its commensal *Harmothoë lunulata*, *Nephtys caeca*, *N. cirrosa*, *Nerine cirratulus*, *Magelona papillicornis*, *Capitella capitata*, and the crustacea *Eurydice pulchra*, *Bathyporeia guilliamsoniana* and *Urothoë brevicornis*. At low water of spring tides *Ensis ensis*, and *Echinocardium cordatum* with its commensal *Montacuta ferruginosa* are abundant, and a few *Peachia hastata* are to be found near the Raglan Pier. (Pirrie, Bruce and Moore, 1932.*)

*See footnote p. 5.

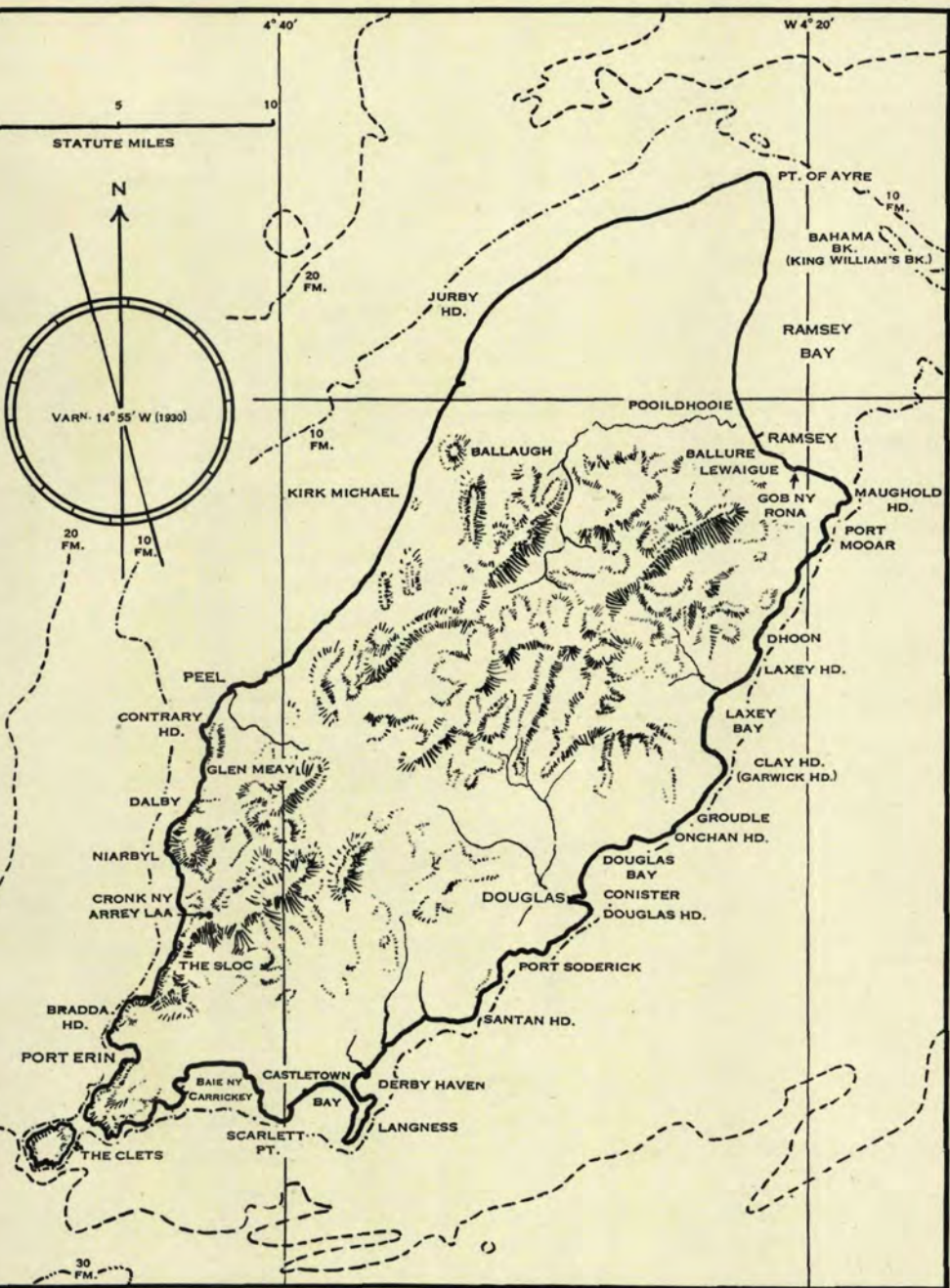
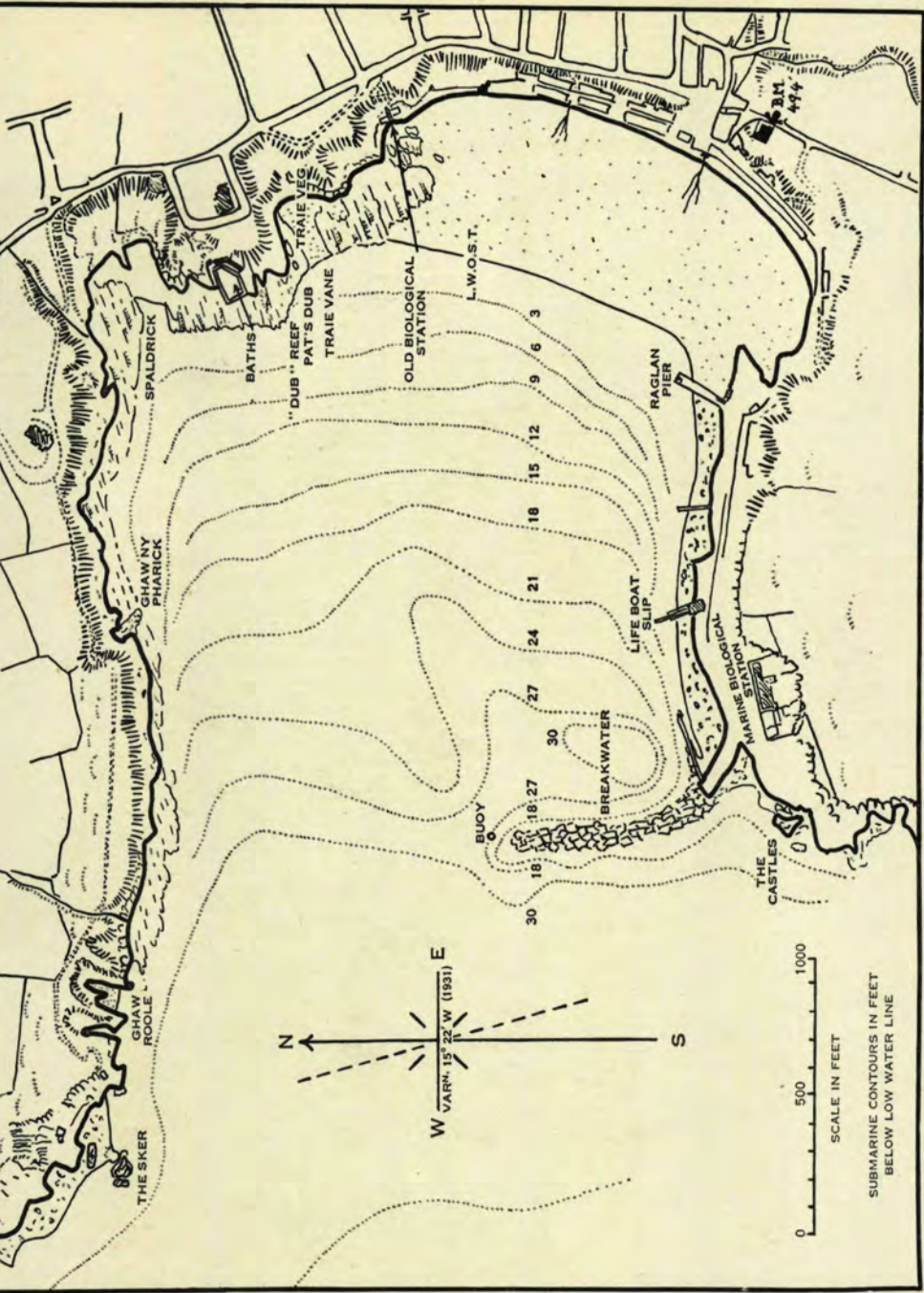


CHART A. The Isle of Man



CHART B. West and South Coasts, Isle of Man
(Niarbyl to Scarlett Pt.)



SUBMARINE CONTOURS IN FEET
 BELOW LOW WATER LINE

SCALE IN FEET

Chart C. Port Fair Bay

Fleshwick Bay [Chart B].—This is mainly a boulder beach, with a few pools. The collecting is not so good as at Port Erin, although certain species are more abundant, as for instance *Verruca stroemia* and *Sabellaria spinulosa*, both on stones at low water.

Niarbyl [Charts A, B].—This is rather a distant ground, but is well worth a visit. The beach is mainly boulders offering rich general collecting. *Echinus esculentus* is abundant at low water, as it is on the breakwater at Port Erin; *Psammechinus miliaris* is not uncommon, and *Cucumaria saxicola* occasional there. There are also good pools, mostly shallow, in some of which *Littorina littorea* is extraordinarily numerous. The glass-eel stage of the fresh water eel may usually be taken in a small stream crossing a sandy bay somewhat south of the point.

The Calf Sound [Chart B].—The shore is mostly boulder beach with a fairly good general fauna, but some pools are accessible, and the anemones in certain of these are very abundant, including species rare elsewhere. *Echinus esculentus* is fairly plentiful at low water, and hydroids and polyzoa are abundant.

Perwick Bay (Chart B).—Chiefly boulder beach, the collecting here is not particularly good, although some of the pools are rich in hydroids, polyzoa and sponges.

Port St. Mary "Ledges" [Chart B].—These are a succession of limestone terraces, on which are great numbers of shallow pools of all sizes, as well as loose boulders, both on the rocks and in pools. The collecting is good, especially for demonstration of the zonation of the various species. In the top pools the copepod *Tigriopus fulvus* and the gasteropod *Littorina saxatilis* are extremely abundant, the latter frequently of a very large variety. *Gibbula umbilicalis*, which is practically absent from Port Erin Bay, is abundant here, together with *G. cineraria*. *Tubularia* is fairly common under ledges, lower down the shore.

Port St. Mary Harbour (Inner) [Chart B].—The bottom is muddy-clay, grading into stones above high water neaps, and below low water

springs. The fauna is very rich, both in density, and in numbers of species. Of the more abundant forms, *Scolecopsis fuliginosa* is present up to 11,000 per square metre, and *Scoloplos armiger*, *Capitella capitata* and *Nereis diversicolor* var., all above a hundred per square metre. *Corophium volutator* also is very abundant—over a thousand per square metre, and *Tellina fabula* over seventy.

The rocks outside the harbour, and eastwards along to Gansey Point, provide one of the richest collecting grounds in the south of the island. At low water a long stretch of boulder beach is exposed, with numbers of pools, the boulders harbouring in particular, numbers of crustacea and nudibranchs. The overhanging ledges on Gansey Point are very rich in sponges, and the tube-worm *Bispira voluticornis* is taken there. Higher up the shore *Diodora* [= *Fissurella*] *apertura* is to be found. The intermediate sandy beach of Chapel Bay contains a good sand fauna, although not so rich as that of the inner harbour. At low water there is an area of *Zostera* which is a good collecting ground for various mysids, *Lacuna vincta*, *Aplysia punctata*, *Elysia viridis*, etc.

The sandy beaches of Baie-ny-Carrickey and Castletown Bay are somewhat similar in fauna to Port Erin shore, but are more exposed and less densely populated. In both, *Haustorius arenarius* and *Bathyporeia pelagica* are common.

Scarlett Point [*Charts A, B*] is a fairly good general ground, although not outstanding except for sponges. The Port St. Mary side is mostly boulder beach, but towards Castletown this gives place to flat limestone terraces similar to the Port St. Mary "Ledges."

Derby Haven [*Chart A*], although largely gravelly, has areas of sand which are, especially towards low water, a good general ground for digging. The population densities are not as great as those in Port St. Mary inner harbour, but the number of species found is nearly as large.

DREDGING GROUNDS

In the absence of systematic dredging, carried out throughout the year, and over a wide area, it is not possible to give at present a general

account of the types of bottom and fauna round the south end of the island. Their richness can, however, be seen from the records in the list of fauna. Many lists have from time to time been published, of the results of dredging and trawling in the area, both in the *Fauna of Liverpool Bay* before the foundation of the Biological Station at Port Erin, and thereafter in the annual reports of the station. In 1900, Herdman brought together these results, so far as they concerned the immediate neighbourhood of Port Erin, and embodied them in a series of distributional charts of the fauna of the neighbourhood. The only recent revision of these has been that of Moore (1933),* for the area of Port Erin bay below low water mark, and that of Pirrie, Bruce and Moore (1932)* for the area of sandy beach in the bay between tide marks. Both indicate a very considerable change in the fauna in the past thirty years.

The principal grounds which have been trawled on to any extent of recent years are those in Port Erin Bay, that between Bay Fine and Bradda Head, that in the mouth of Fleshwick Bay, and the area off Port Erin known as "The Breast" (see *Chart B*). In addition, material is brought in from time to time by fishermen, from two banks, "Bank Charles," and "The Warts Bank," between Scarlett Point and the Calf Sound.

Port Erin Bay.—Except in the immediate neighbourhood of low water mark, the bottom is mainly sandy, with a muddy patch immediately inside the breakwater. The depth of water is 0-6 fathoms. The sandy part is characterised by *Venus fasciata*, *V. striatula*, *Abra prismatica*, *Tellina fabula*, *Ensis ensis*, etc., the worms *Nephtys caeca*, *N. cirrosa*, *N. hombergi*, *Owenia fusiformis*, and *Pista cristata*, and the echinoderms *Echinocardium cordatum*, *E. flavescens*, and *Ophiura albida*. The muddy area contains *Cardium scabrum*, *Venus ovata*, *Dosinia lupinus*, *Tellina crassa*, *Aloidis gibba*, and the polychaete *Ammotrypane aulogaster*. On the bottom of the bay, and coming to the water's edge at night time, is a very abundant crustacean fauna, comprising in particular *Crangon vulgaris*, *Pontocrates arenarius*,

* See footnotes, p. 5.

Bathyporeia guilliamsoniana, *Eurydice pulchra*, *Iphinoë trispinosa* and various Mysids, of which *Schistomysis spiritus* and *Praunus flexuosus* are the commonest.

Bay Fine [Chart B].—A trawling and dredging ground which is usually productive of plenty of material is the area from Bay Fine across the mouth of Port Erin Bay to Bradda Head, in a depth of about 0—10 fathoms. The bottom is mostly shell and gravel. Herdman's 1900 list gives about a hundred species for this area. A typical haul of a small otter trawl on this ground recently yielded the following :—*Echinus esculentus*, *Psammechinus miliaris*, *Asterias rubens*, *Marthasterias glacialis*, *Astropecten irregularis*, *Solaster papposus*, *Ophiocomina nigra*, *Antedon rosacea*, and its pentacrinus stage, *Philine aperta*, *Gibbula magus*, *Cantharidus montagui*, *Velutina velutina*, *Patelloida tessulata*, *Emarginula fissura*, *Pecten maximus*, *Chlamys opercularis*, *Cardium crassum*, *Macropodia longirostris*, *Inachus dorsettensis*, *Eurynome aspera*, *Eupagurus bernhardus*, *E. prideauxi*, *Galathea intermedia*, *Nemertesia antennina*, *N. ramosa*. This may be taken as a representative haul, although many small forms must have been included but not listed. Also the nature of the fauna varies considerably from time to time.

The Breast [Chart B].—Lying off Port Erin in a depth of 15 to 20 fathoms, the fauna is not dissimilar to that of Bay Fine. The bottom is mostly shell and gravel with some clinker. An interesting form from this area is *Crania anomala*, which is widely distributed, although not common. *Echinus esculentus*, spider crabs and various ophiuroids, are usually all abundant together with a wide range of small forms.

Fleshwick [Chart B].—The bottom varies greatly in a small distance, but some spots are very productive. In the mouth of the bay *Gibbula magus* is usually common, and in one place where there is a patch of mud, *Dentalium entalis* is fairly common. Inside the bay the bottom is sand, changing to boulders close to the shore.

KEY TO INITIALS.

A.B.W.	Dr. A. B. Wildman.	J.O.C.	Dr. J. Omer-Cooper.
A.E.	Mr. A. Eslick.	J.R.B.	Mr. J. R. Bruce.
A.G.	Miss A. Grimwood.	J.W.J.	Mr. J. W. Jones.
A.G.R.	Mr. A. Graham.	K.M.W.	Miss K. M. White.
A.K.T.	Mr. A. K. Totton.	L.G.	Dr. L. Giltay.
B.G.W.	Miss B. G. Wood.	M.C.	Mr. M. Cohen.
B.J.M.	Mr. B. J. Marples.	M.B.W.	Miss M. B. Whitaker.
B.T.P.	Mr. B. T. Parsons.	M.E.P.	Miss M. E. Pirrie.
D.H.	Miss D. Holroyd.	M.G.C.F.	Miss M. G. C. Fordham.
D.M.H.	Mr. D. M. Hall.	M.K.M.	Miss M. K. Molyneux.
E.C.H.	Miss E. C. Herdman.	M.K.S.	Dr. M. K. el Saby.
E.L.	Miss E. Lumb.	M.K.	Dr. M. Knight.
E.L.C.	Mr. E. Lucas.	M.L.J.	Dr. M. L. Johnson.
E.M.L.	Miss E. M. Lowe.	M.V.L.	Dr. M. V. Lebour.
E.P.	Mr. E. Philips.	M.W.P.	Dr. M. W. Parke.
E.T.B.F.	Dr. E. T. B. Francis.	N.B.E.	Dr. N. B. Eales.
F.J.B.	Mr. F. J. Brown.	N.S.J.	Mr. N. S. Jones.
F.J.C.	Prof. F. J. Cole.	R.A.F.	Mr. R. A. Fleming.
F.S.R.	Dr. F. S. Russell.	R.B.	Mr. R. Bassindale.
F.W.E.	Dr. F. W. Edwards.	R.C.B.	Mrs. R. C. Bisbee.
G.A.C.	Mr. G. A. Chadwick.	R.E.	Mr. R. Elmhirst.
G.A.F.	Miss G. A. Fishwick.	R.R.	Miss R. Rawlinson.
G.I.C.	Mr. G. I. Crawford.	R.W.	Mr. R. Winckworth.
G.P.F.	Dr. G. P. Farran.	S.T.B.	Mr. S. T. Burfield.
H.B.M.	Dr. H. B. Moore.	TH.M.	Dr. Th. Mortensen.
H.C.C.	Mr. H. C. Chadwick.	T.N.C.	Mr. T. N. Cregeen.
H.W.	Mr. H. Waring.	W.C.S.	Mr. W. C. Smith.
J.A.K.	Dr. J. A. Kitching.	W.E.F.	Miss W. E. Frost.
J.B.	Mr. J. Burton.	W.A.H.	Prof. W. A. Herdman.
J.H.D.	Mr. J. H. Day.	W.F.	Mr. W. Fowler.
J.H.F.	Mr. J. H. Fraser.	W.J.B.	Mr. W. J. Beaumont.
J.H.O.	Prof. J. H. Orton.	W.T.C.	Dr. W. T. Calman.
J.M.D.	Mr. J. M. Dodd.		

LIST OF ABBREVIATIONS USED.

H.W.	High water.	S.T.	Spring tide.
L.W.	Low water.	O.	Ordinary.
N.T.	Neap tide.	E.	Equinoctial.

(Combinations of above, e.g. L.W.O.S.T. = low water of ordinary spring tides.)

M.T. Mid tide level.

M.S.L. Mean sea level (approximately M.T.).

NOTE.

In the list which follows, each record is denoted by initials, e.g. (A.B.W.), or by a number, e.g. [99].

The *initials* are those of the person or persons responsible for the record or summary statement. Such initialled records were made, for the most part, in the years since 1930, and many of them have been published as "Faunistic Records" in the Annual Reports of the Port Erin Marine Biological Station. A key to the initials, and to some abbreviations used in the text, is given on pp. 23-24.

The *numbers* apply to those records which have been extracted from published work other than that mentioned above. They refer to corresponding numbers in the Records Bibliography on p. 260.

References to descriptions and figures of species (immediately following the specific name) are to be found in the Reference Bibliography on p. 247.

LIST OF SPECIES

Phylum PROTOZOA

Class MASTIGOPHORA

Sub-Class PHYTOMASTIGINA

Order DINOFLAGELLATA

Family PROROCENTRIDAE

Most of the references to Dinoflagellates are taken from the following papers: Herdman, E. C., 1921, 1922, 1924; Herdman, W. A., 1912, 1913.

EXUVIAELLA MARINA Cienkowski [= *E. lima* (Ehrenberg) Bütschli. (*E. C. Herdman*, 1922).] *Lebour*, 1925, p. 13.

On the sandy beach at Port Erin. Never very abundant. Single individuals have appeared from time to time, usually with diatoms, in the inner harbour. Recorded 1921,-22 (E.C.H.).

PROROCENTRUM MICANS Ehrenberg *Lebour*, 1925, p. 16.

Sandy Beach, Port Erin. Never very abundant. Single individuals have appeared from time to time, usually with diatoms, in the inner harbour. Recorded 1921,-22 (E.C.H.).

Sub-Order DINIFERIDEA

Family GYMNODINIIDAE

AMPHIDINIUM BIPES E. C. Herdman *Lebour*, 1925, p. 29; *E. C. Herdman*, 1924, p. 78.

Sandy Beach, Port Erin. Recorded, 1924; not common (E.C.H.).

AMPHIDINIUM BRITANNICUM E. C. Herdman [= *A. britannicum* *Lebour* (*E. C. Herdman*, 1924). = *A. asymmetricum* Kofoid, var. *britannicum* E. C. Herdman (in *E. C. Herdman*, 1922).] [= *A. asymmetricum* Kofoid (in *E. C. Herdman*, 1921).] [= *A. operculatum* Claparède & Lachmann (long form), (in *W. A. Herdman*, 1913).] *Lebour*, 1925, p. 27; *E. C. Herdman*, 1922, p. 21, as *A. asymmetricum* var. *britannicum*.

Very abundant on the sandy beach at Port Erin. Recorded 1913,-21,-22,-23,-24 (E.C.H.).

AMPHIDINIUM FLEXUM E. C. Herdman *Lebour*, 1925, p. 27;
E. C. Herdman, 1924, p. 59.

Sandy Beach, Port Erin. Never very abundant. Recorded 1923, but occurred in other years also (E.C.H.).

AMPHIDINIUM HERDMANI Kofoid & Swezy [= *A. herdmani*
 Kofoid & Swezy (in *Lebour* 1925).] [= *A. operculatum* Claparède
 and Lachmann (short form), (in *W. A. Herdman*, 1912, 13).]
Lebour, 1925, p. 23.

Sandy beach at Port Erin, and Douglas Beach opposite the promenade. Many varieties in colour, shape and cell contents. Very abundant; recorded 1912, 13, 21, 22, 23, 24 (E.C.H.).

AMPHIDINIUM KLEBSI Kofoid & Swezy *Lebour*, 1925, p. 23.

At least six different types which grade into one another, and some of which approach very near to *A. klebsi* Kofoid & Swezy.

Sandy beach, Port Erin. A few specimens have been seen from time to time, each year (1921-1924), usually associated with *A. herdmani* (E.C.H.).

AMPHIDINIUM KOFOIDI E. C. Herdman *Lebour*, 1925, p. 33;
E. C. Herdman, 1922, p. 26.

Sandy beach, Port Erin. Very abundant from time to time, off the end of the old pier. Recorded 1921-1924 (E.C.H.).

AMPHIDINIUM LATUM *Lebour* *Lebour*, 1925, p. 26.

Sandy beach, Port Erin. Never very common. Recorded 1924. Very variable in form (E.C.H.).

AMPHIDINIUM MANANNINI E. C. Herdman *Lebour*, 1925, p. 34;
E. C. Herdman, 1924, p. 79.

Sandy beach, Port Erin. Not common. Recorded 1924 (E.C.H.).

AMPHIDINIUM OVUM E. C. Herdman *Lebour*, 1925, p. 29;
E. C. Herdman, 1924, p. 78.

Sandy beach, Port Erin. Not common. Recorded 1924 (E.C.H.).

AMPHIDINIUM PELLUCIDUM E. C. Herdman *Lebour*, 1925, p. 28;
E. C. Herdman, 1922, p. 27.

Many varieties of colour and shape. A complete series leads over to *A. scissum* Kofoid & Swezy.

Sandy beach, Port Erin. Common round the old pier. Recorded 1922, 23, 24 (E.C.H.).

AMPHIDINIUM SEMILUNATUM E. C. Herdman *Lebour*, 1925, p. 33 ;
E. C. Herdman, 1924, p. 59.

Sandy beach, Port Erin. Never abundant. Recorded 1923, but occurred also in other years (E.C.H.).

AMPHIDINIUM TESTUDO E. C. Herdman *Lebour*, 1925, p. 29 ;
E. C. Herdman, 1924, p. 76.

A variety found at Freshfield, Lancs., suggests that this species might grade into *A. operculatum* Claparède & Lachmann.

Sandy beach, Port Erin. Never abundant, but a few individuals usually present. Recorded 1924, but occurred in other years also (E.C.H.).

AMPHIDINIUM VITREUM E. C. Herdman *Lebour*, 1925, p. 34 ;
E. C. Herdman, 1924, p. 79.

One specimen, sandy beach, Port Erin, 1924 (E.C.H.).

GYMNODINIUM SIMPLEX (Lohmann) *Lebour*, 1925, p. 37.

Abundant in sea and ponds at Port Erin, 1934, 1935 (M.W.P., det. M.V.L.).

GYMNODINIUM AGILE Kofoid & Swezy *Lebour*, 1925, p. 40.

A variety differing somewhat from the Californian type. Sandy beach, Port Erin. Never abundant. Recorded 1922,-23,-24 (E.C.H.).

GYMNODINIUM GLANDULA E. C. Herdman *Lebour*, 1925, p. 41 ;
E. C. Herdman, 1924, p. 81.

Sandy beach, Port Erin. Not common. Recorded 1924 (E.C.H.).

GYMNODINIUM INCERTUM E. C. Herdman *Lebour*, 1925, p. 41 ;
E. C. Herdman, 1924, p. 80.

Sandy beach, Port Erin. One specimen, 1924 (E.C.H.).

GYMNODINIUM VARIABILE E. C. Herdman *Lebour*, 1925, p. 41 ;
E. C. Herdman, 1924, p. 80.

A dozen or more varieties. Probably some of the smaller types are really spores of some other, possibly armoured, dinoflagellates. Others may represent different stages in a single life-history.

Sandy beach, Port Erin. Fairly common amongst the other shore-living dinoflagellates. Recorded 1924 (E.C.H.).

GYMNODINIUM MINUTUM Lebour [= *A. rotundatum*, Kofoid & Swezy, 1921, p. 150] *Lebour*, 1925, p. 45.

In sea and ponds at Biological Station. Abundant in the ponds in spring and summer. (M.W.P. verit. M.V.L.).

GYRODINIUM LÉBOURAE E. C. Herdman *Lebour*, 1925, p. 53.

Sandy beach, Port Erin. Not common. Recorded 1924 (E.C.H.).

Family POLYKRIKIDAE

POLYKRIKOS LÉBOURAE E. C. Herdman [= *P. schwarzi* Bütschli (in *E. C. Herdman*, 1922).] *Lebour*, 1925, p. 68; *E. C. Herdman*, 1924, p. 60.

Sandy beach, Port Erin. Regularly present, but never abundant. Recorded 1921-1924 (E.C.H.).

Family NOCTILUCIDAE

NOCTILUCA SCINTILLANS Macartney [= *N. miliaris* Suriray.] *Lebour*, 1925, p. 69.

In ripple marks on the sand, off the end of the small pier, Port Erin (probably from the plankton). In very large numbers in July, 1921 (E.C.H.), and in July 1934 (J.R.B.). Common in the plankton, and generally distributed [128, 130]. May to Feb. with maxima in July and Oct. (Summary for years 1907-1920) [104].

Family DINOPHYSIDAE

PHALACROMA EBRIOLA E. C. Herdman [= *P. ebriolum* E. C. Herdman (in *Lebour*, 1925).] *Lebour*, 1925, p. 77; *E. C. Herdman*, 1924, p. 79.

Sandy beach, Port Erin. Not common. Recorded 1924 (E.C.H.).

PHALACROMA KOFOIDI (E. C. Herdman) [= *Amphidinium kofoidi* var. *petasatum* E. C. Herdman (*E. C. Herdman*, 1922).] [= *A. sulcatum* Kofoid (*E. C. Herdman*, 1921).] *Lebour*, 1925, p. 77; *E. C. Herdman*, 1924, p. 79.

Also a colourless variety with only a slight suggestion of a theca.

Sandy beach, Port Erin. Abundant off the end of the old pier in the summers of 1920,-22,-23. Not found in 1921 (E.C.H.).

Family GLENODINIIDAE

GLENODINIUM MONENSE E. C. Herdman [= *G. monensis* E. C. Herdman (in *Lebour*, 1925).] *Lebour*, 1925, p. 86; *E. C. Herdman*, 1924, p. 58.

Sandy beach, Port Erin. Occurred in large numbers from time to time during the summer of 1922 (probably in other years also) close to the concrete steps in the inner harbour (E.C.H.).

Family PERIDINIIDAE

CERATIUM FUSUS (Ehrenberg) *Lebour*, 1925, p. 146.

Common and generally distributed, in the plankton round the south of the island. Taken throughout the year [128, 130].

CERATIUM FURCA (Ehrenberg) *Lebour*, 1925, p. 145.

Common in the plankton, and generally distributed round the south of the island. Taken from Feb. to Nov. [128, 130].

CERATIUM TRIPOS (O. F. Müller) *Lebour*, 1925, p. 148.

Very common in the plankton, and generally distributed round the south of the island [87, 128, 130]. May to Aug., with a maximum in July. (Summary for the years 1907-1920) [104]

Sub-Class ZOOMASTIGINA

Order PROTOMONADINA

Family HERPETOMONADIDAE

HERPETOMONAS PATELLAE Porter *Porter*, 1915, p. 322.

In the alimentary tract and digestive gland of *Patella vulgata*, Port Erin, 1913 [118a].

Class RHIZOPODA

Order FORAMINIFERA

Family GROMIIDAE

GROMIA OVIFORMIS Dujardin *Jepps*, 1926, p. 701.

Common under stones at low water, Port Erin, Port St. Mary. Calf Sound (H.B.M.).

Family ASTRORHIZIDAE

HALIPHYSEMA TUMANOWICZII Bowerbank *Brady*, 1884, p. 281.

Calf Sound (N.B.E.).

Class SPOROZOA

Sub-Class TELOSPORIDIA

Order COCCIDIOMORPHA

Sub-Order COCCIDIA

MEROCYSTIS KATHAE Dakin *Dakin*, 1911, p. 147.

In the renal organs of *Buccinum undatum* [43a].

Class CILIOPHORA

Order HOLOTRICHA

PROTOPHYRYA OVICOLA Kofoid *Kofoid*, 1903, p. 113.

Common, parasitic on the eggs and embryos in the brood pouch of *Littorina rudis* from the outer south beach, Port Erin, and other localities, Apl. 1930 (J.H.O.).

FOETTINGERIA ACTINIARUM (Claparède). *De Morgan*, 1924, p. 68.

Abundant, parasitic in *Actinia equina* from below the laboratory, Port Erin, and from Fleshwick Bay, Apl. 1930-31 (J.H.O.).

CRYPTOCHILUM BOREALE Hentschel *Hentschel*, 1924, p. 321.

Port Erin Bay, in the intestine of almost every specimen of *Echinus esculentus* examined [33a].

Order HETEROTRICHA

Sub-Order POLYTRICHA

FOLLICULINA AMPULLA Müller *Kent*, 1881, Vol. II, p. 597.

Common on shells, etc., in pools round Port Erin and in dredgings (H.B.M.).

FOLLICULINA ELEGANS Claparède and Lachmann *Kent*, 1881, Vol. II, p. 598.

Common on shells in the east fish pond at Port Erin, Apl. 1934 (H.B.M.).

Sub-Order OLIGOTRICHA.

Family TINTINNIDAE

TINTINNOPSIS CAMPANULA (Ehrenberg) *Jorgensen*, 1924, p. 68.

In the plankton round the south of the Isle of Man, Sept.-Nov. [130].

Order PERITRICHA

LICNOPHORA AUERBACHII Cohn *Kent*, 1881, Vol. II, p. 651.

On the tentacles of *Pecten maximus*, Port Erin, 1909 [42].

Sub-Class SUCTORIA

HEMIOPHYRYA GEMMIPARA Hertwig *Kent*, 1881, Vol. II, p. 823.

On *Coryne* sp., Port Erin Bay, 1919 (H.C.C.). On brown algae on the shore below the laboratory, Port Erin, Apl. 1933 (M.L.J., E.P.).

Phylum **ROTIFERA**Order **PLOIMA**Sub-Order **ILLORICATA**Family **SYNCHAETIDAE**

SYNCHAETA TRIOPHTHALMA Lauterborn *Lauterborn*, 1896, p. 212.

Abundant in stored water taken from lobster pond, Port Erin, summer 1936 (M.W.P., J.R.B., det. J.H.F.).

Breeding: reproductive organs well developed in Aug. (M.W.P., J.R.B.).

Phylum PORIFERA

Order CALCAREA

Family HOMOCOELIDAE

LEUCOSOLENIA PRIMORDIALIS (Haeckel) *Haeckel*, 1869, pp. 236-254.

Across the mouth of Port Erin Bay, 17 fm., 1895 [76].

LEUCOSOLENIA CORIACEA (Montagu) *Bowerbank*, 1874, p. 8.

Between tide marks, Langness Point and Poyllvaaish (J.H.O.) [116]. Port Erin, 1890 [62]. Fleshwick, in great quantities, 1886 [92]. In coralline pools at Port Erin and at Fleshwick, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].

LEUCOSOLENIA BOTRYOIDES (Ellis & Solander) *Bowerbank*, 1874, p. 7.

Common in pools between tide marks; on the harbour buoy, Port Erin; the Sound; Fleshwick; Perwick, L.W.N.T. (H.B.M.) [15]. In Pat's Dub and other coralline pools at Port Erin, and at Fleshwick, 1900 [90].

LEUCOSOLENIA CLATHRUS (Schmidt) *Haeckel*, 1872, p. 30, pl. IV.

Young colonies very abundant on the breakwater, Port Erin, L.W.O.S.T. (N.B.E.).

Family SYCETTIDAE

SYCON CORONATUM (Ellis & Solander) *Haeckel*, 1872, p. 304, as *Sycandra coronata*.

In coralline pools and under stones at Port Erin and at Fleshwick, 1900 [90].

SYCON CILIATUM (Fabricius) *Haeckel*, 1872, p. 296, as *Sycandra ciliata*.

Common everywhere on weeds in pools, between tide marks; Port Erin (H.B.M.) [15], Port St. Mary (N.B.E.). Port Erin, 1886 [92], 1889 [61]. Off Bay Fine, 18 fm., 1900 [90].

SYCON ASPERUM (Gibson) *Gibson*, 1886, p. 365, as *Sycandra aspera*.

Port Erin (H.B.M.) [15]. Dredged off Port Erin, 1900 [90].

Family GRANTIIDAE

GRANTIA COMPRESSA (Fabricius) *Bowerbank*, 1874, p. 1.

Common everywhere on weeds in pools between tide marks; Port Erin, Perwick (H.B.M.) [15]. Port St. Mary (N.B.E.). Port Erin, 1886 [92], 1900 [90]. Fleshwick, 1900 [90].

UTE GLABRA Schmidt *Haeckel*, 1872, p. 349.

One mile off Bradda Head, 15 fm., 1893 [15].

LEUCONIA NIVEA (Grant) *Haeckel*, 1872, p. 211; *Bowerbank*, 1874, p. 11.

Port Erin (H.B.M.) [15]. Poyllvaaish (J.H.O.). Under stones and on boulders at Port Erin, and at Fleshwick, 1900 [90]. Port Erin and Douglas Bay, 1886 [92].

LEUCONIA FISTULOSA (Johnston) *Haeckel*, 1872, p. 197; *Bowerbank*, 1874, p. 12.

Under stones at extreme low water at Port Erin and at Fleshwick, 1900 [90].

LEUCONIA GOSSEI (Bowerbank) *Haeckel*, 1872, p. 177.

Under stones at extreme low water at Port Erin and at Fleshwick, 1900 [90]. In caves near the Sugar-loaf Rock, 1900 [90]. Port St. Mary, 1894 [64].

LEUCONIA JOHNSTONII (Carter) *Haeckel*, 1872, p. 216.

Under stones at extreme low water at Port Erin and at Fleshwick, 1900 [90]. Port Erin, 1886 [92].

Order TETRAXONIDA

Sub-Order HOMOSCLEROPHORA

Family PLAKINIDAE

OSCARILLA LOBULARIS (Schmidt) *Schmidt*, 1862, p. 80, as *Halisarca lobularis*; *Schulze*, 1877, p. 10.

Dub Reef, Port Erin, between tide marks [15].

DERCITUS BUCKLANDI (Bowerbank) *Bowerbank*, 1874, p. 346, under *Battersbyia bucklandi*.

Dredged off Port St. Mary, 1893 [39].

Sub-Order ASTROSCLEROPHORA

Family STELLETTIDAE

STELLETTA GRUBEI Schmidt [*Stelletta dorsigera* Schmidt]. *Topsent*, 1894, p. 345. (Topsent's descriptions of *S. grubei*, *dorsigera* and *stellata* will serve for *S. grubei* as all three specimens are synonymous.)

In caves round Spanish Head, 1893 [74]. Poyllvaaish (J.H.O.). Port Erin [15].

STELLETTA LACTEA Norman *Topsent*, 1894, p. 340, as *Pilochrota lactea*.

Port Erin [15].

STRYPHNUS PONDEROSUS (Bowerbank) *Bowerbank*, 1874, p. 352, as *Ecionemia ponderosa*.

Port Erin [15]. Langness Point (J.H.O.). Gansey Point, L.W.E.S.T. (N.B.E.).

Family GEODIIDAE

PACHYMATISMA JOHNSTONIA Bowerbank *Bowerbank*, 1874, p. 17.

Port Erin [116]. Port St. Mary, L.W.E.S.T. (N.B.E.). Perwick Bay and in caves under Bradda Head, 1890 [62]. In caves round Spanish Head, 1893 [74]. In caves in the Sugar-loaf Rock, 1893 [74]. Between tide marks, Langness Point (J.H.O.).

Sub-Order SIGMATOSCLEROPHORA

Family HAPLOSCLERIDAE

ADOCIA CINEREA (Grant) *Bowerbank*, 1874, p. 121, under *Isodictya cinerea*.

In pools between tide marks, Port Erin [15, 62, 90, 92]. Fleshwick and Perwick Bays, 1892 [38].

HALICLONA LIMBATA (Montagu) *Bowerbank*, 1872, p. 172, under *Chalina limbata*.

Port Erin, 1886 [92]. Dub Reef, Port Erin, Apl. 1934 (M.B., H.B.M.).

HALICLONA LUTEOSA (Bowerbank) *Bowerbank*, 1874, p. 288, under *Isodictya luteosa*.

Port Erin [15]. Langness Point (J.H.O.).

HALICLONA CLAVA (Bowerbank) *Bowerbank*, 1874, p. 135, under *Isodictya clava*.

Port Erin [15]. Langness Point (J.H.O.). Douglas Bay, 1886 [92].

HALICLONA OCLATA (Pallas) *Bowerbank*, 1874, p. 169, under *Chalina oculata*.

Seven miles west of Peel, 21 fm., 1895 [76]. Dredged between Laxey and the Dhoon, 1890, 91 [172].

Family DESMACIDONIDAE

Section *Isodictyaea*

DESMACIDON FRUTICOSUM (Montagu) *Bowerbank*, 1874, p. 155.
Dredged off the Calf, 40-50 fm., 1893 [74].

Section *Mycalea*

MYCALE MACILENTA (Bowerbank) *Topsent*, 1924, p. 105.
Off the Calf, on a *Pecten* shell, 1890 [62].

MYCALE MINIMA (Waller) *Topsent*, 1924, p. 114.
Niarbyl [15].

AMPHILECTUS FUCORUM (Johnston) *Bowerbank*, 1874, p. 142, under
Isodictya fucorum. (See also *Burton*, 1932, p. 289.)

Fairly common in pools between tide marks, on weeds, chiefly
Corallina officinalis, at Port Erin and Bay Fine (H.B.M.) [15]. Port
St. Mary, on *Fucus* and *Laminaria* (A.B.W.). Langness Point
(J.H.O.). Off the Calf, 20 fm., 1886 [92]. Douglas Bay, 1889 [62].

Section *Myxilla*

MYXILLA INCRUSTANS (Johnston) *Bowerbank*, 1874, p. 108, as
Halichondria incrustans.

Not uncommon on boulders between tide marks; the Sound [15].
Port Erin, 1900 [90]. Poyllvaaish (J.H.O.). Off Clay Head, 20 fm.,
1892 [73].

MYXILLA ROSACEA (Lieberkühn) *Lundbeck*, 1905, II, p. 138.
Port Erin [15].

ANCHINOË FICTITIA (Bowerbank) *Bowerbank*, 1874, pp. 256, 352,
under *Microcionia fictitia*; *Stephens*, 1921, p. 45.
Ganse Point [15].

PRONAXELLA PLUMOSA (Montagu) *Bowerbank*, 1874, p. 61, under
Microcionia plumosa.

Port Erin [15]. Langness Point (J.H.O.). Port Erin, under
stones at extreme low water, 1900 [90]. Port Erin and Fleshwick,
1894 [64].

IOPHON PATTERSONI (Bowerbank) [*Mar. Biol. Assoc.*, 1931, p. 64, as
Iophon nigricans.] *Bowerbank*, 1874, p. 354 (cf. *Burton*, 1932,
p. 348).

Off Clay Head, 20 fm., 1892 [63].

Section Clathriaceae

OPHLITASPONGIA SERIATA Bowerbank *Bowerbank*, 1874, p. 167.

Between tide marks, Port Erin, Perwick Bay, Fleshwick Bay (H.B.M.) [15]. Calf Sound and Port St. Mary, abundant on rock faces at L.W.S.T., Apl. 1937 (N.B.E.). Port Erin, 1890 [62]. Three miles west of Fleshwick, 20 fm., 1892 [73].

MICROCIONA ACANTHOTOXA (Stephens). *Stephens*, 1921, p. 50, under *Eurypon acanthotoxata*.

Port Erin [15].

Family ASTRAXINELLIDAE

STELLIGERA STUPOSA (Ellis & Solander) *Bowerbank*, 1874, p. 47, as *Dictyocylindrus stuposus*.

Off Port Erin, 15-20 fm., 1900 [90].

STELLIGERA RIGIDA (Montagu) *Montagu*, 1818, p. 87, as *Spongia rigida*.

Port Erin [15], 1886 [92].

Family AXINELLIDAE

HALICHONDRIA PANICEA (Pallas) *Bowerbank*, 1874, p. 97.

Very common, encrusting rocks, between tide marks; Fleshwick, Port Erin, Perwick, Gansey Point (H.B.M.) [15]. Langness Point (J.H.O.), Port St. Mary (A.B.W.). Off Bay Fine, 1900 [90].

HALICHONDRIA GLABRA Bowerbank *Bowerbank*, 1874, p. 353.

Port Erin [15].

HYMENIACIDON SANGUINEA (O. F. Müller) *Bowerbank*, 1874, p. 81.

Common everywhere, encrusting rocks between tide marks; Port Erin, Fleshwick Bay (H.B.M.) [15]. Poyllvaaish (J.H.O.).

HYMENIACIDON CARUNCULA Bowerbank *Bowerbank*, 1874, p. 81.

Calf Sound, on ledges, abundant, L.W.S.T., Apl. 1937 (N.B.E.).

Family CLAVULIDAE

SUBERITES DOMUNCULA (Olivi) *Bowerbank*, 1874, p. 91, as *Hymeniacidon suberea*. [*Mar. Biol. Assoc.*, 1931, p. 61, as *Ficulina ficus*.]

Occasionally in the trawl round the south of the island, usually containing a hermit crab (H.B.M.). Off the Calf, on *Chlamys opercularis*, 1890 [62], three and four miles west of Fleshwick, 20 and 23 fm., 1892,-93 [73, 74]. Off Halfway Rock, 18 fm., 1895 [76]. Off Clay Head, 20 fm., 1892 [73]. Seven miles west of Peel, 21 fm., 1895 [76]. Douglas Bay, on hermit crabs, 1867 [52]. Between Laxey and the Dhoon, 1890,-91 [172].

TERPIOS FUGAX Duchassaing & Michelotti *Topsent*, 1900, p. 193.

On boulders below the Biological Station, March 1936 (N.B.E.); similarly, near Lifeboat House, abundant, Apl. 1937 (K.M.W.).

CLIONA CELATA (Grant) *Bowerbank*, 1874, p. 95, as *Hymeniacion celata*.

Very common boring in shells, all round the south of the island (H.B.M.). Off the south end of the island, 1893,-94 [76]. One and a half miles west of Contrary Head, 13 fm., 1895 [75].

CLIONA VASTIFICA (Hancock) *Topsent*, 1900, p. 56.

The Breast, and between Bay Fine and Bradda Head [15].

POLYMASTIA ROBUSTA *Bowerbank* *Bowerbank*, 1866, p. 62.

Off Clay Head, 20 fm., 1892 [73].

POLYMASTIA MAMMILLARIS (O. F. Müller) *Bowerbank*, 1874, p. 31.

Dredged between Laxey and the Dhoon, 1890, 91 [172].

Order EUCERATOSA

Family SPONGIIDAE

DUSEIDEA FRAGILIS (Montagu) *Bowerbank*, 1874, p. 175, as *Dysidea*.

West of Port St. Mary harbour, between tide marks [15]. Off Clay Head, 20 fm., 1892 [73]. Off Garwick, 1892 [63].

HALISARCA DUJARDINII Johnston *Johnston*, 1842, p. 192; *Bowerbank*, 1874, p. 95, as *Hymeniacion dujardinii*.

Port Erin [15]. In coralline pools at Port Erin, 1900 [90]. Near low water at Baie-ny-Carrickey; from *Laminaria* roots, between Port St. Mary and Spanish Head; in pools near Port Erin, 1886 [92]. Three miles west of Fleshwick, 20 fm., 1892 [73].

Family APLYSINIDAE

APLYSILLA ROSEA Schulze *Schulze*, 1878, p. 416.

Three miles west of Fleshwick, 20 fm., 1892 [73].

Phylum COELENTERATA

Sub-Phylum CNIDARIA

Class HYDROZOA

Order HYDROIDA*†

Sub-Order ATHECATA

Family CLAVIDAE

CLAVA MULTICORNIS (Forsk.) *Allman*, 1871, p. 246.

On *Fucus* and in coralline pools at Port Erin, 1900 [90]. South end of the island, on *Corallina*, 1886 [114].

CLAVA SQUAMATA (O. F. Müller) *Allman*, 1871, p. 243.

On *Corallina officinalis* in a pool at L.W. at Perwick Bay (H.B.M.).

MERONA CORNUCOPIAE (Norman) *Hincks*, 1868, p. 11, as *Tubiclava cornucopiae*; *Allman*, 1871, p. 256.

On a shell of *Dentalium entale* (living), dredged off Fleshwick, Sept. 1931, and on the Breast, Oct. 1932 (H.B.M.).

Family BOUGAINVILLIIDAE

HYDRACTINIA CARNEA (M. Sars) *Allman*, 1871, p. 349, as *Podocoryne carnea*.

One specimen at Port Erin, Mar. 1894 [13]. In the aquarium tanks at Port Erin, 1906 [28].

HYDRACTINIA ECHINATA (Fleming) *Allman*, 1871, p. 345.

Trawled on the Breast (H.B.M.). Port Erin Bay, on a shell of *Buccinum* inhabited by *Eupagurus*; off Port Erin Breakwater, etc., 1900 [90]. Douglas Bay, on *Pectunculus* shells, 1867 [52]. Point of Ayre, 1886 [114].

PERIGONIMUS REPENS (T. S. Wright) *Hincks*, 1868, p. 90. Medusa = *Leuckartiara octona*.

Between the Calf and Contrary Head, 1901 [159].

* For convenience the Hydroids and Medusae are arranged separately. (See p. 48.)

† Owing to doubt as to their synonymy it has been necessary to omit many of the earlier records from this group.

BOUGAINVILLIA MUSCUS (Allman) *Hincks*, 1868, p. III.

On a submerged rope, Port Erin Bay, 1895 [76]. Off the south end of the island, 15-30 fm., 1900 [158]. Eleven miles north-west of Port Erin, 50 fm., mud, 1893 [74].

BOUGAINVILLIA RAMOSA (van Beneden) *Allman*, 1871, p. 311.

On Port Erin harbour buoy, 1898 [79].

DICORYNE CONFERTA (Alder) *Allman*, 1871, p. 293.

Four and half miles west of Cronk-ny-Arrey-Laa, 22 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76].

BIMERIA (GARVEIA) NUTANS (T. S. Wright) *Allman*, 1871, p. 295, as *Garveia nutans*.

Very abundant on rocks in the Calf Sound, L.W.E.S.T. (N.B.E.). In a deep pool above L.W., on the north side of the Calf Sound, 1906 [57]. Off Spanish Head, 15 fm., 1900 [90].

BIMERIA VESTITA (T. S. Wright) *Allman*, 1871, p. 297.

Off the south end of the island, 15-30 fm., 1900 [158].

Family EUDENDRIIDAE

EUDENDRIUM CAPILLARE Alder *Allman*, 1871, p. 335.

Two colonies, one on *Hyas coarctatus*, off the south end of the island, 1885 [114]. On the north side of Fleshwick Bay, 15-18 fm., 1893 [74].

EUDENDRIUM RAMEUM (Pallas) *Hincks*, 1868, p. 80.

North-east and south of the Bahama Bank, shoal water, 1893 [74]. Four miles west of Dalby, 25 fm., 1893 [74].

EUDENDRIUM RAMOSUM (Linné) *Allman*, 1871, p. 332.

On Port Erin harbour buoy, 1898 [79]. Off Port Erin, 10-20 fm., 1900 [90]. One large colony off the south end of the island, 20 fm., 1886 [114]. Small colonies with no gonophores, off the north-west coast of the island; two similar small colonies off the north-east coast, 1901 [173].

Family CORYNIDAE

CORYNE MUSCOIDES (Linné) [= *C. vaginata* Hincks] *Allman*, 1871, p. 268.

In a pool, at M.T., Port Erin, and on *Corallina officinalis*, L.W.O.S.T., Perwick Bay, in a pool (H.B.M.). Port Erin, under ledges of rock, at L.W.; on *Fucus*, round the Calf, 1900 [90].

ACTINOGONIUM PUSILLUM (van Beneden) *Allman*, 1871, p. 273;
Hincks, 1868, p. 45, as *Coryne van Benedenii*.

In pools at Port Erin, 1893 [73].

SYNCORYNE EXIMIA (Allman) *Allman*, 1871, p. 282. Medusa = *Sarsia eximia*.

Growing in sheets on vertical and overhanging faces of the blocks on Port Erin Breakwater, in summer, at, and below, L.W. Also in pools at Port St. Mary. On cork floats attached to crab-pot lines, 1906 [57].

Family MYRIOTHELIDAE

MYRIOTHELA COCKSI (Vigurs) *Hincks*, 1868, p. 77, as *M. phrygia*.

On the shore at Port Erin, 1925 [34].

Family TUBULARIIDAE

TUBULARIA INDIVISA Linné *Allman*, 1871, p. 400.

On overhanging ledges of rock, just above L.W., Port St. Mary, 1906 [57]. In caves round Spanish Head, 1893 [74]. North-west of the island, several colonies, 1901 [173].

TUBULARIA LARYNX Ellis & Solander *Allman*, 1871, p. 406.

In pools at Port Erin. On the harbour buoy, fairly abundant (H.B.M.). Under stones and on the Breakwater, at Port Erin, 1900 [90]. On the harbour buoy, 1898 [79]. Numerous colonies from the north-west of the island, 1901 [173].

ECTOPLEURA DUMORTIERI (van Beneden) *Allman*, 1871, p. 424.
Medusa = *Ectopleura dumortieri*.

Point of Ayre, 1886 [114].

HYBOCODON PROLIFER L. Agassiz *Allman*, 1871, p. 422. Medusa = *Hybocodon prolifer*.

In a pool at Spaldrick, between M.T. and H.W., one colony, shedding gonophores, Mar. 1932 (F.J.B.).

Family CORYMORPHIDAE

CORYMORPHA NUTANS M. Sars *Allman*, 1871, p. 388. Medusa = *Steenstrupia nutans*.

Recorded from the Isle of Man, but no locality given, 1894 [154].

Sub-Order THECATA

Family HALECIIDAE

HALECIUM MURICATUM (Ellis & Solander) *Hincks*, 1868, p. 223.

One small piece from five miles off Maughold Head, densely covered with gonothecae, 1901 [173].

HALECIUM BEANI (Johnston) *Hincks*, 1868, p. 224.

Off Bay Fine, 15-18 fm., and off Spanish Head, 1900 [90]. North-east coast, numerous colonies with gonothecae, frequently growing on other hydroids. Recorded also from the north-west coast, 1901 [173].

HALECIUM HALECINUM (Linné) *Hincks*, 1868, p. 221.

Off Fleshwick, one piece with a few gonothecae, Sept. (H.B.M.). Off Port Erin, Bay Fine and Spanish Head, 10-20 fm., 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Numerous colonies dredged off the Dhoon, generally with gonothecae, but scarcer on the north-west coast, 1901 [173].

HALECIUM TENELLUM *Hincks* *Hincks*, 1868, p. 226.

Round the Calf, dredged, 1893 [74]. One specimen from the north-east coast of the island, 1901 [173].

Family CAMPANULARIIDAE

CAMPANULARIA FRAGILIS *Hincks* *Hincks*, 1868, p. 175.

In pools at Port Erin, 1893 [73].

CAMPANULARIA VERTICILLATA (Linné) *Hincks*, 1868, p. 167.

Off Bay Fine, 18 fm., 1900 [90]. One colony off Spanish Head, 10-20 fm., 1886 [114]. Two miles north of the Calf, 22 fm., 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [81]. Seven miles west of Peel, 21 fm., 1895 [76]. Several colonies from the north-west and north-east coasts, 1901 [173].

CAMPANULARIA HINCKSI Alder *Hincks*, 1868, p. 162.

Off Spanish Head, 1900 [90]. Several colonies off the south of the island, adhering to *Tubularia*, 1886 [114]. Abundant in the north-west of the island, growing on other hydroids, 1901 [173].

CAMPANULARIA VOLUBILIS (Linné) *Hincks*, 1868, p. 160.

Off Spanish Head, 1900 [90]. Several colonies off the south of the island, adhering to *Tubularia* and *Sertularia filicula*, 1886 [114]. North-west coast, many colonies, 1901 [173].

ORTHOPYXIS (CAMPANULARIA) CALICULATA (Hincks) *Hincks*, 1868, p. 164. Medusa = *Agastra mira*.

Several off the south of the island, 10-20 fm., 1886 [114].

CLYTIA JOHNSTONI (Alder) *Hincks*, 1868, p. 143. Medusa = *Phialidium hemisphaericum*.

Port Erin Bay, on *Chorda filum*; off Bradda Head, 15 fm., 1900 [90]. On a rope, Port Erin, 1895 [76]. On the harbour buoy, Port Erin, 1898 [79]. In *Zostera* beds, Laxey Bay, 8 fm., 1892 [73]. North-west coast, numerous colonies, some with gonothecae, growing over other hydroids; scarcer on the north-east coast, 1901 [173].

CLYTIA GRACILIS (M. Sars) *Hincks*, 1868, p. 183, as *Gonothyraea gracilis*.

North-east and south of the Bahama Bank, shoal water, 1893 [74].

OBELIA DICHOTOMA (Linné) *Hincks*, 1868, p. 156.

Off Port Erin, 10-20 fm., 1900 [90]. North-west coast, numerous colonies growing on other hydroids, 1901 [173].

OBELIA GENICULATA (Linné) *Hincks*, 1868, p. 149.

On *Chorda filum* and *Laminaria* in Port Erin Bay, 1900 [90]. Port Erin, 1895 [76], 1898 [20]. North-west coast, one specimen only, attached to an old stem of *Tubularia indivisa*, no gonothecae; north-east coast, several colonies growing on *Desmarestia aculeata*, 1901 [173].

OBELIA LONGISSIMA (Pallas) *Hincks*, 1868, p. 154.

Port Erin, 1895 [76]. Large colonies on lobster pot lines at Port Erin and Fleshwick Bay, 1907 [57]. North-west coast, several fine colonies, 1901 [173].

OBELIA PLICATA *Hincks* *Hincks*, 1868, p. 159.

Recorded from the Isle of Man but no locality given, 1894 [154].

GONOTHYRAEA LOVENI (Allman) *Hincks*, 1868, p. 181.

Off Port Erin, 10-20 fm.; off Bay Fine, 18 fm., 1900 [90]. North-west coast, several fine colonies growing on *Halecium beani*, 1901 [173].

GONOTHYRAEA HYALINA *Hincks* *Hincks*, 1868, p. 184.

Recorded from the Isle of Man but no locality given, 1894 [154].

LAOMEDEA ANGULATA Hincks *Hincks*, 1868, p. 170, as *Campanularia angulata*.

Off Port Erin, 10-20 fm., 1900 [90]. A great many colonies attached to algae, off the south end of the island, 1886 [114]. In a *Zostera* bed, Laxey Bay, 8 fm., 1892 [73].

LAOMEDEA (CAMPANULARIA) NEGLECTA Alder *Hincks*, 1868, p. 171, as *Campanularia neglecta*.

Off Port Erin, 10-20 fm., 1900 [90].

LAOMEDEA (OBELIA, OBELARIA) GELATINOSA Pallas *Hincks*, 1868, p. 151, as *Obelia gelatinosa*.

North-west and north-east coasts, numerous colonies attached to other hydroids; recorded from the south coast, 1901 [173].

LAOMEDEA (CAMPANULARIA) FLEXUOSA Hincks *Hincks*, 1868, as *Campanularia flexuosa*.

Off Port Erin, 10-20 fm., 1900 [90]. Off the south end of the island, on weeds and *Tubularia*, 1886 [114]. Recorded from the north coast, 1901 [173].

Family CAMPANULINIDAE

CAMPANULINA REPENS Allman *Hincks*, 1868, p. 189. Medusa = *Phialella cymbaloides*.

In Pat's Dub, Port Erin, 1898 [21].

OPERCULARELLA LACERATA (Johnston) *Hincks*, 1868, p. 194.

In pools at Port Erin, 1892 [73]. On a submerged rope in Port Erin Bay, 1892 [76]. Off the south end of the island, 15-30 fm., 1900 [158].

CUSPIDELLA HUMILIS Hincks *Hincks*, 1868, p. 209.

Round the Calf, 1893 [74].

CUSPIDELLA COSTATA Hincks *Hincks*, 1868, p. 210. Medusa = ? *Laodicea undulata*.

Round the Calf, 1893 [74].

CUSPIDELLA GRANDIS Hincks *Hincks*, 1868, p. 210.

Recorded from the Isle of Man but no locality given, 1894 [154].

CALYCELLA SYRINGA (Linné) *Hincks*, 1868, p. 206.

Off Port Erin, 10-20 fm., 1900 [90]. Very common on the stalks of *Tubularia* off the south end of the island, 1886 [114]. North-west and north-east coasts, very common on hydroids, 1901 [173].

STEGOPOMA (CALYCELLA) FASTIGIATA (Alder) *Hincks*, 1868, p. 208, as *Calycella fastigiata*.

North-east and south of the Bahama Bank, shoal water, 1893 [74]. Profusely investing a specimen of *Hydrallmania falcata*, north-west coast, 1901 [173].

Family LAFOEIDAE

LAFOEA DUMOSA (Fleming) *Hincks*, 1868, p. 200.

Off Bay Fine, 18 fm.; off Spanish Head, 10-20 fm., 1900 [90]. Round the Calf, 1893 [74]. Port Erin Bay, 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. North-west and north-east coasts, very abundant, both as independent colonies and climbing over other hydroids, 1901 [173].

Gonosome (as *Coppinia arcta*) *Hincks*, 1868, p. 219.

Port Erin Bay; off Spanish Head, 1900 [90]. One mile off Bradda Head, 15 fm., 1893 [74]. Off Halfway Rock, 18 fm., 1895 [76]. Off Port St. Mary, 15 fm., 1886 [114]. North-west and north-east coasts, several colonies found on the stems of *Sertularia abietina*, 1901 [173].

LAFOEA FRUTICOSA (M. Sars) *Hincks*, 1868, p. 202.

Fairly common on the Breast and off Fleshwick (H.B.M.). Round the Calf, 1893 [74].

FILELLUM SERPENS Hassall *Hincks*, 1868, p. 214.

Off the south end of the island, 15-30 fm., in large quantities on the stems of *Sertularia abietina*, etc., 1900 [158]. North-west and north-east coasts, many colonies, 1901 [173].

Family SERTULARIIDAE

DIPHASIA ATTENUATA (Hincks) *Hincks*, 1868, p. 247.

Off the south end of the island, 15-30 fm., 1900 [158]. North-west coast, two small colonies without gonothecae; north-east coast, common on this side of the island, covering the stems of *Hydrallmania falcata* and other hydroids, taking the place of *D. rosacea* in this respect, as observed in the north-west; several had male and female gonothecae, 1901 [173].

DIPHASIA PINASTER (Ellis & Solander) *Hincks*, 1868, p. 252.

Three miles west of Fleshwick, 20 fm., 1892 [73]. Eight miles west of Fleshwick, 33 fm., 1892 [73]. Four miles west of Dalby, 25 fm., 1893 [74]. North-west coast, numerous colonies, nearly all with gonothecae, 1901 [173]. Not recorded from the north or north-east coasts, 1892 [171].

DIPHASIA ROSACEA (Linné) *Hincks*, 1868, p. 245.

Off Port Erin, 10-20 fm., 1900 [90]. North-west coast, occurs frequently on *Hydrallmania falcata*, but the colonies are generally small and without gonothecae, 1901 [173].

DIPHASIA TAMARISCA (Linné) *Hincks*, 1868, p. 254.

North-west coast, one small piece without gonothecae, 1901 [173].

DIPHASIA FALLAX (Johnston) *Hincks*, 1868, p. 249.

North coast, 1886 [173]. Douglas Bay, 1867 [52].

DYNAMENA (SERTULARIA) PUMILA (Linné) *Hincks*, 1868, p. 260, as *Sertularia pumila*.

Common in pools at Fleshwick Bay, L.W.O.S.T. (H.B.M.). Under ledges of rock at low water, Port Erin, 1900 [90]. Several colonies investing *Fuci* from shallow water at Laxey, 1901 [173].

SERTULARELLA GAYI (Lamouroux) *Hincks*, 1868, p. 237.

One colony on the Breast (H.B.M.). Between the Calf and Contrary Head, 1901 [159]. North-east and south of the Bahama Bank, shoal water, 1893 [74].

SERTULARELLA POLYZONIAS (Linné) *Hincks*, 1868, p. 235.

Several colonies taken on the Breast (H.B.M.). Off Port Erin and Bay Fine, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Contrary Head, 1901 [159]. Laxey Bay, 8 fm., in a *Zostera* bed, 1892 [73]. North-west coast—very abundant attached to other hydroids, chiefly *Tubularia indivisa*, generally with gonothecae; north-east coast—much scarcer on this side of the island, 1901 [173].

SERTULARELLA RUGOSA Gray *Hincks*, 1868, p. 241.

One mile off Bradda, 15 fm., 1893 [74]. Port Erin, on the harbour buoy, 1898 [79]. Off Contrary Head, 1900 [159].

SERTULARELLA TENELLA Alder *Hincks*, 1868, p. 242.

Three miles west of Fleshwick, 20 fm., 1892 [73]. Seven miles west of Fleshwick, and between Port Erin and the Calf, 1893 [74]. Off Contrary Head, 1900 [159]. North-west and north-east coasts, very common, growing on numerous other hydroids, 1901 [173].

SERTULARELLA FUSIFORMIS *Hincks* *Hincks*, 1868, p. 243.

Recorded from the Isle of Man but no locality given, 1894 [154].

ABIETINARIA (SERTULARIA) ABIETINA (Linné) *Hincks*, 1868, p. 266, as *Sertularia abietina*.

Common in the trawl all round the south of the island (H.B.M.). Off Halfway Rock, 18 fm., 1895 [76]. East and south of the Calf, 15-30 fm., 1900 [81]. Seven miles west of Peel, 21 fm., 1895 [76]. North-west and north-east coasts, not uncommon, often covered with *Crisia denticulata*, etc., 1901 [173].

HYDRALLMANIA FALCATA (Linné) *Hincks*, 1868, p. 273.

Fairly common in the trawl all round the south of the island: the Breast, Bank Charles. Often cast ashore in large quantities (H.B.M.). Off Spanish Head, 1900 [90]. Off Port St. Mary, one colony, 1886 [114]. Port Erin Bay, 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Douglas Bay, on *Pectunculus* shells, 1867 [52]. North-west and north-east coasts, very common, attached to shells, 1901 [173].

SERTULARIA OPERCULATA (Linné) *Hincks*, 1868, p. 263.

Port Erin, in pools, 1893 [73]. Off the south end of the island, 15-30 fm., 1900 [158]. Off Spanish Head, 1900 [90]. North-east coast, one small fragment with gonothecae; north-west coast, several good colonies, all without gonothecae, 1901 [173].

SERTULARIA FILICULA Ellis & Solander *Hincks*, 1868, p. 264.

Off Port Erin, 10-20 fm., 1900 [90].

THUJARIA ARTICULATA (Pallas) *Hincks*, 1868, p. 277.

North-west coast, three good colonies, and several small pieces; no gonothecae, 1901 [173]. North-east and south of the Bahama Bank, shoal water, 1893 [74].

Family PLUMULARIIDAE

KIRCHENPAUERIA (PLUMULARIA) PINNATA (Linné) [= *P. echinulata* Lamarck]; *Hincks*, 1868, p. 295, as *Plumularia pinnata*.

In coralline pools, Port Erin, 1900 [90]. Off Bradda Head, 1900 [90]. North side of Fleshwick Bay, 15-18 fm., 1893 [74]. North-west coast, 1901 [173].

PLUMULARIA SETACEA (Ellis & Solander) *Hincks*, 1868, p. 296.

South end of the island, 15-30 fm., 1900 [158].

PLUMULARIA CATHARINA Johnston *Hincks*, 1868, p. 299.

Breast, with gonothecae, July; among *Zostera marina*, west of the harbour, Port St. Mary, L.W.E.S.T. (H.B.M.). Off Halfway Rock,

1900 [90]. Fourteen miles west of Dalby, 60 fm., blue clay-mud, 1892 [73]. North-west coast, several good colonies, one on a *Pecten* shell—with gonothecae, 1901 [173].

NEMERTESIA (ANTENNULLARIA) ANTENNINA (Linné) *Hincks*, 1868, p. 280, as *Antennularia antennina*.

Common in the trawl all round the south of the island: the Breast, off Fleshwick, Bay Fine, between Burroo Nedd and Spanish Head (H.B.M.). With gonophores, Aug. (H.B.M.). Off Bradda Head, Bay Fine and off Spanish Head, 1900 [90]. Port Erin Bay, 1895 [76]. East and south of the Calf, 15-30 fm., 1900 [81]. North-west and north-east coasts, not uncommon, but the specimens are not large, 1901 [173].

NEMERTESIA (ANTENNULLARIA) RAMOSA (Lamouroux) *Hincks*, 1868, p. 282, as *Antennularia ramosa*.

Fairly common in the trawl all round the south of the island: the Breast, Fleshwick, Bay Fine (H.B.M.). With gonophores, Aug. (H.B.M.). Off Port Erin, 10-20 fm., off Bradda Head and Halfway Rock, 1900 [90]. Aldrick and Bay Fine, 15-30 fm., 1893 [74]. East and south of the Calf, 15-30 fm., 1900 [81]. North-west coast, numerous very large colonies; north-east coast, several small colonies and many fragments dredged off the Dhoon, but very small compared with those from the other side of the island, 1901 [173].

THECOCARPUS (AGLAOPHENIA) MYRIOPHYLLUM (Linné) *Hincks*, 1868, p. 290, as *Aglaophenia myriophyllum*.

Off Halfway Rock and Bay Fine, 15 fm., 1900 [90]. Eight miles west of Fleshwick, 33 fm., 1892 [73]. North-east and south of the Bahama Bank, shoal water, 1893 [74]. Several well grown colonies dredged off the Dhoon, 15 fm., 1901 [173]. Off Bradda Head, 1937 (E.L.C.).

AGLAOPHENIA PLUMA (Linné) *Hincks*, 1868, p. 286.

Off Fleshwick, abundant on algae (H.B.M.). Off Bradda Head, 1900 [90]. Off Garwick Head, 4-12 fm., 1892 [73]. Port Erin, many fine colonies, with corbulae, on *Halidrys siliquosa*, cast ashore, 1901 [173].

AGLAOPHENIA TUBULIFERA (Hincks) *Hincks*, 1868, p. 288.

Round the Calf, 1893 [74]. Five to eight miles west of Dalby, 20 fm., 1893 [75]. North-east and south of the Bahama Bank, shoal water, 1893 [74].

Class HYDROZOA

Order HYDROMEDUSAE*

Sub-Order ANTHOMEDUSAE

Family SARSIIDAE

SARSIA TUBULOSA (M. Sars) *Forbes*, 1848, p. 55 ; *Kramph*, 1926, p. 8.
Hydroid = *Syncoryne sarsi*.

In tow-nettings at Port Erin, May-Aug. 1899 [21]. In the tanks and spawning ponds at Port Erin in the spring and early summer, 1906 [14].

DIPURENA (SLABBERIA) HALTERATA (Forbes) *Forbes*, 1848, p. 53 ;
Browne, 1897, p. 816.

Port Erin, two specimens in 1892 [13].

Family CORYMORPHIDAE

STEENSTRUPIA (CORYMORPHA) NUTANS (M. Sars) *Browne*, 1896, p. 463,
as *Corymorpha nutans* ; *Kramph*, 1926, p. 28. Hydroid =
Corymorpha nutans.

Two specimens off Port Erin, 1892 [13]. Off Port Erin, 1896 [78].
In tow-nettings, Port Erin, June and July 1899 [21].

EUPHYSA AURATA *Forbes* *Forbes*, 1848, p. 71 ; *Kramph*, 1926, p. 25.

In the plankton at Port Erin, Apl.-June 1893 [10]. Port Erin,
single specimens, Mar., May and June 1893 [13].

HYBOCODON PROLIFER L. Agassiz *Browne*, 1896, p. 466 ; *Kramph*, 1926,
p. 33. Hydroid = *Hybocodon prolifer*.

Off Port Erin, 1896 [78]. In tow-nettings at Port Erin, Jan. 1899
[21]. Fairly plentiful during the first few days of May, at Port Erin,
1893 [11].

Family MARGELIDAE

PODOCORYNE AREOLATA (Alder) *Browne*, 1897, p. 817 ; *Kramph*
& *Damas*, 1925, p. 268.

In the plankton, Port Erin Bay, Apl.-June 1893 [10]. A number
at different times in Port Erin Bay, 1893-4 [13].

*For convenience the Hydroids and Medusae are arranged separately. (See
p. 38.)

BOUGAINVILLIA RAMOSA (van Beneden) [= ? *Margelis autumnalis* Hartlaub, 1897]; *Hartlaub*, 1911, II, p. 183. Hydroid = *Bougainvillia ramosa*.

Single specimens in Port Erin Bay, Mar., Apl., June. Many specimens in May 1893 [13].

BOUGAINVILLIA BRITANNICA Forbes *Hartlaub*, 1911, II, p. 162.

In tow-nettings, Port Erin, May-July 1899 [21].

BOUGAINVILLIA PRINCIPIS (Steenstrup) *Hartlaub*, 1911, II, p. 177.

One specimen in Fleshwick Bay, May 1893, and one in Port Erin Bay, May 1894 [13].

BOUGAINVILLIA PYRAMIDATA (Forbes & Goodsir) *Browne*, 1905, p. 751, as *Hippocrene pyramidata*; *Hartlaub*, 1911, p. 180.

At Port Erin [13a].

LIZZIA BLONDINA Forbes *Forbes*, 1848, p. 67.

One specimen at Port Erin, 1894 [13].

RATHKEA OCTOPUNCTATA (M. Sars) [= *Rathkea blumenbachi* Hartlaub (1911)] *Forbes*, 1848, p. 64; *Kramph*, 1926, p. 58.

Port Erin Bay, in plankton, Apl.-June 1893 [10]. Not uncommon in Port Erin Bay, Mar.-May 1896 [13].

Family TIARIDAE

LEUCKARTIARA OCTONA (Fleming) *Hartlaub*, 1914, III, p. 285.

Hydroid = *Perigonimus repens*.

A few specimens in Port Erin Bay, in Apl., fairly abundant in May and June (1893), one in Aug. 1892 [13]. July, Aug. and Dec., in tow-nettings at Port Erin, 1899 [21].

Family MITROCOMIDAE

MITROCOMA (MITROCOMELLA) FULVA (Browne) [= (?) *Mitrocoma polydiademata* Romanes] *Browne*, 1903, p. 17; *Kramph*, 1933, p. 566.

In tow-nettings, Port Erin, June and July 1899 [21].

COSMETIRA PILOSELLA (Forbes) *Browne*, 1896, p. 484, as *Eucheilota pilosella*; *Kramph*, 1933, p. 569.

In tow-nettings, Port Erin, June-Aug. 1899 [21].

TIAROPSIS MULTICIRRATA (M. Sars) *Haeckel*, 1879, p. 179; *Kramph*, 1933, p. 572.

In plankton, Port Erin Bay, Apl., June 1893 [10]. Off Port Erin, 1896 [78]. Port Erin, several in Mar., three in May 1893 [13].

Family EUCOPIDAE

OBELIA LUCIFERA Forbes [= *O. dichotoma* + *O. geniculata*] Forbes, 1848, p. 52, as *Thaumantias lucifera*; *Kramph*, 1933, p. 574.

Some in Port Erin Bay, Apl., May and Aug. 1892 & 1894 [13].

PHIALIDIUM HEMISPHERICUM (Linné) [= *P. temporarium* Browne, = *Thaumantias buskiana* Gosse]. *Browne*, 1896, p. 480, as *Thaumantias hemisphaerica*; *Kramph*, 1933, p. 579. Hydroid = *Clytia johnstoni*.

Off Port Erin, 1896 [78]. Single specimens at Port Erin, Apl. and May 1896 [13]. In tow-nettings at Port Erin, Jan., and May-Aug. 1899 [21].

PHIALELLA (PHIALIDIUM) CYMBALOIDES (van Beneden) *Browne*, 1896, p. 491; *Kramph*, 1933, p. 576, as *Eucope quadrata*. Hydroid = *Campanulina repens*.

Port Erin, Apl. 1896 [13]. In tow-nettings at Port Erin, May-July 1899 [21].

SAPHENIA GRACILIS (Forbes & Goodsir) [= *S. mirabilis* (Wright)] *Browne*, 1896, p. 493, as *S. mirabilis*; *Kramph*, 1933, p. 586.

Three specimens at Port Erin, 1893 [13]. In tow-nettings at Port Erin, Apl. 1899 [21].

EUTIMA INSIGNIS (Keferstein) *Browne*, 1896, p. 492; *Kramph*, 1933, p. 588.

An early stage in Port Erin Bay, May 1893 [13].

Family AEQUORIDAE

AEQUOREA FORSKALEA Péron & Lesueur *Mayer*, 1910, II, p. 325. Hydroid = ? *Campanulina acuminata*.

One specimen in a tide pool on Dub Reef, Port Erin, May 1936 (A.K.T.).

Order SIPHONOPHORA

Sub-Order DISCONNECTAE

Family VELELLIDAE

VELELLA SPIRANS (Forsk.) *Vanhöffen*, 1906, p. 37; *Chun*, 1898, p. 93.

Washed ashore in large numbers in Port Erin and Perwick Bays, July 1924 (H.C.C.), and again in Oct. 1934 (J.R.B.).

Sub-Order PHYSOPHORAE

Family AGALMIDAE

STEPHANOMIA BIJUGA (Delle Chiaje) = *Cupulita sarsi* Haeckel ;
Browne, 1900, p. 678.

In tow-nettings at Port Erin, May-Aug. 1899 [21].

Class SCYPHOMEDUSAE

Order STAUROMEDUSAE

Family LUCERNARIIDAE

DEPASTRUM CYATHIFORME (M. Sars) *Sars*, 1846, p. 26, as *Lucernaria cyathiformis*.

On the south side of Port Erin Bay, and on limestone rocks at Poyllvaaish. Fairly abundant in both localities, attached to the undersides of stones. Occurring sparingly in the *Laminaria* zone, but most plentifully higher up, 1893 [6]. Opposite the Biological Station, Port Erin, 1904 [56]. Round the Calf, 1893 [74].

LUCERNARIA CAMPANULATA Lamouroux *Haeckel*, 1879, p. 392.

On stones on the shore at Port Erin, between the life-boat jetty and the Breakwater, 1892 [5]. Common at one spot at Poyllvaaish, on *Halidrys siliquosa*, in a pool (M.K., H.B.M.). Fleshwick, one specimen on a stone at L.W.E.S.T., Apl. 1934 (N.B.E.).

HALICLYSTUS AURICULA (Rathke) *Beaumont*, 1900, p. 806.

A small specimen in a lobster pot, near Port St. Mary, 1891 [6]. A large number on *Alaria esculenta*, on the north side of Fleshwick Bay, 1906. On the Breakwater at Port Erin, and at Fleshwick, July and Aug. 1908 [58].

Order SEMAEOSTOMEAE

Family PELAGIIDAE

PELAGIA PERLA Haeckel *Haeckel*, 1879, p. 506.

In tow-nettings at Port Erin, Oct. 1899 [21].

Family CYANEIDAE

CYANEA CAPILLATA (Linné) *Haeckel*, 1879, p. 529.

A small specimen in Port Erin Bay, May 1893 ; larger ones at the beginning of June ; late ephyrae, Apl. ; young adults, May [11]. In tow-nettings at Port Erin, July and Aug. 1899 [21].

Family AURELIIDAE

AURELIA AURITA (Linné) *Haeckel*, 1879, p. 552.

Common all round the south of the island in the summer months (H.B.M.). Very abundant at Port Erin, June 1893, none in May. Single specimens in Mar., and Apl. 1894, plentiful in the summer [11].

Breeding: ephyrae in the hatching ponds at Port Erin each year in Jan. and Feb. 1908 [29]. Ephyrae in the aquarium at Port Erin, Mar. 1900 [23]. Scyphistomas on a stone, dredged off the Calf, 1903 [25]. Scyphistomas on a *Pecten* shell, Bay Fine, Aug. 1892 [11]. Scyphistomas common in tanks in the aquarium at Port Erin throughout the year (H.B.M.).

Order RHIZOSTOMAE

Family RHIZOSTOMIDAE

RHIZOSTOMA OCTOPUS (Linné) *Haeckel*, 1879, p. 593, as *Pilema octopus*.

Frequent in Port Erin Bay, 1900 [23]. Several during Apl. 1895 [11]. Tow-nettings at Port Erin, Mar., May and Oct. 1899 [21].

Class ANTHOZOA

Sub-Class ALCYONARIA

Order ALCYONACEA

Family CORNULARIIDAE

SARCODICTYON CATENATA Forbes *Herdman*, 1895, p. 163.

Very common in the trawl, on stones and shells, all round the south of the island (H.B.M.). Between Port St. Mary and Spanish Head, 20 fm., 1886 [71]. Off Bay Fine, Port Erin and Spanish Head, 1900 [90]. Three to eight miles west of Fleshwick, 20-33 fm., 1892, -93 [73, 74]. Round the Calf, 1893 [74, 75]. Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Five to eight miles west of Dalby, 20 fm., 1893 [75].

Family ALCYONIDAE

ALCYONIUM DIGITATUM Linné *Hickson*, 1895, p. 349.

Common on the blocks of the Breakwater at Port Erin, about L.W. Small specimens under stones throughout the bay, and at Port St. Mary. Small colonies taken not infrequently in the trawl on shells, round the south of the island (H.B.M.). Off Spanish Head, 1900 [90]. Two miles north of the Calf, 22 fm., 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [81].

Breeding: eggs in the plankton, Port Erin Bay, Dec. 1905 [128].

Order **PENNATULACEA**

Family VIRGULARIIDAE

VIRGULARIA MIRABILIS O. F. Müller *Marshall & Marshall*, 1881, p. 51.
West of the Isle of Man, 70 fm., 1886. Seven miles west of Peel, 21 fm., 1895 [76].

Sub-Class **ZOANTHINARIA**

Family ZOANTHIDAE

EPIZOANTHUS ARENACEUS (Delle Chiaje) *Haddon & Shackleton*, 1891, p. 649.
Off Spanish Head, 20 fm., on nullipore fragments, 1886 [45].

Sub-Class **ACTINIARIA**

Family EDWARDSIIDAE

MILNE-EDWARDSIA CARNEA (Gosse) *Gosse*, 1860, p. 259, as *Edwardsia carnea*; *Stephenson*, 1935, p. 35.
On a stone from deep water, off Port Erin, 1906 [28], and 1919 [32].

Family HALCAMPIDAE

HALCAMPA CHRYSANTHELLUM (Peach) *Haddon*, 1889, p. 335, as *H. arenaria*; *Stephenson*, 1935, p. 69.

In sand at L.W., Port Erin, 1900 [90]. Not taken there recently (H.B.M.). A single specimen off the south-east of the island, 10-20 fm., 1886 [45].

Family ILYANTHIDAE

PEACHIA HASTATA *Gosse* [including *P. triphylla* and *P. undata* *Gosse*] *Gosse*, 1860, p. 235; *Stephenson*, 1935, p. 96.

Not uncommon in the sand at L.W.E.S.T., just clear of the Raglan Pier, and a few below L.W. along the south side of Port Erin Bay. Appears to have replaced *Halcampa chrysanthellum* there since 1900 (H.B.M.).

Breeding: specimens spawning in the aquarium, Apl. 1931 (H.B.M.).

ILYANTHUS MITCHELLI Gosse Gosse, 1860, p. 232 ; Stephenson, 1935, p. 79.

One specimen taken on a long line, six miles north-west of Port Erin, 35 fm., and another six miles west of Port Erin, Apl. 1934 (R.R., H.B.M.). On long lines, off Port Erin, 1918 [32].

Family ACTINIIDAE

ACTINIA EQUINA Linné Gosse, 1860, p. 175, as *A. mesembryanthemum* ; Stephenson, 1935, p. 113.

Very common on the rocks between tide marks, both in pools and exposed at L.W., all round the south of the island, and at Douglas (H.B.M.).

ANEMONIA SULCATA (Pennant) Gosse, 1860, p. 160, as *Anthea cereus* ; Stephenson, 1935, p. 124.

Common between tide marks, all round the south of the island in pools and on weeds (H.B.M.). Douglas, 1886 [45].

TEALIA FELINA (Linné).

var. CORIACEA (Cuvier) Gosse, 1860, p. 209, as *T. crassicornis* ; Stephenson, 1935, p. 140.

Common at L.W. in Port Erin Bay in pools (H.B.M.).

var. TUBERCULATA (Cocks) Gosse, 1860, p. 217, as *T. tuberculata*.

Occasionally on long lines round the south end of the island (H.B.M.).

var. LOFOTENSIS (Danielssen) Gosse, 1860, p. 351, as *Bolocera eques* ; Stephenson, 1935, p. 141.

Occasionally taken in the trawl off Port Erin, 1933-34 (H.B.M.). On long lines off Port Erin, 1904 [27].

BUNODACTIS VERRUCOSA (Pennant) Gosse, 1860, p. 190, as *Bunodes gemmacea* ; Stephenson, 1935, p. 156.

Common in pools, between tide marks at Port Erin (H.B.M.). Common in pools and crevices at L.W., Port Erin, 1900 [90]. Douglas [98].

ANTHOPLEURA BALLII (Cocks) Stephenson, 1935, p. 167.

One specimen in a pool at M.T. on Port St. Mary Ledges, May 1934 (H.B.M., R.R.).

ANTHOPLEURA THALLIA (Gosse) Gosse, 1860, p. 195, as *Bunodes thallia* ; Stephenson, 1935, p. 162.

From a bank, eight miles off Ballaugh, 1906 [82].

Family AURELIANIDAE

AURELIANA HETEROCERA (Thompson) (including *A. augusta* and *Capnea sanguinea* Forbes) Gosse, 1860, p. 285; Stephenson, 1935, p. 174.

Taken occasionally on long lines round the south end of the island (H.B.M.). In deep water, on nullipore beds, 1840 [45].

Family METRIDIIDAE

METRIDIUM SENILE (Linné) var. DIANTHUS (Ellis) [including *Sagartia pura* Alder of Gosse] Gosse, 1860, p. 12, as *Actinoloba dianthus*; Stephenson, 1935, p. 214.

Fairly common at L.W.E.S.T. on the blocks of Port Erin Breakwater. Occasionally on stones from deep water. One large specimen taken on a long line, five miles west of the Chickens Rock, ca. 37 fm., May 1933 (H.B.M.).

ADAMSIA PALLIATA (Bohadsch) Gosse, 1860, p. 125; Stephenson, 1935, p. 245.

Common all round the south of the island, on shells (or shell remains) containing *Eupagurus prideauxi* (H.B.M.). Off Kitterland, 17 fm., 1892 [73]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles west of Port Erin, 33 fm., mud, 1893 [74]. Five to eight miles west of Dalby, 20 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76].

PARAPHELLIA EXPANSA (Haddon) Haddon, 1889, p. 321; Stephenson, 1935, p. 276.

South end of the Isle of Man, 1897 [78].

Family SAGARTIIDAE

SAGARTIA ELEGANS (Dalyell)

var. MINIATA (Gosse) Gosse, 1860, pp. 41 and 57, as *S. miniata* and *S. ichtystoma*; Stephenson, 1935, p. 311.

In crevices of rock at extreme L.W. at Port Erin, 1900 [90]. On the Clets and the Calf, 1900 [90].

var. VENUSTA (Gosse) Gosse, 1860, p. 60, as *Sagartia venusta*; Stephenson, 1935, p. 310.

In crevices of rock at extreme L.W., at Port Erin, 1900 [90]. On the Clets and the Calf, 1900 [90].

var. NIVEA (Gosse) Gosse, 1860, p. 67, as *Sagartia nivea*; *Stephenson*, 1935, p. 310.

Common in pools from M.S.L. to L.W. on the Dub Reef, Port Erin (R.R., H.B.M.). Off the Halfway Rock, 18 fm., 1895 [76]. On the Calf, 1900 [90].

var. ROSEA (Gosse) Gosse, 1860, p. 48, as *Sagartia rosea*; *Stephenson*, 1935, p. 310.

Calf Sound, 1906 [78].

SAGARTIA TROGLODYTES (Price) [including *Phellia murocincta* Gosse] Gosse, 1860, p. 88; *Stephenson*, 1935, p. 324.

South end of the Isle of Man, 1896 [78].

ACTINOTHOE (SAGARTIA) LACERATA (Dalyell) [including *S. herdmani* Haddon and *Phellia picta* Gosse] Gosse, 1860, p. 84, as *S. coccinea*; *Stephenson*, 1935, p. 347.

On shell of *Turritella*, eleven miles north-west of Port Erin, 50 fm., mud, 1893 [74]. Seven and half miles west of Niarbyl, 45 fm., mud, 1894 [75].

ACTINOTHOE (SAGARTIA) SPHYRODETA (Gosse) Gosse, 1860, p. 73, as *S. sphyrodeta*; *Stephenson*, 1935, p. 342.

South end of the Isle of Man, 1896 [78].

CEREUS PEDUNCULATUS (Pennant) Gosse, 1860, p. 27, as *Sagartia bellis*; *Stephenson*, 1935, p. 363.

In Coralline pools, Port Erin, 1900 [90]. Isle of Man, 1860 [55].

Family PARACTIDAE

STOMPHIA COCCINEA (Müller) Gosse, 1860, p. 222, as *S. churchiae*; *Stephenson*, 1935, p. 381.

From a bank, eight miles off Ballaugh, 1906 [82].

Sub-Class MADREPORARIA

Family TURBINOLIDAE

CARYOPHYLLIA SMITHI Stokes Gosse, 1860, p. 310.

One specimen on a stone from the Calf Sound, 1903 [25].

PARACYATHUS PTEROPUS Gosse Gosse, 1860, p. 321.

On the Traine Bank, off Port Erin, 1906 [82].

Family CORALLINOMORPHIDAE

CORYNACTIS VIRIDIS Allman *Gosse*, 1860, p. 289.

In rock pools, Port Erin, 1900 [90]. Abundant in pools below Bradda Head, 1906 [57]. Under overhanging ledges, Calf Sound, L.W.E.S.T., Mar. 1936, 1937 (N.B.E.). Off Port Erin, 1900 [90]. Off Spanish Head, 20 fm., 1886 [45]. Round the Calf, 1893 [74]. A fine group on a stone, off Burroo Nedd, 30 fm., Sept. 1935. Said by fishermen to be common there (J.R.B.).

Class CTENOPHORA

BOLINOPSIS INFUNDIBULUM (O. F. Müller) *Krumbach*, 1927, p. 15.

In tow-nettings at Port Erin, 1893 [10].

PLEUROBRACHIA PILEUS (O. F. Müller) *Krumbach*, 1927, p. 6.

Generally distributed round the south end of the island [130]. Taken throughout the year, but chiefly at the end of Sept. and Oct. [Summary for 1907-12] [132].

BEROË CUCUMIS Fabricius *Krumbach*, 1927, p. 22.

In tow-nettings at Port Erin, 1899 [21]. A few in Port Erin Bay, 1900 [23].

Phylum **PLATYHELMINTHES**Class **TURBELLARIA**Order **ACOELA**Family **CONVOLUTIDAE**

APHANOSTOMA DIVERSICOLOR Oersted *Gamble*, 1893, p. 442; *von Graff*, 1882, p. 220, and 1905, p. II.

Two specimens among weeds at L.W., near Port Erin Breakwater, 1897 [102]. In tide pools close to the old Biological Station, Port Erin, 1893 [51a].

CONVOLUTA PARADOXA Oersted *Gamble*, 1893, p. 445; *von Graff*, 1882, p. 228.

Swarms, in all stages of development, among drift-weed, especially *Ceramium*, in Port Erin Bay: a few in tide pools, July 1893 [51a]. One specimen in seaweed at L.W., opposite the old Biological Station, Port Erin, 1897 [102]. In rock pools, Port Erin Bay, 1900 [90].

CONVOLUTA FLAVIBACILLUM Jensen *Gamble*, 1893, p. 448; *von Graff*, 1882, p. 227, and 1905, p. 17.

In rock pools, Port Erin, 1900 [90].

Order **RHABDOCOELA**Family **GRAFFILLIDAE**

GRAFFILLA BUCCINICOLA Jameson *von Graff*, 1913, p. 82.

In the kidneys and renal ducts of *Buccinum undatum* and *Fusus antiquus*, Port Erin, 1897 [102]. In the stomach and rectum of *Buccinum undatum*, Port Erin, 1911 [43].

PROVORTEX BALTICUS (Schultze) *Gamble*, 1893, p. 468; *von Graff*, 1882, p. 345, and 1913, p. 75.

Plentiful in tide pools near the old Biological Station, 1893 [51a]. In pools, 1897, 1900 [90, 102].

PROVORTEX AFFINIS (Jensen) *Gamble*, 1893, p. 469; *von Graff*, 1882, p. 346, and 1913, p. 76.

One specimen among *Cladophora* in a tide pool near the old Biological Station, 1897 [102].

Family **BYRSOPHLEBIDAE**

MAEHRENTHALIA INTERMEDIA (von Graff) *Gamble*, 1893, p. 456, and *von Graff*, 1882, p. 276, as *Byrsophlebs intermedia*; *von Graff*, 1913, p. 172.

Occurring, together with *Provortex balticus*, in a Coralline pool near the old Biological Station, Port Erin, 1893 [51a]. Common on *Cladophora* in tide pools near the old Biological Station, 1897 [102].

Family ASTROTORHYNCHIDAE

ASTROTORHYNCHUS BIFIDUS (McIntosh) *Gamble*, 1893, p. 459, and *von Graff*, 1882, p. 316, as *Pseudorhynchus bifidus*; *von Graff*, 1913, p. 179.

Among drift-weed, Port Erin Bay, 1893 [51a]. Common between tide marks at Port Erin and Port St. Mary [102].

Family PROXENETIDAE

PROMESOSTOMA AGILE (Levinsen) *Gamble*, 1893, p. 454; *von Graff*, 1913, p. 196.

Seventeen specimens among algae at L.W. on Port Erin Breakwater, 1897 [102].

PROMESOSTOMA LENTICULATUM (Schmidt) *Gamble*, 1893, p. 453; *von Graff*, 1882, p. 274, and 1913, p. 196.

Among *Corallina officinalis* in a tide pool near the old Biological Station, 1893 [51a].

PROMESOSTOMA MARMORATUM (Schultze) *Gamble*, 1893, p. 450; *von Graff*, 1913, p. 191.

In tide pools at Port Erin, 1893 [51a]. Two specimens in tide pools, and five specimens among weed, between tide marks, near the old Biological Station, Port Erin, 1897 [102].

PROMESOSTOMA OVOIDEUM (O. Schmidt) *Gamble*, 1893, p. 451; *von Graff*, 1882, p. 272, and 1913, p. 194.

One specimen among shell debris, outside Port Erin Breakwater, 1893 [51a].

PROMESOSTOMA SOLEA (O. Schmidt) *Gamble*, 1893, p. 452; *von Graff*, 1882, p. 273, and 1914, p. 195.

One specimen among algae in front of the old Biological Station, 1897 [102].

PARAMESOSTOMA NEAPOLITANUM (von Graff) *Gamble*, 1893, p. 458, and *von Graff*, 1882, p. 310, as *Mesostoma neapolitanum*; *von Graff*, 1913, p. 198.

One specimen among algae, between tide marks, Port St. Mary, 1897 [102].

PROXENETES FLABELLIFER Jensen *Gamble*, 1893, p. 456; *von Graff*, 1882, p. 227, and 1913, p. 187.

In tide pools round Port Erin; also common in algae from the Clets in the Calf Sound, 1893 [51a]. One specimen among *Cladophora* in a pool near the old Biological Station, 1897 [102].

Family TRIGONOSTOMIDAE

TRIGONOSTOMUM ARMATUM (Jensen) *Gamble*, 1893, p. 466, and *von Graff*, 1882, p. 337, as *Hyporhynchus armatus*; *von Graff*, 1913, p. 305.

Outside Port Erin Breakwater, 15 fm., 1893 [51a].

Family POLYCYSTIDIDAE

ACRORHYNCHUS CALEDONICUS (Claparède) *Gamble*, 1893, p. 460; *von Graff*, 1882, p. 319, and 1913, p. 324.

Frequent among algae between tide marks at Port Erin, 1893 [51a]. Two specimens from Port Erin Breakwater, and three from Port St. Mary, between tide marks, 1897 [102].

POLYCYSTIS NAEGELI Kölliker *Gamble*, 1893, p. 462, as *Macrorhynchus naegelii*.

Six specimens among algae at L.W., opposite the old Biological Station at Port Erin, 1897 [102].

POLYCYSTIS CROCEA (Fabricius) *Gamble*, 1893, p. 463, and *von Graff*, 1882, p. 324, as *Macrorhynchus croceus*; *von Graff*, 1913, p. 330.

The commonest turbellarian at Port Erin: numerous on every piece of weed examined at Port Erin and Port St. Mary, 1897 [102].

PHONORHYNCHUS HELGOLANDICUS (Metchnikoff) *Gamble*, 1893, p. 464, and *von Graff*, 1882, p. 328, as *Macrorhynchus helgolandicus*; *von Graff*, 1913, p. 338.

Among algae in tidal pools at Port Erin and Port St. Mary, 1897 [102].

Family FECAMPIIDAE

FECAMPIA ERYTHROCEPHALA A. Giard *Giard*, 1886, p. 499; *von Graff*, 1913, p. 352.

Encysted stage in numbers under stones between tide marks, but the adult not found, 1897 [102]. Encysted stage fairly common under stones at L.W.O.S.T., Port Erin Breakwater (N.B.E.), and Port St. Mary (H.B.M.).

Order ALLOEOCOELA

Family PLAGIOSTOMIDAE

PLAGIOSTOMUM KORENI Jensen *Gamble*, 1893, p. 476; *von Graff*, 1882, p. 392, and 1913, p. 385.

Four specimens among algae in a tide pool near the old Biological Station, 1897 [102].

PLAGIOSTOMUM SULPHUREUM *von Graff Gamble*, 1893, p. 472; *von Graff*, 1882, p. 387, and 1913, p. 366.

In coralline pools near the old Biological Station, 1893 [51a].

PLAGIOSTOMUM VITTATUM (Frey and Leuckart) *Gamble*, 1893, p. 475; *von Graff*, 1882, p. 389, and 1913, p. 383.

Not uncommon in tide pools at Port Erin; young specimens in tow-nettings near the shore, 1893 [51a]. One specimen in a pool near the old Biological Station, 1897 [102].

VORTICEROS AURICULATUM (O. F. Müller) *Gamble*, 1893, p. 478; *von Graff*, 1882, p. 399, and 1913, p. 389.

In tide pools at Port Erin, 1893 [51a], 1900 [90]. Three specimens among algae opposite the old Biological Station, and one in a tow-netting at sunset, Port Erin Bay, 1897 [102].

Family PSEUDOSTOMIDAE

PSEUDOSTOMUM QUADRIOCULATUM (Leuckart) *Gamble*, 1893, p. 483, and *von Graff*, 1882, p. 410, as *Cylindrostoma quadrioculatum*; *von Graff*, 1913, p. 395.

In tide pools near Port Erin, at the bottom of the littoral zone, 1893 [51a]. A few specimens among *Cladophora*, in shallow pools near H.W., by the old Biological Station, 1897 [102].

PSEUDOSTOMUM INERME (Hallez) *Gamble*, 1893, p. 484, and *von Graff*, 1882, p. 414, as *Cylindrostoma inerme*; *von Graff*, 1913, p. 399.

Among drift-weed in Port Erin Bay, 1893 [51a].

Family ALLOSTOMATIDAE

ALLOSTOMA PALLIDUM *van Beneden Gamble*, 1893, p. 482; *von Graff*, 1882, p. 406, and 1913, p. 416.

A few immature specimens at Port Erin, 1893 [51a].

Family MONOCELIDIDAE

MONOCELIS FUSCA Oersted *Gamble*, 1893, p. 488, and *von Graff*, 1882, p. 421, as *Monotus fuscus*; *von Graff*, 1913, p. 425.

Between tide marks at Port Erin: frequently sheltering in *Balanus balanoides*, 1893 [51a]. Common in tide pools and among tidal refuse at Port Erin and Port St. Mary, 1897 [102].

MONOCELIS LINEATA (O. F. Müller) *Gamble*, 1893, p. 487, and *von Graff*, 1882, p. 418, as *Monotus lineatus*; *von Graff*, 1913, p. 427.

Not uncommon among *Corallina officinalis* in tide pools about Port Erin, and on the Clefs in the Calf Sound, 1893 [51a]. Very common among algae between tide marks at Port Erin and Port St. Mary, 1897 [102].

Order TRICLADIDA

Family PLANARIIDAE

PROCERODES ULVAE (Oersted) *Wilhelmi*, 1909, p. 316; *Gamble*, 1893, p. 493, as *Gunda ulvae*.

Usually occurring in abundance on rocky and gravelly shores at about H.W.N.T., where fresh water runs into the sea: Port St. Mary (J.H.O.). Port Erin, Spaldrick, Fleshwick Bay (J.H.O., M.K.M.). Perwick Bay (M.K.M.).

Breeding: egg capsules Apl. (M.K.M.), June (J.H.O.).

Order POLYCLADIDA

Family LEPTOPLANIDAE

LEPTOPLANA TREMELLARIS (O. F. Müller) *Gamble*, 1893, p. 498; *Lang*, 1884, p. 476.

At Port Erin and Port St. Mary, on the under surface of weed-covered stones, between tide marks and down to about 20 fm., 1893 (51a). Several specimens under stones at Port Erin and Port St. Mary, 1897 [102].

Family PLANOCERIDAE

STYLOCHOPLANA MACULATA Quatrefages *Gamble*, 1893, p. 497; *Lang*, 1884, p. 459.

One specimen under a stone at L.W.S.T. on the Breakwater, Port Erin, Apl. 1935 (E.T.B.F.). Two specimens under stones in front of the old Biological Station, Port Erin, 1897 [102].

Family EURYLEPTIDAE

CYCLOPORUS PAPILLOSUS Lang *Lang*, 1884, p. 568; *Gamble*, 1893, p. 506.

Off Bradda Head, 12 fm., also between tide marks at Port Erin and Port St. Mary, 1893 [51a]. Two specimens under stones at Port St. Mary; two specimens on *Botrylloides* sp. outside Port Erin harbour, 1897 [102]. Half-mile west-north-west of Fleshwick, 15 fm., 1894 [75].

OLIGOCLADUS SANGUINOLENTUS (Quatrefages) *Gamble*, 1893, p. 509.

Among shell debris outside Port Erin Breakwater, 1893 [51a].

STYLOSTOMUM VARIABLE Lang *Gamble*, 1893, p. 511.

On shelly ground outside Port Erin Bay, 1893 [51a].

Class TREMATODA

Order HETEROCOTYLEA

OCTOCOTYLE SCOMBRI (Kuhn) *van Beneden & Hesse*, 1863, p. 97.

On the gills of *Scomber scomber* from the Isle of Man, 1899 [125].

MICROCOTYLE CANICULAE (Johnstone) *Johnstone*, 1911, p. 16, as *Paracotyle caniculae*.

In the head of *Scyllium canicula*, near the gill slits; south of the Calf, June 1905 [*ref. above*]. Common on the head and pectoral fins of two specimens of *S. canicula* in the Aquarium at Port Erin, Apl. 1933 (M.G.C.F.), and again in 1935 (J.R.B.).

APPENDIX

RHOPALURA GIARDII Metchnikoff *Metchnikoff*, 1879, p. 547.

In the body of *Amphiura elegans*, Port Erin [67a].

Phylum NEMERTINI

Order ANOPLA

Family TUBULANIDAE

TUBULANUS ANNULATUS (Montagu) *McIntosh*, 1873, p. 203, as *Carinella annulata*; *Bürger*, 1904, p. 14.

Port Erin Bay, under stones at L.W., 1900 [80]. One specimen, off Port Erin, 20 fm., Apl. (H.B.M.). 23 fm., south-east of Port St. Mary, and 20 fm., west of Fleshwick. One specimen under a stone at low water, Port St. Mary, 1894 [160]. Not infrequent, 15-18 fm., north of Halfway Rock, 1895 [7]. Round the Calf, 15-30 fm., 1900 [81].

Family CEPHALOTRICHIDAE

CEPHALOTRICH RUFIFRONS (Johnston) *Bürger*, 1895, p. 539, T.II, Fig. 24, and T.VII, Fig. 2, as *C. bioculata*; 1904, p. 18.

Several during August in coralline pools between Traie Vane and Traie Veg, Port Erin, 1894 [160]. Common on the shore under stones and among weeds. Occasionally off Port Erin, 15 fm., 1895 [7].

Family LINEIDAE

LINEUS LONGISSIMUS (Gunnerus) *McIntosh*, 1873, p. 181, Pl. IX, as *L. marinus*; *Bürger*, 1904, p. 93.

Not uncommon under stones between tide marks, Port Erin Bay and the Calf Sound (H.B.M.). Port Erin Bay, under stones, 1900 [90]. At L.W. in pools, and in deep water all round the coast, 1894 [160]. Off Halfway Rock, 18 fm., 1895 [76]. Off the Calf, 1893 [74], 1903 [25].

Breeding: spawning in the laboratory, Port Erin, Mar. 1930 (N.B.E.).

LINEUS GESSERENSIS O. F. Müller *McIntosh*, 1873, p. 185.

Common under stones, Port Erin, March (J.H.O.). By far the most abundant species of Nemertine in the pools at Port Erin and Poyllvaish, 1894 [160]. Round the Calf, 1893 [74].

Breeding: eggs (new), under stones, Port Erin, Mar. 1931 (J.H.O.).

MICRURA FASCIOLATA Ehrenberg *McIntosh*, 1873, p. 197, Pl. VI, Fig. 2; *Bürger*, 1904, p. 105.

Port Erin Bay, on shelly ground, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].

MICRURA PURPUREA (Dalyell) *McIntosh*, 1873, p. 200, Pl. VII, Fig. 3; *Bürger*, 1904, p. 106.

Two specimens on shelly ground, north of Halfway Rock, 15 fm., 1895 [7].

MICRURA CANDIDA *Bürger* *Joubin*, 1894, p. 118, Pl. II, Fig. 23b; *Bürger*, 1904, p. 106.

One specimen, north of Halfway Rock, 15 fm., June 1895 [7], [90].

CEREBRATULUS FUSCUS (McIntosh) *McIntosh*, 1873, p. 196, Pl. VI, Fig. 3, as *Micrura fusca*; *Bürger*, 1904, p. 118.

One specimen dug in the sand, Port Erin Bay, L.W.E.S.T., Mar. 1932 (N.B.E.). One specimen off Spanish Head; seven specimens off Port Erin, 15-20 fm., June 1895 [7].

Order ENOPLA

Family EMPLECTONEMATIDAE

EMPLECTONEMA NEESI (Oersted) *McIntosh*, 1873, p. 178, Pl. III, Fig. 6, as *Nemertes neesii*; *Bürger*, 1904, p. 22.

Port Erin Bay, Mar. 1931 (N.B.E.). Common between tide marks, Port Erin, 1900 [90]. Very common under stones and among gravel, from H.W. to L.W. on the south side of Port Erin Bay, and also at L.W. off Traie Veg, 1894 [160]. One young specimen, 20 fm., off Peel, June 1895 [76]. Large specimens common on the shore in all suitable localities, 1895 [7].

Breeding: spawning freely, Port Erin Bay, Mar. 1936 (N.B.E.).

Family AMPHIPORIDAE

AMPHIPORUS LACTIFLOREUS (Johnston) *McIntosh*, 1873, p. 156, Pl. I, Figs. 1 and 2; *Bürger*, 1904, p. 38.

Common under stones on the south side of Port Erin Bay, Mar. 1931 (J.H.O.). One specimen trawled, Fleshwick Bay, Mar. 1932 (H.B.M.). Fleshwick Bay, L.W.O.S.T., one specimen, Mar. 1932 (N.B.E.). Under stones, Port Erin, 1900 [90]. Very abundant in the shingle, under *Ulva* covered stones near the old Biological Station, Port Erin, generally associated with *Lineus gesserensis* and *Clitellio arenarius*, 1894 [160].

AMPHIPORUS DISSIMULANS *Riches* *Riches*, 1893, p. 10.

Numerous specimens off Port Erin Breakwater, on shelly ground, 15-20 fm., and off Spanish Head, 1895 [7], [90].

AMPHIPORUS PULCHER (Johnston) *McIntosh*, 1873, p. 158, Pl. I, Fig. 3; *Bürger*, 1904, p. 41.

Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Fairly abundant on shelly ground off Port Erin, 15-20 fm.; also on several occasions near Spanish Head, 1895 [7]. Off Halfway Rock, 18 fm., 1895 [76].

Family PROSORHOCHMIDAE

PROSORHOCHMUS CLAPARÈDI Keferstein *Bürger*, 1895, p. 553.

Not uncommon on shell ground, north of Halfway Rock, 15-20 fm., 1895 [7].

Family PROSTOMATIDAE

PROSTOMA MELANOCEPHALUM (Johnston) *McIntosh*, 1873, p. 165, Pl. III, Fig. 1, as *Tetrastemma melanocephalum*; *Bürger*, 1904, p. 56.

One specimen from Poyllvaish; several from coralline pools near Spaldrick, Port Erin, 1894 [160]. Fairly abundant and well distributed, in weeds between tide marks; also on shell and coralline ground, 15-20 fm., 1895 [7]. Off Port Erin, 15-20 fm., 1900 [90].

PROSTOMA VERMICULUS (Quatrefages) *Joubin*, 1894, p. 160, Pl. III, Fig. 64, as *Tetrastemma vermicula*; *Bürger*, 1904, p. 62.

Calf Sound, L.W.E.S.T., Mar. 1932 (N.B.E.). Among tufts of *Crisia eburnea*, the Clets, Calf Sound, 1894 [160]. Two specimens from weeds, between tide marks, Perwick Bay, 1895 [7].

PROSTOMA ROBERTIANAE (McIntosh) *McIntosh*, 1873, p. 166, Pl. III, Fig. 1, as *Tetrastemma robertianae*; *Bürger*, 1904, p. 63.

One specimen at Port Erin, July 1894 [160]. Two specimens on shell ground off Port Erin, 15 fm., 1895 [7].

PROSTOMA CANDIDUM (O. F. Müller) *Bürger*, 1895, p. 586, Pl. III, Figs. 13 and 19, as *Tetrastemma candidum*; *Bürger*, 1904, p. 64.

Fairly common in Port Erin Bay, 1894 [160]. In considerable numbers in weeds between tide marks, Port Erin and Port St. Mary, 1895 [7].

PROSTOMA FLAVIDUM (Ehrenberg) *Bürger*, 1895, p. 585, Pl. III, Fig. 20, as *Tetrastemma flavidum*; 1904, p. 64.

Well distributed round Port Erin, but nowhere very abundant. At Port Erin and Perwick Bay, among weeds on reefs, and in pools; also on shelly ground, 15 fm., 1895 [7]. Port Erin, among algae, L.W.E.S.T., Mar. 1936 (N.B.E.).

OERSTEDIA DORSALIS (Abildgaard) *Bürger*, 1895, p. 592, Pl. III, Figs. 30 and 36; 1904, p. 71.

In the *Laminaria* zone on the north side of Port Erin Bay and on the Breakwater, 1894 [160]. Common on the shore and in the *Laminaria* zone at Port Erin; also on shelly ground, 15-20 fm., 1895 [7]. Calf Sound, L.W.E.S.T., Mar. 1932 [N.B.E.].

OERSTEDIA NIGRA (Riches) *Riches*, 1893, p. 14, as *Tetrastemma nigra*.

On *Codium* in a pool at M.T., Traie Veg, Port Erin, 1894 [160]. A few in weeds from the shore at Port Erin, and from the Cleets in the Calf Sound, 1895 [7].

OERSTEDIA IMMUTABILIS (Riches) *Riches*, 1893, p. 14, as *Tetrastemma immutabilis*.

Two specimens from the Cleets in the Calf Sound and two from Perwick Bay, 1895 [7].

Family MALACOBDELLIDAE

MALACOBDELLA sp.

In the pallial cavity of *Venus casina*, Port Erin, 1909 [42].

CHAETOGNATHA

SAGITTA ELEGANS Verrill (*Ritter-Záhony*, 1911, p. 11.)

The species present at Port Erin has not previously been critically determined (H.B.M.). In samples of plankton taken in 1934, this and the next species were about equally abundant (F.S.R.).

SAGITTA SETOSA J. Müller (*Ritter-Záhony*, 1911, p. 7.)

See above. Common, at periods, in the plankton at Port Erin in 1934 (F.S.R.).

SPADELLA sp.

Round the shore, Port Erin, 1892 [73]. In night tow-nettings at Port Erin, 1899 [40]. A few in pools between tide marks in Fleshwick Bay, Apl. 1932 (H.B.M.).

Phylum **ANNELIDA**Class **ARCHIANNELIDA**

DINOPHILUS TAENIATUS Harmer *Harmer*, 1889, p. 119; *Fauvel*, 1927, p. 441.

Abundant in pools about H.W.N.T. all round Port Erin Bay (J.H.O.). Extremely abundant in pools, Port Erin Bay (J.H.F.). Abundant in spring, 1893 [74].

Breeding: Easter, 1893 [74]. Early Apl. 1893 [74]. Many young specimens found, Apl. 1932 (J.H.F.).

PROTODRILUS FLAVOCAPITATUS Uljanin *Pierantoni*, 1908, p. 167; *Fauvel*, 1927, p. 424.

Common in a rather limited area of Traie Vane and Spaldrick in Port Erin Bay—under stones lying on fine gravel or coarse sand, about H.W.N.T. Associated with *Procerodes ulvae* and *Jaera marina* [117]. One specimen from the Breakwater, Port Erin, L.W.N.T. (N.B.E.). Niarbyl, abundant under stones in stream, M.T., Apl. 1935 (F.J.B.).

NERILLA ANTENNATA Schmidt *Goodrich*, 1912, p. 398; *Fauvel*, 1927, p. 434.

Common among weeds in pools about M.T., Dub Reef, Port Erin Bay, Apl. 1932 [116].

POLYGORDIUS LACTEUS Schneider *Hempelmann*, 1906, p. 527; *Fauvel*, 1927, p. 417.

Three specimens dredged in the mouth of Port Erin Bay, Mar. 1932 (H.B.M.).

HISTRIOBDELLA HOMARI van Beneden *Foettinger*, 1884, p. 435; *Shearer*, 1910, p. 287.

On eggs of *Homarus vulgaris*. Two specimens from pots off the Calf were both heavily infected (J.H.O.).

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

Traie Vane beach, Port Erin, ca. 1934 (E.M.L.) 1936,-37 (J.H.O.).

Class **CHAETOPODA**Order **POLYCHAETA**Family **APHRODITIDAE**

APHRODITE ACULEATA Linné *McIntosh*, 1900-1923, I, 2, p. 247; *Fauvel*, 1923, p. 33.

A few specimens trawled on the Breast, but not common (H.B.M.). North of the Calf, 1900 [90]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. North-west of Calf, 20 fm., 1894 [74]. Seven miles west of Peel, 21 fm., 1895 [76]. Trawled frequently all round the Laxey region, and in great numbers off Clay Head [105].

HERMIONE HYSTRIX (Savigny) *McIntosh*, 1900-1923, I, 2, p. 264 ;
Fauvel, 1923, p. 35.

Off Port Erin, Halfway Rock and Spanish Head, 1900 [90]. West and south-west of Port Erin, 15-18 fm. ; twenty miles south-east of the Isle of Man, 20-25 fm., 1886 [94].

PANTHALIS OERSTEDI Kinberg *Fauvel*, 1923, p. 98.

Restricted to muddy bottom in deep water, west of the island. Eleven miles north-west of Port Erin, 50 fm., mud, 1893 [74]. Nine to ten miles west of Port Erin, 48 fm., mud, 1894 [75]. Seven and a half to eleven miles north-west of Bradda Head, 47-60 fm., mud, 1894 [75]. Seven and a half miles west of Niarbyl, 45 fm., mud, 1894 [75]. Fourteen miles west of Dalby, 60 fm., mud, 1892 [73].

LEPIDONOTUS SQUAMATUS (Linné) *McIntosh*, 1900-1923, I, 2, p. 274 ;
Fauvel, 1923, p. 45.

Dredged on the Breast (J.H.F.). Off Port Erin and Spanish Head, 1900 [90]. Twenty miles south-east of the Isle of Man, 20-25 fm. ; Port Erin shore, between tide marks, 1891 [94]. One specimen at Port St. Mary, 1886 [54]. One, under a stone, Port Erin Breakwater, L.W.E.S.T., Mar. 1936 (N.B.E.)

MALMGRENIA CASTANEA *McIntosh* *McIntosh*, 1900-1923, I, 2, p. 379 ;
Fauvel, 1923, p. 48.

Commensal on *Spatangus purpureus*, eight miles west of Fleshwick, 33 fm., 1892 [73].

HARMOTHOË HALLËTI *McIntosh* *Fauvel*, 1923, p. 57.

Off Port Erin, 15 fm., 1900 [90].

HARMOTHOË IMBRICATA (Linné) *McIntosh*, 1900-23, I, 2, p. 314 ;
Fauvel, 1923, p. 55.

Abundant at low water under stones at Port Erin, especially on the south side of the bay, and also at Peel, 1891 [94]. Abundant in Baie-ny-Carrickey under stones and in pools, 1886 [54].

HARMOTHOË IMPAR Johnston *McIntosh*, 1900-1923, I, 2, p. 353, as *Evarne impar*; *Fauvel*, 1923, p. 59.

Common in pools, M.T., Port Erin, Apl. 1934 (H.B.M.).

HARMOTHOË LUNULATA (Delle Chiaje) *McIntosh*, 1900-1923, I, 2, p. 342; *Fauvel*, 1923, p. 70.

Commensal with *Arenicola marina*; fairly common in the sandy part of Port Erin Bay from L.W.O.S.T. down. Single specimens at Port St. Mary harbour H.W.N.T., Chapel Bay L.W.O.S.T., and Derby Haven L.W.O.S.T. (H.B.M.).

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

Under stones, Port Erin Bay, 1900 [90].

SCALISSETOSUS ASSIMILIS (McIntosh) *McIntosh*, 1900-1923, I, 2, p. 377; *Fauvel*, 1923, p. 74.

Among the spines of *Echinus esculentus*; on all deep water grounds, about one specimen from ten urchins, but none found on urchins from between tide marks (H.B.M.). Off Port Erin and Bay Fine, 1900 [90].

LAGISCA EXTENUATA (Grube) *Fauvel*, 1923, p. 76.

Port Erin, beneath stones and in rock cavities, mid-tide to deep water, abundant, 1891 [94].

HALOSYDNA GELATINOSA (M. Sars) *McIntosh*, 1900-1923, I, 2, p. 384; *Fauvel*, 1923, p. 84.

Fairly common in the trawl round the south of the island, usually in dead shells. One specimen in a pool at M.T., on the Dub Reef, Port Erin, Apl. 1934 (H.B.M.). Aldrick and Bay Fine, 15-20 fm., 1893 [74]. East and South of the Calf, 15-30 fm., 1900 [81].

STHENELAIS MINOR Pruvot & Racovitza *McIntosh*, 1900-1923, I, 2, p. 414, as *Sthenelais zelandica*; *Fauvel*, 1923, p. 112.

One damaged specimen off Port Erin, 20 fm., 1886 [54].

STHENELAIS BOA (Johnston) *McIntosh*, 1900-1923, I, 2, p. 408; *Fauvel*, 1923, p. 110.

Port Erin and Peel, under stones from M.T. to L.W.; never taken in deeper water, 1891 [94]. One specimen in Port St. Mary harbour, L.W.O.S.T. (H.B.M.).

Family AMPHINOMIDAE

EUPHROSYSNE FOLIOSA Audouin and Edwards *McIntosh*, 1900-23, I, 2, p. 234.

One specimen dredged on a *Laminaria* root, 15 fm., outside the Breakwater, Port Erin, Apl. 1935 (E.T.B.F.).

SPINTHER MINIACEUS Grube *McIntosh*, 1900-1923, I, 2, p. 232 ; *Fauvel*, 1923, p. 140.

About five specimens taken on *Hymeniacedon sanguinea* in Chapel Bay, spring, 1930 (F.J.C.), and one in Apl. 1935 (E.T.B.F.).

Family PHYLLODOCIDAE

PHYLLODOCE GROENLANDICA Oersted *Fauvel*, 1923, p. 153.

Two specimens at Chapel Bay, L.W.O.S.T., 1932 (H.B.M.).

PHYLLODOCE LAMELLIGERA (Gmelin) *McIntosh*, 1900-1923, II, 1, p. 76 ; *Fauvel*, 1923, p. 147.

Two specimens in Chapel Bay, L.W.O.S.T., 1932 (H.B.M.).

PHYLLODOCE LAMINOSA Savigny *Fauvel*, 1923, p. 145.

Under stones in the *Laminaria* zone, Port Erin Bay, 1891 [94].

PHYLLODOCE LINEATA (Claparède) *Fauvel*, 1923, p. 147.

Found in the sand at L.W.E.S.T. at two stations in Port Erin Bay (M.E.P.).

PHYLLODOCE MACULATA (Linné) *McIntosh*, 1900-1923, II, 1, p. 89 ; *Fauvel*, 1923, p. 152.

Under stones, Port Erin Bay, 1900 [90].

EULALIA (EUMIDA) SANGUINEA Oersted *McIntosh*, 1900-1923, II, 1, p. 66, as *Eumida sanguinea* ; *Fauvel*, 1923, p. 166.

Port Erin district, 1909 [119]. Port Erin Breakwater, L.W.S.T., Mar. 1936 (N.B.E.).

EULALIA VIRIDIS (O. F. Müller) *McIntosh*, 1900-1923, II, 1, p. 55 ; *Fauvel*, 1923, p. 160.

Port Erin and Peel, over the entire tidal zone, 1891 [94]. Breakwater, Port Erin, 1900 [90].

NOTOPHYLLUM FOLIOSUM (Sars) *McIntosh*, 1900-1923, II, 1, p. 46 ; *Fauvel*, 1923, 170.

Off Dalby, 1911 [120].

PROTOMYSTIDES BIDENTATA (Langerhans) *Fauvel*, 1923, p. 179.

Two specimens among algae, in a *Corallina* pool, M.T., Port Erin, Apl. 1932 [116].

PELAGOBIA LONGICIRRATA Greeff *Fauvel*, 1923, p. 192.

Sparingly in the plankton at Port Erin, 1920 [33].

Family TOMOPTERIDAE

TOMOPTERIS HELGOLANDICA Greeff *Apstein*, 1900, p. 35; *Fauvel*, 1923, p. 221.

In the plankton in Port Erin Bay throughout the summer (H.B.M.). 1905, Port Erin Bay, Jan., July, Sept., Dec. [128]. 1906, round the Calf, Aug., Sept.; Niarbyl, Aug., Sept. [130]. 1906, Port Erin, Jan., Feb., July, Aug., Sept., Oct. [130]. 1907, never very abundant, maximum in Aug.-Sept. [87]. 1908, small numbers throughout the year [88].

Family HESIONIDAE

KEFERSTEINIA CIRRATA (Keferstein) *McIntosh*, 1900-1923, II, 1, p. 127, as *Castalia fusca*; *Fauvel*, 1923, p. 238.

Dredged near the Calf, 1911 [121].

CASTALIA PUNCTATA (O. F. Müller) *McIntosh*, 1900-1923, II, 1, p. 121; *Fauvel*, 1923, p. 240.

Port Erin district, 1909 [119]. One, on stone near Jetty, Port Erin, L.W.S.T., Mar. 1936 (N.B.E.).

MAGALIA PERARMATA Marion & Bobretzky *McIntosh*, 1900-1923, II, 1, p. 136; *Fauvel*, 1923, p. 246.

Port Erin district, 1909 [119].

Family SYLLIDAE

SYLLIS (TYPOSYLLIS) KROHNI Ehlers *McIntosh*, 1900-1923, II, 1, p. 192; *Fauvel*, 1923, p. 259.

Port Erin district, 1909 [119].

SYLLIS (TYPOSYLLIS) ARMILLARIS (Müller) *McIntosh*, 1900-1923, II, 1, p. 188; II, 2, p. 238, as *Syllis alternosetosa*; *Fauvel*, 1923, p. 264.

Port Erin district, 1909 [119].

SYLLIS (EHLERSIA) CORNUTA Rathke *McIntosh*, 1900-1923, II, 1, p. 200; *Fauvel*, 1923, p. 267.

Port Erin district, 1909 [119].

TRYPANOSYLLIS ZEBRA (Grube) *McIntosh*, 1900-1923, II, 1, p. 169; *Fauvel*, 1923, p. 269.

Port Erin district, 1909 [119].

ODONTOSYLLIS CTENOSTOMA Claparède *McIntosh*, 1900-1923, II, 1, p. 182; *Fauvel*, 1923, 277.

Swimming at the surface, outside Port Erin Bay, on calm evenings, 1906 [57].

PTEROSYLLIS FORMOSA Claparède *McIntosh*, 1900-1923 II, 1, p. 225, as *Amblyosyllis lineata*; *Fauvel*, 1923, p. 280.

One specimen in a pool, M.S.L., Port Erin Bay, Apl. 1934 (H.B.M.).
Two specimens under stones, L.W.S.T., Port Erin Breakwater, Apl. 1935 (F.J.B.). Port Erin Bay, in tow-nettings, Sept. 1899 [21].
One specimen in Port Erin Bay, Apl. 1910 (H.C.C.).

PIONOSYLLIS LAMELLIGERA de St. Joseph *de St. Joseph*, 1886, p. 163; *Fauvel*, 1923, p. 288.

Dredged off Bay Fine, 1906 [57].

EUSYLLIS BLOMSTRANDI Malmgren [= *E. tubifex* Gosse] *McIntosh*, 1900-23, II, p. 173; *Fauvel*, 1923, p. 293.

Two specimens, one ripe, at L.W.E.S.T., on *Crisia* at the Calf Sound, Apl. 1934 (N.B.E.).

Breeding: see above.

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

One specimen among roots of *Laminaria* on north side of Port Erin Bay, Mar. 1936 (J.M.D., J.H.O.).

AUTOLYTUS PROLIFER (O. F. Müller) *de St. Joseph*, 1886, p. 238; *Fauvel*, 1923, p. 311.

Niarbyl, July, Aug.; round the Calf, Aug., Sept. 1906 [130].
Port Erin, Mar., May, July-Nov. 1906 [130].

Breeding: with eggs, surface tow-nettings off the Bahama Lightship, Mar. 1895 [170].

AUTOLYTUS CORNUTUS A. Agassiz *Agassiz*, 1862, p. 390.

In the tow-nettings at Port Erin, Jan. and May 1898 [21]. Jan., May, July, Sept. 1899 [21].

MYRIANIDA PINNIGERA (Montagu) *McIntosh*, 1900-1923, II, 1, p. 229; *Fauvel*, 1923, p. 322.

One specimen under a stone near the Jetty, Port Erin, L.W.S.T., Apl. 1935 (F.J.B.). One specimen under a stone at L.W.S.T., on the south side of Port Erin Bay, 1906 [57].

Family NEREIDAE

NEREIS PELAGICA Linné *McIntosh*, 1900-1923, II, 2, p. 267; *Fauvel*, 1923, p. 336.

One specimen at L.W.E.S.T., west of the harbour, Port St. Mary (H.B.M.). Port Erin Bay, and the Calf Sound, L.W.E.S.T. (N.B.E.). Port Erin, and Peel, littoral and at all depths, on sandy and rocky ground, 1891 [94]. Port Erin Bay, under stones, 1900 [90]. Large specimens at Port St. Mary, 1886 [54].

Breeding: spawning in the laboratory, Feb. [21].

NEREIS DIVERSICOLOR O. F. Müller *McIntosh*, 1900-1923, II, 2, p. 312; *Fauvel*, 1923, p. 344.

Found at Port Erin in the inner harbour only, in mud and sand (M.E.P., H.B.M.). Common in Port St. Mary harbour between M.T. and H.W.N.T.; very abundant in Chapel Bay at all levels, but chiefly between M.T. and H.W.N.T.; very common at Derby Haven from M.T. to H.W.N.T.; common at Douglas from M.T. to H.W.N.T.; a few at Ramsey below M.T. (H.B.M.).

NEREIS FUCATA Savigny *McIntosh*, 1900-1923, II, 2, p. 336; *Fauvel*, 1923, p. 344.

Commensal with *Eupagurus bernhardus*, but sometimes taken free. Port Erin; Peel; west and south-west of Port Erin, 15-18 fm., 1891 [94]. Port Erin Bay, 1900 [90].

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

An individual 24 inches long, dug from the mud in Port St. Mary harbour, Nov. 1930 (H.B.M.). This species used to be common in Port Erin Bay (H.C.C.), but I have not seen it recently (H.B.M.).

PERINEREIS CULTRIFERA (Grube) *McIntosh*, 1900-1923, II, 2, p. 280, as *Nereis cultrifera*; *Fauvel*, 1923, p. 352.

Under stones in a *Corallina* pool, Port Erin, one specimen; in mud at L.W.O.S.T., Port St. Mary harbour, one specimen [116]. Fairly common at Derby Haven (H.B.M.). Port Erin, L.W.S.T., Mar. 1936 (N.B.E.).

PLATYNEREIS DUMERILII (Audouin and Edwards) *McIntosh*, 1900-1923, II, 2, p. 302, as *Nereis dumerilii*; *Fauvel*, 1923, p. 359.

Numerous at Port Erin, 1891 [94]. Trawled on the Breast, Aug. 1932 (H.B.M.).

Family NEPHTHYDIDAE

NEPHTHYS CIRROSA Ehlers *McIntosh*, 1900-1923, II, 1, p. 36; *Fauvel*, 1923, p. 369.

Common at Ramsey from m.t. down, and fairly common throughout the beach and bay at Port Erin; single specimens from Chapel Bay, Derby Haven and Douglas between L.W.N.T. and L.W.O.S.T. (H.B.M.). Abundant in sand, Port Erin, L.W.S.T., Apl. 1937 (N.B.E.).

NEPHTHYS CAECA (O. F. Müller) *McIntosh*, 1900-1923, II, 1, p. 8; *Fauvel*, 1923, p. 365.

A few in Port Erin Bay between tide marks and down to about 3 fm. Large specimens, up to 27 cm. length, occasionally taken at L.W.E.S.T. near the Raglan Pier. Not recorded from the other sandy bays round the island (H.B.M.). Numerous in sand, Port Erin, L.W.S.T., Apl. 1937 (N.B.E.).

NEPHTHYS HOMBERGI Lamarck *McIntosh*, 1900-1923, II, 1, p. 17; *Fauvel*, 1923, p. 367.

In sand, about L.W.N.T., Port Erin Bay, 1900 [90]. Not found there recently, but a few dredged in the Bay (H.B.M.). Numerous large specimens in sand at L.W.S.T., Port Erin, Apl. 1937 (N.B.E.).

Family SPHAERODORIDAE

EPHESIA GRACILIS Rathke *McIntosh*, 1900-1923, III, 1, p. 47; *Fauvel*, 1923, p. 377.

One specimen at L.W.E.S.T. on *Crisia*, at the Calf Sound, Apl. 1934 (N.B.E.). Twenty miles south-east of the Isle of Man, 20-25 fm., 1891 [94]. Amongst dredged weed, Port Erin, Apl. 1936 (N.B.E.).

SPHAERODORUM sp.

Under stones and in *Laminaria* roots, Poyllvaish, July, Aug. 1909 [59].

Family GLYCERIDAE

GLYCERA LAPIDUM Quatrefages *McIntosh*, 1900-1923, II, 2, p. 477; *Fauvel*, 1923, p. 386.

One specimen in the mouth of Port Erin Bay, Apl. 1933 (H.B.M.). Port Erin district 1909 [119].

GLYCERA GIGANTEA Quatrefages *McIntosh*, 1900-1923, II, 2, p. 482,
as *G. siphonostoma*; *Fauvel*, 1923, p. 387.

Port Erin, 1910 [120].

GLYCERA ROUXI Audouin & M.-Edwards *McIntosh*, 1900-1923, II,
2, p. 491, as *G. goesi*; *Fauvel*, 1923, p. 389.

Port Erin district, 1909 [119].

GONIADA MACULATA Oersted *McIntosh*, 1900-1923, II, 2, p. 462;
Fauvel, 1923, p. 392.

Port Erin district, 1909 [119].

Family EUNICIDAE

EUNICE HARASSI Audouin & M.-Edwards *McIntosh*, 1900-1923, II, 2,
p. 425, as *E. fasciata*; *Fauvel*, 1923, p. 399.

Port Erin district, 1909 [119].

NEMATONEREIS sp.

Under stones and in *Laminaria* roots, Poyllvaaish, July, Aug.
1909 [59].

HYALINOECIA TUBICOLA (O. F. Müller) *McIntosh*, 1900-1923, II, 2,
p. 419; *Fauvel*, 1923, p. 421.

Eight miles north-west of Port Erin, 40 fm., mud, 1893 [74].

LUMBRICONEREIS FRAGILIS (O. F. Müller) *McIntosh*, 1900-1923,
II, 2, p. 372; *Fauvel*, 1923, p. 430.

One specimen from Port St. Mary, 1886 [54].

STAUROCEPHALUS sp.

Under stones and in *Laminaria* roots, Poyllvaaish, July, Aug.
1909 [59].

OPHRYOTROCHA PUERILIS Claparède and Mecznikow *McIntosh*, 1900-
1923, II, 2, p. 364; *Fauvel*, 1923, p. 450.

Port Erin district, 1909 [119].

Family ARICIIDAE

ARICIA CUVIERI Audouin & M.-Edwards *McIntosh*, 1900-1923, II, 2,
p. 497; *Fauvel*, 1927, p. 12.

Port Erin district, 1909 [119].

SCOLOPLOS ARMIGER (O. F. Müller) *McIntosh*, 1900-1923, II, 2,
p. 510; *Fauvel*, 1927, p. 20.

Abundant in Port St. Mary harbour at all levels, but chiefly
between M.T. and H.W.N.T., and at Chapel Bay chiefly from L.W.N.T.

down ; common at Derby Haven, Douglas, and Ramsey from about M.T. down ; a single specimen at Kirk Michael at L.W.N.T. ; one specimen dredged on the north side of Port Erin Bay, Apl. 1935 (H.B.M.). Peel, common in sand from M.T. down to 6 fm., 1891 [94].

NAINEREIS QUADRICUSPIDA (Fabricius) *Fauvel*, 1927, p. 22.

Under stones and in *Laminaria* roots at Poyllvaish, and at Port Erin, below the Biological Station [59].

Family SPIONIDAE

SCOLELEPIS FULIGINOSA (Claparède) *McIntosh* 1900-1923, III, 1, p. 160, as *Scolecopsis fuliginosus* ; *Fauvel*, 1927, p. 29.

Very abundant from L.W.N.T. to H.W.N.T. in Port St. Mary harbour and in muddy sand at the north end of the sandy beach at Port Erin ; abundant about M.T. in Chapel Bay ; common between L.W.N.T. and H.W.N.T. at Derby Haven, Douglas and Ramsey ; a single specimen at Kirk Michael (H.B.M.).

SCOLELEPIS GIRARDI (Quatrefages) *McIntosh*, 1900-1923, III, 1, p. 156, as *Scolecopsis vulgaris* ; *Fauvel*, 1927, p. 30.

Plentiful in mud under stones, on the shore, Port Erin, 1891 [94].

NERINE CIR RATULUS (Delle Chiaje) *McIntosh*, 1900-1923, III, 1, p. 148 ; *Fauvel*, 1927, p. 36.

Fairly common in Port Erin Bay, with a maximum about M.T. (M.E.P.). Single specimens at Brewery Beach and Ramsey between M.T. and H.W.N.T. (H.B.M.).

NERINE FOLIOSA (Audouin & M.-Edwards) *McIntosh*, 1900-1923, III, 1, p. 142 ; *Fauvel*, 1923, p. 34.

A single specimen at L.W.N.T. at Kirk Michael (H.B.M.). A single specimen of var. *sarsiana* at L.W.N.T., Brewery Beach, 1932 (H.B.M., J.H.D.).

SPIOPHANES BOMBYX (Claparède) *Fauvel*, 1927, p. 41.

Several specimens in sand at L.W.N.T. at the north end of Port Erin Beach, Mar. 1936 (N.B.E.).

PYGOSPIO ELEGANS Claparède *Fauvel*, 1927, p. 46.

Very numerous in sandy mud at L.W. in the inner harbour at Port St. Mary, Mar. 1936 (N.B.E.).

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

Under stones and in *Laminaria* roots, Poyllvaish, July, Aug. 1909 [59].

POLYDORA CILIATA (Johnston) *McIntosh*, 1900-1923, III, 1, p. 198 ;
Fauvel, 1927, p. 49.

Common in *Hymeniacion sanguinea*, Port Erin, L.W.O.S.T. (H.B.M., J.H.D.). A few at Port Erin in narrow clefts in the rock, near low water ; also in old shells, 1891 [94].

POLYDORA FLAVA Claparède *McIntosh*, 1900-1923, III, 1, p. 205 ;
Fauvel, 1927, p. 52.

Port Erin district, 1909 [119].

POLYDORA (BOCCARDIA) POLYBRANCHIA Haswell *Fauvel*, 1927, p. 58.

In small tubes under *Lithothamnion* in pools at various levels, Port Erin, common, Apl. 1932 [116].

Family MAGELONIDAE

MAGELONA PAPILLICORNIS (Fr. Müller) *McIntosh*, 1900-1923, III, 1,
p. 223 ; *Fauvel*, 1927, p. 64.

On the sandy beach at Port Erin, chiefly near low water ; not uncommon, Sept. 1931 [116] ; Mar. 1936 (N.B.E.).

var. ROSEA Moore *Fauvel*, 1927, p. 66, as *Magellona rosea*.

One specimen taken, in sand, 2 fm., off the Raglan Pier, Port Erin, Apl. 1933 (H.B.M.).

Family CHAETOPTERIDAE

CHAETOPTERUS VARIOPEDATUS (Renier) *McIntosh*, 1900-1923, III,
1, p. 120 ; *Fauvel*, 1927, p. 77.

A few dredged on the Breast, 20 fm., Apl. 1934 (H.B.M.). North-west of the Calf, 18 fm., 1893 [74]. Five miles north-west of the Chickens Rock, 25 fm., 1894 [75]. One and a half miles north of Kitterland, 19 fm., 1894 [75]. Two miles north of the Calf, 22 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76].

Breeding : post-larvae in tow-nettings at Port Erin, July 1909 [21].

Family CIRRATULIDAE

AUDOUINIA TENTACULATA (Montagu) *McIntosh*, 1900-1923, III, 1,
p. 242, as *Cirratulus tentaculatus* ; *Fauvel*, 1927, p. 91.

Fairly common in mud in Port St. Mary harbour between H.W.N.T. and L.W.O.S.T. (H.B.M.). Under stones, Port Erin Bay, 1900 [90].

CIRRATULUS CIRRATUS (O. F. Müller) *McIntosh*, 1900-23, III, 1, p. 249 ;
Fauvel, 1927, p. 94.

Port Erin Bay, large numbers in clefts in rock, 1891 [94]. Near Port St. Mary and Port Erin, under stones in mud and in decaying algae, 1886 [54]. Common in Port St. Mary harbour at L.W.O.S.T. ; very common at L.W.O.S.T. at Derby Haven (H.B.M.).

DODECACERIA CONCHARUM Oersted *McIntosh*, 1900-1923, III, 1, p. 255 ; *Fauvel*, 1927, p. 102. [Some of these records may now have to be referred to *D. caulleryi* Dehorne. *Dehorne*, 1933, p. 298 (H.B.M.).]

One specimen, boring in *Lithophyllum incrustans* in a pool on the Dub Reef at Port Erin, Sept. 1933 (H.B.M.). Port Erin district, 1909 [119]. In the plankton, Port Erin Bay, 1926 [35].

Family CHLORHAEMIDAE

FLABELLIGERA AFFINIS Sars *McIntosh*, 1900-1923, III, 1, p. 107 ;
Fauvel, 1927, p. 113.

Port Erin Bay, one specimen under a boulder at L.W.O.S.T., on the outer south beach, Apl. 1935 (M.W.P., det. J.H.O.). Under wet stones and in gravel, M.T., Port St. Mary, Apl. 1927 (J.H.F.). Port Erin district, 1909 [119].

Family SCALIBREGMIDAE

LIPOBRANCHIUS JEFFREYSII (McIntosh) *McIntosh*, 1900-1923, III, 1, p. 41, as *Eumenia jeffreysii* ; *Fauvel*, 1927, p. 127.

Four miles west of the Chickens Rock, 38 fm., 1894 [75]. Fourteen miles north-west of Port Erin, 79 fm., mud, 1893 [74]. Eleven miles north-west of Port Erin, 50 fm., mud, 1893 [74]. Six and a half miles west of Contrary Head, 38 fm., mud, 1894 [75].

Family OPHELIIDAE

OPHELIA RADIATA Delle Chiaje *Fauvel*, 1927, p. 130.

A single specimen (young) at Ramsey between M.T. and H.W.N.T. (H.B.M., J.H.D.).

AMMOTRYPANE AULOGASTER Rathke *McIntosh*, 1900-1923, III, 1, p. 15 ; *Fauvel*, 1927, p. 133.

Two specimens in muddy sand, inside the Breakwater, Port Erin, 5 fm., Apl. 1933 (H.B.M.)

Family CAPITELLIDAE

- CAPITELLA CAPITATA (Fabricius) *McIntosh*, 1900-1923, III, 1, p. 280 ;
Fauvel, 1927, p. 154.

Very common in Port St. Mary harbour from H.W.N.T. down, and at Derby Haven from H.W.N.T. to M.T. ; common in Chapel Bay about M.T. and in the outer harbour at Port Erin ; a few at Douglas and Kirk Michael (H.B.M.). Young specimens very numerous under decaying *Fucus*, under boulders at Port Erin, 1891 [94].

Family ARENICOLIDAE

- ARENICOLA MARINA Linné *McIntosh*, 1900-1923, III, 1, p. 59 ;
Fauvel, 1927, p. 161.

Abundant at all levels throughout the sandy part of Port Erin Bay, especially in the harbours (M.E.P.). Very common in Chapel Bay from M.T. down ; common in Port St. Mary harbour from M.T. down. Derby Haven from H.W.N.T. down and Douglas at all levels ; rare at Ramsey, very rare at Kirk Michael (H.B.M.). Abundant everywhere at Peel, 1891 [94].

- ARENICOLA ECAUDATA Johnston *McIntosh*, 1927, III, 1, p. 72 ;
Fauvel, 1927, p. 164.

Shore Port Erin, among stones and muddy shingle, 1895 [142].
Port St. Mary, at L.W. (J.H.O.).

- ARENICOLA BRANCHIALIS Audouin & M.-Edwards *McIntosh*, 1900-1923,
III, 1, p. 78 ; *Fauvel*, 1927, p. 165, as *A. grubii*.

Port Erin Bay, under stones, 1900 [90]. Port St. Mary harbour
and Fleshwick Bay, L.W.O.S.T.-L.W.E.S.T. (N.B.E.).

Family MALDANIDAE

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

Not uncommon in muddy sand between M.T. and H.W.N.T. at Port
St. Mary harbour, from L.W.N.T. down in Chapel Bay, and from
H.W.N.T. down at Derby Haven, 1932 (H.B.M., det. R.E.).

Family OWENIIDAE

- OWENIA FUSIFORMIS Delle Chiaje *McIntosh*, 1900-1923, III, 1,
p. 356 ; *Fauvel*, 1927, p. 203.

A few near the Raglan Pier, Port Erin, at L.W.E.S.T. (J.H.O.).
Several dredged in mud inside the Breakwater, Port Erin, 5 fm.
(H.B.M.). In sand, L.W.N.T., Port Erin Bay, 1900 [90]. Seven miles
west of Peel, 21 fm., 1895 [76].

Family SABELLARIIDAE

SABELLARIA SPINULOSA Leuckart *McIntosh*, 1900-1923, IV, 1, p. 12;
Fauvel, 1927, p. 208.

Abundant on stones and rocks, L.W.O.S.T., at Fleshwick Bay,
Mar. 1932 & 1934 (N.B.E.). Port Erin at L.W., Apl. 1934 (N.B.E.).

Family AMPHICTENIDAE

PECTINARIA (AMPHICTENE) AURICOMA (O. F. Müller) *Malmgren*,
1865, p. 357; *Fauvel*, 1927, p. 222.

Port Erin district, 1909 [119]. One specimen dredged in Port
Erin Bay, Oct. 1933 (H.B.M.). One, in mud, Port St. Mary inner
Harbour, L.W.N.T., Apl. 1937 (K.M.W.).

PECTINARIA BELGICA (Pallas) *McIntosh*, 1900-1923, IV, 1, p. 38;
Fauvel, 1927, p. 220.

Off Port Erin, 20 fm., gravelly bottom, 1886 [54].

PECTINARIA (LAGIS) KORENI *Malmgren McIntosh*, 1900-23, IV, 1,
p. 49; *Fauvel*, 1927, p. 221.

One, in sand, Port Erin Bay, L.W.S.T., Apl. 1937 (K.M.W.).

Family AMPHARETIDAE

AMPHARETE GRUBEI *Malmgren Fauvel*, 1927, p. 227.

Twenty miles south-east of the Isle of Man, 20-25 fm., two
specimens, 1891 [94].

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

Port Erin district, 1909 [119].

Family TERESELLIDAE

AMPHITRITE JOHNSTONI (Malmgren) *McIntosh*, 1900-1923, IV, 1,
p. 117, as *A. figulus*; *Fauvel*, 1927, p. 248.

Shore, Port Erin, 1895 [142]. Under stones, near Breakwater,
Port Erin, L.W.E.S.T., Apl. 1936, 1937 (N.B.E.).

LANICE CONCHILEGA (Pallas) *McIntosh*, 1900-1923, IV, 1, p. 137;
Fauvel, 1927, p. 255.

In fine clean sand, at and a little above low water, Port Erin
(M.E.P.). Abundant off Port Erin in large lamellibranch shells,
1886 [54]. Abundant in the littoral zone, and frequent in the
dredge, 1891 [94]. A few at Derby Haven; common at Ramsey
(H.B.M.).

POLYMNIA NEBULOSA (Montagu) *McIntosh*, 1900-1923, IV, 1, p. 129 ;
Fauvel, 1927, p. 257.

Fairly commonly trawled in empty shells, all round the south of the island (H.B.M.). Off Port Erin, 10-20 fm., 1900 [90]. Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Under stones, near Port Erin Breakwater, L.W.S.T., Apl. 1937 (B.T.P.).

NICOLEA ZOSTERICOLA (Oersted) *Fauvel*, 1927, p. 261 ; *Malmgren*, 1865, p. 381.

Several specimens among *Crisia* and in sponges, L.W.S.T., Calf Sound, Apl. 1935 (N.B.E.). Dredged off Bay Fine, Apl. 1936 (N.B.E.).

NICOLEA VENUSTULA (Montagu) *de St. Joseph*, 1894, p. 207 ; *Fauvel*, 1927, p. 260.

Twenty miles south-east of the Isle of Man, 20-25 fm., 1891 [94]. Fleshwick Bay, L.W.O.S.T., Mar. 1932 (N.B.E.).

TEREBELLIDES STROEMI Sars *McIntosh*, 1900-23, IV, 1, p. 209 ;
Fauvel, 1927, p. 291.

A single specimen in muddy sand, just inside Port Erin Breakwater, 5 fm., Apl. 1933 (H.B.M.).

THELEPUS CININNATUS (Fabricius) *McIntosh*, 1900-1923, IV, 1, p. 170 ;
Fauvel, 1927, p. 271.

Common in the littoral zone : also twenty miles south-east of the Isle of Man, 20-25 fm., 1891 [94].

PISTA CRISTATA (Müller) *McIntosh*, 1900-23, IV, 1, p. 158 ; *Fauvel*, 1927, p. 266.

Three adults and four young, in gravelly sand on the north side of Port Erin Bay, 5 fm., Apl. 1933 (H.B.M.).

Family SABELLIDAE

SABELLA PAVONINA (Savigny) *McIntosh*, 1900-1923, IV, 1, p. 223,
as *S. penicillus* ; *Fauvel*, 1927, p. 298.

Port Erin, from some feet above L.W. to 16 fm., but littoral specimens are small, 1891 [94]. On the harbour buoy, Port Erin, 1903 [25]. Sometimes found in the salt-water supply pipes at the Biological Station. A single specimen in Pat's Dub, Port Erin, Sept. 1933 (H.B.M.).

BISPIRA VOLUTACORNIS (Montagu) *McIntosh*, 1900-1923, IV, 2,
p. 254 ; *Fauvel*, 1927, p. 307.

Gansey Point, L.W.E.S.T., about thirty worms on the under-surface of a submerged overhanging rock, Mar. 1932 [116].

POTAMILLA RENIFORMIS (O. F. Müller) *Mcl sh*, 1900-1923, IV, 1, p. 232; *Fauvel*, 1927, p. 309.

Port Erin district, 1909 [119]. Growing in the shallow tanks in the aquarium at the Biological Station, Port Erin, 1915 [31]. Common on shells in the tanks, Sept. 1933 (H.B.M.).

POTAMILLA TORELLI Malmgren *McIntosh*, 1900-1923, IV, 1, p. 239; *Fauvel*, 1927, p. 310.

Growing in the shallow tanks in the aquarium at the Biological Station, 1915 [31].

DASYCHONE BOMBYX (Dalyell) *de St. Joseph*, 1894, p. 309; *Fauvel*, 1927, p. 319.

Port Erin district, 1909 [119].

AMPHIGLENA MEDITERRANEA (Leydig) *McIntosh*, 1900-1923, IV, 2, p. 270; *Fauvel*, 1927, p. 324.

Very abundant on overhanging rock surfaces at L.W.S.T. at Niarbyl, 1935 (N.B.E.). In rock pools at Port Erin, 1900 [90]. Port St. Mary, on rocks at L.W.E.S.T., Mar. 1936 (N.B.E.).

FABRICIA SABELLA (Ehrenberg) *McIntosh*, 1900-1923, IV, 2, p. 264; *Fauvel*, 1927, p. 325.

One specimen in *Hymeniacidon sanguinea*, M.T., Port Erin, Apl. 1932 (J.H.D., H.B.M.).

MYXICOLA INFUNDIBULUM (Rénier) *McIntosh*, 1900-1923, IV, 2, p. 311; *Fauvel*, 1927, p. 342.

Port Erin district, 1909 [119].

Family SERPULIDAE

SERPULA VERMICULARIS Linné *McIntosh*, 1900-1923, IV, 2, p. 353; *Fauvel*, 1927, p. 351.

Fairly common on shells, trawled round the south of the island (H.B.M.). Off Port Erin, Spanish Head, etc., 1900 [90]. Plentiful in the Isle of Man, 1886 [54].

HYDROIDES NORVEGICA Gunnerus *Fauvel*, 1927, p. 356.

Port Erin district, 1909 [102]. Not uncommon on dead shells, round the south of the island: off Fleshwick, off Port Erin. Also in the upper storage tank at the Biological Station, Port Erin [116].

POMATOCEROS TRIQUETER (Linné) *McIntosh*, 1900-1923, IV, 2, p. 362; *Fauvel*, 1927, p. 370.

Fairly common on dead shells all round the south of the island (H.B.M.). On stones and dead shells in Port Erin Bay, and off Halfway Rock, 1900 [90].

Breeding: 17 Apl. (J.H.O.). 22 Apl. (A.B.W.).

FILOGRANA IMPLEXA (Berkely) *McIntosh*, 1900-1923, IV, 2, p. 339 ;
Fauvel, 1927, p. 376.

Common among the roots of *Laminaria* at low water. Frequently growing in the sea-water supply pipes at the Biological Station (H.B.M.). On stones and dead shells in Port Erin Bay, also off Bradda Head, Bay Fine, etc., 1900 [90]. South end of the Isle of Man, L.W. to 18 fm., 1891 [94]. L.W., between Port St. Mary and Spanish Head, on roots of *Laminaria*, 1886 [54]. East and south of the Calf, 15-30 fm., 1900 [81].

SPIROBIS BOREALIS Daudin *McIntosh*, 1900-1923, IV, 2, p. 409 ;
Fauvel, 1927, p. 399.

Very abundant on the whole coast on weeds—chiefly Fucacae—and on rocks (H.B.M.). 1886 [54]. 1891 [94]. 1900 [90].

SPIROBIS SPIRILLUM (Linné) *McIntosh*, 1900-1923, IV, 2, p. 391 ;
Fauvel, 1927, p. 392.

Common in deep water ; frequently on *Sertularia*, 1891 [94]. Port Erin district, 1909 [119].

Order MYZOSTOMARIA

MYZOSTOMUM CIRRIFERUM Leuckart *Benham*, 1896, p. 343 ; *Fauvel*,
1927, p. 448.

Abundant everywhere on *Antedon bifida* (H.B.M.).

Order OLIGOCHAETA

Family TUBIFICIDAE

CLITELLIO ARENARIUS (O. F. Müller) *Beddard*, 1889, p. 69.

Under stones, Port Erin Bay, 1900 [90].

Class HIRUDINEA

PONTOBELLA MURICATA (Linné) *Van Beneden & Hesse*, 1863,
p. 23.

On skate round the Isle of Man (H.B.M.).

Breeding: a specimen laying in the aquarium, Port Erin, Nov.
1933 (H.B.M.).

Phylum **GEPHYREA**

Family ECHIURIDAE

THALASSEMA LANKESTERI Herdman *Herdman*, 1898, p. 380.

Twelve miles south-west of the Chickens Rock, 40-50 fm., mud, Apl. 1896, several specimens [80].

Family SIPUNCULIDAE

PHASCOLOSOMA ELONGATUM Keferstein *Fischer*, 1925, p. 16.

A single specimen about half tide in mud in Port St. Mary inner harbour, Apl. 1934 (N.B.E.).

PHASCOLOSOMA VULGARE (Blainville) *Fischer*, 1925, p. 21.

In *Laminaria* roots at Poyllvaaish, 1908 (59). Port Erin, 1905 [28]. Eight to nine miles west of Port Erin, 35 fm., 1894 [75]. Outside Port St. Mary Harbour, in fine gravel under stone at L.W.S.T., Apl. 1937 (N.S.J.).

PHASCOLOSOMA MINUTUM Keferstein *Fischer*, 1925, p. 19.

In shale, Port St. Mary harbour, M.T., July, 1932, fairly common (J.H.O.).

PHASCOLION STROMBI (Montagu) *Fischer*, 1925, p. 22.

Round the Isle of Man, 20 fm., 1850 [50]. Several specimens in empty *Dentalium* shells, off Port Erin, 1905 [28].

Phylum **PHORONIDEA**

PHORONIS sp. Actinotrocha larvae.

Several larvae, and young *Phoronis* in surface tow-nettings, Port Erin Bay, June, 1899 (H.C.C.). Port Erin Bay, June to Aug. 1899 [21].

Phylum BRACHIOPODA

TEREBRATULA RETUSA (Linné) [= *T. caput-serpentis* Linné] Davidson, 1886, pp. 17-25, Pl. 3, Fig. 12; Pl. 4, Figs. 1-11; Pl. 5, Figs. 32-34; Thompson, 1927, p. 187, Fig. 55.

Two small specimens dredged two and a half to three miles off Port Erin, May 1934 (W.F.). A small dead specimen dredged off Bay Fine, 1901 [16]. A living specimen dredged off Ballaugh, 1907 (specimen preserved at Port Erin).

CRANIA ANOMALA (Müller) Davidson, 1886, pp. 183-188, Pl. 27, Figs. 1-9; Thompson, 1927, p. 137, Fig. 40.

Generally distributed on the Breast, but not very common. Ten specimens attached to dead shells, Apl. 1932 (H.B.M.). A single specimen off Ballaugh, 1834 [47]. Three miles west of Fleshwick, 20 fm., 1892 [73]. Six miles west of Port Erin, 20 fm., 1892 [73]. Round the Calf, 1893 [74]. Three miles west of the Chickens Rock, 29 fm., 1894 [75].

Phylum **ARTHROPODA**Class **CRUSTACEA**Sub-Class **BRANCHIOPODA**Order **CLADOCERA**Family **POLYPHEMIDAE**

EVADNE NORDMANNI Lovén *Apstein*, 1901, p. 12.

Common and generally distributed in the summer months: Niarbyl, off Peel, off the Calf, off Fleshwick, Port Erin [87, 88, 128, 130, 135]. Apl.-July, maximum in June, 1908 [88]. Mar.-Oct. maximum in May-June, 1907 [87]. Very few breeding after Aug. 1907 [87]. Biological Station West Pond, June 1934 (J.H.F.).

PODON INTERMEDIUS Lilljeborg *Apstein*, 1901, p. 14.

Frequent and generally distributed in the summer months: Niarbyl, off the Calf, off Bradda, Peel to Jurby, Bay Fine [87, 88, 128, 130, 135]. 1907, May-Oct., maximum in Aug. [87]. 1908, June, and then small numbers up to Oct. [88].

PODON LEUCKARTI Sars *Apstein*, 1901, p. 13.

Port Erin Bay, 1905, Apl., July, Aug., and Sept. [128].

Sub-Class **OSTRACODA**Order **MYODOCOPA**Family **CYPRIDINIDAE**

PHILOMEDES INTERPUNCTA (Baird) *Brady & Norman*, 1896, II, p. 656.

Dredged in the neighbourhood of Port Erin, 10-40 fm., 1894 [8]. Two specimens, Port Erin Bay, Sept. 1905 [130].

ASTEROPE MARIAE (Baird) *Sars*, 1928, X, p. 17; *Brady & Norman*, 1896, II, p. 630.

One specimen in a surface tow-netting, at night, Port Erin Bay, Sept. 1905 [130].

Sub-Order **PODOCOPA**Family **CYPRIDAE**

PONTOCYPRIS TRIGONELLA G. O. Sars *Sars*, 1928, IX, p. 48; *Brady & Norman*, 1889, I, p. 109.

Dredged in the neighbourhood of Port Erin, 10-40 fm., 1894 [8].

- ERYTHROCYPRIS MYTILOIDES (Norman) Sars, 1928, IX, p. 50; *Brady & Norman*, 1889, I, p. 107, as *Pontocypris mytiloides*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- ARGILLOECIA CYLINDRICA G. O. Sars Sars, 1928, IX, p. 54; *Brady & Norman*, 1889, I, p. III.
Off Peel, 50 fm., 1896 [78].
- BAIRDIA INFLATA (Norman) Sars, 1928, IX, p. 67; *Brady & Norman*, 1889, I, p. 112.
Dredged near Port Erin, 10-40 fm., 1894 [8].

Family CYTHERIDAE

- CYTHERIDEA PAPILLOSA Bosquet Sars, 1928, IX, p. 159.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERIDEA PUNCTILLATA Brady Sars, 1928, IX, p. 160.
Dredged near Port Erin, 10-40 fm., 1894 [8]. A few specimens in pools, Port Erin Bay, Apl. 1932 (J.H.F.).
- EUCYTHERE DECLIVIS (Norman) Sars, 1928, IX, p. 163; *Brady & Norman*, 1889, I, p. 178.
Off Peel, 50 fm., 1896 [78]. Near Port Erin, 10-40 fm., 1894 [8].
- KRITHE BARTONENSIS (Jones) Sars, 1928, IX, p. 165.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERE ALBOMACULATA Baird Sars, 1928, IX, p. 169; *Brady & Norman*, 1889, I, p. 138.
Fairly common among weeds in pools at Port Erin, and a few at Poyllvaish (J.H.F.). Port St. Mary, 1896 [78].
- CYTHERE CONVEXA Baird *Brady*, 1868, p. 401.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERE LUTEA O. F. Müller Sars, 1928, IX, p. 167; *Brady & Norman*, 1889, I, p. 125.
Common among weeds in pools at Port Erin, a few at Poyllvaish, Apl. 1932 [116]. In *Laminaria*, Port St. Mary, 1896 [78].
- LEPTOCYTHERE TENERA (Brady) Sars, 1928, IX, p. 175.
Two specimens in a pool at Port Erin, Apl. 1932 (J.H.F.). Dredged near Port Erin, 10-40 fm., 1894 [8].

- LEPTOCYTHERE PELLUCIDA (Baird) Sars, 1928, IX, p. 172; *Brady & Norman*, 1889, I, p. 127, as *Cythere confusa*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- HEMICYTHERE CONCINNA (Jones) Sars, 1928, IX, p. 189.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- HEMICYTHERE FINMARCHICA G. O. Sars Sars, 1928, IX, p. 185.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- HEMICYTHERE VILLOSA (G. O. Sars) Sars, 1928, IX, p. 182; *Brady & Norman*, 1889, I, p. 146, as *Cythere villosa*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYHEREIS DUNELMENSIS (Norman) Sars, 1928, IX, p. 195.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYHEREIS TUBERCULATA (G. O. Sars) Sars, 1928, IX, p. 192; *Brady & Norman*, 1889, I, p. 161, as *Cythere tuberculata*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYHEREIS ANTIQUATA (Baird) *Brady*, 1868, p. 417, as *Cythere antiquata*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYHEREIS EMACIATA (Brady) *Brady*, 1868, p. 414, as *Cythere emaciata*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYHEREIS JONESI (Baird) Sars, 1928, IX, p. 196; *Brady & Norman*, 1889, I, p. 169, as *Cythere jonesii*.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERURA ANGULATA Brady *Brady*, 1868, p. 440; *Brady & Norman*, 1889, I, p. 197.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERURA CELLULOSA (Norman) Sars, 1928, IX, p. 216; *Brady & Norman*, 1889, I, p. 206.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERURA CORNUTA Brady *Brady & Norman*, 1889, I, p. 192.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHERURA SELLA G. O. Sars Sars, 1928, IX, p. 204; *Brady & Norman*, 1889, I, p. 194.
Dredged near Port Erin, 10-40 fm., 1894 [8].

- CYTHERURA STRIATA G. O. Sars Sars, 1928, IX, p. 208 ; *Brady & Norman*, 1889, I, p. 196.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- LOXOCOONCHA GUTTATA (Norman) *Brady*, 1868, p. 436 ; *Brady & Norman*, 1889, I, p. 184.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- LOXOCOONCHA IMPRESSA (Baird) Sars, 1928, IX, p. 218 ; *Brady & Norman*, 1889, I, p. 183.
Dredged near Port Erin, 10-40 fm., 1894 [8]. Extremely abundant on weed in shore pools at Port Erin, 1894 [75].
- LOXOCOONCHA MULTIFORA (Norman) *Brady & Norman*, 1889, I, p. 185.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- LOXOCOONCHA PUSILLA *Brady & Robertson* *Brady & Norman*, 1889, I, p. 186.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- LOXOCOONCHA TAMARINDUS (T. R. Jones) Sars, 1928, IX, p. 221 ; *Brady & Norman*, 1889, I, p. 186.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHEROPTERON ALATUM G. O. Sars Sars, 1928, IX, p. 225.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHEROPTERON LATISSIMUM (Norman) Sars, 1928, IX, p. 223.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- CYTHEROPTERON PUNCTATUM *Brady* Sars, 1928, IX, p. 227.
Off Peel, 50 fm., 1896 [78].
- CYTHEROPTERON PYRAMIDALE *Brady* *Brady & Norman*, 1889, I, p. 208.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- BYTHOCYTHERE CONSTRICTA G. O. Sars Sars, 1928, IX, p. 235 ; *Brady & Norman*, 1889, I, p. 220.
Dredged near Port Erin, 10-40 fm., 1894 [8].
- BYTHOCYTHERE TURGIDA G. O. Sars Sars, 1928, IX, p. 233 ; *Brady & Norman*, 1889, I, p. 221.
Dredged near Port Erin, 10-40 fm., 1894 [8].

PSEUDOCYTHERE CAUDATA G. O. Sars Sars, 1928, IX, p. 239; *Brady & Norman*, 1889, I, p. 225.

Dredged near Port Erin, 10-40 fm., 1894 [8].

SCLEROCILUS CONTORTUS (Norman) Sars, 1928, IX, p. 247; *Brady & Norman*, 1889, I, p. 225.

Dredged near Port Erin, 10-40 fm., 1894 [8].

MACHAERINA TENUISSIMA (Norman) *Brady & Norman*, 1889, I, p. 238.

Dredged near Port Erin, 10-40 fm., 1894 [8].

PARADOXOSTOMA ENSIFORME Brady Sars, 1928, IX, p. 258; *Brady & Norman*, 1889, I, p. 229.

One specimen in weed, in a pool at Port St. Mary, June 1932 (J.H.F.). Dredged near Port Erin, 10-40 fm., 1894 [8].

PARADOXOSTOMA HIBERNICUM Brady Sars, 1928, IX, p. 261; *Brady & Norman*, 1889, I, p. 232.

Dredged near Port Erin, 10-40 fm., 1894 [8].

PARADOXOSTOMA NORMANI Brady Sars, 1928, IX, p. 264; *Brady & Norman*, 1889, I, p. 231.

Dredged near Port Erin, 10-40 fm., 1894 [8].

PARADOXOSTOMA VARIABILE (Baird) Sars, 1928, IX, p. 256; *Brady & Norman*, 1889, I, p. 229.

A few specimens among weeds in pools at Port Erin and Poyllvaish, Apl. 1932 [116]. Dredged near Port Erin, 10-40 fm., 1894 [8].

Sub-Class *COPEPODA*

Order **EUCOPEPODA**

Sub-Order CALANOIDA

Family CALANIDAE

CALANUS FINMARCHICUS (Gunnerus) Sars, 1903, IV, p. 9.

Common in tow-nettings all round the south of the island [104, 128, 130, 135, 146]. Occurring from Apl. to Dec., with a maximum in July [Summary of results for Port Erin, 1907-1920] [104].

Family PARACALANIDAE

PARACALANUS PARVUS (Claus) Sars, 1903, IV, p. 17.

Common all round the south of the island [104, 128, 130]. July to Nov., with a maximum in Sept. [Summary for Port Erin, 1907-1920] [104]. Biological Station West Pond, May-June 1934 (J.H.F.).

Family PSEUDOCALANIDAE

PSEUDOCALANUS ELONGATUS Boeck *Sars*, 1903, IV, p. 20.

Fairly abundant all round the south of the island [104, 128, 130, 135, 146]. Taken all the year round, with a maximum in Sept. and a smaller maximum in June [Summary of results for Port Erin, 1907-1920] [104].

MICROCALANUS PUSILLUS G. O. Sars *Sars*, 1903, IV, p. 156.

Appears first in deep water at the end of Aug., then in shallow waters, including Port Erin Bay, in early Sept., and continuing there until early Jan. 1908 [87]. Dec. 1918, large numbers [89A].

Family AETEIDAE

AETIDEUS ARMATUS Boeck *Sars*, 1903, IV, p. 25.

One male and one female in a surface tow-netting in Port Erin Bay by electric light, 1889 [149]. One specimen among material dredged outside Port Erin, 20 fm., 1892 [149].

Family CENTROPAGIDAE

CENTROPAGES TYPICUS Kröyer *Sars*, 1903, IV, p. 75.

Off Port Erin, 1896 [78]. May 1906 [130].

CENTROPAGES HAMATUS (Lilljeborg) *Sars*, 1903, IV, p. 76.

Common all round the south of the island [87, 104, 128, 130, 135, 146]. Taken from Apl. to Oct. with a maximum in Aug. [Summary for Port Erin, 1907-1920] [104]. Some present all the year round; more abundant at the surface than deeper, 1908 [87].

ISIAS CLAVIPES Boeck *Sars*, 1903, IV, p. 79.

Taken all round the south of the island from May to Sept. [89, 130].

Family TEMORIDAE

TEMORA LONGICORNIS (O. F. Müller) *Sars*, 1903, IV, p. 97.

Common all round the south of the island [87, 104, 128, 130, 135, 146]. Apl. to Sept., with a maximum in June-July [Summary of results for Port Erin, 1907-1920] [104]. Equally abundant in Port Erin Bay and outside, and at all depths, 1908 [87]. Biological Station West Pond, June 1934 (J.H.F.).

EURYTEMORA VELOX (Lilljeborg) *Sars*, 1903, IV, p. 100.

One male found in a rock pool at Poyllvaish, Apl. 1932 (J.H.F.).

Family PSEUDOCYCLOPIDAE

PSEUDOCYCLOPIA STEPHOIDES Thompson *Sars*, 1903, IV, p. 71.

Two males and one female dredged off Port Erin, 15 fm., Mar. 1894 [150].

PSEUDOCYCLOPS CRASSIREMIS Brady *Brady*, 1878, I, p. 82.

In neritic material dredged off Spanish Head, 1896 [78].

PSEUDOCYCLOPS OBTUSATUS Brady *Sars*, 1903, IV, p. 131.

In dredged material from one mile off Spanish Head, 16 fm., 1895 [123].

Family CANDACIIDAE

CANDACIA ARMATA Boeck *Sars*, 1903, IV, p. 135.

Open sea near Port Erin, Jan. 1898; also June and July 1899, surface to 33 fm., off Port Erin, several specimens [152]. Off Niarbyl, Aug. 1906, single specimens. Off the Calf, Aug. 1906, rare [130].

Family PONTELLIDAE

ANOMALOCERA PATERSONI Templeton *Sars*, 1903, IV, p. 139.

Taken all round the south of the island, occasionally extremely abundant [104, 128, 130, 149]. Taken from Apl. to July, with a maximum in Apl. [Summary of results for Port Erin, 1907-1920] [104].

LABIDOCERA WOLLASTONI (Lubbock) *Sars*, 1903, IV, p. 142.

Off Niarbyl, Sept. 1906, rare [130].

Family PARAPONTELLIDAE

PARAPONTELLA BREVICORNIS (Lubbock) *Sars*, 1903, IV, p. 145.

All round the south of the island, Aug. 1906, rare [130].

Family ACARTIIDAE

ACARTIA CLAUSI Giesbrecht *Sars*, 1903, IV, p. 150.

Common all round the south of the island [104, 128, 130, 135]. Taken from Apl. to Nov., with a maximum in June [Summary of results for Port Erin, 1907-1920] [104]. Biological Station West Pond, common, May and July 1934 (J.H.F.).

Sub-Order HARPACTICOIDA

Family MISOPHRIIDAE

MISOPHRIA PALLIDA Boeck *Sars*, 1911, V, p. 6.

Mouth of Port Erin Bay, 17 fm., 1895 [76].

Family LONGIPEDIIDAE

CANUELLA PERPLEXA T. Scott *Sars*, 1911, V, p. 17.

Frequent in dredged material about Port Erin, 1896 [150].

Family CERVINIIDAE

CERVINIA BRADYI Norman *Sars*, 1911, V, p. 351.

Several specimens, twelve miles west of Port Erin, 39 fm., mud, 1893 [149].

Family ECTINOSOMIDAE

ECTINOSOMA ERYTHROPS Brady *Brady*, 1880, II, p. 12.

Occasionally dredged in Port Erin Bay, 4 fm., 1893 [149]. Eight miles off Spanish Head, 16 fm., 1895 [123].

ECTINOSOMA GOTHICEPS Giesbrecht *Sars*, 1911, V, p. 37.

In pools at H.W.N.T., Port St. Mary, rare, Jan. 1933 (J.H.F.). Among material dredged at Port Erin, 1894 [150].

ECTINOSOMA GRACILE T. and A. Scott *T. & A. Scott*, 1896, p. 429.

Common amongst weed in pools at M.T., at Port Erin, Poyllvaish and Port St. Mary, Apl. 1932 (J.H.F.). One or two specimens among material dredged at Port Erin, 1894 [150]. In material dredged one mile off Spanish Head, 16 fm., 1895 [123].

ECTINOSOMA HERDMANI T. & A. Scott *Sars*, 1911, V, p. 33.

One specimen in material dredged off Port Erin, 1894 [150].

ECTINOSOMA MELANICEPS Boeck *Sars*, 1911, V, p. 34.

Dredged off Port St. Mary and off the Calf, 1893 [149]. In material dredged one mile off Spanish Head, 16 fm., 1895 [123].

ECTINOSOMA NORMANI T. & A. Scott *Sars*, 1911, V, p. 35.

Dredged off Port Erin, 1894 [150].

ECTINOSOMA SANSI Boeck *Sars*, 1911, V, p. 30.

In material dredged one mile off Spanish Head, 16 fm., 1896 [123]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. In considerable numbers in mud dredged in Port Soderick Bay, 1887 [148]. In the West Pond at Port Erin Biological Station, rare, June-July 1934 (J.H.F.).

BRADYA TYPICA Boeck *Sars*, 1911, V, p. 46.

A few specimens, all females, dredged in mud, Port Erin Bay, 1893 [149]. In material dredged at Port Soderick, 1889 [148].

MICROSETELLA NORVEGICA (Boeck) Sars, 1911, V, p. 44.

Taken once by electric light, in Port Erin Bay, 1893 [149]. Off Halfway Rock, 18 fm., 1895 [76].

Family HARPACTICIDAE

HARPACTICUS CHELIFER (O. F. Müller) Sars, 1911, V, p. 49.

In material dredged one mile off Spanish Head, 16 fm., 1896 [123].

HARPACTICUS FLEXUS Brady Sars, 1911, V, p. 53.

Common at Port St. Mary, L.W. to M.T., in pools, June 1932 (J.H.F.).

HARPACTICUS GRACILIS Claus Sars, 1911, V, p. 52.

Among weeds in a pool at Poyllvaaish, uncommon, Apl. 1932 (J.H.F.).

Breeding: females with egg sacs, Apl. (J.H.F.).

HARPACTICUS LITTORALIS G. O. Sars Sars, 1911, V, p. 363.

Common in pools at L.W. at Port St. Mary, Apl. 1932 (J.H.F.).

HARPACTICUS UNIREMIS Kröyer Sars, 1911, V, p. 51.

Very common among weed in pools at Poyllvaaish, Apl. 1932 (J.H.F.). Biological Station West Pond, rare, June-July 1934 (J.H.F.).

AMYMONE SPHAERICA Claus Brady, 1880, II, p. 28.

Port Erin Bay, 1893 [128].

TIGRIOPUS FULVUS (Fischer) Sars, 1911, V, p. 54.

Very abundant among *Enteromorpha* in pools of high salinity and often high temperature from M.T. to H.W.S.T. at Port St. Mary Ledges; also in the tanks at Port Erin Biological Station, June 1932 (J.H.F.). Present there throughout the year (H.B.M.). In the ponds at the Biological Station, Jan.-June, 1931 [135].

Breeding: females with egg-sacs throughout the year (J.H.F.).

ZAUS SPINATUS Goodsir Sars, 1911, V, p. 57.

Not uncommon among weeds in pools at Port Erin and at Port St. Mary, Apl. 1932 (J.H.F.). Dredged in Port Erin Bay, 1893 [149]. In material dredged one mile off Spanish Head, 16 fm., 1896 [123].

Breeding: females with egg sacs, Apl. (J.H.F.).

ZAUS GOODSIRI Brady Sars, 1911, V, p. 59.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off the Calf, 20 fm., 1893 [149]. In material dredged one mile off Spanish Head, 16 fm., 1896 [123]. Inside the Warts Bank, Aug. 1907 [87]. Seven miles west of Peel, 21 fm., 1895 [76].

Family PELTIDIIDAE

ALTEUTHA INTERRUPTA (Goodsir). *Sars*, 1911, V, p. 62.

In a pool at Port St. Mary (J.H.F.).

Family TEGASTIDAE

TEGASTES LONGIMANUS (Claus) *Sars*, 1911, V, p. 367.

One specimen dredged in 5 fm., in Port Erin Bay, 1893 [149].

Family PORCELLIDIIDAE

PORCELLIDIUM FIMBRIATUM Claus *Sars*, 1911, V, p. 76.

One specimen among weed in a pool at Poyllvaaish, Apl. 1932 (J.H.F.).

PORCELLIDIUM TENUICAUDA Claus *Brady*, 1880, II, p. 166.

Dredged in 20 fm., outside Port Erin Bay, 1893 [149].

PORCELLIDIUM VIRIDE (Philippi) *Philippi*, 1840, p. 190.

One specimen dredged in mud in Port Erin Bay, 4 fm., 1893 [149].

Family IDYIDAE

IDYA ANGUSTA G. O. *Sars* *Sars*, 1911, V, p. 95.

In the hatching ponds at Port Erin, rare, June 1934 (J.H.F.).

IDYA ENSIFERA (Fischer) *Sars*, 1911, V, p. 90.

A few specimens in rock pools at L.W. Port St. Mary, June 1932 (J.H.F.). In ponds at Biological Station, June 1934 (J.H.F.).

IDYA FURCATA (Baird) *Sars*, 1911, V, p. 88.

Not uncommon in pools at Port St. Mary, and one specimen from a pool at Port Erin, Apl. 1932 (J.H.F.). In the ponds at the Biological Station all the year round, 1922,-23 [136]. Very common there in summer, 1934 (J.H.F.).

IDYA GRACILIS T. Scott *Sars*, 1911, V, p. 94.

A number from shelly material, off Spanish Head, 16 fm., 1895 [122]. In the ponds at the Biological Station, Jan.-June 1920 [135].

IDYA LONGICORNIS T. Scott *Sars*, 1911, V, p. 92.

In the hatching ponds at Port Erin, rather rare, May 1934 (J.H.F.).

IDYA MINOR T. & A. Scott *Sars*, 1911, V, p. 90.

A few specimens amongst weed in pools at Port St. Mary, June 1932 (J.H.F.). Biological Station West Pond, May 1934 (J.H.F.).

IDYA TENERA G. O. Sars *Sars*, 1911, V, p. 91.

In the hatching ponds at Port Erin, common, May 1934 (J.H.F.).

PSAMATHE LONGICAUDA Philippi *Sars*, 1911, V, p. 83.

Dredged in Port Erin Bay, 1893 [148]. One specimen tow-net in Douglas Bay, 1889 [149].

ASPIDISCUS FASCIATUS Norman *Sars*, 1911, V, p. 81.

Among material dredged one mile off Spanish Head, 16 fm., 1896 [151].

Family THALESTRIDAE

THALESTRIS LONGIMANA Claus *Sars*, 1911, V, p. 104.

Common among weed in pools at Port Erin, June 1931 (H.B.M.). One specimen in a rock pool at Poyllvaaish, Apl. 1932 (J.H.F.).

THALESTRIS RUFOVIOLACENS Claus *Sars*, 1911, V, p. 107.

A few specimens dredged in Port Erin Bay, 4 fm., 1893 [149].

THALESTRIS BRUNNEA G. O. Sars *Sars*, 1911, V, p. 108.

Amongst weeds in a rock pool at Poyllvaaish, Apl. 1932 (J.H.F.). Biological Station West Pond, May 1934 (J.H.F.).

PARATHALESTRIS CLAUSI (Norman) *Sars*, 1911, V, p. 111.

In tidal pools at Fleshwick Bay, 1893 [149]. Trawled in the mouth of Port Erin Bay, 17 fm., 1895 [76].

PARATHALESTRIS HARPACTICOIDES (Claus) *Sars*, 1911, V, p. 112.

A few specimens in tow-nets at Port Erin and in Douglas Bay, May 1888 [148].

RHYNCHOTHALESTRIS RUFOCINCTA (Norman) *Sars*, 1911, V, p. 120.

In material from off Spanish Head, 16 fm., 1895 [123].

RHYNCHOTHALESTRIS HELGOLANDICA (Claus) *Sars*, 1911, V, p. 121.

Port Erin Bay, 1893 [149].

MICROTHALESTRIS FORFICULA (Claus) *Sars*, 1911, V, p. 123.

Very common among weed in pools in Port Erin Bay [116]. Off Port Erin, 1896 [78].

Breeding: females with egg sacs, Apl. (J.H.F.).

MICROTHALESTRIS LITTORALIS G. O. Sars *Sars*, V, 1911, p. 369.

Common in pools from low water to half-tide level at Port St. Mary, Jan. 1933 (J.H.F.).

DACTYLOPUSIA BREVICORNIS (Claus) Sars, 1911, V, p. 130.

Common in pools at Port Erin, Apl. 1932 (J.H.F.). In material dredged one mile off Spanish Head, 16 fm., 1895 [123]. A few in tidal pools at Douglas, 1893 [149].

DACTYLOPUSIA ROSTRATA T. Scott T. Scott, 1893, p. 205.

A single specimen dredged at Port Erin in 1894 (W.A.H.) [150].

DACTYLOPUSIA NEGLECTA G. O. Sars Sars, 1911, V, p. 127.

Common among weed in pools at Port St. Mary, June 1932 (J.H.F.).

DACTYLOPUSIA THISBOIDES (Claus) Sars, 1911, V, p. 126.

Abundant among weeds in pools at Port St. Mary, June 1932 (J.H.F.). Frequently dredged at Port Erin; also in tidal pools, 1893 [149]. In the ponds at the Biological Station, 1921 [135].

DACTYLOPUSIA VULGARIS G. O. Sars Sars, 1911, V, p. 128.

Very abundant in pools at Port St. Mary, June, 1932 (J.H.F.).

DACTYLOPUSIA FLAVA (Claus) Sars, 1911, V, p. 132, as *Dactylopodella flava*.

Occasionally in the dredge off the Calf, 20 fm., 1893 [149]. Off Halfway Rock, 18 fm., 1895 [76]. In material dredged one mile off Spanish Head, 16 fm., 1895 [123].

AMENOPHIA PELTATA Boeck Sars, 1911, V, pp. 136, 376.

Off Port Erin, 20 fm., 1893 [149]. Off Halfway Rock, 18 fm., 1895 [76]. In material from one mile off Spanish Head, 16 fm., 1895 [151].

WESTWOODIA MINUTA Claus Sars, 1911, V, p. 142.

A few specimens in rock pools at Poyllvaish, M.T., Apl. 1932 (J.H.F.). In the ponds at the Biological Station, 1921 [135]. Off Port Erin, 1896 [78].

WESTWOODIA MONENSIS (Brady) Sars, 1911, V, p. 377.

In the ponds at the Biological Station, 1921 [135].

WESTWOODIA NOBILIS (Baird) Sars, 1911, V, p. 140.

A few specimens in pools at Port Erin, Apl. 1932 (J.H.F.). Biological Station West Pond, rare, May 1934 (J.H.F.).

WESTWOODIA PYGMAEA (T. & A. Scott) Sars, 1911, V, p. 143.

Among weeds in pools, common at Poyllvaish, rare at Port Erin, Apl. 1932 (J.H.F.). In washings from sponges, Port Erin, Aug. 1894 [150].

Family DIOSACCIDAE

DIOSACCUS TENUICORNIS (Claus) Sars, 1911, V, p. 116.

Dredged, Port Erin Bay, 1893 [149].

PSEUDODIOSACCUS PROPINQUUS (T. & A. Scott) T. & A. Scott, 1893,
p. 237.

Port Erin, 1894 [150].

AMPHIASCUS DENTICULATUS (Thompson) Sars, 1911, V, p. 382.

Two females, on a muddy bottom, inside Port Erin breakwater,
1893 [149].

AMPHIASCUS HIRSUTUS (Thompson) T. Scott, 1894, p. 239, as *Stenhelia*
hirsuta.

A few specimens, male and female, twelve miles west of Port Erin,
39 fm., 1898 [149].

AMPHIASCUS HISPIDUS (Brady) Sars, 1911, V, p. 166.

Port Erin Bay, 1893 [149].

AMPHIASCUS IMUS (Brady) Sars, 1911, V, p. 156.

Dredged in Port Erin Bay, 1893 [149]. A single specimen in mud,
dredged in Port Soderick Bay, 1887 [148].

AMPHIASCUS LONGIROSTRIS (Claus) Sars, 1911, V, p. 159.

Common in low water pools at Port St. Mary, Jan. 1933 (J.H.F.).

AMPHIASCUS MINUTUS (Claus) Sars, 1911, V, p. 154.

In a pool at Port St. Mary, common, Jan. 1933 (J.H.F.). In the
ponds at the Biological Station, 1921 [135].

AMPHIASCUS TENUIREMIS (Brady) Sars, 1911, V, p. 161.

One specimen in a surface tow-net at Port Erin, 1893 [149]. In
material from one mile off Spanish Head, 16 fm., 1895 [123].

AMPHIASCUS THALESTROIDES G. O. Sars. Sars, 1911, V, p. 381.

Among weeds in pools at Port Erin, rare, Apl. 1932 (J.H.F.). A
single specimen in 20 fm., near the Calf, 1893 [149].

STENHELIA GIBBA Boeck Sars, 1911, V, p. 181.

Sparingly, dredged in 33 fm., off the Isle of Man, Jan. 1899 [152].

STENHELIA HERDMANI Scott A. Scott, 1896, p. 33.

In material from one mile off Spanish Head, 16 fm., 1895 [124]

STENHELIA PALUSTRIS (Brady) Sars, 1911, V, p. 185.

In mud, Port Erin, 1893 [149].

STENHELIA REFLEXA T. Scott. *T. Scott*, 1895, p. 166.

A few specimens dredged off Port Erin, June 1895 [122]. Seven miles west of Peel, 21 fm., 1895 [76].

STENHELIA SIMILIS Scott *A. Scott*, 1896, p. 34.

In material from one mile off Spanish Head, 15 fm., 1895, a considerable number [122].

Family CANTHOCAMPTIDAE

MESOCHRA PYGMAEA (Claus) *Sars*, 1911, V, p. 209.

Common in pools at M.T., Port St. Mary, Jan. 1933 (J.H.F.). In the ponds at the Biological Station, Port Erin, 1921 [135].

MESOCHRA MACINTOSHI T. Scott *T. & A. Scott*, 1895, p. 53.

A number in shelly material from one mile off Spanish Head, 16 fm., 1895 [122].

AMEIRA ATTENUATA Thompson *Sars*, 1911, V, pp. 397, 220.

Several specimens, nearly all females, dredged in mud, 7 fm., inside Port Erin Breakwater, 1893 [149]. In material from one mile off Spanish Head, 16 fm., 1895 [73].

AMEIRA EXIGUA T. Scott *T. Scott*, 1894, p. 243.

In washings from sponges, Port Erin, Aug. 1894 [150].

AMEIRA GRACILE Scott *A. Scott*, 1896, p. 37.

In material from one mile off Spanish Head, 16 fm., a number of specimens, 1895 [122].

AMEIRA LONGIPES Boeck *Sars*, 1911, V, p. 215.

Dredged in 20 fm., off the Calf, 1893 [149]. In material from one mile off Spanish Head, 16 fm., 1895 [123].

AMEIRA MINUTA Boeck *Sars*, 1911, V, p. 216.

Common among weeds in pools at Poyllvaish, Apl. 1932 (J.H.F.).
Breeding: females with egg sacs, Apl. (J.H.F.)

AMEIRA REFLEXA T. Scott *T. Scott*, 1894, p. 240.

In material from one mile off Spanish Head, 16 fm., 1895 [123].

PARAMEIRA LONGIREMIS (T. Scott) *Sars*, 1921, Suppl., p. 59.

In washings from sponges, Port Erin, Aug. 1894 [150]. Four specimens from the Warts Bank, Aug. 1906 [129].

STENOPIA LONGICAUDATA (T. Scott) *Sars*, 1911, V, p. 228.

One specimen dredged, 15 fm., between Port Erin and Peel, 1894 [150]. In material from one mile off Spanish Head, 16 fm., 1895 [123].

PARAMESOCYCLA DUBIA T. Scott *Sars*, 1911, V, p. 425.

In mud dredged in Port Erin Bay, 7 fm., 1893, numbers of specimens of both sexes [149]. In material from one mile off Spanish Head, 16 fm., 1895 [123].

LEPTOMESOCYCLA ATTENUATA (A. Scott) *Sars*, 1911, V, p. 419.

In material from one mile off Spanish Head, 16 fm., 1895, a few specimens [123].

PHYLLOPODOPSYLLUS BRADYI T. Scott *Sars*, 1911, V, p. 231.

In mud dredged in Port Erin Bay, 7 fm.; males plentiful; only a few females, 1893 [149].

TETRAGONICEPS TRISPINOSUS Scott *A. Scott*, 1896, p. 39.

In material from one mile off Spanish Head, 16 fm., two specimens, 1895 [122].

LEPTOPSYLLUS HERDMANI Thompson & Scott *Thompson & Scott*, 1899, p. 141.

In sand in front of the old Biological Station, Port Erin, Jan. 1897, not common [152].

LEPTOPSYLLUS INTERMEDIUS T. & A. Scott *T. & A. Scott*, 1895, p. 51.

Common in sand in front of the old Biological Station, Jan. 1897 [152].

PTEROPSYLLUS CONSIMILIS T. Scott *Sars*, 1911, V, p. 413.

A few specimens in material from one mile off Spanish Head, 16 fm., 1895 [122].

Family LAOPHONTIDAE

LAOPHONTE BREVIROSTRIS (Claus) *Sars*, 1911, V, p. 256.

Common among weeds in pools at Poyllvaash, Apl. 1932 (J.H.F.).
Breeding: females with egg sacs, Apl. (J.H.F.).

LAOPHONTE CORNUTA Philippi *Sars*, 1911, V, p. 235.

One specimen among weeds in a pool at Port Erin, Apl. 1932 (J.H.F.).

Breeding: female with egg sac, Apl. (J.H.F.).

- LAOPHONTE CURTICAUDA Boeck *Sars*, 1911, V, p. 252.
In material from one mile off Spanish Head, 16 fm., 1895 [123].
- LAOPHONTE DENTICORNIS T. Scott *Sars*, 1911, V, p. 264.
In dredgings, 33 fm., off the Isle of Man, Jan. 1899 [152].
- LAOPHONTE HORRIDA Norman *Sars*, 1911, V, p. 246.
A few of both sexes in Port Erin Bay, 4 fm.; one specimen, 39 fm., twelve miles north-west of Port Erin, 1893 [149].
- LAOPHONTE INOPINATA T. Scott *Sars*, 1911, V, p. 263.
In washings from sponges, Port Erin, Aug. 1894 [150].
- LAOPHONTE PROXIMA G. O. Sars *Sars*, 1911, V, p. 250.
One or two specimens in the ponds at the Biological Station, 1921 [135].
- LAOPHONTE SERRATA (Claus) *Sars*, 1911, V, p. 237.
Taken by electric light in Port Erin Bay, 1893 [149]. A few specimens washed from sponges, Port Erin, Aug. 1894 [122].
- LAOPHONTE SIMILIS (Claus) *Sars*, 1911, V, p. 244.
Abundant among weed in pools at Port Erin, and at Poyllvaish, Apl. 1932 (J.H.F.).
Breeding: females with egg sacs, Apl. (J.H.F.).
- LAOPHONTE STRÖMI (Baird) *Sars*, 1911, V, p. 251.
Not uncommon among weed in pools at Port St. Mary, Apl. and June 1932 (J.H.F.). In the ponds at the Biological Station, 1921 [135]. In material from one mile off Spanish Head, 16 fm., 1895 [123].
- LAOPHONTE THORACICA Boeck *Sars*, 1911, V, p. 240.
Seven miles west of Peel, 21 fm., 1895 [76].
- LAOPHONTOPSIS LAMELLIFERA (Claus) *Sars*, 1911, V, p. 266.
Swarming in mud from near the Breakwater, Port Erin, Oct. 1887 [78A].
- LAOPHONTODES BICORNIS A. Scott *A. Scott*, 1896a, p. 147.
Dredged off Port Erin, June 1895 [122]. In neritic material from off Spanish Head, 1896 [78].
- PSEUDOLAOPHONTE SPINOSA (Thompson) *Sars*, 1911, V, p. 428.
A number taken, one mile off Spanish Head, 16 fm., 1895 [122]. One male and one female, in mud from inside the breakwater, Port Erin, 7 fm., 1893 [149].

NORMANELLA DUBIA (Brady & Robertson) *Sars*, 1911, V, p. 278, as *N. minuta*.

A few specimens in mud dredged in Port Erin Bay, 4 fm., 1893 [149].

Family CLETODIDAE

ITUNELLA TENUIREMIS (T. Scott) *T. Scott*, 1896, p. 151; *T. Scott*, 1892, p. 204, as *Cletodes tenuiremis*.

Two specimens in the plankton in Port Erin Bay in 1911, 12 [131].

EURYCLETODES SIMILIS (T. Scott). *Sars*, 1911, V, p. 295.

A few specimens washed from sponges, Port Erin, Aug. 1894 [124].

MESOCLETODES MONENSIS (Thompson) *Sars*, 1921, VII, p. 80.

Several specimens, all females, in mud from 39 fm., twelve miles west of Port Erin, 1893 [149].

NANNOPUS PALUSTRIS Brady *Sars*, 1911, V, p. 307.

In mud dredged at Port Soderick, 1889 [148].

Family CYLINDROPSYLLIDAE

CYLINDROPSYLLUS LAEVIS Brady *Sars*, 1911, V, p. 321.

One specimen in mud from inside Port Erin Breakwater, 1893 [149].

Family TACHIDIIDAE

TACHIDIUS BREVICORNIS Lilljeborg *Sars*, 1911, V, p. 328.

In material from one mile off Spanish Head, 16 fm., 1895 [123].

DANIELSSENIA FUSIFORMIS (Brady) *Sars*, 1911, V, p. 338.

Dredged off the Calf, 20 fm., 1893 [149].

THOMPSONULA HYAENAE (I. C. Thompson) *T. Scott*, 1893, p. 202, as *Jonesiella hyaenae*.

In muddy sand in Port Erin Bay, 5 fm., several, all females, Apl. 1889 [147]. In considerable numbers on a muddy bottom in Port Erin Bay, 1893 [149].

Breeding: females with egg sacs, Apl. [147].

EUTERPINA ACUTIFRONS (Dana) *Sars*, 1921, VII, p. 97.

Port Erin Bay, Oct. 1905 [128]. Jan., Feb., May, Sept. 1906 [130]. Three miles west of Bradda Head, rare, Sept. 1906 [130]. 1911, in fair quantity in Port Erin Bay, Nov.-Jan.; absent for the rest of the year [89].

Family CLYTEMNESTRIDAE

- CLYTEMNESTRA ROSTRATA (Brady) *Giesbrecht*, 1892, pp. 566, 572.
One specimen in Port Erin Bay, Dec. 1910 [884].

Sub-Order CYCLOPOIDA

Family OITHONIDAE

- OITHONA HELGOLANDICA Claus *Sars*, 1918, VI, p. 8.

Generally distributed round the south of the island, common in the summer months [104, 128, 130, 135]. Present throughout the year, with a maximum in July [Summary of results for Port Erin Bay, 1907-1920] [104]. Biological Station West Pond, common in July 1934 (J.H.F.).

- OITHONA NANA *Giesbrecht* *Giesbrecht*, 1892, pp. 538, 549.
Port Erin, Mar. and Apl. 1906 [130].

Family CYCLOPINIDAE

- CYCLOPINA GRACILIS Claus *Sars*, 1918, VI, p. 11.

In the oyster ponds at Port Erin Biological Station, rare in June, extremely abundant in Aug. 1934 (J.H.F.). Mouth of Port Erin Bay, 17 fm., 1895 [76].

Breeding : young stages in the oyster ponds in Aug. (J.H.F.).

Family ASCOMYZONTIDAE

- ASCOMYZON LATUM (Brady) *Sars*, 1918, VI, p. 90.

One specimen dredged at Port Soderick, 1887 [148]. Port Erin Bay, dredged 1893 [149]. Mouth of Port Erin Bay, 17 fm., 1895 [76].

- ASCOMYZON BOECKI (Brady) *Sars*, 1918, VI, p. 88.

Dredged off the Calf, 20 fm., 1893 [149].

- ECHINOCHERES VIOLACEUS Claus *Sars*, 1918, VI, p. 93.

A few specimens, one mile off Spanish Head, 16 fm., 1895 [122].

- DERMATOMYZON NIGRIPES (Brady & Robertson) *Sars*, 1918, VI, p. 95.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. In material from one mile off Spanish Head, 16 fm., 1895 [123]. Seven miles west of Peel, 21 fm., 1895 [76].

- COLLOCHERES GRACILICAUDA (Brady) *Sars*, 1918, VI, p. 101.

Numbers dredged off Port Erin, 20 fm., 1893 [149]. Off Halfway Rock, 18 fm., 1895 [76].

- ACONTIOPHORUS SCUTATUS (Brady & Robertson) *Sars*, 1918, VI, p. 110.
Off Halfway Rock, 18 fm., 1895 [76].
- LEPTOMYZON ELEGANS (A. Scott). *Sars*, 1918, VI, p. 105.
One specimen dredged off Port Erin, 1895 [122].
- SCOTTOCHERES ELONGATUS (T. & A. Scott) *Sars*, 1918, VI, p. 107.
One specimen washed from *Pecten maximus*, 15 fm., off Port Erin, 1894 [150]. Seven miles west of Peel, 21 fm., 1895 [76].
- SCOTTOMYZON GIBBERUM (T. Scott) *Sars*, 1918, VI, p. 212.
Mouth of Port Erin Bay, 17 fm., 1895 [76].
- NICOTHOË ASTACI Audouin & M. Edwards *Leigh-Sharpe*, 1926, p. 148.
On the branchiae of *Homarus vulgaris*, Port Erin, 1899 [152].

Family DYSPONTIIDAE

- DYSPONTIUS STRIATUS Thorell *Sars*, 1918, VI, p. 118.
Off Halfway Rock, 18 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76].
- BRADYPONTIUS MAGNICEPS (Brady) *Sars*, 1918, VI, p. 124.
Mouth of Port Erin Bay, 17 fm., 1895 [76]. Dredged off the Calf, 1893 [149]. Seven miles west of Peel, 21 fm., 1895 [76].
- CRIBROPONTIUS NORMANI (Brady) *Sars*, 1918, VI, p. 130.
One specimen dredged off the Calf, 20 fm., 1893 [149].

Family ARTOTROGIDAE

- ARTOTROGUS ORBICULARIS Boeck *Sars*, 1918, VI, p. 133.
Off Halfway Rock, 18 fm., 1895 [76].
- PARARTOTROGUS ARCTICUS T. Scott *Sars*, 1918, VI, p. 136.
Among refuse, off Peel, 1896 [78].

Family CANCERILLIDAE

- CANCERILLA TUBULATA Dalyell *Sars*, 1918, VI, p. 139.
Dredged at Port Erin, probably detached from *Ophiocomina nigra* or *Ophiothrix fragilis*, 1894 [150].

Family LICHOMOLGIDAE

LICHOMOLGUS FORFICULA Thorell *Sars*, 1918, VI, p. 153.

Seven miles west of Peel, 21 fm., 1895 [76].

LICHOMOLGUS FUCICOLUM Brady *Sars*, 1918, VI, p. 163.

Dredged in Port Erin Bay, 1893 [149]. In material from one mile off Spanish Head, 16 fm., 1895 [123].

LICHOMOLGUS FURCILLATUS Thorell *Brady*, 1880, III, p. 49.

A few specimens in mud, Port Erin Bay, 4 fm., 1893 [149]. In material from one mile off Spanish Head, 16 fm., 1895 [123].

LICHOMOLGUS THORELLII Brady & Robertson *Brady*, 1880, III, p. 47.

One specimen in mud from Port Erin Bay, 4 fm., 1893 [149].

HERMANELLA MAXIMA I. C. Thompson *Thompson*, 1893, p. 208.

In *Pecten maximus* dredged off Port Erin, 20 fm., 1893 [149]. Across the mouth of Port Erin Bay, 17 fm., Oct. 1895 [76].

PSEUDANTHESIIUS LIBER (Brady) *Sars*, 1918, VI, p. 169.

Dredged off the Calf in 20 fm., and in Port Erin Bay in 4 fm., 1893 [149]. Off Halfway Rock, 18 fm., 1895 [76].

MODIOLICOLA INSIGNIS Aurivillius *Sars*, 1918, VI, p. 173.

One specimen dredged some miles off Peel, June 1895 [151].

Family ONCAEIDAE

ONCAEA MINUTA Giesbrecht *Sars*, 1918, VI, p. 217.

One or two specimens (females) in the plankton, Port Erin Bay, 1910,-11 [131].

ONCAEA SUBTILIS Giesbrecht *Giesbrecht*, 1892, pp. 591, 603.

Port Erin Bay, Dec. 1910 [131].

Family CORYCAEIDAE

CORYCAEUS ANGLICUS Lubbock *Sars*, 1918, VI, p. 196.

One specimen in a tow-net at Port Erin, Nov. 1898; a shoal of it off Port Erin, May 1899 [152]. Port Erin Bay, Dec. 1910 [88A].

Sub-Order MONSTRILLOIDA

Family MONSTRILLIDAE

MONSTRILLA ANGLICA Lubbock *T. Scott*, 1903, p. 246.

One specimen, four miles north-west of Cronk-ny-Arrey-Laa, Sept. 1906 [130].

MONSTRILLA LONGICORNIS I. C. Thompson Sars, 1921, VIII, p. 11.

Port Erin, Dec. 1905 [128]. Sept. 1906 [130]. Peel to Jurby, Aug. 1906, one specimen; four miles west of Cronk-ny-Arrey-Laa, Sept. 1906, one specimen [130].

Sub-Order NOTODELPHOIDA

Family NOTODELPHIDAE

NOTODELPHYS ALLMANI Thorell Sars, 1921, VIII, p. 31.

A few specimens of both sexes in the branchial sacs of *Ciona intestinalis*, off the south end of the island, 1888 [148]. Parasitic on ascidians at various localities, 1892 [73].

Family DOROPYGIDAE

DOROPYGUS PULEX Thorell Sars, 1921, VIII, p. 42.

In the branchial sacs of *Ciona intestinalis*, off the south end of the island, 1888; *Ascidiella scabra*, dredged in Groudle Bay; *Ascidia plebeia*, off the Calf, 20 fm., 1888 [148].

DOROPYGUS PORICAUDA Brady Sars, 1921, VIII, p. 45.

One specimen in the branchial sac of *Ascidia plebeia*, off the Calf, 1888 [148].

NOTOPTEROPHORUS PAPILIO Hesse Sars, 1921, VIII, p. 55.

In the branchial sacs of ascidians at various localities round the Isle of Man, 1891 [73].

BOTACHUS CYLINDRATUS Thorell Sars, 1921, VIII, p. 59.

In the branchial sacs of *Ascidia mentula*, and *Ascidiella scabra*, about twelve females and one male, 1889 [148].

Family ASCIDICOLIDAE

ASCIDICOLA ROSEA Thorell Sars, 1921, VIII, p. 64.

In the branchial sac of a simple ascidian, dredged off the south end of the Isle of Man, 1885 [146].

Sub-Order CALIGOIDA

Family CALIGIDAE

CALIGUS RAPAX M.-Edwards T. & A. Scott, 1913, I, p. 48.

Single specimens from *Cyclopterus lumpus*, Port Erin, June 1931, and Oct. 1932 (H.B.M.). Two specimens, off the Calf, Aug. 1906 [130].

CALIGUS GURNARDI Kröyer T. & A. Scott, 1913, I, p. 52.

One specimen dredged off Port Erin, 26 fm., Nov. 1898 [152].

CALIGUS PELAMYDIS Kröyer T. & A. Scott, 1913, I, p. 57.

One specimen on the gills of *Scomber scomber*, Sept. 1931 (R.A.F.).

PSEUDOCALIGUS BREVIPEDES (Bassett-Smith) T. & A. Scott, 1913, I, p. 61.

Inside the operculum of *Motella tricirrata*, Port Erin Bay, 1928 [137].

TREBIUS CAUDATUS Kröyer T. & A. Scott, 1913, I, p. 81.

A considerable number on the back of *Raja batis*, caught off Port Erin, Aug. 1933 (H.B.M.).

ECHTHROGALEUS COLEOPTRATUS (Guérin) T. & A. Scott, 1913, I, p. 89.

One specimen, female, on first dorsal fin of *Acanthias vulgaris*, caught five to seven miles west of Port Erin, May 1937 (H.W., det. G.P.F.).

Family DICHELESTIIDAE

KROYERIA LINEATA van Beneden T. & A. Scott, 1913, I, p. 121.

Between the gill rays of a male specimen of *Galeorhinus galeus*, King William's Bank, Apl. 1912 [138].

EUDACTYLINA INSOLENS T. & A. Scott T. & A. Scott, 1913, I, p. 135.

Four males on the gill filaments of *Galeorhinus galeus*, King William's Bank, Apl. 1912 [138].

Sub-Order LERNAEOIDA

Family CHONDRACANTHIDAE

CHONDRACANTHUS MERLUCCII (Holten) T. & A. Scott, 1913, I, p. 180.

On *Merluccius merluccius*, caught off the Calf, 1896 [78]. On the roof and sides of the mouth, under the tongue, and inside the operculum of *Merluccius merluccius*, taken round the Isle of Man, usually common, 1928 [137].

Family LERNAEOPODIDAE

LERNAEOPODA BIDISCALIS Kane T. & A. Scott, 1913, I, p. 200.

Parasitic in spiracle of *Acanthias vulgaris*, caught five to seven miles west of Port Erin, May 1937 (H.W., det. W.E.F.).

BRACHIELLA INSIDIOSA Heller *T. & A. Scott*, 1913, I, p. 206.

Parasitic on the gill rays of *Merluccius merluccius*, caught near the Isle of Man, moderately common, 1928 [137].

BRACHIELLA MERLUCCII Bassett-Smith *T. & A. Scott*, 1913, I, p. 207.

Parasitic on the gill rays of *Merluccius merluccius*, caught near the Isle of Man, not uncommon, 1928 [137].

CLAVELLISA EMARGINATA (Kröyer) *T. & A. Scott*, 1913, I, p. 218.

On the gills of *Clupea alosa* caught off Peel, a single specimen, Sept. 1933 (H.B.M.).

Sub-Class CIRRIPIEDIA

Order THORACICA

Family SCALPELLIDAE.

SCALPELLUM SCALPELLUM (Linné) *Darwin*, 1851, I, p. 222, as *S. vulgare*.

Generally distributed, but not very common; usually on hydroids; one specimen in Bay Fine on *Nemertesia antennina*, Nov. 1933; one on the Breast, Sept. 1931, and one in Nov. 1933 (H.B.M.). Off Bay Fine, 1900 [90]. Four miles west of Dalby, 25 fm., 1893 [74]. Five miles west of Dalby, 30 fm., 1894 [75]. Five to eight miles west of Dalby, 20 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Six miles north-west of Port Erin, 33 fm., 1893 [74]. Four miles off Glen Meay, 21 fm., 1894 [75]. Between Laxey and the Dhoon, 1890-91 [172].

Family LEPADIDAE

LEPAS ANATIFERA Linné *Darwin*, 1851, I, p. 73.

Port Erin, Sept. 1915, a large number (W.A.H.). A large specimen on a floating bottle, off Port Erin, Apl. 1933 (H.B.M.).

LEPAS PECTINATA Spengler *Darwin*, 1851, I, p. 85.

Several specimens on a drifting box, taken off Port Erin, Apl. 1933 (H.B.M.).

LEPAS HILLII Leach *Darwin*, 1851, I, p. 177.

A large number on a floating box, taken off Port Erin, Apl. 1933 (H.B.M.).

Family VERRUCIDAE

VERRUCA STROEMIA (O. F. Müller) *Darwin*, 1854, II, p. 518.

Not uncommon under stones between L.W.O.S.T. and L.W.E.S.T. Chapel Bay and Fleshwick Bay; one specimen dredged on a shell of

Cantharidus clelandi off Port Erin, 1932 (H.B.M.). On *Laminaria* at Port Erin, 1886 [113].

Breeding: full of nauplii, ready to hatch, 25 Mar. 1933 (H.B.M.).

Family CHTHAMALIDAE

CHTHAMALUS STELLATUS (Poli) *Darwin*, 1854, II, p. 455.

Recorded as very common in shore pools at Fleshwick Bay, 1886 [113]. If record is correct, which seems doubtful, this must have been an abnormal year, as I have not been able to find it there or elsewhere in the neighbourhood recently (H.B.M.).

Family BALANIDAE

BALANUS PORCATUS da Costa *Darwin*, 1854, II, p. 256.

Fairly common under boulders at L.W.E.S.T. on the Breakwater at Port Erin. Several specimens on shells, one mile west of Port Erin, 15 fm., Mar. 1931 (H.B.M.). Three miles west of Fleshwick, 20 fm., 1892 [73]. Eight miles west of Fleshwick, 33 fm., 1892 [73].

BALANUS CRENATUS Bruguière *Darwin*, 1854, II, p. 261.

Numerous on the walls of the upper storage tank at Port Erin, July 1931 (H.B.M.). On stones near the Breakwater, Port Erin, 1935 (N.B.E.). On a spar from S.S. "Citrine," wrecked off Port Erin, Mar. 1931. Spar brought ashore Oct. 1931 (H.B.M.). On *Mytilus edulis* from Ramsey Pier at L.W., Oct. 1931 (H.B.M.).

BALANUS BALANOIDES (Linné) *Darwin*, 1854, II, p. 267.

In great quantities on the rocks between tide marks on the whole coast: H.W.N.T. to L.W.S.T. in exposed situations; H.W.N.T. to M.T. in shelter. Very large specimens at Kirk Michael (H.B.M.).

Breeding: in Port Erin Bay, nauplius larvae, Feb.-Apl., maximum in March; cypris larvae, Apl.-June, maximum in May [Summary for years 1907-20] [104]. 1932, first nauplii seen in the tow-nettings on Mar. 15th. First cypris settled on the rocks 26th Apl. 1932, 25th Apl. 1933, 25th Apl. 1934 (H.B.M.).

BALANUS IMPROVISUS *Darwin* *Darwin*, 1854, II, p. 250.

Common on the walls of the east pond at the Biological Station at Port Erin, 1932. In the upper storage tank, together with var. *assimilis*, July 1931. Var. *assimilis* in boxes in the hatchery, and under boards in the west pond, Oct. 1931 (H.B.M.).

BALANUS HAMERI (Ascanius) *Darwin*, 1854, II, p. 277.

Frequently taken on long lines by fishermen on the outer side of Bank Charles, south of Spanish Head, in about 25 fm. (H.B.M.). Off the Isle of Man, 12 fm., no locality given (*Darwin*).

Order ACROTHORACICA

Family PELTOGASTRIDAE

GALATHEASCUS STRIATUS Boschma *Boschma*, 1929, p. 73.

One specimen on *Galathea strigosa*, Port Erin, 1910 or 1911 (N.B.E., det. Boschma. Specimen in British Museum).

SACCULINA CARCINI Thompson *van Beneden*, 1861, p. 154; *Kruger*, 1927, p. 6.

One specimen, parasitic on *Macropodia longirostris* off Fleshwick, Apl. 1931 (H.B.M.). Two specimens on the Breast, 1931 [116]. On the Breast, Oct. 1933. One specimen on *Atelecyclus septemdentatus*, Bay Fine, Mar. 1934 (H.B.M.).

Sub-Class MALACOSTRACA

Order CUMACEA

Family CUMIDAE

BODOTRIA SCORPIOIDES (Montagu) *Sars*, 1900, p. 12, as *Cuma edwardsii*.

A few specimens in mud in Port St. Mary harbour at L.W.O.S.T., 1932 (W.T.C., H.B.M.).

BODOTRIA ARENOSA Goodsir *Sars*, 1900, p. 10, as *Cuma scorpioides*; *Stebbing*, 1913, p. 27.

One specimen at the water's edge at Port Erin, July, 1932 (H.B.M.).

IPHINOË TRISPINOSA (Goodsir) *Sars*, 1900, p. 14.

Not uncommon in dredgings in Port Erin Bay; one specimen at L.W.N.T., in Port St. Mary harbour (H.B.M.). Very abundant at Port Erin by electric light, 1892 [161]. One specimen in night tow-netting from Port Erin buoy, Nov. 1897 [167].

IPHINOË TENELLA G. O. *Sars* *Stebbing*, 1913, p. 47.

Off North Bank, Peel, June, 1895 [165].

CUMOPSIS GOODSIRI (van Beneden) *van Beneden*, 1861, p. 76, as *Bodothria goodsiri*.

A few specimens from sandy mud from M.T. down in Chapel Bay and Brewery Beach, 1932 (H.B.M.).

Family LEUCONIDAE

LEUCON NASICUS Kröyer *Sars*, 1900, p. 30.

In tow-netting, twelve miles south-west of the Chickens Rock, 33 fm., Apl. 1896 [166].

EUDORELLA EMARGINATA (Kröyer) Sars, 1900, p. 36.

Twelve miles south-west of the Chickens Rock, 33 fm., Apl. 1896 [166].

EUDORELLA TRUNCATULA (Bate) Sars, 1900, p. 37.

Port Erin Bay, 1900 [90].

EUDORELLOPSIS DEFORMIS (Kröyer) Stebbing, 1913, p. 82.

On the bottom, north-west of the Bahama Light, 1900 [125].

Family DIASTYLIDAE

DIASTYLOIDES BIPPLICATA G. O. Sars Sars, 1900, p. 62.

Several adults, eight miles west of Fleshwick, 33 fm., 1893 [162].

Family PSEUDOCUMIDAE

PSEUDOCUMA CERCARIA (van Beneden) Sars, 1900, p. 74.

Males only, abundant at Port Erin by electric light, 1892 [161].

PSEUDOCUMA SIMILIS Sars Sars, 1900, p. 76.

On the bottom, north-west of the Bahama light-ship, 1900 [125].

PETALOSARSIA DECLIVIS Sars Sars, 1900, p. 77.

Eight miles west of Fleshwick, 33 fm., 1894 [164].

Family CAMPYLASPIDAE

CAMPYLASPIS GLABRA G. O. Sars Sars, 1900, p. 86.

Three specimens, twelve miles south-west of the Chickens Rock, 33 fm., Apl. 1896 [166].

CAMPYLASPIS MACROPTALMA G. O. Sars Stebbing, 1913, p. 195.

Four and a half miles west of Cronk-ny-Arrey-Laa, 22 fm., 1894 [75].

Order LEPTOSTRACA

NEBALIA BIPES (Fabricius) Sars, 1896, p. 9.

Fairly common under stones at and below m.t. at Fleshwick, 1930; under stones, m.t., Port St. Mary, Apl. 1933 (J.H.O.). Port Erin Bay, L.W.S.T., Apl. 1935 (F.J.B.). Under stones, Port Erin, 1900 [90]. One specimen, dredged in Port Erin Bay (H.B.M.). Twelve miles south-west of the Chickens Rock, 33 fm., 1896 [78].

Order TANAIIDACEA

Family TANAIIDAE

TANAIS CAVOLINI M.-Edwards Sars, 1899, p. 12, as *T. tomentosus*.

Common on rocks, M.T. to L.W.N.T., on Castletown Ledges, 1934 (H.B.M.). At Port Erin in old wooden piles bored by *Limnoria lignorum*, 1911 [145].

PARATANAIS BATEI Sars Sars, 1899, p. 16.

One specimen on *Thyone raphanus*, Bay Fine, 12 fm., Apl. 1933 (H.B.M.). From *Pecten maximus*, Port Erin, 1893 [162].

TANAOPSIS LATICAUDATA G. O. Sars Sars, 1899, p. 32.

Port Erin harbour, 1893 [162].

Order ISOPODA

Sub-Order FLABELLIFERA

Family ANTHURIDAE

ANTHURA GRACILIS (Montagu) Norman & Stebbing, 1886, p. 122.

Three specimens in empty *Pomatoceros triqueter* tubes, dredged, Bay Fine, Apl. 1932 (J.H.F.). Aldrick and Bay Fine, 15-20 fm., 1893 [74].

Family GNATHIIDAE

GNATHIA DENTATA G. O. Sars Sars, 1899, p. 54; *Monod*, 1926, p. 516.

Two females, six miles west-south-west of the Calf, 20-30 fm., Sept. 1900 [169].

GNATHIA MAXILLARIS (Montagu) *Monod*, 1926, p. 521.

Castletown, between tide marks, one specimen, Apl. 1933; Port Erin, L.W.N.T., in a crevice in the rock, one male, Apl. 1934 (H.B.M.). Males and females with eggs, inside *Grantia compressa*, Port Erin, 1892 [9].

Family CIROLANIDAE

CIROLANA BOREALIS Lilljeborg Hansen, 1890, p. 321.

One specimen taken on a cod near Port Erin, Apl. 1933 (H.B.M.). Off Port Erin, Apl. 1895 [165].

CONILERA CYLINDRACEA (Montagu) Hansen, 1890, p. 358.

In crab pots at Port Erin, 1910, and Mar. 1933 (H.B.M.). Round the Calf, 1893 [74]. Aldrick and Bay Fine, 15-20 fm., 1893 [74].

EURYDICE PULCHRA Leach *Sars*, 1899, p. 73.

Common from M.T. to H.W.N.T. at Port Erin and Kirk Michael, smaller numbers from M.T. to L.W.N.T. at Derby Haven and Brewery Beach (H.B.M.).

EURYDICE INERMIS Hansen *Hansen*, 1890, p. 366.

One specimen in a surface tow-netting, two miles west of Bradda Head, 1906 [130].

Family LIMNORIIDAE

LIMNORIA LIGNORUM (Rathke) *Sars*, 1899, p. 76.

Common in wooden piles at Port Erin, together with *Chelura terebrans*, 1933 (H.B.M.). In old wooden piles at Port Erin, 1911 [145].

Family SPHAEROMIDAE

CYMODOCE TRUNCATA (Montagu) *Bate & Westwood*, 1868, p. 426, as *Cymodocea truncata*.

Two specimens in *Zostera* at L.W.E.S.T. in Chapel Bay in 1931, and one specimen in 1932 (H.B.M.), Port Erin, 1894 [164].

NAESA BIDENTATA (Adams) *Bate & Westwood*, 1868, p. 431, and p. 419 (female) as *Dynamena rubra*.

Port St. Mary, L.W.E.S.T.; Fleshwick, L.W.O.S.T., under stones, Apl. 1934 (N.B.E.). On weeds, Port Erin, 1900 [90].

Sub-Order VALVIFERA

Family IDOTEIDAE

IDOTEA BALTICA (Pallas) *Sars*, 1899, p. 80.

Common, trawled in Port Erin Bay and Bay Fine, 1932; one specimen at L.W.E.S.T. in Chapel Bay among *Zostera*, Mar. 1932 (H.B.M., det. J.O.-C.). Niarbyl, 1935 (N.B.E.). On weeds in Port Erin Bay and generally distributed, 1900 [90]. Port Erin Bay and between Peel and Jurby, single specimens, 1906 [130]. Port Erin Bay, 1895 [76].

IDOTEA PELAGICA Leach *Sars*, 1899, p. 81.

One specimen on Port Erin harbour buoy, Sept. 1910 (W.A.H.). One female in a tow-netting in Port Erin Bay, 1903 [91].

IDOTEA GRANULOSA Rathke *Sars*, 1899, p. 82.

In crevices and pools, Port Erin, about M.T. (J.H.F., H.B.M.). L.W., Port Erin, 1903 [91].

IDOTEA VIRIDIS (Slabber) *Sars*, 1899, p. 83.

On weeds, Port Erin Breakwater, 1900 [90].

IDOTEA LINEARIS (Pennant) *Bate & Westwood*, 1868, p. 388.

Single specimens dredged in Port Erin Bay and Bay Fine (H.B.M., det. J.O.-C.).

IDOTEA EMARGINATA (Fabricius) *Sars*, 1899, p. 85.

Immature specimens common in the trawl in Port Erin Bay, Mar. 1932 (H.B.M., det. J.O.-C.). One specimen in a pool at L.W.S.T. at Niarbyl, Apl. 1935 (N.B.E.).

Breeding: Thousands with eggs and young, Apl. 1936 (N.B.E.)

IDOTEA NEGLECTA G. O. *Sars Sars*, 1899, p. 84.

Abundant in pools at Niarbyl, 1935 (N.B.E.). One specimen trawled in the mouth of Port Erin Bay, Mar. 1932 (H.B.M., det. J.O.-C.).

Family ARCTURIDAE

ASTACILLA LONGICORNIS (Sowerby) *Sars*, 1899, p. 88.

One specimen off Fleshwick, Nov. 1933, and one in Bay Fine (H.B.M.). Seven miles west of Fleshwick, and between Port Erin and the Calf, 1893 [74].

Sub-Order ASELLOTA

Family JANIRIDAE

JANIRA MACULOSA Leach *Sars*, 1899, p. 99.

Under stones, on the ledges, Port St. Mary [116]. Round the Calf, 1893 [74].

JAERA MARINA (Fabricius) *Sars*, 1899, p. 104.

Under stones at about H.W.N.T., where fresh water runs into the sea, on rocky or gravelly shores: Spaldrick, Fleshwick Bay, Perwick Bay, 1930 [115].

JAERA NORDMANNI (Rathke) *Norman & Scott*, 1906, p. 48.

Port St. Mary, numerous, Apl. 1931 (H.B.M., det. J.O.-C.).

Family MUNNIDAE

MUNNA KRÖYERI Goodsir *Sars*, 1899, p. 109.

One specimen among *Crisia*, Calf Sound, L.W.S.T., Apl. 1935 (N.B.E.).

Sub-Order ONISCOIDEA

Family LIGIIDAE

LIGIA OCEANICA (Linné) Sars, 1899, p. 156.

Common in clefts in the rock at and above high water, Port Erin (H.B.M.), 1900 [90].

Sub-Order EPICARIDA

Family BOPYRIDAE

PSEUDIONE HYNDMANNI Bate & Westwood *Bonnier*, 1900, p. 295.

Male and female on *Eupagurus bernhardus*, near the Bahama light, 1902 [126].

PSEUDIONE INSIGNIS Giard & Bonnier *Bonnier*, 1900, p. 301.

On *Galathea squamifera*, Port Erin, 1893 [140].

PLEUROCRYPTA LONGIBRANCHIATA (Bate & Westwood) Sars, 1899, p. 206.

One male and female in the gill chamber of *Galathea squamifera*, shore, Port St. Mary, and one male and female in *G. nexa*, the Breast, 20 fm., Apl. 1934 (H.B.M.).

PLEUROCRYPTA INTERMEDIA Giard & Bonnier *Bonnier*, 1900, p. 313.

On *Galathea intermedia*, the Breast, one specimen (H.B.M.). Off Bay Fine, 1900 [90]; Apl. 1936 (D.M.H.).

Breeding: Female with developing eggs, Apl. 1936.

PLEUROCRYPTA HENDERSONI Giard & Bonnier *Bonnier*, 1900, p. 315.

On *Galathea dispersa*, near the Bahama light, 1902 [126].

PLEUROCRYPTA PORCELLANAE Hesse *Bonnier*, 1900, p. 317.

Two specimens on *Porcellana longicornis*, 1912 [145].

Family CRYPTONISCIDAE

HEMIONISCUS BALANI (Spence Bate) Sars, 1899, p. 236, as *Cryptothir balani*.

One female in the mantle cavity of *Balanus balanoides* from H.W.N.T., on the Alfred Pier, Port St. Mary, Feb. 1934. Not seen previously, although large numbers of barnacles from around Port Erin have been opened (H.B.M.).

Order AMPHIPODA

Sub-Order GAMMARIDEA

Family LYSIANASSIDAE

PERRIERELLA AUDOUINIANA (Bate) *Chevreux & Fage*, 1925, p. 34.

On a sponge, twenty-two miles south-east of the Isle of Man; among broken shells and gravel, off Fleshwick, 1895 [163]. From *Pecten maximus*, Port Erin, 1893 [74].

NORMANION QUADRIMANUS (Bate & Westwood) *Chevreux & Fage*, 1925, p. 35.

One specimen, six miles west of the Calf, 23 fm., 1896 [166].

SOCARNES ERYTHROPHALMUS Robertson *Chevreux & Fage*, 1925, p. 50.

Port Erin, 15-20 fm., 1894 [164].

HIPPOMEDON DENTICULATUS (Bate) *Chevreux & Fage*, 1925, p. 53.

Taken at Port Erin by electric light, 1895 [163].

SCOPELOCHEIRUS CRENATA Bate Sars, 1895, p. 53, as *Callisoma crenata*.

Off Port Erin, Apl. 1895 [165].

TMETONYX SIMILIS (G. O. Sars) *Chevreux & Fage*, 1925, p. 69.

Laxey Bay, 8 fm., one specimen, 1895 [163].

ORCHOMENELLA NANA (Kröyer) *Chevreux & Fage*, 1925, p. 71.

Off Port Erin, 15-20 fm., 1895 [163].

EUONYX CHELATUS Norman Sars, 1895, p. 117.

One specimen, one mile south of Port Erin, 17 fm., Apl. 1931 [116].

Family AMPELISCIDAE

AMPELISCA BREVICORNIS (Costa) *Chevreux & Fage*, 1925, p. 77.

Taken at Port Erin with electric light, 1895 [163]. Fairly common in Chapel Bay from L.W.N.T. down; single specimens between L.W.N.T. and L.W.O.S.T., in Port St. Mary harbour and at Derby Haven (H.B.M.).

AMPELISCA MACROCEPHALA Lilljeborg Sars, 1895, p. 172.

Off Port Erin, 10-20 fm., one large female, Aug. 1893 [162].

AMPELISCA SPINIPES Boeck *Chevreux & Fage*, 1925, p. 81.

Generally distributed, 20-50 fm., 1895 [163].

AMPELISCA TENUICORNIS Lilljeborg *Chevreux & Fage*, 1925, p. 83.

Port Erin. Five miles west of Dalby, 30 fm., sandy mud.
Six miles west of Contrary Head, 38 fm., mud, 1895 [163].

AMPELISCA TYPICA (Bate) *Chevreux & Fage*, 1925, p. 84.

Several dredged in Port Erin Bay, Apl. 1933 (H.B.M.). Taken at Port Erin with electric light, 1895 [163].

Family ARGISSIDAE

ARGISSA HAMATIPES (Norman) *Norman*, 1869, p. 259 as *Syrrhoë hamatipes*.

Two females, with ova, taken twelve miles south-west of the Chickens Rock, 33 fm., 1896 [166].

Family HAUSTORIIDAE

BATHYPOREIA GUILLIAMSONIANA (Bate) *Chevreux & Fage*, 1925, p. 92.

A number trawled in 1-3 fm., in Port Erin Bay, Apl. 1933; trawled abundantly at Gob-yn-Ushy and in Niarbyl Bay, Apl. 1933 (H.B.M.). Common in sand about M.T. in Castletown Bay [116]. Taken with electric light in Port Erin Bay: off Garwick Head, 1895 [163].

BATHYPOREIA PELAGICA Bate *Chevreux & Fage*, 1925, p. 93.

Very common in the sand about L.W.N.T. at Brewery Beach. Fairly common at all levels at Douglas and from M.T. down, Kirk Michael. A single specimen in Chapel Bay (H.B.M.). Port Erin harbour, abundant, 1895 [163] and 1900 [90]. Not taken there recently (H.B.M.).

HAUSTORIUS ARENARIUS (Slabber) *Chevreux & Fage*, 1925, p. 95.

Common in the sand about M.T. at Brewery Beach. Fairly common at Port Erin, Castletown and Kirk Michael. A few at Ramsey (H.B.M.).

UROTHOË MARINA (Bate) *Chevreux & Fage*, 1925, p. 97.

Several adult specimens of both sexes, two miles south-east of Kitterland, 17 fm., 1895 [163].

UROTHOË BREVICORNIS Bate *Chevreux & Fage*, 1925, p. 100.

Common in the sand, from about M.T. down, at Port Erin, Ramsey and Kirk Michael; a few at Derby Haven (H.B.M., det. G.I.C.). One male off Kitterland, 20 fm., 1894 [164].

Family PHOXOCEPHALIDAE

PARAPHOXUS OCULATUS G. O. Sars *Sars*, 1895, p. 149.

Seven miles off Bradda Head, 31 fm., one specimen, 1895 [163].

METAPHOXUS FULTONI (T. Scott) *Chevreux & Fage*, 1925, p. 106.

Taken with electric light at Port Erin; also dredged, 15-20 fm., 1895 [163].

HARPINIA CRENULATA Boeck *Chevreux & Fage*, 1925, p. 110.

Seven miles west of Bradda Head, 39 fm., three adult specimens, 1895 [163].

HARPINIA ANTENNARIA Meinert *Chevreux & Fage*, 1925, p. 108, as *H. della-vallei*.

Port Erin, 1893 [161A]. Five miles west of Dalby, 30 fm., on sandy mud, 1895 [163].

HARPINIA LAEVIS G. O. Sars *Sars*, 1895, p. 161.

Two specimens in mud, seven and a half miles west of Niarbyl, 45 fm., mud, 1894 [164].

Family AMPHILOCHIDAE

AMPHILOCHUS MANUDENS Bate *Chevreux & Fage*, 1925, p. 114.

Two miles south-east of Kitterland, 17 fm., 1895 [163]. Off Halfway Rock, 18 fm., 1895 [76].

AMPHILOCHOIDES ODONTONYX (Boeck) *Chevreux & Fage*, 1925, p. 116.

Eight miles west of Fleshwick, 33 fm., 1892 [73].

GITANA SANSI Boeck *Chevreux & Fage*, 1925, p. 118.

Eight miles west of Fleshwick, 33 fm., 1895 [163].

PELTOCOXA BREVIROSTRIS (T. and A. Scott) *Chevreux & Fage*, 1925, p. 120.

Eight miles west of Fleshwick, 33 fm., 1895 [163]. Off Halfway Rock, 18 fm., 1895 [76].

PELTOCOXA MARIONI Catta *Chevreux & Fage*, 1925, p. 119.

Eight miles west of Fleshwick, 33 fm., June, 1892 [73].

Family LEUCOTHOIDAE

LEUCOTHOË LILLJEBORGI Boeck *Chevreur & Fage*, 1925, p. 124.

Port Erin, 15-20 fm., 1894 [164]. In *Chlamys opercularis*, four miles west of Dalby, 25 fm., shell bottom, 1893 [74].

LEUCOTHOË SPINICARPA (Abildgaard) *Chevreur & Fage*, 1925, p. 122.

From the south-east coasts of the Isle of Man, in the branchial sacs of *Ascidia venosa* and *Ascidia mentula*; off Port Erin, washed out of *Pecten*, 1895 [163]. Off Halfway Rock, 18 fm., 1895 [76]. From *Ascidia mentula*, off Clay Head, 1893 [162].

Family METOPIDAE

METOPA BRUZELLI (Goës) *Sars*, 1895, p. 261.

Off Port Erin, 24 fm., 1895 [163]. Port Erin Bay, 1900 [90].

Family STENOTHOIDAE

STENOTHOË CRASSICORNIS Walker *Walker*, 1897, p. 229.

Three males taken, six miles west-south-west of the Calf, 23 fm., 1896 [166].

STENOTHOË MARINA (Bate) *Chevreur & Fage*, 1925, p. 136.

Two specimens, six miles south-east of the Calf, 34 fm., 1895 [163]. Off Halfway Rock, 18 fm., 1895 [76].

STENOTHOË MONOCULOIDES (Montagu) *Chevreur & Fage*, 1925, p. 133.

Abundant in tidal pools at Port Erin, Port St. Mary and Fleshwick Bay, 1895 [163]. One specimen in a pool at Port Erin, 1932 (J.H.F.). Abundant at the Calf, L.W.E.S.T., Sept. 1900 [81].

Family CRESSIDAE

CRESSA DUBIA (Bate) *Chevreur & Fage*, 1925, p. 141.

Two miles south-east of Kitterland, 17 fm., 1895 [163]. Off Halfway Rock, 18 fm., 1895 [76].

Family COLOMASTIXIDAE

COLOMASTIX PUSILLA Grube *Chevreur & Fage*, 1925, p. 144.

In sponge debris, Port Erin, 1895 [163].

Family ACANTHONAZOMIDAE

PANOPLOEA MINUTA (G. O. Sars) *Chevreur & Fage*, 1925, p. 148.

Port Erin, 15-20 fm., 1895 [163].

PANOPLOEA EBLANAE (Bate) *Chevreux & Fage*, 1925, p. 149.

One specimen, six miles south-west of the Calf, 20-30 fm., Sept. 1900 [169].

IPHIMEDIA OBESA Rathke *Chevreux & Fage*, 1925, p. 150.

Generally distributed, 2-15 fm., 1895 [163]. Mouth of Port Erin Bay, 17 fm., 1895 [76].

Family LILLJEBORGIIDAE

LILLJEBORGIA BREVICORNIS Lilljeborg *Chevreux & Fage*, 1925, p. 155.

Six miles west of Port Erin, 24 fm., 1892 [73].

LILLJEBORGIA KINAHANI (Bate) *Chevreux & Fage*, 1925, p. 157.

On a submerged rope in Port Erin Bay, 1895 [76]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Three miles west of the Calf, 19 fm., 1893 [74].

Family OEDICEROSIDAE

PERIOCULODES LONGIMANUS (Bate & Westwood) *Chevreux & Fage*, 1925, p. 162.

Port Erin harbour, and generally on sandy ground from the littoral zone to 39 fm., 1895 [163]. Port Erin Bay, three specimens, 1906 [130].

PONTOCRATES ARENARIUS (Bate) *Chevreux & Fage*, 1925, p. 166.

Common in Port Erin harbour. One specimen, one mile south-east of Kitterland, 20 fm., 1895 [163]. Very common in the sand at Brewery Beach, from M.T. down, but chiefly about L.W.N.T. One specimen at Kirk Michael (H.B.M.).

SYNHELIDIUM HAPLOCHELES Grube *Chevreux & Fage*, 1925, p. 168.

Port Erin and Ramsey harbours, by electric light; also off Port Erin, 22 fm., 1895 [163].

MONOCULODES CARINATUS (Bate) *Chevreux & Fage*, 1925, p. 169.

Outside Port Erin harbour; and seven miles west of Bradda Head, 31 fm., 1895 [163].

WESTWOODILLA CAECULA (Bate) *Chevreux & Fage*, 1925, p. 173.

Five or six specimens, 12 miles south-west of the Chickens Rock, 33 fm., 1896 [166].

Family TIRONIDAE

SYRRHOE FIMBRIATUS Stebbing & Robertson *Stebbing & Robertson*, 1891, p. 34.

Two miles south-east of Kitterland, 17 fm.; seven miles west of Bradda Head, 31 fm., 1895 [163].

Family CALLIOPIIDAE

APHERUSA BISPINOSA (Bate) *Chevreux & Fage*, 1925, p. 177.

Generally distributed in tidal pools and shallow water, 1895 [163]. In night tow-nettings, Port Erin Bay, 1900, 1897 [81, 167]. On a submerged rope, Port Erin Bay, 1895 [76]. Two specimens, two miles west of Bradda Head, Sept. 1906 [130].

APHERUSA JURINEI (M.-Edwards) *Chevreux & Fage*, 1925, p. 182.

Abundant in pools, between tide marks, Port Erin Bay (J.H.F.). Common and generally distributed in tidal pools, 1895 [163].

Breeding: females carrying eggs, Apl. (J.H.F.).

Family PLEUSTIDAE

STENOPLEUSTES NODIFER (G. O. Sars) *Chevreux & Fage*, 1925, p. 187.

Seven miles west of Bradda Head, 31 fm., 1895 [163].

Family PARAMPHITHOIDAE

PARAMPHITHOË ASSIMILIS Sars *Sars*, 1895, p. 352.

Calf Sound, 1895 [163].

Family ATYLIDAE

NOTOTROPIS SWAMMERDAMI (M.-Edwards) *Chevreux & Fage*, 1925, p. 195.

Abundant and generally distributed, from the littoral zone to 20 fm., 1895 [163]. Common in the sand in Chapel Bay (H.B.M.). Night tow-nettings, Port Erin Bay, 1897, 1900 [81, 167]. One specimen, two miles west of Bradda Head, 1906 [130].

NOTOTROPIS VEDLOMENSIS (Bate) *Sars*, 1895, p. 466, as *Paratylus vedlomensis*; Stebbing, 1906, p. 331.

Port Erin harbour, with electric light. Eight miles west of Fleshwick, 33 fm. Three miles west of the Calf, 19 fm., 1895 [163].

Family EUSIRIDAE

EUSIRUS LONGIPES Boeck *Chevreux & Fage*, 1925, p. 201.

Off Port Erin, 10-20 fm., Aug. 1893 [162].

Family MELPHIDIPPIDAE

MELPHIDIPELLA MACRA (Norman) *Chevreux & Fage*, 1925, p. 198.

Eight miles west of Fleshwick, 33 fm. Seven miles west of Bradda Head, 31 fm., 1895 [163]. Six miles south-east of the Calf, 34 fm., 1895 [76].

Family GAMMARIDAE

GAMMARELLUS HOMARI (Fabricius) *Chevreux & Fage*, 1925, p. 205.

The young are the commonest amphipods in the pools in spring and early summer. Large females come inshore in early spring to deposit ova and may then be taken on algae, 1895 [163]. One specimen on *Laminaria* from Port Erin breakwater, June, 1931 (H.B.M.).

Breeding: early spring, see above.

CHEIROCRATUS SUNDEVALLI (Rathke) *Chevreux & Fage*, 1925, p. 223.

Not uncommon in the Isle of Man, 2-30 fm., 1895 [163]. One specimen in a pool near L.W. at Port St. Mary, 1932 (J.H.F.).

CHEIROCRATUS ASSIMILIS Lilljeborg *Chevreux & Fage*, 1925, p. 225.

Port Erin harbour, Jan. 1893 [162]. Seven miles west of Bradda Head, 31 fm., 1895 [163].

MEGALUROPUS AGILIS Hoeck *Chevreux & Fage*, 1925, p. 226.

Common in the Isle of Man, 2-10 fm., 1895 [163].

MELITA PALMATA (Montagu) *Chevreux & Fage*, 1925, p. 230.

Port Erin, littoral to 30 fm., 1895 [163].

MELITA OBTUSATA Montagu *Chevreux & Fage*, 1925, p. 232.

Generally distributed, littoral to 30 fm.; sometimes on echinoderms, 1895 [163]. Mouth of Port Erin Bay, 17 fm., 1895 [76].

CERADOCUS SEMISERRATUS (Bate) *Chevreux & Fage*, 1925, p. 236;
Stebbing, 1906, p. 431.

Six miles west of Port Erin, 24 fm., 1892 [73].

MAERA OTHONIS (M.-Edwards) *Chevreux & Fage*, 1925, p. 237.

Dug in Port St. Mary harbour; also dredged on the Breast, Apl. 1931; common in the trawl in Port Erin Bay, Apl. 1933 (H.B.M.). Off Port Erin and Fleshwick, 15-24 fm., 1895 [163]. Round the Calf, 1894 [74].

MAERELLA TENUIMANA (Bate) *Chevreux & Fage*, 1925, p. 242;
Stebbing, 1906, p. 436, as *Maera tenuimana*.

Off Port Erin, 15-20 fm., 1895 [163].

GAMMARUS MARINUS Leach *Chevreux & Fage*, 1925, p. 250.

Very common between tide marks: Port Erin, Derby Haven (H.B.M.), Perwick Bay (J.H.O.).

GAMMARUS LOCUSTA (Linné) *Chevreux & Fage*, 1925, p. 257.

Common and generally distributed on the shore (H.B.M.), 1900 [90], 1895 [163].

GAMMARUS CAMPYLOPS Leach *Stebbing*, 1906, p. 476.

Very common about L.W.N.T. at Derby Haven; common from H.W.N.T. down at Chapel Bay and in Port St. Mary harbour; a few in Port Erin Bay. Also ascending fresh-water streams for some distance (H.B.M.).

GAMMARUS DUEBENI Lilljeborg *Chevreux & Fage*, 1925, p. 257.

Very abundant in brackish and practically fresh-water pools on Scarlett Point, 1912 [145]. A single specimen dredged four miles off Glen Meay, 22-30 fm., 1898 [168].

Family DEXAMINIDAE

TRITAETA GIBBOSA (Bate) *Chevreux & Fage*, 1925, p. 266.

Several in a sponge from a pool at L.W.N.T., Port Erin, 1932-33 (H.B.M.). Very common in a red sponge at Port Erin, 1893 [74]. Encysted in the tests of Ascidians at Port Erin, 1895 [163]. On *Morchellium argus*, Port Erin, 1900 [90]. Round the Calf, 1894 [74]. In *Chlamys opercularis*, four miles west of Dalby, 25 fm., 1893 [74].

DEXAMINE SPINOSA (Montagu) *Chevreux & Fage*, 1925, p. 264.

Common and generally distributed from littoral to 10 fm., 1895 [163]. Port Erin Bay (H.B.M.), 1895, 1897 [165, 167]. Fleshwick Bay [H.B.M.]. Two miles west of Bradda Head, 1906 [130].

Breeding: females with ova, Aug. 1932, Fleshwick Bay, trawled (H.B.M.).

DEXAMINE THEA Boeck *Chevreux & Fage*, 1925, p. 265.

Common in Port Erin harbour, 1892 [73].

GUERNEA COALITA (Norman) *Chevreux & Fage*, 1925, p. 267.

Off Port Erin, 15-20 fm.; two miles south-east of Kitterland, 17 fm.; 25 miles south-east of the Calf, 1895 [163].

Family TALITRIDAE

TALITRUS SALTATOR (Montagu) *Chevreux & Fage*, 1925, p. 271.

Abundant under dead seaweed in Port Erin Bay, about h.w. (E.M.L.).

ORCHESTIA GAMMARELLA (Pallas) *Chevreux & Fage*, 1925, p. 274.

Very abundant under stones at, and above high water at Port Erin.
Also at Fleshwick Bay, 1895 [163].

TALORCHESTIA DESHAYESEI (Audouin) *Chevreux & Fage*, 1925, p. 278.

Abundant in loose sand under stones, Derby Haven, H.W.E.S.T.,
both sexes, and young. Apl. 1937 (R.R.).

Breeding : Ripe males, Apl. 1937.

HYALE NILSSONI (Rathke) *Chevreux & Fage*, 1925, p. 282.

Among algae on Port Erin breakwater, 1900 [90]. Among stones
and algae on the shore, Port St. Mary, 1895 [163].

Family AORIDAE

AORA TYPICA Kröyer *Chevreux & Fage*, 1925, p. 293.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Round the Calf,
1893 [74].

LEMBOS LONGIPES (Lilljeborg) *Chevreux & Fage*, 1925, p. 304.

Calf Sound ; five miles west of Dalby, 30 fm. ; Laxey Bay, 4-12
fm., 1895 [163].

Family PHOTIDAE

MICROPROTOPUS MACULATUS Norman *Chevreux & Fage*, 1925, p. 308.

Very abundant in Port Erin harbour ; also in tow-netting, twenty-
five miles south-east of the Calf, 1895 [163].

PHOTIS LONGICAUDATA (Bate & Westwood) *Chevreux & Fage*, 1925,
p. 310.

Eight miles west of Port Erin, 38 fm., mud ; six miles south-east
of the Calf, 1895 [163].

EURYSTHEUS PALMATUS (Stebbing & Robertson) *Chevreux & Fage*,
1925, p. 313.

Five miles west of Dalby, 30 fm., sandy mud ; six miles west of
Fleshwick, 30-33 fm., 1895 [163].

EURYSTHEUS MACULATUS (Johnston) *Chevreux & Fage*, 1925, p. 314.

Eight miles west of Fleshwick, 30-33 fm., 1895 [163].

PODOCERPIS NITIDA Stimpson *Chevreux & Fage*, 1925, p. 317.

Outside Port Erin Bay, 1900 [90].

- MEGAMPHOPUS CORNUTUS Norman *Chevreux & Fage*, 1925, p. 319.
Eight miles west of Fleshwick, 30-33 fm., 1895 [163].
- LEPTOCHEIRUS HIRSUTIMANUS (Bate) *Chevreux & Fage*, 1925, p. 321.
One specimen, two miles south-east of Kitterland, 17 fm., 1895 [163].
- LEPTOCHEIRUS PILOSUS Zaddach *Chevreux & Fage*, 1925, p. 322.
Many young specimens dredged off Port Erin; two miles south-east of Kitterland, 17 fm., 1895 [163].
- LEPTOCHEIRUS PECTINATUS Norman *Chevreux & Fage*, 1925, p. 324.
Port Erin, 1894 [164].

Family AMPHITHOIDAE

- AMPHITHOË RUBRICATA (Montagu) *Chevreux & Fage*, 1925, p. 334.
Generally distributed under stones, between tide marks, 1895 [163].
One specimen in Port St. Mary harbour, at L.W.O.S.T., and one in a pool at M.T., Port Erin (H.B.M.). Round the Calf, 1893 [74]. One green specimen on sand at H.W.E.S.T., Port Erin, Apl. 1937 (R.R.).
- PLEONEXES GAMMAROIDES Bate *Chevreux & Fage*, 1925, p. 335.
Several specimens at Port Erin, Apl. 1898 [168].

Family JASSIDAE

- JASSA FALCATA (Montagu) *Chevreux & Fage*, 1925, p. 344.
Common in pools at M.S.L. in Port Erin Bay, Apl. 1934. Always present in very large numbers on the harbour buoy, Port Erin (H.B.M.). On a submerged rope in Port Erin Bay, 1895 [76]. On Port Erin Breakwater, 1900 [90].
Breeding: in berry in pools at Port Erin, Apl. (H.B.M.).
- JASSA PUSILLA (G. O. Sars) *Chevreux & Fage*, 1925, p. 346.
Off Port Erin, 1895 [163]. Eight miles west of Fleshwick, 33 fm., 1892 [73].
- JASSA OCIA (Bate) *Chevreux & Fage*, 1925, p. 347.
From sponge debris, Port Erin, 1895 [163].
- MICROJASSA CUMBRENSIS (Stebbing & Robertson) *Chevreux & Fage*, 1925, p. 350.
Off Halfway Rock, 18 fm., 1895 [76].
- PARAJASSA PELAGICA (Leach) *Chevreux & Fage*, 1925, p. 349.
Common on Port Erin Breakwater, 1895 [163].

Family COROPHIIDAE

ERICTHONIUS BRASILIENSIS (Dana) *Chevreux & Fage*, 1925, p. 353.

Common in tubes on *Zostera marina*, just below L.W. in Port Erin Bay (H.B.M.). Port Erin harbour and Point of Ayr, 1895 [163].

ERICTHONIUS DIFFORMIS M.-Edwards *Chevreux & Fage*, 1925, p. 354.

Port Erin, by electric light; Laxey Bay, 4-12 fm., very abundant in tubes on *Zostera*, 1895 [163].

SIPHONOCETES DELLAVALLEI Stebbing *Chevreux & Fage*, 1925, p. 361.

One specimen dredged in the mouth of Port Erin Bay, 6 fm., Apl. 1933 (H.B.M.).

SIPHONOCETES COLLETTI Boeck *Chevreux & Fage*, 1925, p. 359.

Port Erin harbour and off Garwick Head, 1893 [163].

COROPHIUM VOLUTATOR Pallas *Chevreux & Fage*, 1925, p. 364.

Extremely abundant in Port St. Mary harbour from H.W.N.T. down, but chiefly between M.T. and L.W.N.T.; common at Derby Haven at M.T. (H.B.M.).

COROPHIUM BONELLI (M.-Edwards) *Chevreux & Fage*, 1925, p. 369.

Port Erin, 1895 [163].

Family CHELURIDAE

CHELURA TEREBRANS Philippi *Chevreux & Fage*, 1925, p. 371.

Common in wooden piles, Port Erin, 1933, along with *Limnoria lignorum* (H.B.M.). From the wooden piles of Ramsey Pier, 1900 [81].

Family PODOCERIDAE

DULICHIA PORRECTA (Bate) *Chevreux & Fage*, 1925, p. 377.

From *Pecten*, seven miles west of Bradda Head, 38 fm., 1895 [163].

Sub-Order HYPERIIDEA

Family HYPERIIDAE

HYPERIA GALBA (Montagu) *Chevreux & Fage*, 1925, p. 401.

Common in *Rhizostoma*, Port Erin Bay, 1931 [116]. Similarly, along with young whiting, July 1934 (J.R.B.).

Sub-Order CAPRELLIDEA

Family CAPRELLIDAE

- PHTISICA MARINA* Slabber *Chevreux & Fage*, 1925, p. 434.
Mouth of Port Erin Bay, 17 fm., 1895 [76].
- PSEUDOPROTELLA PHASMA* (Montagu) *Chevreux & Fage*, 1925, p. 437.
On the Breakwater, Port Erin, 1900 [90]. Abundant on the harbour buoy, Port Erin, 1903 [25].
- PARIAMBUS TYPICUS* (Kröyer) *Chevreux & Fage*, 1925, p. 441.
Port Erin harbour, on *Asterias rubens*, 1895 [163].
- CAPRELLA ACANTHIFERA* Leach *Chevreux & Fage*, 1925, p. 446.
On a submerged rope in Port Erin Bay, 1895 [76]. On weeds, hydroids, etc., Port Erin Bay, 1900 [90]. Two specimens among hydroids and sponges, on the shores of the Calf Sound, 1912 [145]. One specimen on weed, trawled in Port Erin Bay, Apl. 1933 (H.B.M.).
- CAPRELLA LINEARIS* (Linné) *Chevreux & Fage*, 1925, p. 456.
Among algae, abundant and generally distributed, 1895 [163]. On weeds, hydroids, etc., Port Erin Bay, 1900 [90]. Calf Sound, on *Crisia*, L.W.E.S.T., Mar. 1936 (N.B.E.).

Order SCHIZOPODA (=MYSIDACEA)

Family MYSIDAE

- GASTROSACCUS SANCTUS* (van Beneden) *Zimmer*, 1909, p. 61.
Port Erin Bay, Nov. 1892, and Jan. 1893 [162].
- GASTROSACCUS SPINIFER* (Goës) *Zimmer*, 1909, p. 64.
Port Erin, Apl. 1889, by electric light [161].
- HAPLOSTYLUS NORMANI* G. O. Sars *Zimmer*, 1909, p. 65.
One male from Port Erin harbour, Jan. 1893 [162].
- SIRIELLA ARMATA* (M.-Edwards) *Zimmer*, 1909, p. 69.
Several trawled, Port Erin Bay, Mar. (H.B.M.). Port Erin Harbour, Apl. 1896 [166]. Several young in a night tow-netting at Port Erin, Nov. 1897 [167].
- SIRIELLA JALTENSIS* Czerniavsky *Zimmer*, 1909, p. 72.
Several in pool, Port Erin Breakwater, L.W.N.T., Mar. 1937 (R.B.).
- SIRIELLA NORVEGICA* G. O. Sars *Zimmer*, 1909, p. 73.
Port Erin, by electric light, and in surface tow-nettings, Apl. 1889 [161]. In night tow-nettings, Port Erin Bay, mostly young specimens, 1900 [81].

ERYTHROPS SERRATA (G. O. Sars) *Zimmer*, 1909, p. 76.

Twelve miles south-west of the Chickens Rock, 33 fm., 1896 [166].

ERYTHROPS ELEGANS (G. O. Sars) *Zimmer*, 1909, p. 79.

Eight miles west of Fleshwick, 33 fm., June 1892 [73].

ERYTHROPS ERYTHROPTHALMA (Goës) *Zimmer*, 1909, p. 80.

Three specimens from between the Calf and Port Erin, Apl. 1907 [129].

MYSIDOPSIS GIBBOSA G. O. Sars *Zimmer*, 1909, p. 131.

Port Erin harbour, among algae, 1893 [74].

LEPTOMYSIS MEDITERRANEA G. O. Sars *Zimmer*, 1909, p. 132.

Port Erin, Nov. 1930 (H.C.C.).

LEPTOMYSIS LINGUURA (G. O. Sars) *Zimmer*, 1909, p. 135.

A few trawled in Port Erin Bay, on two occasions, Mar. (H.B.M.).
Port Erin harbour, 2-5 fm., June 1892 [161].

PRAUNUS INERMIS (Rathke) *Zimmer*, 1909, p. 148.

Three specimens among *Zostera marina* in Chapel Bay, Mar. and Apl.; one specimen trawled in Fleshwick Bay, Aug. (H.B.M.).
Common at Port Erin in the summer, 1900 [90]. Night tow-nettings, Port Erin Bay, 1900 [81]. Douglas, 1892 [161].

PRAUNUS FLEXUOSUS (Müller) *Zimmer*, 1909, p. 150.

Very common in Port Erin Bay during the spring and summer.
Common among the *Zostera marina* in Chapel Bay (H.B.M.).

SCHISTOMYSIS SPIRITUS Norman *Zimmer*, 1909, p. 152.

Extremely abundant throughout Port Erin Bay (H.B.M.).

SCHISTOMYSIS ARENOSA (G. O. Sars) *Zimmer*, 1909, p. 155.

Single specimens trawled in Port Erin Bay, Mar., July and Aug. (H.B.M.). Four specimens from Port Erin Bay, Apl. 1910 [144].

Order EUPHAUSIACEA

Family EUPHAUSIIDAE

MEGANICTIPHANES NORVEGICA (M. Sars) *Zimmer*, 1909, p. 8.

Bahama Bank, Mar. 1905 [128]. Numerous in the stomachs of herrings taken at night in Port Erin Bay, Mar. 1934; also in herring stomachs from Port Erin, Apl. 1924, and from off Peel, Sept. 1931 (H.B.M.).

Order DECAPODA

Sub-Order NATANTIA

Tribe CARIDEA

Family PASIPHAEIDAE

PASIPHAË SIVADO (Risso) *Kemp*, 1910, p. 37.

Numerous in the stomachs of herrings taken in Port Erin Bay, Feb. and Mar. 1934 (H.B.M.). West of the Isle of Man, 70 fm., 1893 [72].

Family PANDALIDAE

PANDALUS MONTAGUI Leach *Kemp*, 1910, p. 86.

Common at all depths below L.W., all round the south of the island : off Fleshwick, off Port Erin, Bank Charles (H.B.M.). Common, generally distributed, 1900 [90]. Abundant everywhere on stony ground, 1892 [161].

Breeding : 1907 larvae rare, west of the Calf, 23 Apl. [99]. Apl. 1913, Port Erin Bay, abundant at the surface, few deeper [100].

PANDALINA BREVIROSTRIS (Rathke) *Kemp*, 1910, p. 97.

Common on the Breast, 20 fm., Apl. 1931 (H.B.M.). Off the south end of the island, 21 fm., 1892 [74]. Six miles south-east of the Calf, 34 fm., 1895 [76].

Breeding : 1907, Apl. 23-26, stage 4 common west of the Calf and in Port Erin Bay. Sept., stages 4 and 6 common [99]. Apl. 1913, Port Erin Bay [100].

Family HIPPOLYTIIDAE

HIPPOLYTE VARIANS Leach *Kemp*, 1910, p. 100.

Very common at L.W.S.T. in *Zostera* beds in Chapel Bay and Port Erin Bay. Trawled in numbers in Port Erin Bay and Fleshwick Bay (H.B.M.). Common and generally distributed, 1900 [90].

Breeding : 24 Apl. 1907, stage 3 present in Port Erin Bay [99]. Females in berry, 22 Mar. and 18 Aug. (H.B.M.).

HIPPOLYTE PRIDEAUXIANA Leach *Kemp*, 1910, p. 101.

One, near Jetty, Port Erin, under stone at L.W.S.T., Apl. 1937 (N.B.E.).

SPIRONTOCARIS SPINUS (Sowerby) *Kemp*, 1910, p. 103.

One specimen trawled on Bank Charles, Aug. 1931 (H.B.M.). Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Round the Calf, 1893 [74].

SPIRONTOCARIS PUSIOLA (Kröyer) *Kemp*, 1910, p. 107.

In *Zostera* bed at L.W.E.S.T., west of the harbour, Port St. Mary, Apl. 1931, one specimen. One specimen from the mouth of Port Erin Bay, Mar. 1932. One specimen between Bay Fine and Bradda Head, Aug. 1932 (H.B.M.).

Breeding: one female in berry, 22 Mar. 1932 (H.B.M.).

CARIDION STEVENI Lebour *Lebour*, 1930A, p. 185.

One specimen from between tide marks, Castletown Bay, Mar. 1932 (J.H.O.).

Breeding: in berry, Mar. (J.H.O.).

CARIDION GORDONI (Bate) *Kemp*, 1910, p. 109.

One specimen from between the Calf and Port Erin, 1888 [161].*

Breeding: in berry, May [161].*

Family ALPHEIDAE

ATHANAS NITESCENS (Montagu) *Kemp*, 1910, p. 122.

Not uncommon in pools. Port Erin, low water (H.B.M.). Port St. Mary, L.W.E.S.T. (N.B.E.).

Family PROCESSIDAE

PROCESSA CANALICULATA Leach† *Kemp*, 1910, p. 123.

In the stomach of a whiting, twelve miles south-west of the Chickens Rock, 33 fm., 1896 [166].

Family PALAEMONIDAE

LEANDER SERRATUS (Pennant) *Kemp*, 1910, p. 130.

Common everywhere in pools between tide marks (H.B.M.).

Breeding: in berry, 20 Apl. (H.B.M.).

LEANDER SQUILLA (Linné) *Kemp*, 1910, p. 132.

Recorded from the Isle of Man but no locality given, 1863 [98] [141].

*This may have been *C. steveni* (H.B.M.).

† This species requires revision, see: Lebour, M. V., 1936, *Proc. Zool. Soc. London*, pp. 609-617.

Family CRANGONIDAE

CRANGON VULGARIS Linné *Kemp*, 1910, p. 137.

Common on all sandy shores down to about 4 fm. Abundant along the water's edge, especially at night. Port Erin, Port St. Mary, Douglas, Ramsey, Kirk Michael (H.B.M.).

Breeding: 1907, larvae in all stages common off Port Erin in Apl. All stages present off Port Erin in Aug. [99]. Females in berry, 22 and 29 Mar. (H.B.M.).

CRANGON ALLMANNI Kinahan *Kemp*, 1910, p. 138.

Off Halfway Rock, 18 fm., 1895 [76].

PHILOCHERAS TRISPINOSUS (Hailstone) *Kemp*, 1910, p. 146.

Off Port Erin Breakwater, and Bay Fine, 1900 [90].

PHILOCHERAS SCULPTUS (Bell) *Kemp*, 1910, p. 148.

Not uncommon in the trawl all round the south of the island: the Breast, Bay Fine, Fleshwick Bay (H.B.M.). Off the south end of the island, 1892 [161].

Breeding: in berry, 30 July, 15, 18, 24, 25 Aug. (H.B.M.).

PHILOCHERAS FASCIATUS (Risso) *Kemp*, 1910, p. 151.

Two specimens from *Zostera* beds, west of the harbour, Port St. Mary, Apl. 1931 (H.B.M.). Port Erin Bay, 4 fm., and outside the Breakwater, 1900 [90].

PHILOCHERAS BISPINOSUS (Hailstone & Westwood) *Kemp*, 1910, p. 152.

One specimen from the Breast, July, 1931, and one from off Fleshwick, Aug. 1931 [116].

Breeding: in berry, 15 Aug. (H.B.M.).

PONTOPHILUS SPINOSUS (Leach) *Kemp*, 1910, p. 160.

A number taken, six miles south-east of the Calf, 34 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76].

Sub-Order REPTANTIA

Tribe PALINURA

Family PALINURIDAE

PALINURUS VULGARIS Latreille *Selbie*, 1914, p. 42.

Occasionally taken in the trawl round the south of the island (H.B.M.) Occasionally off Laxey [105].

Breeding: in berry in July and Aug. (T.N.C.), Nov. (H.B.M.).

Tribe *ASTACURA*Family *NEPHROPSIDAE*

NEPHROPS NORVEGICUS Linné *Selbie*, 1914, p. 47.

Taken in quantity on muddy ground, seven to eight miles south-west of the Calf, 35-40 fm. (T.N.C.).

Breeding : Stage 1, three specimens ten miles west-north-west of Port Erin, 0-10 fm., Apl. 1907 [87]. Port Erin Bay, Apl. 1913 [100]. A stage 1 larva taken off the mouth of Port Erin Bay, Apl. 1934 (H.B.M.).

HOMARUS VULGARIS M.-Edwards *Selbie*, 1914, p. 53.

Occasionally taken in pools and under stones near L.W., especially at Port St. Mary. Common and generally distributed below L.W. on rocky ground, close inshore. Same distribution in the Laxey region, but very rarely taken on the shore (H.B.M.).

Breeding : eggs laid Oct., Nov. ; berried lobsters taken all the year round ; ripe eggs, Apl. to Sept., with a maximum about July (T.N.C.). Larvae in tow-netting, east of the Calf, Sept. 1906 [130]. Stage 4 present off Port Erin, Aug., Sept. 1907 [99].

Tribe *ANOMURA*Family *GALATHEIDAE*

GALATHEA INTERMEDIA Lilljeborg *Selbie*, 1914, p. 66.

Very abundant in the trawl on the Breast, and generally distributed round the south of the island (H.B.M.). Generally distributed, 1900 [90]. Coasts of the Isle of Man, rather common, 1892 [161]. Off Halfway Rock, 1893-95 [74, 76]. Off Fleshwick, 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. With the parasitic Isopod, *Pleurocrypta intermedia*, off Halfway Rock, 1893 [74].

GALATHEA DISPERSA Bate *Bonnier*, 1888, p. 154 ; *Crawshay*, 1912, pp. 352, 353, as distinct from *G. nexa* (see Lebour, 1930, p. 175.)

One specimen at L.W.E.S.T., Port Erin. Fairly common in the trawl all round the south of the island ; the Breast, off Fleshwick, etc. ; common in whelk pots, four miles west of the Chickens Rock, 37 fm. (H.B.M.). Round the Calf, 1893 [74]. Off Halfway Rock, 18 fm., 1895 [76].

Breeding : in berry in Apl. (H.B.M.).

GALATHEA NEXA Embleton *Bonnier*, 1888, p. 149; *Crawshay*, 1912, p. 353, as distinct from *G. dispersa* (see *Lebour*, 1930, p. 175).

The Breast, 20 fm., Apl. 1934 (H.B.M.). Aldrick and Bay Fine, 15-20 fm., 1893. With the parasitic Isopod *Pleurocrypta nexa* [74].

GALATHEA SQUAMIFERA Leach *Selbie*, 1914, p. 69.

Very common under stones at L.W., all round the coast: Fleshwick, Port Erin, the Sound, Port St. Mary, Baie-ny-Carrickey (H.B.M.). Abundant under stones, Port Erin Bay, 1900 [90]. Douglas Bay, under stones, 1878 [53].

GALATHEA STRIGOSA (Linné) *Selbie*, 1914, p. 72.

Occasionally at L.W.S.T., under stones, round the coast, especially just inside the Breakwater, Port Erin (H.B.M.). Port Erin Bay, under stones, rare, 1900 [90]. Port Moar [107].

MUNIDA BAMFFICA (Pennant) [= *M. rondelii* Bell] *Selbie*, 1914, p. 73.

One specimen in a whelk pot, four miles west of the Chickens Rock, 37 fm., May 1933 (H.B.M.). Two miles west of Bradda Head, 23 fm., 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76].

Breeding: Apl. 1907, stages 1, 2 and 3 present off Port Erin [99].

Family PORCELLANIDAE

PORCELLANA PLATYCHELES (Pennant) *Selbie*, 1914, p. 87.

A few, between tide marks, Scarlett Point, 1931 (J.H.O.). Port St. Mary, Port Erin, a few, 1934,-5 (N.B.E.). Isle of Man, no locality given, 1863 [98] [141].

PORCELLANA LONGICORNIS (Linné) *Selbie*, 1914, p. 87.

Common under stones all round the coast, from about M.T. to L.W.; Port Erin, the Sound, Baie-ny-Carrickey. Very common in the trawl all round the south of the island: the Breast, between Bay Fine and Bradda Head, etc. (H.B.M.). Off Bay Fine and Aldrick, 1900 [90]. Common everywhere under stones, 1892 [161]. Off the Calf, 1903 [25]. Port Moar [107]. On the scallop beds off Ramsey, 1878 [53].

Breeding: larvae—probably including a few *P. platycheles*—1907, very common off Port Erin, Aug., present off Port Erin in Sept. [99].

Tribe *THALASSINIDEA*

Family AXIIDAE

CALOCARIS MACANDREAE Bell *Selbie*, 1914, p. 92.

Restricted to the mud zone below about 30 fm., west of the island (H.B.M.). Eight miles north-west of Port Erin, 40 fm., mud, 1893 [74]. Seven and a half to eleven miles north-west of Bradda Head, 47-60 fm. mud, 1894 [75]. Nine to ten miles west of Port Erin, 35 fm., 1894 [75]. Fourteen miles north-west of Port Erin, 79 fm., mud, 1893 [74]. Seven and a half miles west of Niarbyl, 45 fm., mud, 1894 [53]. Thirteen miles north-west of Port Erin, 60 fm., mud, 1893 [75]. Sometimes encrusted with the Polyzoan *Triticella boeckii* [74, 75].

Breeding : several females with ova, thirteen miles north-west of Port Erin, 60 fm., June, 1893 [74, 75].

Tribe *PAGURIDEA*

Family PAGURIDAE

EUPAGURUS BERNHARDUS (Linné) *Selbie*, 1921, p. 15.

Young specimens common in rock pools all round the coast. All sizes common in the trawl all round the south of the island. Young in shells of *Littorina*, *Purpura*, *Natica*, *Ocenebra*, etc. Adults usually in shells of *Buccinum undatum*. Shells sometimes covered by a colony of the hydroid *Hydractinia echinata* (H.B.M.). Generally distributed, 1900 [90]. Abundant everywhere, 1892 [161].

Breeding : 1907, all stages very common off Port Erin. Very rare off Port Erin in Aug. [99]. Apl. 1913, abundant in deep hauls, Port Erin Bay [100].

EUPAGURUS CUANENSIS (Thompson) *Selbie*, 1921, p. 26.

Two specimens trawled in Fleshwick Bay, and one on the Breast, Aug. 1931 (H.B.M.). Off Halfway Rock, 18 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76].

EUPAGURUS PRIDEAUXI (Leach) *Selbie*, 1921, p. 34.

Common in the trawl all round the south of the island ; off Port Erin, the Breast, Bay Fine (H.B.M.). Off Port Erin Breakwater, Bay Fine and Spanish Head, 1900 [90]. East and south of the Calf, 15-30 fm., 1900 [81]. Fleshwick Bay, 13 fm., 1895 [74]. Port Erin Bay, 1893,-98, 1900 [20, 74, 90]. Seven miles west of Peel, 21 fm., 1895 [76]. Off Port St. Mary, 1892 [161]. Always with the anemone *Adamsia palliata*.

Breeding : Apl. 8, 1907, stage 1, ten miles north-west of Port Erin, very rare ; Aug., Sept., all stations off Port Erin, common [99].

EUPAGURUS PUBESCENS (Kröyer) *Selbie*, 1921, p. 29.

Dredged west of the Calf, 1888 [161]. Five miles west of Dalby, 30 fm., sandy-mud bottom, 1894 [75].

ANAPAGURUS LAEVIS (Thompson) *Selbie*, 1921, p. 44.

Recorded from the Isle of Man but no locality given, 1863 [141] [98]. Douglas, 1886, one specimen [161].

ANAPAGURUS HYNDMANNI (Thompson) *Selbie*, 1921, p. 49.

Recorded, but no locality given, 1863 [141] [98]. Six miles south-east of the Calf, 34 fm., 1895 [76].

Family LITHODIDAE

LITHODES MAIA (Linné) *Selbie*, 1921, p. 56.

Between the Isle of Man and the Mull of Galloway (Bell). A specimen, said to be Manx, collected by G. W. Wood, in the Manx Museum (*vide* Kermode) (H.B.M.).

Tribe BRACHYURA

Family PORTUNIDAE

PORTUNUS CORRUGATUS (Pennant) *Palmer*, 1927, p. 881.

In deep water, rare; one specimen trawled on the Breast, 17 fm., Nov. 1931; one young specimen off Bay Fine, July 1932 (H.B.M.). South-east of the Calf, 26 fm., 1896 [166]. Port Erin, 1878 [53].

PORTUNUS PUBER (Linné) *Palmer*, 1927, p. 882.

Common under stones between tide marks, all round the coast; rarely taken in deeper water; one specimen from the mouth of Port Erin Bay, Mar. 1932 (H.B.M.). Common in Port Erin Bay, 1900; outside Port Erin Breakwater and off Bay Fine, 1900 [90]. Point of Ayre, 1875 [161].

Breeding: 1907, 8-26 Apl., stage 2, common, five and ten miles north-west of Port Erin. 13 Aug., stage 5, common in Port Erin Bay [99]. Larvae tolerably abundant in Port Erin Bay, Apl. 1913 [100].

PORTUNUS ARCUATUS Leach *Palmer*, 1927, p. 884.

Port Erin Bay, 4 fm., 1900 [90]. A quarter of a mile west of Fleshwick Bay, 13 fm., 1894 [75].

PORTUNUS PUSILLUS Leach *Palmer*, 1927, p. 885.

Taken occasionally in the trawl round the south of the island: Bay Fine, three specimens; mouth of Port Erin Bay, one specimen; between Spanish Head and Burroo Nedd, one specimen; fairly common on the Breast (H.B.M.). Port Erin, 1892 [161]. Port Erin Bay, 1898 [20]. Outside Port Erin Breakwater and off Bay Fine, 1900 [90]. Seven miles west of Peel, 21 fm., 1895 [76].

Breeding: two females in berry, Bay Fine, 23 Mar. 1932 (H.B.M.).

PORTUNUS MARMOREUS Leach *Palmer*, 1927, p. 888.

One male taken between Burroo Nedd and Spanish Head, Sept. 1931 [116].

PORTUNUS HOLSATUS Fabricius *Palmer*, 1927, p. 889.

Fairly common in Port Erin Bay below L.W., and occasionally on other grounds round the south of the island: Port Erin Bay, several records; off Fleshwick Bay, one specimen; between Burroo Nedd and Spanish Head, one specimen, 1931-32 (H.B.M.).

Breeding: 1907, 8-9 Apl., stages 1 and 2, rare, ten miles north-west of Port Erin, 21 Aug., stage 5, rare in Port Erin Bay [99].

PORTUNUS DEPURATOR (Linné) *Palmer*, 1927, p. 893.

Common in the trawl on all grounds round the south of the island (H.B.M.). Abundant everywhere; generally on stony ground, 3-7 fm., 1892 [161].

Breeding: 1907, 23 Apl., stages 1 and 2 common west of the Calf. 13 and 21 Aug., stage 1 common in Port Erin Bay [99]. Apl. 1913, larvae occasionally in Port Erin Bay [100].

CARCINUS MAENAS (Pennant) *Bell*, 1853, p. 76.

Very common under stones between tide marks, everywhere round the coast (H.B.M.). Port Erin Bay, 1900 [90]. Generally distributed in shallow water, 1900 [90].

Family PIRIMELIDAE

PIRIMELA DENTICULATA (Montagu) *Heller*, 1863, p. 64; *Bell*, 1853, p. 72.

On seaweeds at L.W., rare; occasionally in the trawl; west end of inner harbour, Port St. Mary, on *Halidrys siliquosa*, one specimen; Langness, L.W.E.S.T., on *Laminaria*, one specimen; Port Erin Bay, four specimens trawled, Aug. 1932; three specimens trawled, 1933 (H.B.M.). Off Spanish Head, 15 fm., 1892 [38]. Poyllvaish, one specimen at L.W.E.S.T., on sand and weeds, Sept. 1933 (H.B.M.).

Family CANCRIDAE

CANCER PAGURUS Linné *Bell*, 1853, p. 59.

Young individuals up to about two inches across the carapace, but sometimes much larger, common everywhere under stones between tide marks. Adults fairly common all round the south of the island in deeper water. Specimens of less than about three inches diameter rarely taken in the trawl. The best fishing grounds are close to the shore, especially round the Calf (H.B.M.).

Breeding: very rarely taken in berry near the coast. The few taken occur in summer. Large, berried crabs used to be taken in numbers on muddy ground, seven to eight miles south-west of the Calf, in about 35-40 fm. In the summer and autumn there is a migration of large spent "granny" crabs on to the shore grounds all along the coast, especially off Bradda Head (T.N.C.).

ATELECYCLUS SEPTEMDENTATUS (Montagu) *Bell*, 1853, p. 153.

Rare; two specimens from the Breast, Apl. 1932; one specimen in Bay Fine, 12 fm., Apl. 1933 (H.B.M.). Three miles west of Fleshwick Bay, 20 fm., 1892, two specimens [73]. Eight miles west of Fleshwick, 33 fm., 1892 [73]. Four and a half miles west of Cronk-ny-Arrey-Laa, 22 fm., 1894 [75].

Family CORYSTIDAE

CORYSTES CASSIVELAUNUS (Pennant) *Bell*, 1853, p. 159.

Very local; common in some localities; Port Erin Bay, about thirty specimens in one haul of the otter-trawl; single specimens from Fleshwick Bay, and between Bay Fine and Bradda Head. Ramsey, moulted shells washed ashore in large numbers on the whole length of the beach, June 1932 (H.B.M.). North-east and south of the Bahama Bank, in shoal water, 1893 [74].

Breeding: larvae in Port Erin Bay, Apl. 1913 [100]. *Megalopa* larvae at the water's edge in several of the sandy bays, June 1932 (H.B.M.).

Family THIIDAE

THIA POLITA Leach *Bell*, 1853, p. 365.

A single record from six miles west of Port Erin, 24 fm., June 1892 [73].

Family XANTHIDAE

XANTHO INCISUS Leach *Bell*, 1853, p. 51, as *X. florida*.

A specimen collected by G. W. Wood, said to be Manx, in the Manx Museum (*vide* Kermodé) (H.B.M.).

XANTHO HYDROPHILUS (Herbst) *Bell*, 1853, p. 54, as *X. rivulosa*.

Recorded from two localities: three miles west of Fleshwick, 20 fm., 1892 [73]; east and south of the Calf, 15-30 fm., 1900 [81]. These records require verification as there has been some confusion between this and the next species. A specimen, said to be Manx, in the Manx Museum, collected by G. W. Wood (*vide* Kermodé) (H.B.M.). Recorded from the Isle of Man [174].

XANTHO TUBERCULATUS Couch *Bell*, 1853, p. 359.

Generally distributed round the south of the island, but not common; two specimens from the Breast, and one from the Hault Bank. For the identity of the earlier records, see [116] (Records Bibl.) (H.B.M.). Round the Calf, 1893, 1894 [74, 75]. Four miles west of the Chickens Rock, 38 fm., 1894 [75]. Six miles south-east of the Chickens Rock, 34 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76].

PILUMNUS HIRTELLUS (Linné) *Bell*, 1853, p. 68.

Common everywhere under stones near L.W. (H.B.M.). 18 and 25 fm., shell bottom, round the Isle of Man, 1850 [50].

Breeding: larvae, almost certainly of this species, 1907, present off the Calf and five miles off Port Erin, 18 and 26 Apl., Aug., and Sept., common off Port Erin [99]. Larvae, Port Erin Bay, Apl. 1913 [100].

Family GONOPLACIDAE

GONOPLAX RHOMBOIDES (Linné) *Bell*, 1853, p. 130, as *G. angulata*.

In the stomach of a Dab, off Maughold Head, 1911 [131]. Seven and a half miles west of Niarbyl, 45 fm., mud, 1894 [75].

Family PINNOTHERIDAE

PINNOTHERES PISUM (Pennant) *Bell*, 1853, p. 121.

Sometimes taken in *Mytilus edulis* from the pier at Ramsey, not very common; not taken in *M. edulis* from Port Erin. In *Modiolus modiolus* trawled on the Breast, Sept. 1933; 35 specimens opened yielded four males and five females (H.B.M.).

PINNOTHERES VETERUM Bosc *Bell*, 1853, p. 126.

Off Aldrick, 1900 [90]. Off Clay Head, 20 fm., 1892 [73].

Breeding : larvae, probably this species, rare off Niarbyl, 13 Aug. 1907 [99].

Family LEUCOSIIDAE

EBALIA TUBEROSA (Pennant) *Bell*, 1853, p. 141, as *E. pennantii*.

Not uncommon round the south of the island, on a gravelly bottom : Fleshwick Bay, the Breast, Bay Fine, between Burroo Nedd and Spanish Head (H.B.M.). Generally distributed round the south of the island, 1894,-95 [74, 75, 76, 81]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Five to eight miles west of Dalby, 20 fm., 1894 [75]. Four miles off Glen Meay, 21 fm., 1894 [75]. Ramsey Scallop Banks, 1878 [53].

EBALIA CRANCHI Leach *Bell*, 1853, p. 148.

Rather rare ; two specimens from the Breast (H.B.M.). Off Port Erin, 1900 [90]. Three-quarters of a mile north of Kitterland, 18 fm., 1893 [74]. Off Garwick Head, 4-12 fm., 1892 [73].

EBALIA TUMEFACATA (Montagu) *Bell*, 1853, p. 145, as *E. bryerii*

Not uncommon round the south of the island on a gravelly bottom : the Breast, Fleshwick Bay, between Burroo Nedd and Spanish Head (H.B.M.). Off Spanish Head, 1900 [90]. Round the Calf, 1894 [74]. Six miles south-east of the Calf, 34 fm., 1895 [76].

Family MAIIDAE

MAIA SQUINADO (Herbst) *Bell*, 1853, p. 39.

Several taken in lobster pots off Glen Meay, Mar. 1933 (H.B.M.). One specimen from Garwick Bay, ca. 1930 (Manx Museum). Recorded from the Isle of Man, but no locality given, 1863 [141]. Isle of Man [98].

EURYNOME ASPERA (Pennant) *Bell*, 1853, p. 46.

Common in the trawl all round the south of the island (H.B.M.). Off Aldrick, Bay Fine and Spanish Head, 1900 [90]. One and half miles off Bradda Head, 12-15 fm., 1893 [74]. East and south of the Calf 15-30 fm., 1900 [81]. Four and a half miles west of

Cronk-ny-Arrey-Laa, 22 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles off Dalby, 30 fm., 1893 [74]. Douglas Bay, 1867, 1878 [52, 53].

Breeding: in berry, Mar. (H.B.M.).

PISA BIACULEATA (Montagu) *Bell*, 1853, p. 27, as *P. gibbsii*.

Off Port Erin, Easter, 1894 [164]. Douglas Bay, 1867 [52]. Dredged between Laxey and the Dhoon, 1890, 1891 [172].

PISA TETRAODON (Pennant) *Bell*, 1853, p. 22.

Dredged near Port Erin, 1935 (N.B.E.). Recorded from the Isle of Man but no locality given, 1863 [141]. Isle of Man [98].

HYAS COARCTATUS Leach *Bell*, 1853, p. 35.

Common in the trawl all round the south of the island: the Breast, off Fleshwick, Bay Fine, Bank Charles (H.B.M.). Generally distributed in shallow water, 1900 [90]. Mouth of Port Erin Bay, 1895 [76]. A quarter of a mile off Fleshwick, 15 fm., 1894 [75]. A quarter to one mile south-east of Perwick Bay, 15-18 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles west of Dalby, 30 fm., 1894 [75].

HYAS ARANEUS (Linné) *Bell*, 1853, p. 31.

A few specimens taken among weeds at L.W.S.T.: Port Erin, Port St. Mary, Gansey Point. Fairly common in the trawl round the south of the island (H.B.M.). Generally distributed in shallow water, 1900 [90]. Mouth of Port Erin Bay, 1895 [76].

Breeding: Apl. 1907, stages 1, 2 and 3 common off Port Erin [99]. Apl. 1913, larvae extremely abundant at the surface at Port Erin, a few only deeper [100].

INACHUS DORSETTENSIS (Pennant) *Bell*, 1853, p. 13.

Very common in the trawl all round the south of the island; Breast, Bay Fine, between Burroo Nedd and Spanish Head. Occasionally taken in the *Laminaria* zone (H.B.M.). Port Erin, 1878 [53]. Off Port Erin, 1892 [161]. Three-quarters of a mile north of Kitterland, 18 fm., 1893 [74]. Seven miles west of Fleshwick, 1893 [74].

INACHUS DORYNCHUS Leach *Bell*, 1853, p. 16.

Generally distributed round the south of the island, but not very common; off Fleshwick, off Port Erin, Bay Fine (H.B.M.). Port Erin, 1878 [53].

INACHUS LEPTOCHIRUS Leach *Bell*, 1853, p. 18.

Two males trawled on the Breast, ca. 17 fm., Nov. 1930 (H.B.M.).

MACROPODIA LONGIROSTRIS (Fabricius) *Bell*, 1853, p. 6, as *Stenorynchus tenuirostris*.

Fairly common in the trawl all round the south of the island : Breast, Bay Fine, between Burroo Nedd and Spanish Head (H.B.M.).

MACROPODIA ROSTRATA (Linné) *Bell*, 1853, p. 2, as *Stenorynchus phalangium*.

Common everywhere in the trawl round the south of the island : Breast, Bay Fine, off Fleshwick, between Burroo Nedd and Spanish Head, Bank Charles (H.B.M.). Common and generally distributed, 1900 [90]. Port Erin, 1878 [53]. 1898 [20]. Seven miles west of Peel, 21 fm., 1895 [76].

MACROPODIA EGYPTIA (M.-Edwards) *Milne-Edwards*, 1834, I, p. 280, as *Stenorynchus egyptius*.

One specimen trawled off Fleshwick, Aug. 1931 ; one specimen trawled in Port Erin Bay, Apl. 1932 ; one male and one female dredged on the south side of Port Erin Bay, 3 fm., Mar. 1933 (H.B.M.).

ACHAEUS CRANCHI Leach *Bell*, 1853, p. 10.

Recorded from the Isle of Man but no locality given, 1863 [141] [98].

Class ARACHNIDA

Sub-Class PYCNOGONIDA

Family PYCNOGONIDAE

PYCNOGONUM LITTORALE (Ström) *Sars*, 1891, p. 7 ; *Bowvier*, 1923, p. 61.

A few under stones near L.W. at Port Erin and Port St. Mary, and in the trawl in Port Erin Bay, Mar., Apl. 1933 (H.B.M.). Off the Halfway Rock, 18 fm., and in Aldrick, 1900 [90].

Family PHOXICHILIDAE

ENDEIS SPINOSUS (Montagu) *Hoek*, 1881, p. 518, as *Phoxichilus spinosus* ; *Bowvier*, 1923, p. 45, as *Chilophoxus spinosus*.

Taken occasionally in the trawl round the south of the island. Single specimens from Fleshwick, and between Burroo Nedd and Spanish Head (H.B.M.). One specimen from Port Erin Bay, L.W.O.S.T. (N.B.E.). Off Port Erin, 15 fm., one specimen, 1886 [60].

Family PHOXICHILIDIIDAE

ANAPLODACTYLUS PETIOLATUS (Kröyer) Sars, 1891, p. 25; *Bowvier*, 1923, p. 40.

One specimen on a stone, dredged in Bay Fine, Apl. 1932 [116].
Port Erin, 1895 [17].

ANAPLODACTYLUS VIRESCENS (Hodge) Hoek, 1881, p. 517, as *Phoxichilidium virescens*; *Bowvier*, 1923, p. 41.

Not uncommon in the sand from L.W.N.T. down at Brewery Beach, 1932 (L.G., H.B.M.).

PHOXICHILIDIUM FEMORATUM (Rathke) Hoek, 1881, p. 512; *Bowvier*, 1923, p. 43.

Not uncommon on the shore about L.W.O.S.T.; Port St. Mary, Fleshwick (H.B.M.). Port Erin (N.B.E., H.B.M.). Off Port Erin, 1900 [60].

Breeding: males carrying ova, Mar. (N.B.E., H.B.M.). Apl. (N.B.E.).

Family PALLENIDAE

PALLENE BREVIROSTRIS Johnston Hoek, 1881, p. 511; *Bowvier*, 1923, p. 34.

One specimen off Spanish Head, 20 fm., 1886 [60].

PALLENE PRODUCTA Sars Sars, 1891, p. 36; *Bowvier*, 1923, p. 36.

Port Erin, 1895 [17].

Family NYMPHONIDAE

NYMPHON GRACILE Leach *Bowvier*, 1923, p. 30; *Hoek*, 1881, p. 501, as *N. gallicum*. Not *Hoek*, 1881, p. 498, *N. gracile*. *Mar. Biol. Assoc.*, 1931, p. 223, as *N. gallicum*.

Occasionally on the shore at L.W., and more frequently in the dredge, round the south of the island. Castletown, L.W.E.S.T., one specimen; dredged in Port Erin Bay and off Port St. Mary (H.B.M.). Port Erin, 1895 [17]. On the harbour buoy, Port Erin, 1898 [79]. Off the Calf, 1903 [25].

Breeding: several with larvae, Apl. 1933 (H.B.M.).

CHAETONYMPHON HIRTUM (Kröyer) Sars, 1891, p. 101.

Port Erin, 1895 [17].

Family AMMOTHEIDAE

AMMOTHEA ECHINATA (Hodge) *Hoek*, 1881, p. 508; *Bouvier*, 1923, p. 55.

One specimen on the Breast, 18 fm., Oct. 1933 (H.B.M., det. L.G.).
Mouth of Port Erin Bay, 17 fm., 1895 [76].

AMMOTHEA LONGIPES Hodge *Hoek*, 1881, p. 504; *Bouvier*, 1923, p. 52.

One specimen dredged in Port Erin Bay, Mar. 1932 [116].

AMMOTHEA SIMPLEX Giltay *Giltay*, 1934.

One male with ova attached, taken in the neighbourhood of Port Erin—exact locality not known, Apl. 1933 (type specimen in the British Museum.)

Breeding: see above.

Sub-Class EMBOLOBRANCHIATA

Order CHERNETIDAE

Family CHELIFERIDAE

OBISIUM MARITIMUM Leach *Falconer*, 1910, p. 445.

Five specimens taken in chinks in the rocks on the shore, Port Erin, 1904 [97]. Two, similarly, Apl. 1935 (M.C. and B.J.M.).

Class INSECTA

Group *APTERYGOTA*Order **COLLEMBOLA**

LIPURA MARITIMA Guérin *Lubbock*, 1873, p. 193, as *Anurida maritima*.

On the surface of pools between tide marks especially in calm weather ; common and generally distributed 1904 [97] ; (H.B.M.).

Order **THYSANURA**

PETROBIUS MARITIMUS Leach *Lubbock*, 1873, p. 237, as *Machilis maritima*.

Common about the cliffs at Port Erin, above H.W., and in the old Biological Station, 1901 [95]. Very common in the old Biological Station at all times (H.B.M.). Cliffs near Peel, 1915 (J.B.).

Group *ENDOPTERYGOTA*Order **DIPTERA**Family **CHIRONOMIDAE**

CLUNIO BICOLOR Kieff *Imms*, 1903, p. 81.

Fairly abundant on the surface of tidal pools at Port Erin, and a few at Fleshwick, 1902 [96].

CRICOTOPUS FUCICOLA Edwards *Edwards*, 1929, p. 326.

Larvae and pupae abundant in the plankton of the Biological Station ponds at Port Erin throughout the summer (M.W.P., J.R.B., det. F.W.E.).

Order **COLEOPTERA**Sub-Order **GEODEPHAGA**

BROSCUS CEPHALOTES Linné *Fowler*, 1887, I, p. 27, fig. Pl. 5.

At Kirk Michael, on the sandy shore at the foot of the cliffs, 1908 [4].

BEMBIDIUM SAXATILE Gyllenhal *Fowler*, 1887, I, p. 116, fig. Pl. 18.

Abundant among the shingle in Port Erin Bay, June 1892 [46].

BEMBIDIUM PALUDOSUM Panzer *Fowler*, 1887, I, p. 121, fig. Pl. 19.

Common under seaweed at Port Erin, June and Aug. 1892 [46].

AEPUS MARINUS Ström *Fowler*, 1887, I, p. 124, fig. Pl. 19.

In chinks in the slaty rock in the *Fucus* zone between tide marks at Port Erin, 1908 [4].

AEPUS ROBINI Laboulbène *Fowler*, 1887, I, p. 125, fig. Pl. 19.

Abundant at all times of the year, together with larvae, in chinks in the slaty rock in the *Fucus* zone between tide marks at Port Erin, 1908 [4].

Sub-Order PALPICORNIA

CERCYON LITTORALIS Gyllenhal *Fowler*, 1887, I, p. 255, fig. Pl. 36.

Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].

CERCYON DEPRESSUS Stephens *Fowler*, 1887, I, p. 255.

Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].

Sub-Order BRACHELYTRA

ALEOCHARA GRISEA Kraatz *Fowler*, 1887-91, II, p. 21.

Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].

ALEOCHARA ALGARUM Fauvel *Fowler*, 1887-91, II, p. 22, fig. Pl. 37.

Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].

ALEOCHARA OBSCURELLA Erichson *Fowler*, 1887-91, II, p. 22, fig. Pl. 37.

Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].

- HOMALOTA VESTITA** Gravenhorst *Fowler*, 1887-91, II, p. 79, fig. Pl. 42.
Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].
- HOMALOTA HALOBRECTHA** Sharp *Fowler*, 1887-91, II, p. 83, fig. Pl. 44.
Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].
- HOMALOTA ALGAE** Hardy *Fowler*, 1887-91, II, p. 84.
Under seaweed on the shore at Port Erin, in the *Fucus* zone, between tide marks, 1908 [4].
- FALAGRIA SULCATULA** Gravenhorst *Fowler*, 1887-91, II, p. 148.
Under seaweed, Port Erin, June 1892 [46].
- FALAGRIA OBSCURA** (Mulsant & Rey) *Fowler*, 1887-91, II, p. 148.
Under seaweed at Port Erin, June 1892 [46].
- PHILONTHUS TROSSULUS** Nordmann *Fowler*, 1887-91, II, p. 279, fig. Pl. 60.
Among shingle at Port Erin, June 1892 [46].
- CAFIUS FUCICOLA** Curtis *Fowler*, 1887-91, II, p. 282, fig. Pl. 60.
Under seaweed in the *Fucus* zone, between tide marks at Port Erin, 1908 [4]. At Kirk Michael, on the sandy shore at the foot of the cliffs, 1908 [4].
- CAFIUS XANTHOLOMA** Gravenhorst *Fowler*, 1887-91, II, p. 282, fig. Pl. 60.
At Kirk Michael, on the sandy shore at the foot of the cliffs, 1908 [4].
- CAFIUS SERICEUS** Holme *Fowler*, 1887-91, II, p. 283, fig. Pl. 60.
Under seaweed in the *Fucus* zone, between tide marks at Port Erin, 1908 [4].
- LATHROBIUM MULTIPUNCTUM** Gravenhorst *Fowler*, 1887-91, II, p. 303, fig. Pl. 62.
Among shingle at Port Erin, June 1892, and Aug. 1893 [46].
- SUNIUS ANGUSTATUS** Paykull *Fowler*, 1887-91, II, p. 321.
Common among shingle at Port Erin, June 1892 [46].

MICRALYMMMA MARINUM Ström *Fowler*, 1887-91, II, p. 407, fig. Pl. 68.

Abundant at all times of the year, together with larvae, in chinks of the slaty rock in the *Fucus* zone, between tide marks at Port Erin, 1908 [4].

HOMALIUM LAEVIUSCULUM Gyllenhal *Fowler*, 1887-91, II, p. 413.

Under seaweed in the *Fucus* zone at Port Erin, June 1892 [46].
1908 [4].

Sub-Order CLAVICORNIA

PTENIDIUM PUNCTATUM Gyllenhal *Fowler*, 1887-91, III, p. 137, fig. Pl. 80.

Under seaweed in the *Fucus* zone, between tide marks at Port Erin, 1908 [4].

PACHYLOPUS (SAPRINUS) MARITIMUS Stephens *Fowler*, 1887-91, III, p. 212, fig. Pl. 86, as *Saprinus maritimus*.

At Kirk Michael, on the sandy shore at the foot of the cliffs, 1908 [4].

Sub-Order HETEROMERA

ANTHICUS ANGUSTATUS Curtis *Fowler*, 1887-91, V, p. 87, fig. Pl. 150.

Amongst shingle at Port Erin, June 1892 [46].

Phylum MOLLUSCA

Class PLACOPHORA (LORICATA)

Family LEPIDOPLEURIDAE

LEPIDOPLEURUS ASELLUS (Gmelin) *Forbes & Hanley*, 1853, II, p. 407, as *Chiton asellus*.

Live specimens round the Isle of Man, 15 to 18 fm., gravel bottom ; 20 to 25 fm., shell bottom, 1850 [50]. Niarbyl, L.W.E.S.T., Mar. 1932, one specimen. Dredged in Bay Fine, Mar. 1932, one specimen ; a few dredged in Port Erin Bay, Apl. 1933 (H.B.M.). Douglas Bay, dredged 1867 [52]. Five miles off Ballaugh, 20 fm., shell bottom, abundant, 1836 ; same locality, abundant, 1838 [50].

LEPIDOPLEURUS CANCELLATUS (Sowerby) *Forbes & Hanley*, 1853, II, p. 410, as *Chiton cancellatus*.

A few dredged in Port Erin Bay, 1932-33 (H.B.M.). Off Port Erin [90].

HANLEYA HANLEYI (Bean) *Forbes & Hanley*, 1853, II, p. 398, as *Chiton hanleyi*.

Dredged between Laxey and the Dhoon, summer, 1890,-91 [172].

Family LEPIDochITONIDAE

LEPIDochITONA CINEREUS (Linné) *Forbes & Hanley*, 1853, II, p. 402, as *Chiton cinereus*.

Common under stones at low water [47]. Shore, Port Erin, single specimens, 1931 (H.B.M.). Port Erin Bay, a few trawled, 1931, 1933 (H.B.M.). Common off the south end of the island [16]. Off Bay Fine and Spanish Head [90]. Ramsey and Douglas [53a].

TONICELLA RUBRA (Linné) *Forbes & Hanley*, 1853, II, p. 399, as *Chiton ruber*.

Round the Isle of Man, 7 to 12 fm., stony and nullipore bottom, alive [50]. Littoral zone Port Erin Bay, single specimens, 1931 (H.B.M.). Trawled in Bay Fine, May 1931 (H.B.M.). On stones in about 10 fm., on the north coast [47]. Ramsey Bay, Aug. 1885 [107].

TONICELLA MARMOREA (Fabricius) *Forbes & Hanley*, 1853, II, p. 414, as *Chiton marmoreus*.

One, on rock at L.W.S.T., Fleshwick, Apl. 1937 (N.B.E.).

CALLOCHITON ACHATINUS (Brown) *Jeffreys*, 1865, III, p. 226, as *Chiton laevis*.

One, Niarbyl, L.W.S.T., Apl. 1936 (M.B.W.). Rare off the south end of the island [44]. Port Erin Bay, under stones [90]. Trawled round the Calf [74]. Dredged in Douglas Bay, 1867 [52]. 15 to 18 fm., off Douglas Head [51].

Family CRYPTOPLACIDAE

ACANTHOCHITONA CRINITUS (Pennant) *Forbes & Hanley*, 1853, II, p. 393, as *Chiton fascicularis*.

North side of Fleshwick Bay, L.W.O.S.T., Mar. 1932, one specimen (H.B.M.). In deep water on the north coast, not common [47], [44].

Family ISCHNOCHITONIDAE

ISCHNOCHITON ALBUS (Linné). *Forbes & Hanley*, 1853, II, p. 405, as *Chiton albus*.

Off the south end of the island, rare [44]. Port Erin Bay, under stones [90].

Class LAMELLIBRANCHIA

Sub-Class PRIONODESMACEA

Order PROTOBRANCHIA

Family NUCULIDAE

NUCULA SULCATA Bronn *Forbes & Hanley*, 1853, II, p. 221, as *N. decussata*.

Double shells (valves only), fourteen miles north-west of Port Erin, 79 fm., in very tenacious mud, Apl. 1893 [74].

NUCULA NUCLEUS (Linné) *Forbes & Hanley*, 1853, II, p. 215.

Off Bradda Head and Spanish Head, 1900 [90]. Mouth of Port Erin Bay, 1895 [76]. Off Halfway Rock, Port Erin, 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Only valves taken recently, on the Breast (H.B.M.). One, near Jetty, Port Erin, L.W.E.S.T., Apl. 1937 (K.M.W.).

NUCULA HANLEYI Winckworth *Forbes & Hanley*, 1853, II, p. 220, as *N. radiata*.

Radiate form : one specimen among nullipores, the Hault Bank, Apl. 1931 (H.B.M.). Commoner than *N. nucleus* at Port Erin, 1892 [3]. Plentiful in the Isle of Man, 1901 [116]. Non-radiate form : one specimen from the Breast, Sept. 1931; two specimens trawled in Fleshwick Bay, Aug. 1931; one from Bay Fine, Nov. 1933 (H.B.M.).

NUCULA TURGIDA Leckenby & Marshall *Forbes & Hanley*, 1853, II, p. 218, as *N. nitida*.

Occasionally alive round the Isle of Man, 15 to 18 fm., 1850 [50]. Occasionally off Port Erin, 1892 [3].

NUCULA TENUIS (Montagu) *Forbes & Hanley*, 1853, II, p. 223.

Recorded from the Isle of Man but no locality given, 1878 [53]. Not recorded since (H.B.M.).

Family NUCULANIDAE

NUCULANA MINUTA (Müller) *Forbes & Hanley*, 1853, II, p. 226, as *Leda caudata*.

Port Erin, 1896 [78].

Order FILIBRANCHIA

Family ARCIDAE

GLYCYMERIS GLYCYMERIS (Linné) *Jeffreys*, 1863, II, p. 166, as *Pectunculus glycymeris*.

Trawled commonly off all coasts : off Fleshwick Bay, off Spanish Head, on the Hault Bank (H.B.M.); off Bay Fine and Aldrick, 1900 [90]; east and south of the Calf, 1900 [81]; north-west of the Calf, 1893 [74]; two miles south-east of Kitterland, 1894 [75]. Between Port Erin and the Calf, 1893 [74]; seven miles west of Fleshwick Bay, 1893 [74]. Common in deep water off all the coasts, and especially abundant off Douglas Head, 1838 [47]. Douglas Bay, abundant, 1867 [52]. Ramsey, valves abundant (H.B.M.). In a *Zostera* bed, Laxey Bay, 8 fm., alive, 1892 [73].

ARCA (NAVICULA) *TETRAGONA* Reeve *Jeffreys*, 1863, II, p. 180.

Off Spanish Head, 1900 [90]. Two specimens dredged living, off Ballaugh, 20 fm., 1838 [47].

ARCA (TRIGONODESMA) *LACTEA* Linné *Jeffreys*, 1863, II, p. 177.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family ANOMIIDAE

ANOMIA EPHIPIUM Linné *Jeffreys*, 1863, II, p. 30.

Common on shells and stones and also on *Laminaria*, both near L.W. and in deep water, all round the south of the island; L.W., Niarbyl, Port Erin, the Sound; trawled, the Breast, Bay Fine (H.B.M.); Port Erin Bay, 1895 [76]; off Halfway Rock, 1895 [76]; one and a half miles west of the Chickens Rock, 1894 [75]; seven miles west of Peel, 21 fm., 1895 [76].

MONIA PATELLIFORMIS (Linné) *Jeffreys*, 1863, II, p. 34, as *Anomia patelliformis*.

Common at Port Erin, 1892 [3]. Common on shells in deep water, 1838 [47].

MONIA SQUAMA (Gmelin) *Jeffreys*, 1863, II, p. 35, as *Anomia patelliformis* var. *striata*.

Two specimens dredged two and a half to three miles west of Port Erin, May 1934 (W.F.). Port Erin, on rocks near the Breakwater, six specimens at L.W.E.S.T., Apl. 1935 (N.B.E.). On the inner surface of "Pectens", 1878 [53].

HETERANOMIA SQUAMULA (Linné) *Jeffreys*, 1863, II, p. 32, as *Anomia ephippium* var. *aculeata*.

On fuci, common, 1838 [47].

Family MYTILIDAE

MYTILUS EDULIS Linné *Jeffreys*, 1863, II, p. 104.

Recorded as common in the south of the island, 1886 [44]. I have found it in only a few localities, and then only a few very small and stunted specimens: on the rocks opposite the old Biological Station, Port Erin; outside Bradda and at the Sloc (H.B.M.). At Poyllvaash (J.H.O.). In crevices of rocks, by swimming baths and on north side of bay, ca. M.T., 1900 [90]. On the harbour buoy, Port Erin, May 1893 [10], and Sept. 1903 [25]. Valves trawled on Bank Charles (H.B.M.). One mile south-east of the Calf, 20 fm., 1894 [75]. Dredged between Laxey and the Dhoon, abundant, 1890-91 [172]. Very abundant and well grown on Ramsey Pier [H.B.M.]. Recorded as abundant on rocky coasts, 1838 [47]. Those from Ramsey sometimes contain the commensal crab *Pinnotheres pisum*, but I have not seen this at Port Erin (H.B.M.).

MODIOLUS BARBATUS (Linné) *Forbes & Hanley*, 1853, II, p. 190, as *Modiola barbata*.

Recorded from the Isle of Man but no locality given [174]. One, in *Fucus serratus* zone, Niarbyl, M.T., Apl. 1935 (E.T.B.F.).

MODIOLUS MODIOLUS (Linné) *Jeffreys*, 1863, II, p. 111, as *Mytilus modiolus*.

Not uncommon on the Breast (H.B.M.). Off the Calf and Spanish Head, 1900 [90]. Three miles north-west of the Calf, 20 fm. [75]. Mouth of Port Erin Bay, 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Common in deep water off all coasts, 1838 [47]. Often containing the commensal crab *Pinnotheres pisum* (H.B.M.).

MODIOLUS PHASEOLINUS (Philippi) *Jeffreys*, 1863, II, p. 118, as *Mytilus phaseolinus*.

Common in clefts in pools about M.S.L., on the Dub Reef, Port Erin. One specimen in a pool on the north side of Fleshwick Bay. Two small specimens among *Balanus hameri* from outside Bank Charles, four miles south of Spanish Head, 25 fm., Dec. 1933 (H.B.M.).

MUSCULUS DISCORS (Linné) *Forbes & Hanley*, 1853, II, p. 195, as *Crenella discors*.

On the roots of fuci, common, 1838 [47]. Among *Corallina*, in pools, Port Erin, 1900 [90].

MUSCULUS MARMORATUS (Forbes) *Jeffreys*, 1863, II, p. 122, as *Modiolaria marmorata*.

One specimen in the test of *Ascidia mentula*, the Breast, Feb. 1932, and several free in Apl. 1934. (H.B.M.). Port Erin, rare, living, 1886 [44]. Off Spanish Head, 1900 [90]. One mile south-east of the Calf, 22 fm., 1900 [81]. Six miles west-south-west of the Calf, 26 fm., 1900 [109]. Seven miles west of Peel, 21 fm., 1895 [76]. On the roots of fuci on the north coast, 1838 [47]. Port Mooar [107].

Order PSEUDOLAMELLIBRANCHIA

Family OSTREIDAE

OSTREA EDULIS Linné *Jeffreys*, 1863, II, p. 38.

Formerly present all round the island, and abundant on the banks round the north of the island. Now rarely taken owing to over-fishing (H.B.M.). On the north and east coasts, plentiful, especially on a bank off Laxey. Those from the north extremely large, and very coarse, 1838 [47]. Aldrick and Bay Fine, 15 to 20 fm., 1893 [74]. Off the Halfway Rock, Port Erin, 18 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. None found near Port Erin in the last two years (H.B.M.).

Family PECTINIDAE

PECTEN MAXIMUS (Linné) *Jeffreys*, 1863, II, p. 73.

Fairly common in the trawl all round the south of the island, though not nearly as abundant as they used to be: off Fleshwick Bay, off Bradda Head, Bay Fine, the Breast (H.B.M.). Common and very large, distributed everywhere, 1901 [16]. In great abundance four miles west of Dalby, 25 fm., 1893 [74]. Five miles off Ballaugh, 20 fm., numbers, 1836, -38 [50].

CHLAMYS VARIA (Linné) *Jeffreys*, 1863, II, p. 53, as *Pecten varius*.

Under stones, L.W., Port Erin, 1900 [90]. Two specimens under stones, Niarbyl, L.W.E.S.T., Mar. 1932 (H.B.M.). Off Bay Fine and Aldrick, 1900 (90). One mile west of the Calf, 20 fm., 1892 [73]. Off Spanish Head, 1901 [16]. On the scallop banks off the north of the island, but scarce, 1838 [47]. In the roots of fuci, Point of Ayre, 1884 [107]. Numerous, young, under stones, Port Erin Breakwater, L.W.E.S.T., Mar. 1936 (N.B.E.).

CHLAMYS DISTORTA (da Costa) *Jeffreys*, 1863, II, p. 51, as *Pecten pusio*.

One specimen on the Breast, 1931 (H.B.M.). Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, Port Erin, 1895 [76]. East and south of the Calf, 15 to 30 fm., 1900 [81]. Four miles west of the Chickens Rock, 38 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Dredged frequently attached to old shells, 1901 [16]. Common in deep water, 1838 [47]. Five miles off Ballaugh, 20 fm., small numbers, 1836, -38 [50]. On stones, Port Erin Breakwater, L.W.E.S.T., Mar. 1936 (N.B.E.). Calf Sound, L.W.S.T., Apl. 1937 (K.M.W.).

CHLAMYS (AEQUIPECTEN) OPERCULARIS (Linné) *Jeffreys*, 1863, II, p. 59, as *Pecten opercularis*.

Common in the trawl all round the south of the island: the Breast, Fleshwick Bay (H.B.M.); off Bradda Head and Aldrick, 1900 [90]. A bed outside Port Erin and smaller patches closer inshore, especially off Bradda Head, 1892 [3]. Four miles west of Fleshwick Bay, in quantity, 1893 [74]. Four miles west of Dalby, in great abundance, 1893 [74]. West of Dalby, five miles out, 30 fm., sandy mud bottom, 1894 [75]. Four miles west of Glen Meay, 21 fm., 1894 [75]. Dredged between Laxey and the Dhoon, 1890, 91 [172]. Five miles off Ballaugh, 20 fm., 1833, -36, -38, abundant [50].

CHLAMYS (PALLIOLUM) TIGERINA (O. F. Müller) *Forbes & Hanley*, 1853, II, p. 285, as *Pecten tigrinus*.

A few specimens from the Breast and Bay Fine (H.B.M.). Off Bay Fine and Aldrick, 1900 [90]. Occasionally living at Port Erin,

1892 [3]. Round the Calf, 1892, -93, 1900 [73, 74, 81, 109]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles off Ballaugh, 20 fm., 1836, -38 [50]. Not infrequent on all the coast, 1838 [47].

CHLAMYS (PALLIOLUM) STRIATA (Müller) *Forbes & Hanley*, 1853, II, p. 281, as *Pecten striatus*.

Two specimens off Port Erin, Apl. 1931 (H.B.M.). Five specimens off the Bows, Port Erin, Jan.-May 1934 (W.F.). Three miles west of Fleshwick, 20 fm., 1892 [73].

CHLAMYS (PALLIOLUM) FURTIVA (Lovén) *Jeffreys*, 1863, II, p. 67, as *Pecten testae*.

Six specimens taken alive, two to three miles off Port Erin, at various times between Oct. and Dec. 1933, and two more in May 1934 (W.F.). Round the Calf, 1893 [74]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles west-south-west of the Calf, 26 fm., 1900 [109].

CHLAMYS (SIMILIPecten) SIMILIS (Laskey) *Jeffreys*, 1863, II, p. 71, as *Pecten similis*.

One specimen, two and a half to three miles off Port Erin, Oct. 1933 (W.F.). Bay Fine, common, 1892 [3]. Off Port Erin and Spanish Head, 1901 [16].

Family LIMIDAE

LIMA (LIMARIA) HIANS (Gmelin) *Jeffreys*, 1853, II, p. 87.

Six miles west of Port Erin, 24 fm., 1892 [73]. Off Clay Head, 20 fm., 1892 [73]. In deep water on the north coasts, rare, 1838 [47]. North coast, 12-25 fm., on scallop banks, frequent, 1853 [51].

LIMA (LIMARIA) LOSCOMBI Sowerby *Jeffreys*, 1863, II, p. 85, as *L. loscombii*.

Fairly frequent, two to three miles off Port Erin, and some a large size, Oct.-Dec. 1933 (W.F.). Off Bradda Head and Bay Fine, 1892 [3]. Occasionally off Spanish Head, 1901 [16]. One mile south-east of the Calf, 22 fm., 1900 [81]. Fourteen miles west of Port Erin, 79 fm., muddy bottom, 1893 [74]. Five miles west of Dalby, 30 fm., sandy mud, 1893 [74]. Same locality, 1894 [75]. Ramsey scallop bed, 1878 [53]. Dredged alive at Ramsey [53a].

LIMA (LIMATULA) SULCATA Brown *Jeffreys*, 1863, II, p. 81, as *L. elliptica*.

Off Spanish Head, 1900 [90]. East and south of the Calf, 15-30 fm., 1900 [81]. Round the Calf, 1893 [74]. Six miles west-south-west of the Calf, 26 fm., 1900 [109]. Four miles west of the Chickens Rock, 38 fm., 1894 [75]. Six miles west of Port Erin, 24 fm., 1892 [73].

LIMA (LIMATULA) SUBAURICULATA (Montagu) *Jeffreys*, 1863, II, p. 82.

Two valves trawled on the Breast, Sept. 1931 (H.B.M.). Two specimens alive and two dead double valves, three miles off Port Erin, Oct.-Dec. 1933 (W.F.). Dead shells only from the south end of the island, rare, 1886 [44]. Off Laxey, 15 fm., 1853 [51].

Sub-Class TELEODESMACEA

Family ASTARTIDAE

ASTARTE ELLIPTICA (Brown) *Forbes & Hanley*, 1853, I, p. 459.

In deep water on the north coast, not frequent, 1838 [47]. Douglas Bay, dredged, 1867 [52].

ASTARTE SULCATA (da Costa) *Forbes & Hanley*, 1853, I, p. 452.

Off Port Erin, 10-20 fm., 1900 [90]. Sparingly off Bradda Head, 1892 [3]. Two specimens off Port Erin; one specimen off Fleshwick Bay (H.B.M.). Round the Calf, 15-30 fm., 1893, 1900 [73, 81]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. One and a half miles west of Contrary Head, 13 fm., 1894 [75]. Seven miles west of Peel, 1895 [76]. In deep water off the north and east coasts, rare, 1838 [47]. Ramsey, washed up, 1867 [52]. Ballaugh, 1878 [53].

ASTARTE (GOODALLIA) TRIANGULARIS (Montagu) *Jeffreys*, 1863, II, p. 318.

Round the Calf, 1893 [74]. Entangled in the byssi of *Modiolus*, from deep water off Douglas, but rare, 1838 [47].

Family THYASIRIDAE

THYASIRA FLEXUOSA (Montagu) *Jeffreys*, 1863, II, p. 247, as *Axinus flexuosus*.

Twelve fm., but rare, no locality given, 1853 [51]. Ramsey, 1878 [53].

Family LUCINIDAE

LORIPES LUCINALIS (Turton) *Forbes & Hanley*, 1853, II, p. 57, as *Lucina leucoma*.

A single specimen at L.W. at Derby Haven, and one in the swimming baths at Port Erin (H.B.M., det. R.W.).

Family MYRTIDAE

MYRTEA SPINIFERA (Montagu) *Forbes & Hanley*, 1853, II, p. 49, as *Lucina spinifera*.

Several dead off Bay Fine, 1892 [3].

PHACOIDES (LUCINOMA) BOREALIS (Linné) *Jeffreys*, 1863, II, p. 242, as *Lucina borealis*.

Port Erin Bay, dead but fresh, not common, 1900 [90]. Dead shells common off Port Erin, 1892 [3]. 12-25 fm., plentiful in places, as at Ballaugh and Derby Haven, 1853 [51]. Ramsey, 1878 [53].

Family ERYCINIDAE

KELLIA SUBORBICULARIS (Montagu) *Forbes & Hanley*, 1853, II, p. 87.

In crevices of dead shells from deep water, frequent; more rarely in crevices in rocks at very low water, 1838 [47]. Round the Calf, dredged, 1893 [74].

LASAEA RUBRA (Montagu) *Forbes & Hanley*, 1853, II, p. 94, as *Kellia rubra*.

In crevices of slate rocks at low water, among tufts of *Corallina officinalis*, very abundant, 1838 [47]. Very abundant all round the coast wherever there is rock, 1853 [51]. In shells of *Balanus balanoides* on rocks near the old Biological Station, Port Erin, 1899 [109]. Same locality, very abundant, 1931 (H.B.M.).

TURTONIA MINUTA (Fabricius) *Forbes & Hanley*, 1853, II, p. 81.

Abundant among the roots of *Corallina officinalis* and *Lichina*, near high water mark on slate rocks, 1853 [51]. Common alive in weeds at Baie-ny-Carrickey, 1892 [3]. Fleshwick Bay, 1901 [16].

Family LEPTONIDAE

LEPTON SQUAMOSUM (Montagu) *Forbes & Hanley*, 1853, II, p. 98.

Only valves recorded from the Isle of Man—no locality given, 1901 [16].

LEPTON NITIDUM Turton *Jeffreys*, 1863, II, p. 198.

Several from off Port Erin, 1892 [3]. Six miles west-south-west of Calf, 26 fm., 1900 [109].

LEPTON (NEOLEPTON) SULCATULUM Jeffreys *Jeffreys*, 1863, II, p. 201.

Dredged off Kitterland, 17 fm., 1897 [73]. On a piece of limestone from deep water off the Calf, 1903 [25].

LEPTON (EPILEPTON) CLARKIAE Clark *Jeffreys*, 1863, II, p. 202.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family MONTACUTIDAE

MYSELLA BIDENTATA Montagu *Forbes & Hanley*, 1853, II, p. 75, as *Montacuta bidentata*.

Two specimens in muddy sand, 5 fm., just inside Port Erin break-water, Apl. 1933 (H.B.M.).

MONTACUTA SUBSTRIATA (Montagu) *Jeffreys*, 1863, II, p. 205.

One specimen commensal on *Echinocardium flavescens*, from the Breast, May 1934 (H.B.M., det. R.W.). Occasionally off the north of the island and off Port Erin, 1901 [16].

MONTACUTA FERRUGINOSA (Montagu) *Forbes & Hanley*, 1853, II, p. 72.

In the sand by the anal siphon of *Echinocardium cordatum*, all round the sandy shore of Port Erin Bay at and below L.W.S.T. Fairly common, 1900 [90], 1901 [16], 1930 [115], 1932 (H.B.M.).

Family CYPRINIDAE

CYPRINA ISLANDICA (Linné) *Forbes & Hanley*, 1853, I, p. 441.

Dead shells are common in the trawl all round the south of the island; two live specimens trawled on the Breast, Apl. 1933 (H.B.M.). Off Bay Fine and Kitterland, dead but fresh, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, Port Erin, 18 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Ramsey, washed ashore, 1867 [52]. Dead shells very abundant off Laxey, but live ones only rarely taken [105]. Dredged abundantly between Laxey and the Dhoon, 1890-91 [172]. Ramsey, 1878 [53]. Same locality, valves only (H.B.M.).

Family ISOCARDIIDAE

GLOSSUS HUMANUS (Linné) *Forbes & Hanley*, 1853, I, p. 472, as *Isocardia cor*.

Trawled off the Calf, 1901 [16]. West of the Isle of Man, 70 fm., 1893 [72]. Ramsey, washed ashore, 1867 [52]. Ramsey, dead, but with valves still united [53a].

Family CARDIIDAE

CARDIUM (ACANTHOCARDIA) ECHINATUM Linné *Forbes & Hanley*, 1853, II, p. 7.

Young specimens occasionally trawled on the Breast and in Fleshwick Bay, 1932; a few large specimens from Bay Fine and the Breast, 1933 (H.B.M.). Port Erin Bay, 10 fm., 1900 [90]. Living but generally young, off Port Erin, 1892 [3]. Seven miles west of Peel, 21 fm., 1895 [76]. North of the island, living, 1886 [44].

CARDIUM (PARVICARDIUM) MINIMUM Reeve *Forbes & Hanley*, 1853, II, p. 33, as *C. suecicum*.

One large and several small specimens dredged off the south coast of the island, 1901 [16].

CARDIUM (PARVICARDIUM) OVALE Sowerby *Jeffreys*, 1863, II, p. 281, as *Cardium fasciatum*.

A few specimens alive, two to three miles off Port Erin, Oct.-Dec. 1933 (W.F.). On the scallop banks north, north-east and north-west of the island, but rare, 1838 [47].

CARDIUM (PARVICARDIUM) SCABRUM Philippi *Jeffreys*, 1863, II, p. 283, as *Cardium nodosum*.

Several specimens in muddy sand inside the Breakwater, Port Erin, 5 fm., Apl. 1933 (H.B.M.). A few alive, two to three miles off Port Erin, Oct.-Dec. 1933 (W.F.). Common alive off Bay Fine and Bradda Head, 1892 [3]. One mile south-east of the Calf, 22 fm., 1900 [81]. Dredged between Laxey and the Dhoon, 1890-91 [172].

CARDIUM (CERASTODERMA) EDULE Linné *Forbes & Hanley*, 1853, II, p. 15.

Seems to have been plentiful once in one or two localities at least, but to have almost died out now (H.B.M.). Port Erin Bay, in sand 1900 [90]. Now never found there, but present in numbers, and of good size in the swimming baths (H.B.M.). At Ramsey, frequent in sand at the mouth of the Sulby river, 1838 [47]. Killed off there by the gas works, a single valve is now seen there but rarely, ca. 1880 [107]. One small valve washed up, Ramsey shore, 1932 (H.B.M.). Derby Haven, one or two valves. Port St. Mary harbour, rare, living, about M.T. (H.B.M.).

CARDIUM (LAEVICARDIUM) CRASSUM Gmelin *Forbes & Hanley*, 1853, II, p. 35, as *Cardium norvegicum*.

Not uncommonly trawled alive off the south of the island; Fleshwick Bay, between Bay Fine and Bradda Head (H.B.M.). Off Port Erin and Bay Fine, dead but fresh, 1900 [90]. West of

Fleshwick, 15 fm., 1894 [75]. Three miles west of Burroo Nedd, 22 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Ramsey, 1878 [53]. Ramsey, a few valves washed up, 1932 (H.B.M.).

Family VENERIDAE

DOSINIA EXOLETA (Linné) *Forbes & Hanley*, 1853, I, p. 428, as *Artemis exoleta*.

Off Port Erin and Bay Fine, 1900 [90]. Dead but fresh off the Castles, Port Erin, 1900 [90]. Large valves off Port Erin, 1886 [44]. Rare on Manx coasts, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey and Ballaugh, 1877 [53a].

DOSINIA LUPINUS (Montagu) *Jeffreys*, 1863, II, p. 330, as *Venus lincta*.

Two specimens trawled off Bay Fine, July, 1931; a few in muddy sand inside the Breakwater, Port Erin, 5 fm., Apl. 1933 (H.B.M.). Dead but fresh off the breakwater, Port Erin, and Bay Fine, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Common in deep water off Douglas Head, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey, 1878 [53].

GAFRARIUM (CIRCE) MINIMUM (Montagu) *Forbes & Hanley*, 1853, I, p. 446, as *Circe minima*.

Round the Calf, 1893 [74].

VENUS VERRUCOSA Linné *Forbes & Hanley*, 1853, I, p. 401.

Living specimens at Douglas and Ramsey, 1878 [53].

VENUS CASINA Linné *Forbes & Hanley*, 1853, I, p. 405.

Living, both large and small, common off Port Erin, 1886 [44]. Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. One mile south-east of Kitterland, 20 fm., 1894 [75]. Seven miles west of Fleshwick Bay, and between the Calf and Port Erin, 1893 [74]. Douglas Bay, 1867 [52]. Ramsey, 1878 [53].

VENUS (TIMOCLEA) OVATA Pennant *Forbes & Hanley*, 1853, I, p. 419.

Frequent alive at Port Erin, 1892 [3]. Two specimens trawled on the Breast, Sept. 1931, and a few in muddy sand inside Port Erin Breakwater, 3 fm., Apl. 1933 (H.B.M.). In deep water on all coasts, but not frequent, 1838 [47]. Ramsey, 1878 [53].

VENUS (CLAUSINELLA) FASCIATA (da Costa) *Forbes & Hanley*, 1853, I, p. 415.

Common in the mouth of Port Erin Bay and a few round the south side; a single specimen at L.W.E.S.T. near the Raglan Pier; a few

specimens off Fleshwick Bay and on the Hault Bank (H.B.M.). In sand, Port Erin Bay, 1900 [90]. Common alive off Port Erin, 1892 [3]. Off Fleshwick, 15 fm., 1894 [75]. Ramsey, washed ashore, 1867 [52]. Ramsey, 1878 [53].

VENUS (CHAMELEA) STRIATULA (da Costa) *Forbes & Hanley*, 1853, I, p. 408.

Common in the mouth of Port Erin Bay and a few along the south side; a single specimen at L.W.E.S.T. near the Raglan Pier; a few dredged off Port Erin (H.B.M.). In sand at low water and throughout Port Erin Bay, 1900 [90]. Mar. 1936 (K.M.W.). One old, and several young specimens, off Port Erin and Port St. Mary, 1886 [44]. Seven miles west of Peel, 21 fm., 1895 [76]. One and a half miles west of Chicken Rock, 26 fm., shell, sand and gravel, 1894 [75]. Deep water off Douglas, 1838 [47]. Ramsey, washed up, 1867 [52]. Ramsey, dredged, 1878 [53].

PAPHIA (VENERUPIS) AUREA (Gmelin) *Forbes & Hanley*, 1853, I, p. 392, as *Tapes aurea*.

Ramsey, washed ashore, 1867 [52]. Douglas, dredged, 1878 [53].

PAPHIA (VENERUPIS) RHOMBOIDES (Pennant) *Forbes & Hanley*, 1853, I, p. 388, as *Tapes virginea*.

One specimen off Port Erin; four specimens off Fleshwick (H.B.M.). Off the Castles, Port Erin, Bay Fine and Spanish Head, 1900 [90]. Very abundant at Port Erin, 1892 [3]. North and east coast, 15-25 fm., plentiful, 1838 [47]. Ramsey [53a]. Five miles off Ballaugh, 20 fm., shell bottom, abundant, 1833 [50].

PAPHIA (VENERUPIS) PULLASTRA (Montagu) *Forbes & Hanley*, 1853, I, p. 382, as *Tapes pullastra*.

In muddy gravel near the boat jetty, Port Erin, 1900, -04 [26, 90]. Not found there now, but abundant, and a good size in the swimming baths (H.B.M.). Rare, in sand at low water, Ballaugh; Douglas Bay, 1838 [47]. Ramsey [53a].

Breeding: specimens near the boat jetty at Port Erin discharging ova, Sept. 9-16 [26].

Family PETRICOLIDAE

MYSIA UNDATA (Pennant) *Forbes & Hanley*, 1853, I, p. 435, as *Lucinopsis undata*.

Valves at Port Erin, 1892 [3]. On the north coast in deep water, not rare, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey, 1878 [53].

Family DONACIDAE

DONAX VITTATUS (da Costa) Forbes & Hanley, 1853, I, p. 332, as *Donax anatinus*.

In sand at L.W.S.T., and 3 fm., Port Erin Bay, 1900 [90]. A single specimen in Port Erin Bay at L.W.E.S.T., Mar. 1932; no others found in a fairly intensive study of the shore and below low water (H.B.M.). Derby Haven Bay, 1838 [47].

Family TELLINIDAE

TELLINA SQUALIDA Montagu Forbes & Hanley, 1853, I, p. 298, as *T. incarnata*.

Douglas Bay, dredged, 1867 [52]. Douglas and Ramsey [53a].

TELLINA TENUIS da Costa. Jeffreys, 1863, II, p. 379.

A few at Derby Haven between H.W.N.T. and L.W.N.T. (H.B.M.). Valves only in the south of the island, rare, 1886 [44]. Douglas rare, frequent at Ramsey, 1838 [47]. Fairly common at Ramsey, 1932 (H.B.M.).

TELLINA (FABULINA) FABULA Gmelin Forbes & Hanley, 1853, I, p. 302.

Port Erin, common dredged and on the shore, 1892 [3]. Rarely taken on the shore there now, but common in the mouth of the Bay and along the south side. Several, near Raglan Pier, L.W.E.S.T., Dec. 1933 (H.B.M.). Common in Port St. Mary harbour between M.T. and L.W.N.T., and a few in Chapel Bay from L.W.N.T. down (H.B.M.).

TELLINA (MOERELLA) DONACINA Linné Forbes & Hanley, 1853, I, p. 292

Dredged between Laxey and the Dhoon, 1890,-91 [172].

TELLINA (MOERELLA) PYGMAEA Lovén Jeffrey, 1863, II, p. 388, as *T. pusilla*.

Dredged, Port Erin, 1901 [16].

TELLINA (ARCOPAGIA) CRASSA Pennant Forbes & Hanley, 1853, I, p. 288.

Common in muddy sand inside the Breakwater, Port Erin, 5 fm., but not found elsewhere in the Bay, Apl. 1933 (H.B.M.). One mile west of the Calf, 20 fm., 1892 [73]. One mile west of Cronk-ny-Arrey-Laa, alive, 14 fm., 1894 [75]. Douglas Bay and north coast, rare, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey, one valve, 1932 (H.B.M.).

MACOMA BALTHICA (Linné) *Forbes & Hanley*, 1853, I, p. 304, as *Tellina solidula*.

Port Erin, rare, living, 1886 [44]. Port Erin Bay, in sand at L.W.S.T., and off Port Erin, 1900 [90]. Not found there now (H.B.M.). Derby Haven, Douglas and Ramsey, 1838 [47].

Family SEMELIDAE

ABRA TENUIS (Montagu) *Forbes & Hanley*, 1853, I, p. 323, as *Syndosmya tenuis*.

Port St. Mary harbour, two specimens at L.W.O.S.T., 1932 (H.B.M.). In cavities of dead shells from deep water on the north coast, 1838 [47].

ABRA ALBA (Wood) *Jeffreys*, 1863, II, p. 438, as *Scrobicularia alba*.

Common in sand at L.W.S.T. in Port Erin Bay, 1900 [90]. Not found there now, but a single specimen taken in muddy sand, 5 fm., inside Port Erin Breakwater, Apl. 1933 (H.B.M.). North of the island, living, 1886 [44].

ABRA NITIDA (Müller) *Jeffreys*, 1863, II, p. 436, as *Scrobicularia nitida*.

Recorded from the Isle of Man but no locality given, 1878 [53], 1901 [16].

ABRA PRISMATICA (Montagu) *Jeffreys*, 1863, II, p. 435, as *Scrobicularia prismatica*.

Common below L.W. in Port Erin Bay between the jetty and the Raglan Pier, but not found elsewhere in the Bay, Apl. 1933 (H.B.M.). Port Erin Bay, living, 1892 [3]. Seven miles west of Peel, 21 fm., 1895 [76]. North of the island, living, 1886 [44].

Family ASAPHIDAE

GARI FERVENSI (Gmelin) *Jeffreys*, 1863, II, p. 396, as *Psammobia ferroensis*.

One large specimen at L.W.O.S.T. near the Raglan Pier, Port Erin, May, 1934. Occasionally in the mouth of the Bay and inside the Breakwater. One specimen trawled alive in Niarbyl Bay, Apl. 1933 (H.B.M.). Port Erin Bay, dead but fresh, scarce, 1900 [90]. On the north coast, rare, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey, dredged, 1878 [53]. Ramsey, one valve washed ashore, 1932 (H.B.M.).

GARI (PSAMMOCOLA) DEPRESSA (Pennant) *Jeffreys*, 1863, II, p. 398, as *Psammobia vespertina*.

Port Erin, very small, 1901 [16]. One specimen between Burroo Nedd and Spanish Head, Sept. 1931 (H.B.M.). Ramsey, dredged, less plentiful than *G. fervensis*, 1878 [53].

GARI (PSAMMOBELLA) TELLINELLA (Lamarck) *Jeffreys*, 1863, II, p. 392, as *Psammobia tellinella*.

One specimen between Burroo Nedd and Spanish Head; two specimens on the Hault Bank; valves in the mouth of Port Erin Bay (H.B.M.). Off Spanish Head, 1900 [90]. Abundant in one haul off Bradda Head, 1892 [3]. Off Clay Head, 1892 [73]. On the north coast, not uncommon, 1838 [47]. Douglas Bay, dredged, 1867 [52].

Family SOLENIDAE

SOLECURTUS SCOPULA (Turton) *Forbes & Hanley*, 1853, I, p. 263, as *S. candidus*.

One dead but quite fresh specimen off the Bows, Port Erin, Nov. 1933 (W.F.). Douglas Bay, dredged, 1878 [53]. A single valve dredged off Ballaugh, 1836 [47].

SOLECURTUS (ZOZIA) CHAMASOLEN (da Costa) *Jeffreys*, 1865, III, p. 6, as *Solecortus antiquatus*.

One mile west of the Calf, 20 fm., 1892 [73]. Round the Calf, 1893 [74]. One pair of valves trawled in Port Erin Bay, 1931 (H.B.M.). One dead but fresh specimen, two and a half miles off Port Erin, Oct. 1933 (W.F.). North of the island, living, 1886 [44].

CULTELLUS (PHAXAS) PELLUCIDUS (Pennant) *Jeffreys*, 1865, III, p. 14, as *Solen pellucidus*.

Dredged between Bay Fine and Bradda Head, 1901 [16]. Seven miles west of Peel, 21 fm., 1895 [76]. North of the island, living, 1886 [44].

ENSIS ENSIS (Linné) *Jeffreys*, 1865, III, p. 16, as *Solen ensis*.

Fairly common in the sandy beach at Port Erin at L.W.E.S.T., and a few throughout the bay below low water (H.B.M.). In sand, Port Erin Bay, 1900 [90]. On the scallop banks on the north and east coasts, common, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey [53a]. Ramsey, one specimen (valves) washed ashore, 1932 (H.B.M.).

ENSIS SILIQUA (Linné) *Jeffreys*, 1865, III, p. 18, as *Solen siliqua*.

Abundant at low water all round the sandy part of Port Erin Bay (H.B.M.). Abundant in sand at Port Erin, 1900 [90]. Common at Port Erin, 1838 [47]. North of the island, living, 1886 [44]. Ramsey, washed ashore, 1867 [52]. Ramsey, one valve washed ashore, 1932 (H.B.M.).

SOLEN (SOLENIARIUS) MARGINATUS Montagu *Forbes & Hanley*, 1853, I, p. 242.

Ramsey, washed ashore, 1867 [52]. Ramsey [53a].

Family MACTRIDAE

MACTRA CORALLINA Montagu *Jeffreys*, 1863, II, p. 422, as *M. stultorum*.

Port Erin, 1886 [44]. Port Erin Bay, scarce, L.W.S.T., 2 fm., 1900 [90]. Not found there now (H.B.M.). Ramsey, 1878 [53].

SPISULA ELLIPTICA (Brown) *Forbes & Hanley*, 1853, I, p. 356, as *Mactra elliptica*.

Valves only, the Breast, Aug. 1931 (H.B.M.). Young from Port Erin, 1886 [44].

SPISULA SOLIDA (Linné) *Forbes & Hanley*, 1853, I, p. 351, as *Mactra solida*.

Port Erin Bay, L.W.S.T., in sand, 1900 [90]. Not found there now except occasional valves (H.B.M.). Off Port Erin, common, 1886 [44]. North of the island, living, 1886 [44].

SPISULA SUBTRUNCATA (da Costa) *Jeffreys*, 1863, II, p. 419, as *Mactra subtruncata*.

Douglas, and Ramsey Bay, 1838 [47]. Ramsey, washed ashore, 1867 [52]. Ramsey [53a]. Ballaugh, 1878 [53].

Family LUTRARIIDAE

LUTRARIA LUTRARIA (Linné) *Jeffreys*, 1863, II, p. 428, as *L. elliptica*.

One alive at half tide on Port Erin Beach, 1901 [16]. A few at low water spring tides, all round the sandy part of Port Erin Bay (H.B.M.). Valves sometimes trawled off Port Erin and Fleshwick Bay (H.B.M.). [16]. Port Erin, 1838 [47]. Ballaugh (valves), 1838 [47].

Family MYIDAE

MYA TRUNCATA Linné *Forbes & Hanley*, 1853, I, p. 163.

Two living specimens in the lower sea-water storage tank at Port Erin Biological Station, June 1931. Two valves trawled in the mouth of Port Erin Bay (H.B.M.). Off Bay Fine, 1900 [90]. Dead valves not uncommon on the north coast; also in roots of sea-weeds and cavities of dead shells, not uncommon, 1838 [47]. Ramsey scallop bed, one living specimen [53a]. Five miles off Ballaugh, 25 fm., 1853 [51].

MYA (ARENOMYA) ARENARIA Linné *Forbes & Hanley*, 1853, I, p. 168.

One specimen at L.W.O.S.T. in Port St. Mary harbour, 1932 (H.B.M.).

SPHENIA BINGHAMI Turton *Forbes & Hanley*, 1853, I, p. 190.

East and south of the Calf, 15-30 fm., 1900 [81]. Six miles west-south-west of the Calf, 26 fm., 1900 [109]. North and east coasts, 12-20 fm., 1853 [51].

Family ERODONIDAE

ALOIDIS GIBBA (Olivi) *Forbes & Hanley*, 1853, I, p. 180, as *Corbula nucleus*.

Common in a patch of mud, 5 fm., inside Port Erin Breakwater, Apl. 1933 (H.B.M.). Three miles west of the Chickens Rock, 26 fm., 1894 [75]. Laxey Bay, 15 fm., 1853 [51].

Family HIATELLIDAE

HIATELLA ARCTICA (Linné) *Forbes & Hanley*, 1853, I, p. 141, as *Saxicava arctica*.

South of the island, 12 fm., 1853 [51]. Five miles off Ballaugh, 20 fm., shell bottom, 1833, -36, -38, abundant [50].

HIATELLA GALLICANA (Lamarck) *Forbes & Hanley*, 1853, I, p. 146, as *Saxicava rugosa*.

Abundant in limestone rocks at Port St. Mary. Also in stones dredged on the Breast (H.B.M.). Off the Castles, Port Erin, Bay Fine and Aldrick, 1900 [90]. Mouth of Port Erin Bay, 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Common in *Laminaria* roots off Port St. Mary, 1886 [44]. Seven miles west of Peel, 21 fm., 1895 [76]. North of the island, living, 1886 [44].

Family PHOLADIDAE

BARNEA CANDIDA (Linné) *Forbes & Hanley*, 1853, I, p. 117, as *Pholas candida*.

A single valve washed ashore at Port Erin, Apl. 1932 (H.B.M.).

ZIRFAEA CRISPATA (Linné) *Forbes & Hanley*, 1853, I, p. 114, as *Pholas crispata*.

In the projecting masses of hard clay at Baie-ny-Carrickey, 1901 [16]. Valves occasionally thrown ashore at Douglas, 1838 [47]. In stiff clay between Ballure and Lewaigue, about mid-tide, an extensive bed, valves only, 1886 [107]. These are probably all sub-fossils. Those at Baie-ny-Carrickey almost certainly are (H.B.M.).

Family TEREDINIDAE

TEREDO MEGOTARA *Forbes & Hanley* *Forbes & Hanley*, 1853, I, p. 77.

Numbers in a box found floating off Port Erin, Mar. 1933 (H.B.M., det. R.W.).

Sub-Class *ANOMALODESMACEA*Order *LATERNULACEA*Family *PERIPLOMATIDAE*

COCHLODESMA PRAETENUE (Montagu) *Forbes & Hanley*, 1853, I, p. 235.

One valve dredged in Port Erin Bay (H.B.M.). Dredged alive off Port Erin, 1886 [44]. One mile west of Cronk-ny-Arrey-Laa, 14 fm., 1894 [75].

Family *THRACIIDAE*

THRACIA PHASEOLINA (Lamarck) *Forbes & Hanley*, 1853, I, p. 221.

A small specimen dredged off Bradda Head, 1901 [16].

THRACIA (IXARTIA) DISTORTA (Montagu) *Jeffreys*, 1865, III, p. 41.

One live specimen two and a half to three miles off Fleshwick Bay, Nov. 1933 (W.F.). Round the Calf, 1893 [74]. North of the island, living, 1886 [44].

Family *LYONSIIDAE*

LYONSIA NORVEGICA (Gmelin) *Forbes & Hanley*, 1853, I, p. 214.

One specimen, living, off Port Erin, and another in Bay Fine, Apl. 1933 (H.B.M.). One specimen, living, off Bay Fine, 1892 [3]. One mile west of Port Erin, 1893 [74]. Round the Calf, 1893 [74]. ca. seven miles south of the Calf, 30 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Five to eight miles west of Dalby, 20 fm., 1894 [75].

Family *PANDORIDAE*

PANDORA MARGARITACEA Lamarck *Forbes & Hanley*, 1853, I, p. 207, as *P. rostrata*.

Port Erin, living, 1892 [3]. Off Bay Fine, 1900 [90]. Three miles west of Fleshwick, 20 fm., 1892 [73]. Round the Calf, 1893 [74].

PANDORA PINNA (Montagu) *Forbes & Hanley*, 1853, I, p. 210, as *P. obtusa*.

Not uncommon on the Breast, 1933 (H.B.M.). Dredged between Bay Fine and Bradda Head, 1901 [16].

Class SCAPHOPODA

Family DENTALIIDAE

DENTALIUM ENTALIS Linné *Jeffreys*, 1865, III, p. 191.

One specimen, alive, off Fleshwick Bay, July 1931, and about eight off Fleshwick and on the Breast, Nov. 1933 (H.B.M.). Living specimens dredged off Port Erin and off Spanish Head, 20 fm., 1900 [90]. Three miles west of the Chickens Rock, 29 fm., 1894 [75]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Five to eight miles west of Niarbyl, 20 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. In deep water off the north coast, rare, 1838 [47].

DENTALIUM VULGARE (da Costa) *Forbes & Hanley*, 1853, II, p. 451, as *D. tarentinum*.

Dead shells only, recorded from the Isle of Man, but no locality given, 1901 [16].

SIPHONODENTALIUM (PULSELLUM) LOFOTENSE (M. Sars) *Jeffreys*, 1865, V, p. 195.

Six living specimens taken in mud trawled about five miles north-west of Peel, 60 fm., 1895 [37].

Class GASTROPODA

Sub-Class PROSOBRANCHIA

Order ARCHAEOGASTROPODA

Family FISSURELLIDAE

EMARGINULA RETICULATA *Forbes & Hanley* *Forbes & Hanley*, 1853, II, p. 477.

Port Erin Bay, under stones [90]. On the breakwater, Port Erin, small specimens, not common, Mar. 1932 (N.B.E.). Frequently trawled on shells and stones at many localities round the south end of the island (H.B.M.). Mouth of Port Erin Bay [76]. Off Halfway Rock [76]. Round the Calf, 15 to 30 fm. [74, 81, 25]. Seven miles west of Peel, 21 fm., 1895 [76]. On scallop bed, off Ramsey, 1878 [53]. Abundant on shell bottom, five miles off Ballaugh, 20 fm. [50].

DIODORA APERTURA (Montagu) *Forbes & Hanley*, 1853, II, p. 469, as *Fissurella reticulata*.

One specimen at L.W.N.T., Port Erin, Apl. 1933 (H.B.M.). Rare off the south end of the island, 1886 [44]. Gansey Point, L.W.E.S.T., Mar. 1932, one specimen (N.B.E.). Langness, littoral zone, one

specimen, July 1931 (J.H.O.). Round the Calf, 15 to 30 fm. [25, 74, 81]. On shells, especially *Chlamys opercularis*, in deep water off the north coast, frequent, 1838 [47]. On *Ostrea* off the north coast [52]. On scallop bed off Ramsey, 1878 [53]. Five miles west of Ballaugh, 20 fm., shell bottom, a few, 1836 and 1838 [50].

Family PATELLIDAE

**PATELLA VULGATA* Linné *Jeffreys*, 1865, III, p. 236.

Abundant everywhere round the island at all levels between tide marks, on rocks, exposed and in pools (H.B.M.).

PATELLA DEPRESSA Pennant [= *P. athletica* Bean] *Forbes & Hanley*, 1853, II, p. 425.

Common round Port Erin on exposed rocks and in pools (H.B.M.).

PATINA PELLUCIDA (Linné) *Jeffreys*, 1865, III, p. 242, as *Helcion pellucidum*.

On the stalks and frond of *Laminaria* spp., at low water, fairly common everywhere, sometimes as many as twenty in an area of four square inches; found at Niarbyl, Fleshwick Bay, Port Erin Bay, Port St. Mary, Poyllvaish (H.B.M.). Isle of Man, north [44] Douglas Bay [53a].

PATINA LAEVIS (Pennant) *Jeffreys*, 1865, II, p. 243, as *Helcion pellucidum*, var. *laevis*.

Common in the bases of *Laminaria* spp., everywhere; found at Fleshwick Bay, Port Erin, Port St. Mary, Poyllvaish (H.B.M.). Douglas Bay [53a].

Family LOTTIIDAE

PATELLOIDA (*COLLISELLA*) *TESSULATA* (Müller) *Forbes & Hanley*, 1853, II, p. 434, as *Acmaea testudinalis*.

This species has appeared since 1836, and multiplied considerably on the north coast of the island [51]. Fleshwick Bay, L.W.O.S.T., common, Mar. 1932 (A.G.). (H.B.M.) A few, fairly large specimens, at very low water all round Port Erin Bay (H.B.M.). On stones and shells, fairly common, on the Breast, ca. 20 fm., Sept. 1931, in Bay Fine, Aug. 1932, and in Port Erin Bay, 1931,-32 (H.B.M.). Ramsey, 1878 [53]. Ballaugh, 1901 [16].

* The distribution of this genus requires to be revised in the light of recent knowledge (See Fischer-Piette, E. 1935. *Journ. Conchylologie*, Vol. LXXIX, pp. 1-66.)

PATELLOIDA (TECTURA) VIRGINEA (Müller) *Forbes & Hanley*, 1853, II, p. 437, as *Acmaea virginea*.

Abundant at low water in Port Erin Bay and at Port St. Mary; common and large at Fleshwick Bay, north side, from half tide to low water in pools; common on stones trawled in Port Erin Bay, ca. 5 fm. (H.B.M.). Abundant, alive, off Port Erin, 1892 [3]. Off Halfway Rock, 1895 [76]. Douglas Bay, 1867 [52]. Abundant on scallop bed off Ramsey [53a]. Five miles off Ballaugh, 20 fm., shell bottom, abundant, 1836,-38 [50].

Family LEPETIDAE

PROFILIDIUM EXIGUUM (Thompson) *Forbes & Hanley*, 1853, II, p. 443, as *P. ancyloide*.

Dredged off the southern districts of the island, 1901 [16]. Fleshwick Bay, L.W.E.S.T., Mar. 1932, one specimen (A.G.).

Family TROCHIDAE

MARGARITES HELICINUS (Fabricius) *Forbes & Hanley*, 1853, II, p. 531, as *Trochus helicinus*.

Abundant at Fleshwick Bay in 1901 [16]. Absent from that locality the previous year, but present some years before that [109].

CALLIOSTOMA ZIZYPHINUM (Lamarck) *Forbes & Hanley*, 1853, II, p. 491, as *Trochus zizyphinus*.

Common in the littoral zone all round the south end of the island: Niarbyl, common; Fleshwick Bay, a few only; Port Erin Bay, common; the Sound, common; Perwick Bay, a few; Port St. Mary, abundant; Castletown Bay, very few (J.H.F., H.B.M.). Frequently taken in the trawl off the south of the island in depths of 0 to 20 fm.; the Breast, Bay Fine, off Spanish Head, Bank Charles (H.B.M.). Similar distribution in the north of the island: Douglas Bay, littoral zone, 1878 [53, 107]; Lewaigue [107]; Point of Ayre (shells only) [107]; five miles off Ballaugh, 20 fm., shell bottom, a few, 1838 [50].

var. LYONSII. Single specimens off Port Erin, and on Bank Charles (H.B.M.); Douglas Bay [53]. Calf Sound, L.W.E.S.T., Mar. 1936 (K.M.W.).

CALLIOSTOMA PAPILLOSUM (da Costa) *Forbes & Hanley*, 1853, II, p. 499, as *Trochus granulatus*.

Three specimens alive, three miles off Port Erin, Oct.-Dec. 1933 (W.F.). On the north coast in deep water, not common, 1838 [47]. North-west coast on a scallop bank, not rare, 1853 [51].

GIBBULA MAGUS (da Costa) *Jeffreys*, 1865, III, p. 305, as *Trochus magus*.

A single specimen at L.W.E.S.T., on the Dub Reef in Port Erin Bay, 1931, and two in the same locality in 1933. Fairly commonly trawled all round the south of the island, but most abundant in Fleshwick Bay and Bay Fine (H.B.M.). Recorded as very abundant in Port Erin Bay in 1901 [16], but less so now (H.B.M.). North coast, frequently cast on shore but rarely taken alive in dredge. Inhabits a gravelly bottom at a depth of about 20 fm., 1838 [47]. Specimens found cast ashore between Ballure and Lewaigue, 1884 [107]; and at Ramsey, 1932 (H.B.M.).

GIBBULA TUMIDA (Montagu) *Forbes & Hanley*, 1853, II, p. 513, as *Trochus tumidus*.

Common in deep water off all coasts, 1838 [47]. Fairly commonly trawled round the south end of the island from 10 to 20 fm.: Fleshwick Bay, the Breast, off Port Erin, Bay Fine, off Spanish Head (H.B.M.). One mile south-east of the Galf, 22 fm., 1900 [109]. Douglas Bay, 1867, 1878 [52, 53]. Five miles off Ballaugh, 20 fm., numerous, 1833 [50].

GIBBULA CINERARIA (Linné) *Forbes & Hanley*, 1853, II, p. 516, as *Trochus cinerarius*.

Abundant all round the south end of the island near low water: Niarbyl, Fleshwick Bay, Port Erin Bay, Port St. Mary; less abundant at Perwick Bay and Castletown Bay (J.H.F., H.B.M.). Frequently trawled in inshore water, 0 to 15 fm., but more rarely in deeper water: Fleshwick Bay, Port Erin Bay, Bay Fine (H.B.M.). All round the island, chiefly littoral, and from 7 to 12 fm., on shelly bottom, 1850 [50].

Breeding: Specimens spawning when brought into laboratory, 18 Dec. 1930 (H.B.M.).

GIBBULA UMBILICALIS (da Costa) *Forbes & Hanley*, 1853, II, p. 519, as *Trochus umbilicatus*.

About mid-tide mark, common in some localities but extremely local in its distribution. Never taken below low water mark. Abundant at Castletown and Poyllvaish, less so on parts of the Ledges at Port St. Mary and at Fleshwick Bay; very rare in Port Erin Bay; none found at Niarbyl, the Sound, Perwick Bay, Gansey Point, Chapel Bay, Douglas Bay (J.H.F., H.B.M.). Common round Port Erin Bay, 1900 [90]. Recorded as occurring, living, in the north of the island, 1886 [44].

CANTHARIDUS (JUJUBINUS) STRIATUS (da Costa) Forbes & Hanley, 1853, II, p. 508, as *Trochus striatus*.

Recorded from the Isle of Man, dredged, but no locality given, 1838 [47].

CANTHARIDUS (JUJUBINUS) MONTAGUI (Wood) Forbes & Hanley, 1853, II, p. 511, as *Trochus montagui*.

Frequently trawled all round the south of the island; the Breast, Hault Bank, off Fleshwick Bay, off Spanish Head (H.B.M.). Dredged in Douglas Bay, 1867, 1878 [52, 53].

CANTHARIDUS (CLELANDELLA) CLELANDI (Wood) Forbes & Hanley, 1853, II, p. 502, as *Trochus millegranus*.

The Sound, L.W.E.S.T., one] small specimen, Mar. 1932. Not uncommon in the trawl off the south end of the island: off Port Erin, the Breast, off Fleshwick Bay (H.B.M.). Three miles west of the Chickens Rock, 29 fm., 1894 [75]. No records from the north of the island (H.B.M.).

SKENEIA MILLIPUNCTATA (Friele) Friele, 1886, p. 33, Pl. II, figs. 17 and 18, as *Cyclostrema millepunctatum*.

Nine miles west of Contrary Head, 46 fm., 1893 [74]. Recorded by Chaster from the Isle of Man (*Conchologist*, vol. 2, 1892), who further described the species (*J. Conch.*, Vol. 7, p. 301, 1894), but his description does not fit Friele's species (R.W.).

SKENEIA SERPULOIDES (Montagu) Forbes & Hanley, 1853, III, p. 161, as *S. divisa*.

Abundant living on seaweeds at low water in Fleshwick Bay, 1901 [16]. No recent record there (H.B.M.). Six miles west-south-west of the Calf, 26 fm., Sept. 1900 [109]. Douglas, not rare; from deep water off Douglas Head, very rare, 1838 [47].

SKENEIA NITENS (Jeffreys) Forbes & Hanley, 1853, II, p. 534, as *Trochus pusillus*.

Only twice recorded: off Kitterland, 17 fm., June 1892 [73]; six miles west-south-west of the Calf, 26 fm., Sept. 1900 [109].

SKENEIA CUTLERIANA (Clark) Forbes & Hanley, 1853, III, p. 164.

Off Kitterland, 26 fm., June 1892 [73]. Recorded from Isle of Man but no locality given, 1901 [16].

Family TURBINIDAE

TRICOLIA PULLUS (da Costa) *Forbes & Hanley*, 1853, II, p. 538, as *Phasianella pullus*.

On fuci at low water of spring tides, common in shell sand, 1838 [47]. Off the south end of the island occasionally, 1886 [44]. Port Erin Bay, 1897 [20]. Off the Breakwater, Port Erin, 1900 [90]. Off Spanish Head, 15 fm., 1901 [16]. One mile south-east of the Calf, 1900 [109]. North of the island, 1886 [44].

Order MESOGASTROPODA

Family LACUNIDAE

LACUNA (EPHERIA) VINCTA (Montagu) *Forbes & Hanley*, 1853, III, p. 62

Very common on *Zostera marina* at and below low water at Port Erin and Port St. Mary; dredged on *Laminaria* in Port Erin Bay, and on *Laminaria* growing on the Breakwater there (H.B.M.). Common on the rocks at Fleshwick Bay, 1901 [16]. On fuci at low water on the north coast, but rare 1838 [47].

LACUNA (LACUNA) PARVA (da Costa) *Forbes & Hanley*, 1853, III, p. 58, as *L. puteolus*.

Several living, off Port Erin, 1892 [3]. Among sand in Douglas Bay, not uncommon, 1838 [47].

LACUNA PALLIDULA (da Costa) *Forbes & Hanley*, 1853, III, p. 56.

Frequent on fuci at low water on the north coast, 1838 [47].

LITTORINA LITTOREA (Linné) *Jeffreys*, 1865, III, p. 368.

Common everywhere among stones from about half-tide to low water, and sometimes in very great numbers, especially at Niarbyl, and in Port Erin Bay opposite the old Biological Station (H.B.M.).

LITTORINA (LITTORIVAGA) SAXATILIS (Olivi) *Jeffreys*, 1865, III, p. 364, as *L. rudis*.

Common everywhere on the rocks near high water, especially on the Ledges at Port St. Mary; very large specimens common there and at Poyllvaaish (H.B.M.).

LITTORINA (MELARHAPHE) NERITOIDES (Montagu) *Jeffreys*, 1865, III, p. 361.

Locally common above high water, in crevices in the rocks: Port Erin Bay, Fleshwick Bay and Perwick; apparently absent in many other localities (H.B.M.) [116]. Recorded as absent from the island by Forbes, 1853 [51].

LITTORINA (NERITOIDES) LITTORALIS (Linné) [= *L. obtusatus* Lamarck]
Forbes & Hanley, 1853, III, p. 45.

Common everywhere on weeds, chiefly Fucaceae, from about half-tide to low water.

Breeding: Individuals seen copulating, Port Erin, 26 Mar. 1932 (H.B.M.).

Family HYDROBIIDAE

HYDROBIA (PERINGIA) ULVAE Pennant *Jeffreys*, 1867, IV, p. 52.

In muddy places on the shore near Castletown, 1838 [47].

Family RISSOIDAE

CINGULA (PARVISETIA) ALDERI (Jeffreys) *Forbes & Hanley*, 1853, III, p. 131, as *Rissoa soluta*.

Only one record—nine miles west of Contrary Head, 46 fm., 1893 [74].

CINGULA (ONOA) SEMICOSTATA (Montagu) *Forbes & Hanley*, 1853, III, p. 94, as *Rissoa striata*.

Common under stones at Gansey Point, L.W.O.S.T., Mar. 1933 (H.B.M.). Common on fuci, 1838 [47]. Round the island, 7-20 fm., alive, 1850 [50]. Port Erin, Port St. Mary, 1897 [78]. Off the Breakwater, Port Erin, 1900 [90]. Six miles west-south-west of the Calf, 26 fm., 1900 [109].

CINGULA (CINGULA) SEMISTRIATA (Montagu) *Forbes & Hanley*, 1853, III, p. 117, as *Rissoa semistriata*.

Recorded from the Isle of Man but no locality given, 1901 [16].

CINGULA (CINGULA) CINGILLUS (Montagu) *Forbes & Hanley*, 1853, III, p. 122, as *Rissoa cingillus*.

Common under stones at low water, 1893 [47]. Abundant above the *Laminaria* zone at Port Erin and at Baie-ny-Carrickey, 1892 [3]. Off the Breakwater, Port Erin, 1900 [90]. Trawled round the Calf, 1893 [74].

ALVANIA (MANZONIA) CRASSA (Kanmacher) *Jeffreys*, 1867, IV, p. 22, as *Rissoa costata*.

Recorded from the Isle of Man but no locality given, 1901 [16].

ALVANIA (ALVANIA) BEANII (Thorpe) *Forbes & Hanley*, 1853, III, p. 84, as *Rissoa beanii*.

In deep water, rare, 1838 [47]. Six miles west-south-west of the Calf, 26 fm., 1900 [109].

ALVANIA (ALVANIA) ZETLANDICA (Montagu) *Jeffreys*, 1867, IV, p. 20, as *Rissoa zetlandica*.

Recorded from the south of the island but no locality given, 1896 [78].

ALVANIA (ALVANIA) CANCELATA (da Costa) *Forbes & Hanley*, 1853, III, p. 80, as *Rissoa crenulata*.

Taken alive at Port Erin, 1901 [16]. Nine miles west of Contrary Head, 46 fm., 1893 [74]. One broken specimen from deep water off the north coast, 1838 [47].

ALVANIA (ACTONIA) ABYSSICOLA (Forbes & Hanley) *Forbes & Hanley*, 1853, III, p. 86, as *Rissoa abyssicola*.

One record from fourteen miles north-west of Port Erin, 79 fm., muddy bottom, Apl. 1893 [74].

ALVANIA (ACTONIA) PUNCTURA (Montagu) *Jeffreys*, 1867, IV, p. 17, as *Rissoa punctura*.

Round the Isle of Man, on shelly bottom, 29 fm., 1850 [50].

RISSEO (TURBOELLA) INCONSPICUA Alder *Forbes & Hanley*, 1853, III, p. 113.

Recorded from the south end of the island, 1894 [108].

RISSEO (TURBOELLA) PARVA (da Costa) *Forbes & Hanley*, 1853, III, p. 98.

Common on *Zostera marina* at Chapel Bay, Port St. Mary, and on stones in Port Erin Bay (H.B.M.); dredged in quantity on weeds, close to the shore in Port Erin Bay, 1901 [16]; also from deep water, six miles west-south-west of the Calf, 26 fm., 1900 [109]. Extremely abundant under stones at low water on the north of the island, 1838 [47]. Point of Ayre [107].

RISSEO (RISSEO) LILACINA Réchuz *Forbes & Hanley*, 1853, III, p. 106, as *R. rufilabrum*.

Recorded from the Isle of Man but no locality given, 1901 [16].

RISSEO (RISSEO) MEMBRANACEA (Adams) *Forbes & Hanley*, 1853, III, p. 110, as *R. labiosa*.

Recorded from the Isle of Man but no locality given, 1901 [16]. Abundant at L.W.E.S.T. on *Zostera marina* at Chapel Bay, Port St. Mary (H.B.M.).

Family TORNIDAE

TORNUS IMPERSPICUUS (Chaster) *Chaster*, 1895, p. 56.

A single record from nine miles west of Contrary Head, Apl. 1893 [16].

Family SKENEOPSISIDAE

SKENEOPSIS PLANORBIS (Fabricius) *Forbes & Hanley*, 1853, III, p. 156, as *Skenea planorbis*.

Under stones at low water, common, 1838 [47]. Abundant at Port Erin, always on weed, 1892 [3]. In coralline pool, Port Erin, L.W.N.T., Apl. 1937 (N.B.E.).

Family OMALOGYRIDAE

OMALOGYRA ATOMUS (Philippi) *Forbes & Hanley*, 1853, III, p. 158, as *Skenea nitidissima*.

Taken sparingly near Port Erin; also taken living in the north of the island, 1892 [3].

Family RISSOELLIDAE

RISSOELLA DIAPHANA (Alder) *Forbes & Hanley*, 1853, III, p. 152, as *Jeffreysia diaphana*.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family TURRITELLIDAE

TURRITELLA COMMUNIS Risso *Jeffreys*, 1867, IV, p. 80, as *T. terebra*.

Dead shells frequent round the south of the island, live animals more rarely (H.B.M.). One, alive, cast ashore, Port Erin, Aug. 1934 (M.W.P.). Seven miles west of Peel, 21 fm., 1895 [76]; five miles west of Dalby, 30 fm., bottom sandy-mud, 1894 [75]; five and a half miles west of Glen Meay, 34 fm., muddy bottom, 1894 [75]. Dead shells frequently cast ashore on the north coast, 1838 [47]. Sometimes cast ashore with the animal, as in 1883, when a great number were washed ashore at the Life-boat House, Ramsey. Many empty shells in Ramsey Bay occupied by hermit crabs [107].

var. NIVEA. One live and one dead specimen, two and a half miles off Port Erin, Jan. 1934 (W.F.).

Family CAECIDAE

CAECUM IMPERFORATUM (Kanmacher) *Forbes & Hanley*, 1853, III, p. 178, as *Coecum trachea*.

Recorded from the Isle of Man but no locality given, 1894 [108].

CAECUM (BROCHINA) GLABRUM (Montagu) *Forbes & Hanley*, 1853, III, p. 181.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family CERITHIIDAE

BITTIUM RETICULATUM (da Costa) *Jeffreys*, 1867, IV, p. 258, as *Cerithium reticulatum*.

One specimen (dead) recorded from the Isle of Man but no locality given, 1901 [16].

Family CERITHIOPSIDAE

CERITHIOPSIS TUBERCULARIS (Montagu) *Forbes & Hanley*, 1853, III, p. 365.

Recorded (dead) from the Isle of Man but no locality given, 1901 [16].

Family TRIPHORIDAE

TRIPHORA PERVERSA (Linné) *Forbes & Hanley*, 1853, III, p. 195, as *Cerithium adversum*.

Recorded from the south of the island but no locality given, 1896 [78].

Family EPITONIIDAE

CLATHRUS CLATHRATULUS (Kanmacher) *Forbes & Hanley*, 1853, III, p. 209, as *Scalaria clathratula*.

Recorded from the Isle of Man but no locality given [174].

Family ACLIDIDAE

GRAPHIS ALBIDA (Kanmacher) *Forbes & Hanley*, 1853, III, p. 222, as *Aclis unica*.

Recorded from the Isle of Man but no locality given, 1901 [16].

PHERUSINA GULSONAE (Clark) *Forbes & Hanley*, 1853, IV, p. 281, as *Odostomia gulsonae*.

East and south of the Calf, 15 to 39 fm., 1900 [81]; also six miles west-south-west of the Calf, 26 fm., 1900 [109].

CIMA MINIMA (Jeffreys) *Jeffreys*, 1867, IV, p. 115, as *Odostomia minima*.

Recorded as dredged in the south of the island but no locality given, 1896 [78].

Family EULIMIDAE

EULIMA GLABRA (da Costa) *Forbes & Hanley*, 1853, III, p. 235,
as *E. subulata*.

Taken alive on a shelly bottom round the Isle of Man, 1850 [50].
One dead shell at Port Erin, 1892 [3]. Dredged at Ballaugh,
1838 [47].

EULIMA TRIFASCIATA (Adams) *Forbes & Hanley*, 1853, III, p. 237,
as *E. bilineata*.

One live specimen two and a half miles off Port Erin, Oct. 1933
(W.F.). Recorded from nine miles west of Contrary Head, 46 fm.,
1893 [74]. Six miles west-south-west of the Calf, 26 fm., 1900 [109].
Off Kitterland, 17 fm., 1892 [73]. Off Spanish Head, 10 to 17 fm.,
1901 [16].

BALCIS ALBA (da Costa) *Jeffreys*, 1867, IV, p. 201, as *Eulima polita*.

Occasional specimens taken in the trawl round the south of the
island: off Fleshwick, the Breast, Bay Fine, single specimens
(H.B.M.). Off Port Erin, very fine specimens, 1901 [16]. Dead
shells from the north of the island, 15 fm., nullipore bottom, 1850 [50].

BALCIS LUBRICA (Monterosato) *Forbes & Hanley*, 1853, III, p. 231,
as *Eulima polita*, var. *nitida*.

Record of one or two specimens from the Isle of Man but no
locality given, 1901 [16].

BALCIS (VITREOLINA) DEVIANS (Monterosato) *Forbes & Hanley*, 1853,
III, p. 232, as *Eulima distorta*.

One, living, Calf Sound, on seaweed at L.W.S.T., Apl. 1937 (K.M.W.).
Dead shells in 30 fm., round the island, on a gravel bottom, 1850
[50]. Dead shells recorded from the north of the island, 1886 [44].

Family PYRAMIDELLIDAE

CHRYSALLIDA (PARTHENINA) OBTUSA (Brown) *Jeffreys*, 1867, IV,
p. 151, as *Odostomia interstincta*.

Recorded from the Isle of Man but no locality given, 1896 [78].

CHRYSALLIDA (PARTHENINA) INDISTINCTA (Montagu) *Jeffreys*, 1867,
IV, p. 149, as *Odostomia indistincta*.

Recorded from the Isle of Man but no locality given, 1901 [16].

CHRYSALLIDA (PARTHENINA) DECUSSATA (Montagu) *Jefferys*, 1867,
IV, p. 145, as *Odostomia decussata*.

One specimen dredged at Port Erin, 1892 [3].

CHRYSTALLIDA (PARTULIDA) SPIRALIS (Montagu) *Forbes & Hanley*, 1853, III, p. 299, as *Odostomia spiralis*.

Six miles west-south-west of the Calf, 26 fm., 1900 [109]. In shell sand from Kiristal (near Douglas), rare, 1838 [47].

MENESTHO (EVALEA) DIVISA (Adams) *Forbes & Hanley*, 1853, III, p. 289, as *Odostomia insculpta*.

Dredged alive off the south of the island, 1896 [78].

MENESTHO (EVALEA) WARRENI (Thompson) *Forbes & Hanley*, 1853, III, p. 292, as *Odostomia warreni*.

Off Port Erin, 1892 [16].

ODOSTOMIA (ODOSTOMIA) PLICATA (Montagu) *Forbes & Hanley*, 1853, III, p. 271.

Deep water, Isle of Man, rare, no locality given, 1838 [47].

ODOSTOMIA (ODOSTOMIA) TURRITA Hanley *Forbes & Hanley*, 1853, III, p. 267, as *O. unidentata* var. *turrita*.

Recorded from Port Erin, 1896 [78].

ODOSTOMIA (ODOSTOMIA) UNIDENTATA (Montagu) *Forbes & Hanley*, 1853, III, p. 264.

In deep water off Douglas, rare, 1838 [47].

ODOSTOMIA (ODOSTOMIA) CONSPICUA Alder *Forbes & Hanley*, 1853, III, p. 263.

Recorded from Douglas, 1892 [3].

ODOSTOMIA (ODOSTOMIA) ACUTA Jeffreys *Jeffreys*, 1867, IV, p. 130.

Recorded from the Isle of Man but no locality given, 1901 [16].

ODOSTOMIA (ODOSTOMIA) CONOIDEA Jeffreys *Jeffreys*, 1867, IV, p. 127.

Recorded from the Isle of Man but no locality given, 1901 [16].

ODOSTOMIA (BRACHYSTOMIA) LUKISII Jeffreys *Jeffreys*, 1867, IV, p. 120.

Dredged off the south of the island, 1901 [16].

ODOSTOMIA (BRACHYSTOMIA) ALBELLA (Lovén) *Forbes & Hanley*, 1853, III, p. 286, as *O. rissoides* var. *albella*.

Recorded from Port Erin and Port St. Mary, 1896 [78].

- ODOSTOMIA (BRACHYSTOMIA) SCALARIS Macgillivray *Forbes & Hanley* 1853, III, p. 284, as *O. rissoides*.
Dredged one mile west of the Calf, 20 fm., 1892 [73]; and again, off Port Erin, 1896 [78].
- ODOSTOMIA (BRACHYSTOMIA) EULIMOIDES Hanley *Forbes & Hanley*, 1853, III, p. 273.
Recorded from the Isle of Man but no locality given, 1901 [16].
- EULIMELLA LAEVIS (Brown) *Forbes & Hanley*, 1853, III, p. 311, as *E. acicula*.
Dredged off Kitterland, 17 fm., 1892 [73].
- EULIMELLA (EBALINA) NITIDISSIMA (Montagu) *Forbes & Hanley*, 1853, III, p. 223, as *Aclis nitidissima*.
Dredged off Kitterland, 17 fm., 1892 [73].
- TURBONILLA ELEGANTISSIMA (Montagu) *Forbes & Hanley*, 1853, III, p. 242, as *Chemnitzia elegantissima*.
Several specimens under stones, L.W.E.S.T., Port St. Mary and Castletown, Apl. 1933 (H.B.M.). In sand, Douglas Bay, scarce, 1838 [47]. Port Erin, L.W.S.T., Apl. 1937 (N.B.E.).
- TURBONILLA INNOVATA Monterosato *Forbes & Hanley*, 1853, III, p. 244, as *Chemnitzia elegantissima* var. *pusilla*.
Recorded from the Isle of Man but no locality given, 1901 [16].
- TURBONILLA (PYRGISCULUS) CRENATA (Brown) *Forbes & Hanley*, 1853, III, p. 247, as *Chemnitzia rufa*.
Off the Breakwater, Port Erin, 1900 [90].

Family CAPULIDAE

- CAPULUS UNGARICUS (Linné) *Jeffreys*, 1865, III, p. 269, as *C. hungaricus*.
Empty shells not uncommon round the south of the island, generally inhabited by *Eupagurus prideauxi*; four live specimens on a living *Modiolus modiolus* on the Breast, Sept. 1933, and a small specimen on a dead shell from the Breast, Apl. 1933 (H.B.M.). Mouth of Port Erin Bay, 17 fm., 1895 [76]. Six miles west of Port Erin, 24 fm., 1892 [73]. Seven miles west of Fleshwick Bay, 1893; between Port Erin and the Calf, 1893 [74]. Three-quarters of a mile north of Kitterland, 18 fm., 1893 [74]. Common on shells and stones in deep water on all the coasts, 1838 [47]. Ramsey scallop bed, 1878 [53]. Same locality, alive, several times [107]. Five miles off Ballaugh, 20 fm., shell bottom, fairly numerous, 1838 [50].

Family APORRHAIIDAE

APORRHAI PES-PELECANI da Costa *Jeffreys*, 1867, IV, p. 250.

Single specimens not uncommon round the south of the island : the Breast, between Bay Fine and Bradda Head (H.B.M.) ; Fleshwick Bay, 1893 [74] ; quarter mile west of Fleshwick Bay, 13 fm., 1894 [75]. Cast ashore at Castletown, 1838 [47]. Off the north end of the island, 10 to 20 fm., rare, 1886 [44]. Cast ashore at Ballaugh, 1838 [47]. Very good specimens dredged off Contrary Head, 1901 [16]. Pooildhooie [107].

Family NATICIDAE

NATICA (EUSPIRA) CATENA (da Costa) *Jeffreys*, 1867, IV, p. 220.

Rare on the south coast ; I have never seen the animal, 1838 [47]. Empty shells occasionally off the south of the island ; rare, alive ; empty shells, Bay Fine, the Breast (H.B.M.). Port Erin, 1838 [47]. Alive off Spanish Head, 1900 [90]. One specimen on the Breast (H.B.M.). Ramsey, washed up, 1867 [52]. Ramsey [53a]. Point of Ayre (dead) [107].

NATICA (EUSPIRA) POLIANA Forbes *Forbes & Hanley*, 1853, III, p. 330, as *N. nitida*.

Single specimens not uncommonly trawled round the south of the island : off Fleshwick Bay, the Breast, Bay Fine (H.B.M.) ; off Spanish Head, and off the Breakwater, Port Erin, 1900 [90] ; seven miles west of Peel, 21 fm., 1895 [76]. Recorded living from the north of the island, 1886 [44].

NATICA (EUSPIRA) MONTAGUI Forbes *Forbes & Hanley*, 1853, III, p. 336.

Single specimens not uncommonly trawled off the south of the island ; off Port Erin, the Breast, Bay Fine (H.B.M.). Frequent on the north coast of the island, 1853 [51].

Family LAMELLARIIDAE

VELUTINA VELUTINA (O. F. Müller) *Jeffreys*, 1867, IV, p. 240, as *V. laevigata*.

Fairly common in the trawl round the south of the island : the Breast, off Fleshwick Bay, Bay Fine (H.B.M.). Mouth of Port Erin Bay, 1895 [76]. Aldrick and Bay Fine, 1893 [74]. Seven miles west of Peel, 21 fm., 1895 [76]. Off Spanish Head and Port Erin, 1901 [16]. Not uncommon in deep water on all coasts, 1838 [47]. Five miles off Ballaugh, 20 fm., shell bottom, fairly numerous 1838 [50].

LAMELLARIA PERSPICUA (Linné) *Forbes & Hanley*, 1853, III, p. 355.

A few on rocks at extreme low water, Port Erin, Port St. Mary, Fleshwick Bay, and the Sound; one specimen trawled in the mouth of Port Erin Bay (H.B.M.). Port Erin, 1900 [90], 1901 [16]. Trawled, round the Calf, 1893 [74]. Douglas, one specimen cast ashore, 1837, very rare [47].

Breeding: *Echinospira* larvae in cloaca of *Didemnum asperum*, 21 Mar. 1932 (N.B.E.).

Family CYPRAEIDAE

TRIVIA MONACHA (da Costa) *Peile*, 1925 [= *Cypraea europaea*]

Fairly common on rocks at extreme low water all round the south of the island: Fleshwick Bay, Port Erin Bay, the Sound; less frequently trawled close inshore: between Bay Fine and Bradda Head (H.B.M., det. R.W.). Young shells rarely taken, 1932 (H.B.M.), 1838 [47]. Frequently cast ashore on the north coast, found occasionally on the rocks at L.W.E.S.T., 1838 [47]. Ramsey, Ballaugh [53a].

TRIVIA ARCTICA (Montagu) *Peile*, 1925.

A few specimens trawled on the Breast, 15-20 fm., Oct. 1933 (H.B.M., det. R.W.).

Order STENOGLOSSA

Family MURICIDAE

TROPION (TROPIONOPSIS) TRUNCATUS (Ström) *Forbes & Hanley*, 1853, III, p. 436, as *T. clathratus*.

Port Erin, 1896 [78]. North coast, not rare, 1838 [47]. Douglas Bay, dredged, 1867 [52]. Five miles off Ballaugh, 20 fm., shell bottom, fairly numerous, 1838 [50].

TROPION (TROPIONOPSIS) BARVICENSIS (Johnston) *Forbes & Hanley*, 1853, III, p. 442.

A number dredged, three miles off Port Erin, May 1934 (W.F.). Young at Port Erin, 1886 [44].

TROPION (TROPIONOPSIS) MURICATUS (Montagu) *Forbes & Hanley*, 1853, III, p. 439.

Off Fleshwick Bay (H.B.M.). Off Port Erin, 1900 [90]. North coast, not rare, 1838 [47].

NUCELLA LAPILLUS (Linné) *Jeffreys*, 1867, IV, p. 276, as *Purpura lapillus*.

Extremely abundant on rocks everywhere. Usually found in large numbers feeding on *Balanus balanoides* (H.B.M.).

Breeding : egg capsules on the rocks throughout the year (H.B.M.).

OCENEBRA ERINACEA (Linné) *Jeffreys*, 1867, IV, p. 306, as *Murex erinaceus*.

Under stones, L.W.S.T., Port Erin, 1900 [90]. Single shells (dead), cast ashore, Port Erin and Port St. Mary (H.B.M.). Off Aldrick, Bay Fine and Spanish Head, 1900 [90]. Off Port Erin (dead) (H.B.M.). Three-quarters of a mile north of Kitterland, 18 fm., 1893 [74]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Off Port St. Mary, rare, 1886 [44]. In deep water, frequent, 1838 [47]. Five miles off Ballaugh, 20 fm., fairly numerous, 1838 [50]. Pooildhoie, Ramsey, in brackish water, dead shells [107].

Family BUCCINIDAE

COLUS GRACILIS (da Costa) *Forbes & Hanley*, 1853, III, p. 416, as *Fusus islandicus*.

Generally distributed ; common in winter at Port Erin in crab pots, 1892 [3]. Common in deep water on all coasts, 1838 [47]. Off Fleshwick Bay [53a], (H.B.M.). Five miles off Ballaugh, 20 fm., 1836 and 1838 [50].

COLUS (SIPHONORBIS) HOWSEI (Marshall) *Forbes & Hanley*, 1853, III, p. 419, as *Fusus propinquus*.

Recorded from the Isle of Man but no locality given, 1901 [16].

COLUS (SIPHONORBIS) JEFFREYSIANUS (Fischer) *Jeffreys*, 1867, IV, p. 340, as *Fusus buccinatus*.

Recorded from the Isle of Man but no locality given, 1901 [16].

NEPTUNEA ANTIQUA (Linné) *Forbes & Hanley*, 1853, III, p. 423, as *Fusus antiquus*.

The normal form of this species is most frequent about Port Erin ; the form "*norvegicus*" on the scallop beds off the north extremity of the island, 1838 [47]. South end of the island, rare, 1886 [44]. Bay Fine, 1892 [67]. Five miles off Ballaugh, 20 fm., small numbers, 1836 and 1838 [50].

BUCCINUM UNDATUM Linné *Jeffreys*, 1867, IV, p. 285.

Common off the south of the island. Taken in numbers by fishermen in whelk pots near the Chickens Rock in about 40 fm.

(H.B.M.). Port Erin Bay, and generally distributed 1900 [90]. Five miles off Ballaugh, 20 fm., abundant, 1836 and 1838 [50]. Off Ramsey Pier [107]; and dead shell, same locality (H.B.M.), also off Ballure [107].

Breeding: One developing egg mass on shell of *Pecten maximus*, off Fleshwick Bay, 15 Apl. 1932 (G.A.F.).

Family NASSARIIDAE

NASSARIUS (HIMA) RETICULATUS (Linné) *Forbes & Hanley*, 1853, III, p. 388, as *Nassa reticulata*.

One living and one dead shell trawled in 1 fm., Port Erin Bay, Apl. 1933, and one living in the same locality in Oct. 1933 (H.B.M.). Three at L.W. near the Breakwater, Port Erin, Apl. 1934 (N.B.E.). Cast ashore occasionally on the north coast. I have never seen it alive on the Manx shores, 1838 [47].

NASSARIUS (HIMA) INCRASSATUS (Ström) *Forbes & Hanley*, 1853, III, p. 391, *Nassa incrassata*.

Common alive at Port Erin, 1892 [3]. Under stones, Port Erin, 1900 [90]. Several specimens in the *Laminaria* zone, Port Erin (H.B.M.). Three specimens at L.W.E.S.T. on the Breakwater, Apl. 1934 (N.B.E.). Off Port Erin and off Fleshwick Bay (H.B.M.). Five miles off Ballaugh 1836 and 1838, abundant [50].

Family TURRIDAE

HAEDROPLEURA SEPTANGULARIS (Montagu) *Jeffreys*, 1867, IV, p. 390, as *Pleurotoma septangularis*.

A large specimen dredged off Port Erin, 1901 [16].

LORA TURRICULA (Montagu) *Forbes & Hanley*, 1853, III, p. 450, as *Mangelia turricula*.

Living specimens at Port Erin, 1886 [44]. Bay Fine, trawled, one specimen (H.B.M.). Off Spanish Head, 1900 [90]. Very rare on the north coast, 1838 [47].

LORA RUFA (Montagu) *Forbes & Hanley*, 1853, III, p. 454, as *Mangelia rufa*.

Very rare on the east coast, in deep water, 1838 [47]. North of the island, living, 1886 [44].

MANGELIA ATTENUATA (Montagu) *Jeffreys*, 1867, IV, p. 377, as *Pleurotoma attenuata*.

Southern coasts, dead shells only, 1901 [16].

MANGELIA (BELA) COARCTATA (Forbes) *Forbes & Hanley*, 1853, III, p. 485, as *M. costata*.

The Breast, July 1931, one specimen (H.B.M.), [116].

MANGELIA (BELA) NEBULA (Montagu) *Forbes & Hanley*, 1853, III, p. 476.

Dredged, living, off Port Erin, rare, 1901 [16, 44].

PHILBERTIA (COMARMONDIA) GRACILIS (Montagu) *Forbes & Hanley*, 1853, III, p. 473, as *Mangelia gracilis*.

Recorded from the Isle of Man but no locality given [174].

PHILBERTIA (PHILBERTIA) LEUFROYI (Smith) *Forbes & Hanley*, 1853, III, p. 468, as *Mangelia leufroyi*.

Dredged, Bay Fine, 1892 [67].

PHILBERTIA (PHILBERTIA) PURPUREA (Montagu) *Forbes & Hanley*, 1853, III, p. 465, as *Mangelia purpurea*.

One specimen trawled, Bay Fine, Sept. 1931 (H.B.M.). Five specimens off the Bows, Port Erin, Oct.-Dec. 1933, and five in May 1934 (W.F.). Two specimens in deep water off Ballaugh, 1834 [47].

PHILBERTIA (PHILBERTIA) LINEARIS (Montagu) *Jeffreys*, 1867, IV, p. 368, as *Defrancia linearis*; *Forbes & Hanley*, 1853, III, p. 470, as *Mangelia linearis*.

Three live specimens two to three miles off Port Erin, Oct.-Dec. 1933, and three in May 1934 (W.F.). One specimen alive and several dead off Port Erin and the Calf in rough dredged material, 1901 [16]. On the north coast, rare, 1838 [47]. Bay Fine, Mar. 1936 (A.E., det. R.W.).

PHILBERTIA (TERES) TERES (Reeve) *Forbes & Hanley*, 1853, III, p. 462, as *Mangelia teres*.

Three specimens alive, two and a half miles off Port Erin, Oct.-Dec. 1933, and three alive and two dead in May 1934 (W.F.). Dredged one mile west of the Calf, 20 fm., 1892 [73]. A single specimen dredged off Port Erin, 1901 [16].

Sub-Class *OPISTHOBRANCHIA*

Order *PLEUROCOELA*

Family *ACTEONIDAE*

ACTEON TORNATILIS (Linné) *Jeffreys*, 1867, IV, p. 433.

Three specimens off Fleshwick Bay, 1931; one dead shell, Port Erin Bay, 1933 (H.B.M.). Off the Castles, Port Erin, 1900 [90].

Family DIAPHANIDAE

DIAPHANA MINUTA Brown *Forbes & Hanley*, 1853, III, p. 521, as *Amphisphyrha hyalina*.

Several specimens dredged in sand, Port Erin Bay, Mar. 1932 (H.B.M.). Dredged off the Calf, 15-17 fm., 1901 [16].

Family ATYIDAE

HAMINOEA HYDATIS (Linné) *Jeffreys*, 1867, IV, p. 439, as *Bulla elegans*; *Forbes & Hanley*, 1853, III, p. 531, as *B. hydatis*.

Off the Castles, Port Erin and Bay Fine, 1900 [90].

Family RETUSIDAE

RETUSA MAMMILLATA (Philippi) *Jeffreys*, 1867, IV, p. 420, as *Utriculus mammillatus*.

Recorded from the south of the island, no locality given, 1896 [78].

RETUSA (CYLICHNINA) SUBCYLINDRICA (Brown) *Forbes & Hanley*, 1853, III, p. 519, as *Cylichna umbilicata*.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family TRICLIDAE

CYLICHNA CYLINDRACEA (Pennant) *Jeffreys*, 1867, IV, p. 415.

Recorded from the south of the island but no locality given, 1901 [16].

ROXANIA UTRICULUS (Fleming) *Forbes & Hanley*, 1853, III, p. 533, as *Bulla cranchii*.

Off Port Erin, 1897 [110]. Obtained by sifting debris at low water on the beach. May have been washed ashore by gales, 1901 [16].

TRICLA LIGNARIA Leach *Jeffreys*, 1867, IV, p. 443, as *Scaphander lignarius*.

Not uncommon in the trawl: the Breast, Fleshwick Bay; unusually common in 1933 (H.B.M.). Fleshwick Bay, 1893 [74], off Bradda Head and near Kitterland, 1892 [3]. Off Bay Fine, 1900 [90]. North-east, and south of the Bahamas Bank, shoal water, 1894 [74]. Ramsey, living, 1838 [47].

Breeding: spawning in the aquarium, Port Erin, May 20, 1933 (H.B.M.).

Family PHILINIDAE

PHILINE APERTA Ascanius *Jeffreys*, 1867, IV, p. 457.

Three specimens trawled between Bay Fine and Bradda Head, Aug. 1932 (H.B.M.). In the stomach of a haddock caught off Douglas, 1837 [47]. *Ramsey* [53a].

HERMANIA SCABRA (Müller) *Jeffreys*, 1867, IV, p. 447, as *Philine scabra*.

Recorded from the Isle of Man but no locality given, 1901 [16].

HERMANIA CATENA (Montagu) *Jeffreys*, 1867, IV, p. 449, as *Philine catena*.

Recorded from the south of the island but no locality given, 1896 [78].

OSSIANIA ANGULATA (*Jeffreys*) *Jeffreys*, 1867, IV, p. 451, as *Philine angulata*.

Dredged off Port Erin, 1901 [16].

Family PELTIDAE

DELTA CORONATA Quatrefages *Jeffreys*, 1869, V, p. 15, as *Runcina hancocki*.

Four specimens in a pool at M.T. on the Dub Reef, Port Erin, Apl. 1936 (A. Gr.). Off Bay Fine, 1900 [90].

Family TETHYIDAE

APLYSIA PUNCTATA (Cuvier) *Garstang*, 1890, p. 401; *Forbes & Hanley*, 1853, III, p. 554, as *A. hybrida*.

Fairly common among weeds all round the south of the island, and sometimes present in great numbers. Port Erin, Port St. Mary (H.B.M.), Fleshwick Bay (N.B.E.). Large specimens less common, but occasionally very abundant; among *Zostera marina*, Chapel Bay, Mar. 1932. Small specimens abundant in the trawl all round the south of the island: Port Erin Bay, Fleshwick Bay, Bay Fine, the Breast, etc. (H.B.M.). Douglas, alive, 1878 [53].

Breeding: 10 Mar., 17 Mar., 8 Jun., 7 July, 26 Aug. (Trawled, on *Diclyota*, 17 fm.) (H.B.M.).

Order PTEROPODA

Family SPIRATELLIDAE

SPIRATELLA RETROVERSA (Fleming) *Forbes & Hanley*, 1853, II, p. 384, as *Spirialis flemingii*.

Round the Calf, 1893 [74].

Order ASCOGLOSSA

Family STILIGERIDAE

HERMAEA BIFIDA (Montagu) *Alder & Hancock*, 1845-55, p. 53.

On *Griffithsia flosculosa*, Batt., in pool at mid-tide level, Port Erin, Oct. 1930 [115], also at L.W.S.T., Mar. 1936 (K.M.W.). West of the harbour, Port St. Mary, Apl. 1931 (M.W.P.). Two green specimens on *Bryopsis plumosa*, L.W., Castletown, Apl. 1937 (J.H.O.).

HERMAEA DENDRITICA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 53.

In a pool (Pat's Dub), in Port Erin Bay, 1899 [21].

Family ELYSIIDAE

ELYSIA VIRIDIS (Montagu) *Forbes & Hanley*, 1853, III, p. 614.

Port Erin, 1893 [74]. In pool (Pat's Dub), Port Erin, and among *Zostera marina* and algae, Chapel Bay, single specimens (H.B.M.). Gansey Beach, two specimens (N.B.E.).

Family LIMAPONTIIDAE

ACTEONIA COCKSII (Alder & Hancock) *Eliot*, 1910, p. 143, as *Cenia cocksii*.

Off Bay Fine, 1900 [90].

LIMAPONTIA CAPITATA (O. F. Müller) *Alder & Hancock*, 1848, p. 402, as *L. nigra*.

Abundant on *Corallina*, in pools near H.W., Port St. Mary, Apl. 1937 (K.M.W.). Off Bay Fine, 1900 [90].

Order ACOELA

Family PLEUROBRANCHIDAE

BERTHELLA PLUMULA (Montagu) *Jeffreys*, 1869, V, p. 11, as *Pleurobranchus plumula*.

Not uncommon on the rocks to the west of Port St. Mary harbour at L.W.E.S.T.; three specimens between M.T. and L.W.N.T. on Port St. Mary Ledges (H.B.M.). Port Erin, 1893 [74]. South side of Fleshwick Bay, 13 fm., 1893 [74]. Round the Calf, 1893 [74].

Breeding: newly-laid spawn under stones between M.T. and L.W.N.T. on Port St. Mary Ledges, 11 June 1932 (H.B.M.).

PLEUROBRANCHUS (OSCANIUS) MEMBRANACEUS (Montagu) *Jeffreys*, 1869, V, p. 10.

Usually rare; a single specimen dredged on the Breast, Nov. 1930; very common on the Breast throughout 1933, adults throughout the summer, and small specimens about 1 cm. in length in Nov. (H.B.M.). Off Port Erin, 15 fm., 1895 [142]. Seven miles west of Peel, 21 fm., 1895 [76]. Six miles west of Contrary Head, 37 fm., 1893 [74].

Family TRITONIIDAE

TRITONIA HOMBERGII Cuvier *Alder & Hancock*, 1845-55, p. 165.

One specimen on Port Erin Breakwater, Apl. 1933; two specimens trawled on the Breast, 17 fm., Oct. 1933 (H.B.M.). A very large specimen on Port Erin Breakwater, July 1905 [56]. Frequent in deep water on the north coast, 1838 [47].

TRITONIA (DUVAUCELIA) LINEATA Alder & Hancock *Alder & Hancock*, 1845-55, p. 169.

One specimen dredged off Bay Fine, Apl. 1936; under stone at Calf Sound, at L.W.S.T., Apl. 1937 (N.B.E.).

TRITONIA (DUVAUCELIA) PLEBEIA Johnston *Alder & Hancock*, 1845-55, p. 167.

Fleshwick Bay, L.W., one specimen, Apl. 1932; Port St. Mary, L.W., one specimen, Apl. 1932 (H.B.M.). Calf Sound, under stones at L.W.S.T., Apl. 1937 (N.B.E.). Dredged, off Bay Fine, Apl. 1937 (E.L.C.). East and south of the Calf, 15 to 30 fm., 1900 [81]. Seven miles west of Peel, 21 fm., 1895 [76].

Family POLYCERIDAE

AEGIRES PUNCTILUCENS (d'Orbigny) *Forbes & Hanley*, 1853, III, p. 574, as *Aegirus*; *Alder & Hancock*, 1845-55, p. 44, as *Aegirus*.

One, under rocks at Port Erin Breakwater, L.W.N.T., Mar. 1937 (F.J.B.). Another, similarly, Apl. 1937 (N.B.E.).

EUPHURUS CLAVIGER (Müller) *Alder & Hancock*, 1845-55, p. 44, as *Triopa claviger*.

Calf Sound, one specimen under a stone at L.W.S.T., Apl. 1935 (K.M.W.). Off Bay Fine, 1900 [90]. From lobster pots off Bradda Head, 1921 [67B]. Port Erin Breakwater, L.W.N.T., Mar. 1937 (F.J.B.).

PALIO DUBIA M. Sars *Forbes & Hanley*, 1853, III, p. 577, as *Polycera lessonii*.

One specimen under a stone at L.W.S.T., Port St. Mary Bay, Apl. 1935 (E.T.B.F.). Isle of Man, 1901 [23].

POLYCERA QUADRILINEATA (O. F. Müller) *Alder & Hancock*, 1845-55, p. 45.

Occasionally on weeds at low water: Fleshwick Bay. Fairly common in the trawl round the south of the island, Port Erin Bay, off Port Erin, Fleshwick Bay (H.B.M.), Bay Fine, 1900 [90].

Breeding: 15 Apl., 27 July (H.B.M.).

ACANTHODORIS PILOSA (Abildgaard) *Alder & Hancock*, 1845-55, p. 43, as *Doris pilosa*.

Six specimens under stones on Port Erin Breakwater between M.T. and L.W.N.T., Mar. 1933 (E.M.L.). A single specimen from the Breakwater, Port Erin, determined by W. J. Beaumont, in the collection at the Port Erin Biological Station (no date). Calf Sound, many small specimens, at L.W.S.T., Apl. 1937 (K.M.W.).

ADALARIA PROXIMA (Alder & Hancock) *Jeffreys*, 1869, V, p. 88, as *Doris proxima* (A. & H.).

Several on stones near L.W., Spaldrick, Mar. 1932 (E.M.L.). Under stones, Port Erin, 1900 [90]. Near jetty, Port Erin, L.W.E.S.T., Apl. 1937 (K.M.W.).

ONCHIDORIS MURICATA (Müller) *Forbes & Hanley*, 1853, III, p. 567, as *Doris aspera*.

Port Erin, under stones, rare, 1900 [90]. Port Erin Breakwater, and Fleshwick Bay, L.W.O.S.T., 1932 (N.B.E.).

Breeding: 21 Mar. (N.B.E.).

ONCHIDORIS (ATALODORIS) PUSILLA (Alder & Hancock) *Alder and Hancock*, 1845-55, p. 43, as *Doris pusilla*.

Dredged off Bay Fine, 1907 [57].

Breeding: spawn, probably of this species, on shell, dredged on the Breast, 18 Apl. (H.B.M.).

GONIODORIS NODOSA (Montagu) *Alder & Hancock*, 1845-55, p. 44.

A few under stones at low water: Fleshwick Bay, the Sound (H.B.M.). Breakwater, Port Erin, under stones, Apl. 1931 (E.M.L.). Off Halfway Rock, 18 fm., 1895 [76].

Breeding: spawning, 30 Mar. (H.C.C.).

GONIODORIS CASTANEA Alder & Hancock *Alder & Hancock*, 1845-55, p. 44.

One specimen under a rock on the Breakwater, Port Erin, L.W.N.T., Mar. 1933 (E.M.L.). Under stones, Port Erin Bay, 1900 [90]. One specimen between Port St. Mary and Spanish Head, 20 fm., 1886 [69]. Off Spanish Head, 1900 [90].

OKENIA (IDALIELLA) ASPERSA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 46, as *Idalia aspersa*.

Common in the spring and summer under stones, Fleshwick Bay, Port Erin; the Sound, a few; Port St. Mary, two specimens (H.B.M.).

Breeding: spawning, 4 Apl. (H.B.M.).

ANCULA CRISTATA (Alder) *Alder & Hancock*, 1845-55, p. 45.

Off the Breakwater, Port Erin, 1900 [90]. In lobster pots off Bradda Head, 1921 [67B].

Family ARGIDAE

CADLINA LAEVIS (Linné) *Forbes & Hanley*, 1853, III, p. 566, as *Doris repanda*.

Port Erin Bay, low water, 1906 [57].

ROSTANGA RUFESCENS Iredale & O'Donoghue *Alder & Hancock*, 1845-55, p. 42, as *Doris coccinea*.

A single specimen trawled off Port St. Mary, Apl. 1931 (H.B.M.).

ARCHIDORIS BRITANNICA (Johnston) *Alder & Hancock*, 1845-55, p. 41, as *Doris tuberculata*.

Common everywhere on the rocks in the spring and early summer, and some specimens to be found all the year round; Fleshwick Bay, Port Erin, Gansey Point (H.B.M.). Douglas, on Conister and elsewhere; Peel, in caves at foot of Castle Rock, 1878 [53].

Breeding: specimens copulating and spawn seen, 29 Feb.; spawn, 3, 4, 21, 29 Mar., 14 June (H.B.M.).

ARCHIDORIS FLAMMEA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 41, as *Doris flammea*.

Off Ballaugh, 25 fm., 1853 [51].

JORUNNA TOMENTOSA (Cuvier) *Alder & Hancock*, 1845-55, p. 42, as *Doris johnstoni*.

Single specimens recorded from Port Erin Breakwater at L.W.O.S.T., 1933, and from the Dub Reef, Port Erin, and the Breakwater, Apl. 1934 (N.B.E.). Fleshwick Bay, L.W.E.S.T.; Port St. Mary, L.W.O.S.T. (H.B.M.). In pools, Port Erin, 1900 [90].

Family DENDRONOTIDAE

DENDRONOTUS FRONDOSUS (Ascanius) *Alder & Hancock*, 1845-55, p. 47, as *D. arborescens*.

Off the Calf, 1878 [53]. Between Port St. Mary and Spanish

Head, 20 fm., 1886 [69]. On fuci off Port Erin [53a]. On the harbour buoy, Port Erin, 1895 [142]. Two small specimens trawled in Port Erin Bay, also one in aquarium (H.B.M.).

Family IDULIIDAE

IDULIA CORONATA (Gmelin) Alder & Hancock, 1845-55, p. 48, as *Doto coronata*.

The Sound, L.W.E.S.T., Apl. 1934 (K.M.W.). Off the Breakwater, Port Erin, and Bay Fine, 1900 [90]. On the harbour buoy, Port Erin, 1893 [10]. In lobster pots off Bradda Head, 1921 [67B]. Dredged, off Bay Fine, on *Desmarestia aculeata*, Apl. 1936 (N.B.E.).

IDULIA FRAGILIS (Forbes) Alder & Hancock, 1845-55, p. 48, as *Doto fragilis*.

Off Port Erin, 1900 [90]. On the harbour buoy, Port Erin, 1898 [79]. Aldrick and Bay Fine, 15 to 20 fm., 1893 [74]. Between Spanish Head and Port St. Mary, 15 to 25 fm., 1886 [69]. On corallines in deep water at Ballaugh, not rare, 1838 [47].

IDULIA PINNATIFIDA (Montagu) Alder & Hancock, 1845-55, p. 48, as *Doto pinnatifida*.

Off Bay Fine, 1900 [90].

Family FLABELLINIDAE

CORYPHELLA VERRUCOSA (Johnston) Forbes & Hanley, 1853, III, p. 593, as *Eolis rufibranchialis*.

A single specimen trawled on the Breast, Apl. 1931 (J.H.F.). One, dredged in Bay Fine, 15 fm., on holdfast of *Laminaria*, Apl. 1937 (E.L.C.).

CORYPHELLA PEDATA (Montagu) Alder & Hancock, 1845, p. 49, as *Eolis landsburgii*.

Dredged off Port Erin several times, 1895 [142]. In lobster pots off Bradda Head, 1921 [67B]. A few specimens trawled in the mouth of Port Erin Bay (H.B.M.). Seven miles west of Peel, 21 fm., 1895 [76].

CORYPHELLA LINEATA (Lovén) Alder & Hancock, 1845-55, p. 49, as *Eolis lineata*.

Two specimens off Port Erin, 15 fm., 1886 [69]. One specimen off the Charan, and one off Spaldrick (H.B.M.). Off Port Erin, 10 fm., 1900 [90]. Dredged in shallow water, Douglas, 1845 [1].

EUBRANCHUS TRICOLOR Forbes *Alder & Hancock*, 1845-55, p. 52, as *Eolis tricolor*.

Not uncommon in the trawl round the south of the island ; off Port Erin (H.B.M.) ; off the Breakwater, Port Erin, and off Spanish Head, 1900 [90] ; between Port St. Mary and Spanish Head, 20 fm., 1886 [69] ; in lobster pots off Bradda Head, 1921 [67B]. On corallines, off Ballaugh, 20 fm., 1838 [47].

EUBRANCHUS CINGULATUS (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 51, as *Eolis cingulata*.

Off the Breakwater, Port Erin, 1900 [90].

Family HEROIDAE

HERO FORMOSA (Lovén) *Jeffreys*, 1869, V, p. 63.

Not uncommon in the trawl ; off Port Erin, the Breast, off Fleshwick Bay (H.B.M.), Bay Fine, 1900 [90], east and south of the Calf, 15 to 30 fm., 1900 [81]. In lobster pots off Bradda Head, 1921 [67B].

Family TERGIPEDIDAE

EMBLETONIA PULCHRA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 52.

Found in almost every dredging at Port Erin in June and July 1895 [142].

TERGIPES DESPECTUS (Johnston) *Alder & Hancock*, 1845-55, p. 52, as *Eolis despecta*.

On *Obelia longissima* on lobster pot ropes, Port Erin Bay, 1906 [57]. In lobster pots off Bradda Head, 1921 [67B].

CUTHONA CONCINNA (Alder & Hancock) *Forbes & Hanley*, 1853, III, p. 598 as *Eolis concinna*.

Port Erin, 1895 [142].

CUTHONA AMOENA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 51, as *Eolis amoena*.

One specimen off Port Erin, 15 fm., Aug. 1886 [69]. Off Halfway Rock, Port Erin, 1900 [90].

CRATENA AURANTIA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 51, as *Eolis aurantiaca*.

Harbour buoy, Port Erin, July 1895 [142]. Harbour buoy, Port Erin, July (H.B.M.).

Breeding : spawning, 9 July (H.B.M.).

CRATENA FOLIATA (Forbes & Goodsir) *Alder & Hancock*, 1845-55, p. 50, as *Eolis olivacea*.

Not uncommon in the upper coralline zone at Port Erin, 1895 [142]. One specimen trawled on the Breast, Apl. 1931 (H.B.M.).

CRATENA VIRIDIS (Forbes) *Alder & Hancock*, 1845-55, p. 51, as *Eolis viridis*.

Trawled in the mouth of Port Erin Bay, 17 fm., 1895 [76]; Apl. 1936 (M.W.P.). Douglas, 1878 [53].

CRATENA GLOTTENSIS (Alder & Hancock) *Forbes & Hanley*, 1853, III, p. 601.

One specimen on *Desmarestia aculeata*, dredged off Bay Fine, Mar. 1936 (K.M.W.).

Family AEOLIDIIDAE

FACELINA DRUMMONDI (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 49, as *Eolis drummondi*.

On harbour buoy, Port Erin, July; Port Erin Bay, trawled, Mar. three specimens (H.B.M.). On the harbour buoy, Port Erin, 1895 [142]. Port Erin Bay, 1898 [20]. Off the Breakwater, Port Erin, 1900 [90]. In lobster pots off Bradda Head, 1921 [67B].

AEOLIDIA PAPILOSA (Linné) *Alder & Hancock*, 1845-55, p. 48, as *Eolis papillosa*.

Not uncommon in pools at low water round the south of the island in the spring; Port Erin, Fleshwick Bay, Port St. Mary (H.B.M.).

Breeding: copulating, 12 Mar., same individuals spawned 19 Mar., and the spawn hatched 4 Apl. (Temp. throughout 10-14°C.) (H.B.M.).

EOLIDINA GLAUCA (Alder & Hancock) *Alder & Hancock*, 1845-55, p. 48, as *Eolis glauca*.

One, on seaweed at Calf Sound, L.W.S.T., Apl. 1937 (N.B.E.).

Sub-Class PULMONATA

Order BASOMMATOPHORA

Family ELLOBIIDAE

LEUCOPEPLA BIDENTATA (Montagu) *Jeffreys*, 1869, V, p. 104, as *Melampus bidentatus*.

One specimen recorded from Port Erin, 1892 [3]. Off Bay Fine,

1900 [90]. Kirk Santon (Santon) Head in crevices with *Otina ovata*, 1853 [51].

PHYTIA MYOSOTIS (Draparnaud) Forbes & Hanley, 1853, IV, p. 196, as *Conovulus denticulatus*, var. *myosotis*.

Recorded from the Isle of Man but no locality given, 1901 [16].

Family OTINIDAE

OTINA OVATA (Brown) Jeffreys, 1869, V, p. 110, as *Otina otis*.

Mr. Heathcote says in the diary of the Port Erin Biological Station (20 July 1890) that he found this species near the Breakwater, Port Erin. All search by us both there and round Port Erin failed to rediscover it, 1901 [16]. In crevices of rocks between tide marks, at Kirk Santon, associated with *Lasaea rubra* and *Conovulus albus*, 1853 [51]. In crevices in rock, Perwick, Mar. 1935 (B.J.M., M.C.).

Class CEPHALOPODA

Order DECEMBRACHIATA

Sub-Order TEUTHOIDEA

Family OMMASTREPHIDAE

ILLEX COINDETHI (Verany) Jeffreys, 1869, V, p. 129, as *Ommatostrephes sagittatus*.

A specimen washed ashore at Port Erin in 1920. Length of pen, 71 cm. [33].

ALLOTEUTHIS MEDIA (Linné) Naef, 1921-28, II, p. 215; Norman, 1890, p. 481, as *Loligo marmorae*.

Trawled at Ramsey, May 1884 [107].

LOLIGO FORBESII Steenstrup Hoyle, 1885, p. 459.

Eggs not uncommon on crab pot ropes at Port Erin [20, 25] (H.B.M.). Douglas, rare, 1838 [47].

Breeding: eggs, hatched, Oct. 13 [25].

LOLIGO VULGARIS Lamarck* Jatta, 1896, p. 167.

Taken frequently in seine nets in Port Erin Bay, and, according to local fishermen, said to be even more common off shore (H.B.M.).

*This record requires verification.

Sub-Order SEPIOIDEA

Family SEPIIDAE

SEPIA OFFICINALIS Linné *Jatta*, 1896, p. 149.

Several trawled in Port Erin Bay, Sept. 1934 (J.R.B.). The shell is often washed ashore [34]. Shell not infrequently cast ashore on the east and west coasts, 1838 [47]. Shell cast ashore in abundance at Ballaugh [107]. Very large numbers of shells washed ashore at Poyllvaish, Apl. 1933 (H.B.M.).

Breeding : eggs on *Chlamys* shell, 1926 [34].

Family SEPIOLIDAE

SEPIOLA (HETEROSEPIOLA) ATLANTICA Orbigny *Norman*, 1890, p. 473.

Not infrequent in the trawl : Port Erin Bay, Fleshwick Bay, the Breast (H.B.M.). Mouth of Port Erin Bay, 1900 [90]. One specimen dredged off the Point of Ayre, 1886 [44].

Breeding : Eggs in cavities of a piece of stone from the Breast, 16 April 1931—hatched, 22 April 1931 (H.B.M.).

ROSSIA MACROSOMA (Oken) *Jatta*, 1896, p. 134.

Two batches of eggs, just hatching, trawled in 20 fm. on the Breast, Apl. 1934 (H.B.M.).

Breeding : see above.

Order OCTOBRACHIATA

Family OCTOPODIDAE

ELEDONE CIRRHOSA (Lamarck) *Jeffreys*, 1869, V, p. 146, as *E. cirrosa*.

Taken frequently in lobster pots round Port Erin from May to Sept., but never in the winter months. One very early specimen on 15 Feb. 1933 (H.B.M., T.N.C.). Occasionally on the shore at L.W.S.T., 1901 [90]. Douglas, 1867 [52]. Dredged at Ballaugh, rare, 1838 [47].

Breeding : eggs laid in the aquarium, 26 Sept. (H.B.M.).

Phylum BRYOZOA

Class ECTOPROCTA

Order GYMNOLAEMATA

Family AETEIDAE

AETEA ANGUINA (Linné) *Hincks*, 1880, p. 4.

Off the south end of the island, 15-30 fm., 1900 [158]. Ramsey, 1886 [111].

AETEA RECTA *Hincks* *Hincks*, 1880, p. 6.

Off Port Erin, 10-15 fm., considerable quantity, 1886 [111].
Off Halfway Rock, Port Erin, 1900 [90]. Port Erin, 1895 [76].
Round the Calf, 1893 [74]. Six miles south-east of the Calf, 30 fm.,
on dead shells, 1900 [158].

AETEA TRUNCATA (Landsborough) *Hincks*, 1880, p. 8.

Common in the Isle of Man on oyster shells, 1880 [93]. Erect and
composite form on weed near Port Erin, 10-15 fm., 1886 [111].

Family EUCRATEIDAE

EUCRATEA CHELATA (Linné) *Hincks*, 1880, p. 14.

Creeping on *Crisia cornuta*, L.W.E.S.T., Port St. Mary, March, 1932
(N.B.E.). Off Port Erin, 1900 [90]. South of the island, 15-30 fm.,
1900 [158]. On the harbour buoy, Port Erin, 1893 [10]. On
a submerged rope in Port Erin Bay, 1895 [76]. Maughold, common
on shells, 1886 [111].

GEMELLARIA LORICATA (Linné) *Hincks*, 1880, p. 18.

Off the breakwater, Port Erin, and in Bay Fine, 1900 [90].
A quarter of a mile west of Fleshwick Bay, 13 fm., 1894 [75].

Family CELLULARIIDAE

SCRUPOCELLARIA REPTANS (Linné) *Hincks*, 1880, p. 52.

Common in the trawl off Port Erin (H.B.M.). On boulders, Port
Erin Bay, 1900 [90]. Very common on *Chlamys* and on *Laminaria*,
1886 [111]. On the harbour buoy, Port Erin, 1893 [10]. On
a submerged rope, Port Erin, 1895 [76]. Mouth of Port Erin Bay,
17 fm., 1895 [76]. Off Halfway Rock, Port Erin, 18 fm., 1895 [76].
A quarter of a mile west of Fleshwick Bay, 13 fm., 1894 [75]. Seven
miles west of Peel, 21 fm., 1895 [76].

SCRUPOCELLARIA SCRUPEA Busk. *Hincks*, 1880, p. 50.

Off Port Erin, 5-10 fm., 1886 [111]. Off Bradda Head and the breakwater, Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].

SCRUPOCELLARIA SCRUPOSA (Linné) *Hincks*, 1880, p. 45.

Recorded from the Isle of Man but no locality given, 1886 [111]. Off the south end of the island, 15-30 fm., 1900 [158].

Family BICELLARIIDAE

BICELLARIA CILIATA (Linné) *Hincks*, 1880, p. 68.

On the breakwater, Port Erin, 1900 [90]. On the harbour buoy, Port Erin, 1898 [79]. Bay Fine, 1900 [90]. Off the south of the island, 15-30 fm., 1900 [158].

BUGULA AVICULARIA (Linné) *Hincks*, 1880, p. 75.

Isle of Man, 1889 [112]. On dead shells, six miles south-east of the Calf, 30 fm., Sept. 1900 [158].

BUGULA FLABELLATA J. E. Gray. *Hincks*, 1880, p. 80.

Isle of Man, on *Flustra*, 1886 [111]. Off Bradda Head, 1900 [90]. Trawled off Port Erin, Apl. 1931 (H.B.M.).

BUGULA PLUMOSA (Pallas) *Hincks*, 1880, p. 84.

Off Port Erin, 1886 [111].

BUGULA TURBINATA Alder *Hincks*, 1880, p. 77.

Isle of Man, 1886 [111]. Off Bay Fine, 1900 [90].

BUGULA CALATHUS Norman *Hincks*, 1880, p. 82.

Off Bradda Head, 1900 [90].

BEANIA MIRABILIS Johnston *Hincks*, 1880, p. 96.

Off Port Erin, 5-10 fm., 1886 [111]. Isle of Man, on weed, 1880 [93]. South of the island, 15-30 fm., 1900 [158]. Fourteen miles west of Dalby, 60 fm., 1892 [73].

Family FLUSTRIDAE

FLUSTRA FOLIACEA (Linné) *Hincks*, 1880, p. 115.

Common on the Breast (H.B.M.). Very abundant everywhere at low water, 1886 [111]. Off Port Erin, 1900 [90]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

FLUSTRA SECURIFRONS (Pallas) *Hincks*, 1880, p. 120.

Dredged between Laxey and the Dhoon, 1890, 1891 [172]. Seven miles west of Peel, 21 fm., 1895 [76].

Family MEMBRANIPORIDAE

MEMBRANIPORA AURITA Hincks *Hincks*, 1880, p. 159.

On a piece of wood near Spanish Head, 1886 [111].

MEMBRANIPORA CATENULARIA (Jameson) *Hincks*, 1880, p. 134.

Off Port Erin, 1900 [90]. South of the island, 15-30 fm., 1900 [158].
On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA CRATICULA Alder *Hincks*, 1880, p. 147.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1885 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Very abundant on shells dredged off Maughold Head, 1886 [111].

MEMBRANIPORA DISCRETA Hincks *Hincks*, 1880, p. 152.

16-20 fm., east of the Calf Sound, 1895 [156].

MEMBRANIPORA DUMERILI (Audouin) *Hincks*, 1880, p. 156.

Mouth of Port Erin Bay, 1893-95 [74, 76]. Off Halfway Rock, 1900 [90]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA FLEMINGI Busk *Hincks*, 1880, p. 162.

Common and widely distributed, 1880 [93]. On stones and shells, Port Erin Bay, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1885 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA HEXAGONA Busk *Hincks*, 1880, p. 143.

Recorded from the Isle of Man, on *Chlamys opercularis*, but no locality given, 1886 [111].

MEMBRANIPORA IMBELLIS Hincks *Hincks*, 1880, p. 160.

Mouth of Port Erin Bay, 1893-95 [74, 76]. Off Halfway Rock, Port Erin, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA LACROIXI Audouin *Hincks*, 1880, p. 129.

On stones in tide pools at Ramsey, 1886 [111].

MEMBRANIPORA LINEATA (Linné) *Hincks*, 1880, p. 143.

Common on *Laminaria* in the Isle of Man, 1886 [111]. Common on Fuci, Port Erin Bay, 1900 [90].

MEMBRANIPORA MEMBRANACEA (Linné) *Hincks*, 1880, p. 140.

On *Laminaria* and *Fucus*, Port Erin Bay, 1900 [90]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA NODULOSA *Hincks* *Hincks*, 1880, p. 170.

15-20 fm., east of the Calf Sound, 1895 [156].

MEMBRANIPORA PILOSA (Linné) *Hincks*, 1880, p. 137.

On various brown algae, Port Erin Bay; generally distributed round the south of the island, 1900 [90]. On a submerged rope, Port Erin Bay, 1895 [76]. South of the island, 15-30 fm., 1900 [158]. Off Halfway Rock, Port Erin, 18 fm., 1895 [76]. On dead shells six miles south-east of the Calf, 30 fm., 1900 [158].

MEMBRANIPORA ROSSELI (Audouin) *Hincks*, 1880, p. 166.

Off Maughold Head, 1886 [93].

MEMBRANIPORA SOLIDULA Alder & *Hincks* *Hincks*, 1880, p. 158.

16-20 fm., east of the Calf Sound, 1895 [156].

MEMBRANIPORA SPINIFERA (Johnston) *Hincks*, 1880, p. 149.

Between tide marks, 1886 [111]. On stones between tide marks, Port Erin Bay, 1900 [90]. Off Garwick Head, 1896 [78]. Laxey Bay, 8 fm., in a *Zostera* bed, 1892 [73].

MEMBRANIPORA TRIFOLIUM (Wood) *Hincks*, 1880, p. 167.

Eight miles west of Fleshwick Bay, 33 fm., 1892 [73].

Family MICROPORIDAE

MICROPORA CORIACEA (Esper) *Hincks*, 1880, p. 174.

Recorded from the Isle of Man but no locality given, 1886 [111].

Family CELLARIIDAE

CELLARIA FISTULOSA (Linné) *Hincks*, 1880, p. 106.

Trawled on the Breast; generally distributed (H.B.M.). Off Halfway Rock, Port Erin, 1893-95 [74, 76]. Off Spanish Head, 20 fm., large quantities, 1886 [111]. Two to three miles west of the Calf Sound, 19 fm., 1894 [75]. Two miles south-east of the Calf, 1894 [75]. Seven miles south of the Calf, 30 fm., 1894 [75]. Three miles west of Fleshwick Bay, 20 fm., 1892 [73]. Seven miles west of Peel, 21 fm., 1895 [76]. Off Contrary Head, 1901 [159]. Fourteen miles west of Dalby, 60 fm., 1892 [73]. Four miles off Glen Meay, 21 fm., 1884 [75].

CELLARIA SINUOSA (Hassall) *Hincks*, 1880, p. 109.

Breast, Apl. 1934, 20 fm. (H.B.M.). Near Port Erin, 27 fm., 1889 [112]. Off Contrary Head, 1901 [159]. Fourteen miles west of Dalby, 60 fm., 1892 [73].

Family TUBICELLARIIDAE

LAGENIPORA SOCIALIS *Hincks*, 1880, p. 235.

East of the Calf Sound, 16-20 fm., 1895 [156].

Family CRIBRILINIDAE

CRIBRILINA ANNULATA (Fabricius) *Hincks*, 1880, p. 193.

Recorded as rare in the Isle of Man but no locality given, 1880 [93].

CRIBRILINA GATTYAE (Busk) *Hincks*, 1880, p. 198.

16-20 fm., east of the Calf Sound, 1895 [156].

CRIBRILINA PUNCTATA (Hassall) *Hincks*, 1880, p. 190.

On wood near Spanish Head, 1886 [111].

CRIBRILINA RADIATA (Moll) *Hincks*, 1880, p. 185.

Common in a pool at M.T. on the Dub Reef, Port Erin, Apl. 1934 (H.B.M.). Recorded from the Isle of Man, but no locality given, 1880 [93].

MEMBRANIPORELLA NITIDA (Johnston) *Hincks*, 1880, p. 200.

On *Chlamys*, off Spanish Head, 20 fm., 1886 [111].

Family MICROPORELLIDAE

MICROPORELLA CILIATA (Pallas) *Hincks*, 1880, p. 206.

Off Port Erin and Halfway Rock, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MICROPORELLA IMPRESSA (Audouin) *Hincks*, 1880, p. 214.

Isle of Man, 1886 [93]. Port Erin, 1894 [155].

MICROPORELLA MALUSI (Audouin) *Hincks*, 1880, p. 211.

On *Chlamys*, off Spanish Head, 20 fm., 1886 [111]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MICROPORELLA VIOLACEA (Johnston) *Hincks*, 1880, p. 216.

Recorded from the Isle of Man but no locality given, 1886 [111].

Family ESCHARIDAE

LEPRALIA EDAX (Busk) *Hincks*, 1880, p. 311.

On shell containing *Eupagurus cuanensis*, trawled off Fleshwick Bay, Aug. 1931 (H.B.M.). Three quarters of a mile north of Kitterland, 18 fm., 1893 [74].

LEPRALIA FOLIACEA (Ellis & Solander) *Hincks*, 1880, p. 300.

Recorded from the Isle of Man but no locality given, 1886 [111].

LEPRALIA PALLASIANA (Moll) *Hincks*, 1880, p. 297.

Common in the Isle of Man, 1880 [93]. On shells and stones, Port Erin Bay, between tide marks, 1900 [90].

LEPRALIA PERTUSA (Esper) *Hincks*, 1880, p. 305.

Isle of Man, 1886 [111]. Across the mouth of Port Erin Bay, 15-18 fm., 1893 [74].

UMBONULA VERRUCOSA (Esper) *Hincks*, 1880, p. 317, as *Umbonella verrucosa*.

Off Port St. Mary; and on a piece of wood, near Spanish Head, 1886 [111]. On boulders and stone, L.W.S.T., Port Erin Bay, 1900 [90].

CHORIZOPORA BRONGNIARTI (Audouin) *Hincks*, 1880, p. 224.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Round the Calf, 1893 [74]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

PORELLA CONCINNA (Busk) *Hincks*, 1880, p. 323.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Off south end of Isle of Man, 15 to 30 fm., 1900 [158].

PORELLA COMPRESSA (Sowerby) *Hincks*, 1880, p. 330.

A very fine specimen dredged off Spanish Head, 20 fm., 1886 [111].

PORELLA MINUTA (Norman) *Hincks*, 1880, p. 326.

East of the Calf Sound, 16-20 fm., 1895 [156].

SMITTIA CHEILOSTOMA (Manzoni) *Hincks*, 1880, p. 349.

On shells dredged off the Calf, 1896 [78]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

SMITTIA LANDSBOROVII (Johnston) *Hincks*, 1880, p. 341.

On a piece of wood from the Isle of Man, no locality given, 1886 [III].

SMITTIA RETICULATA (Macgillivray) *Hincks*, 1880, p. 346.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. On *Chlamys* shells, off Spanish Head, 20 fm., 1886 [III].

SMITTIA TRISPINOSA (Johnston) *Hincks*, 1880, p. 353.

Round the Calf, 1893 [74]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Off Port Erin, 1900 [90].

PHYLACTELLA COLLARIS (Norman) *Hincks*, 1880, p. 358.

Recorded from the Isle of Man but no locality given, 1880 [93].

MUCRONELLA ABYSSICOLA (Norman) *Hincks*, 1880, p. 369.

Port Erin, 1898 [157].

MUCRONELLA COCCINEA (Abildgaard) *Hincks*, 1880, p. 371.

Very common in the Isle of Man, 1886 [III]. On stones and *Laminaria*, Port Erin Bay, 1900 [90]. Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. Off Spanish Head, on *Chlamys*; off Port St. Mary, on *Laminaria* roots, 1886 [III].

MUCRONELLA PEACHI (Johnston) *Hincks*, 1880, p. 360.

Mouth of Port Erin, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Off Spanish Head, on *Chlamys*, 1886 [III]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

MUCRONELLA VARIOLOSA (Johnston) *Hincks*, 1880, p. 366.

Mouth of Port Erin Bay, 15-18 fm., 1893 [74]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Encrusting *Mytilus edulis*, at Ramsey, 1886 [III].

MUCRONELLA VENTRICOSA (Hassall) *Hincks*, 1880, p. 363.

Mouth of Port Erin Bay, 15-18 fm., 1893 [74]. 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

PALMICELLARIA SKENEI (Ellis & Solander) *Hincks*, 1880, p. 379.

North side of Fleshwick Bay, 15-18 fm., 1893 [74]. Dredged between Laxey and the Dhoon, 1890, 1891 [172].

HIPPOTHOA DISTANS Macgillivray *Hincks*, 1880, p. 293, as *Hippothoa flagellum*.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. One mile west of the Calf, 20 fm., 1892 [73]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

HIPPOTHOA DIVARICATA Lamouroux *Hincks*, 1880, p. 288.

Port Erin, 1893 [153]. Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].

SCHIZOPORELLA ALDERI (Busk) *Hincks*, 1880, p. 243.

Off the west coast, 1896 [78].

SCHIZOPORELLA AURICULATA (Hassall) *Hincks*, 1880, p. 260.

Isle of Man, 1880 [93]. On dead shells, 6 miles south-east of the Calf, 30 fm., 1900 [158].

SCHIZOPORELLA CRISTATA *Hincks* *Hincks*, 1880, p. 254.

East of the Calf Sound, 16-20 fm., 1895 [156].

SCHIZOPORELLA HYALINA (Linné) *Hincks*, 1880, p. 271.

On shells and stones, Port Erin Bay, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. On a submerged rope, Port Erin Bay, 1895 [76]. Abundant in the Isle of Man on *Laminaria*, 1886 [111].

SCHIZOPORELLA JOHNSTONI Quelch. *Hincks*, 1880, p. 246, as *Schizoporella simplex*.

Eight miles west of Fleshwick Bay, 33 fm., 1892 [73].

SCHIZOPORELLA LINEARIS (Hassall) *Hincks*, 1880, p. 247.

Mouth of Port Erin Bay, 15-18 fm., 1892, 1895 [73, 76]. Off Halfway Rock, 18 fm., 1895 [76]. One mile west of the Calf, 20 fm., 1892 [73]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

SCHIZOPORELLA SPINIFERA (Johnston) *Hincks*, 1880, p. 241.

On roots and stems of *Laminaria*, Port Erin Bay, 1900 [90]. Off Port Erin, 10-15 fm., 1886 [111].

SCHIZOPORELLA UNICORNIS (Johnston) *Hincks*, 1880, p. 238.

Under stones and on *Laminaria*, Port Erin Bay, 1900 [90]. Near the Calf, 20 fm., 1889 [112]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

SCHIZOPORELLA VULGARIS (Moll) *Hincks*, 1880, p. 244.

16-20 fm., east of the Calf Sound, 1895 [156].

SCHIZOTHECA DIVISA (Norman) *Hincks*, 1880, p. 285.

16-20 fm., east of the Calf Sound, 1895 [156].

SCHIZOTHECA FISSA Busk *Hincks*, 1880, p. 284.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].

MASTIGOPHORA DUTERTREI (Audouin) *Hincks*, 1880, p. 279.

16-20 fm., east of the Calf Sound, 1895 [156].

Family CELLEPORIDAE

CELLEPORA ARMATA *Hincks* *Hincks*, 1880, p. 410.

Isle of Man, 1889 [112]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

CELLEPORA AVICULARIS *Hincks* *Hincks*, 1880, p. 406.

Isle of Man, 1889 [112]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

CELLEPORA COSTAZII Audouin *Hincks*, 1880, p. 411.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 1900 [90]. Ramsey and Point of Ayre, 1880 [93].

CELLEPORA DICHOTOMA *Hincks* *Hincks*, 1880, p. 403.

South of Port Erin, 27 fm., 1889 [112]. Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Six miles west of Contrary Head, 37 fm., 1893 [74].

CELLEPORA PUMICOSA Linné *Hincks*, 1880, p. 398.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. Three quarters of a mile west of Kitterland, 18 fm., 1893 [74]. Seven miles west of Peel, 21 fm., 1895 [76]. Ramsey, common; very large specimens encrusting shells, 1886 [111].

Family CRISIIDAE

CRISIA CORNUTA (Linné) *Hincks*, 1880, p. 419 [excl. var. *geniculata* = *C. geniculata*]

Port Erin Bay, near Pat's Dub, L.W.O.S.T. (N.B.E.). Under stones and boulders, L.W.S.T., Port Erin Bay, 1900 [90]. Off Port Erin,

1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. East and south of the Calf, 15-30 fm., 1900 [81]. Seven miles west of Peel, 21 fm., 1895 [76].

CRISIA DENTICULATA (Lamarck) *Harmer*, 1891, p. 129.

Recorded from the Isle of Man but no locality given, 1886 [111]. South of the island, 15-30 fm., 1900 [158].

CRISIA EBURNEA (Linné) *Harmer*, 1891, p. 131.

On *Chlamys*, off Spanish Head, 10-15 fm., 1886 [111]. Bay Fine, 1900 [90]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

CRISIA RAMOSA *Harmer* *Harmer*, 1891, p. 134.

Off Port Erin and Halfway Rock, 1900 [90]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

Family DIASTOPORIDAE

DIASTOPORA OBELIA (Johnston) *Hincks*, 1880, p. 462.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

DIASTOPORA PATINA (Lamarck) *Hincks*, 1880, p. 458.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 1900 [90]. On *Chlamys*, off Spanish Head, 20 fm., 1886 [111].

DIASTOPORA SUBORBICULARIS *Hincks* *Hincks*, 1880, p. 464.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 1900 [90]. Round the Calf, 1893 [74]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

Family TUBULIPORIDAE

TUBULIPORA FLABELLARIS Fabricius *Harmer*, 1898, p. 99.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Port Erin and Halfway Rock, 1900 [90]. Off Fleshwick Bay, on algae, abundant, Sept., 1931 [116].

TUBULIPORA LOBULATA Hassall *Hincks*, 1880, p. 444.

On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Off Maughold Head, extremely abundant, 1880 [93]. Ramsey Bay, on *Mytilus edulis*, 1886 [111].

IDMONEA SERPENS (Linné) *Hincks*, 1880, p. 453.

Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

ENTALOPHORA CLAVATA (Busk) *Hincks*, 1880, p. 456.

Dredged in Bay Fine, 12 fm., on a shell, Apl., 1933 (H.B.M.).

STOMATOPORA EXPANSA *Hincks* *Hincks*, 1880, p. 432.

Isle of Man, on dead shells, 1886 [111]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

STOMATOPORA GRANULATA (M. Edwards) *Hincks*, 1880, p. 425.

Mouth of Port Erin Bay, 1893 [74]. Fourteen miles west of Dalby, 60 fm., 1892 [73].

STOMATOPORA INCRASSATA (Smitt) *Hincks*, 1880, p. 436.

On *Chlamys*, near the Calf, 20 fm., 1889 [112].

STOMATOPORA INCURVATA (Hincks) *Hincks*, 1880, p. 433.

16-20 fm., east of the Calf Sound, 1895 [156].

STOMATOPORA JOHNSTONI (Heller) *Hincks*, 1880, p. 430.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. Near the Calf, 1889 [112]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

STOMATOPORA MAJOR (Johnston) *Hincks*, 1880, p. 427.

Mouth of Port Erin Bay, 1893 [74]. In deep water, 1886 [111]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158].

Family LICHENOPORIDAE

LICHENOPORA HISPIDA (Fleming) *Hincks*, 1880, p. 473.

Several colonies on stone trawled on the Breast, 20 fm., Apl., 1931; and Bay Fine, Apl., 1933 (H.B.M.). Mouth of Port Erin Bay, 17 fm., 1895 [76]. On dead shells, six miles south-east of the Calf, 30 fm., 1900 [158]. Off Spanish Head, 20 fm., 1886 [111].

LICHENOPORA RADIATA (Audouin) *Hincks*, 1880, p. 476.

Several colonies trawled in the mouth of Port Erin Bay, Mar., 1932 (H.B.M., det. I.G.).

LICHENOPORA VERRUCARIA (Fabricius) *Hincks*, 1880, p. 478.

Dredged between Laxey and the Dhoon, 1890,-91 [172].

Family ALCYONIDIIDAE

ALCYONIDIUM GELATINOSUM (Linné) *Hincks*, 1880, p. 491.

Off Port Erin, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76].
Six miles north-west of Port Erin, 33 fm., 1893 [74].

ALCYONIDIUM HIRSUTUM (Fleming) *Hincks*, 1880, p. 493.

On algae, L.W.S.T., Port Erin Bay, 1900 [90]. On *Delesseria alata*,
Port Erin, 1932 (H.B.M.). Off Port Erin, 10-15 fm., 1886 [111].

ALCYONIDIUM MAMILLATUM Alder *Hincks*, 1880, p. 495.

Round the Calf, 1893 [74]. Six miles west of Contrary Head,
37 fm., 1893 [74].

ALCYONIDIUM MYTILI Dalyell *Hincks*, 1880, p. 498.

Isle of Man, common, 1880 [93]. Off Port Erin, 1900 [90]. Off
Halfway Rock, 18 fm., 1895 [76].

ALCYONIDIUM PARASITICUM (Fleming) *Hincks*, 1880, p. 502.

Common on *Hydrallmania falcata* and *Sertularia* sp. on the Breast
(H.B.M.).

Family ARACHNIDIIDAE

ARACHNIDIUM HIPPOTHOOIDES *Hincks* *Hincks*, 1880, p. 509.

On *Cyprina*, dredged off the Isle of Man, 1880 [93].

Family FLUSTRELLIDAE

FLUSTRELLA HISPIDA (Fabricius) *Hincks*, 1880, p. 506.

Common on *Ascophyllum nodosum*, about m.t. at Port Erin
(H.B.M.). Common in the Isle of Man, 1886 [111]. On fuci, Port Erin
Bay, 1900 [90].

Family VESICULARIIDAE

VESICULARIA SPINOSA (Linné) *Hincks*, 1880, p. 513.

Recorded from the Isle of Man but no locality given, 1886 [111].

AMATHIA LENDIGERA (Linné) *Hincks*, 1880, p. 516.

Very common, 1886 [III]. Off Port Erin, 1900 [90]. Off Garwick Head, 4-12 fm., 1892 [73].

BOWERBANKIA CAUDATA (Hincks) *Hincks*, 1880, p. 521.

One and a half miles west of Bradda Head, 12-15 fm., 1893 [74].

BOWERBANKIA IMBRICATA (Adams) *Hincks*, 1880, p. 519.

In pools, on *Corallina officinalis*, Port Erin Bay, 1900 [90]. Off Port Erin, 10-15 fm., very common, 1886 [III].

BOWERBANKIA PUSTULOSA (Ellis & Solander) *Hincks*, 1880, p. 522.

Off Port Erin, 10-15 fm., 1900 [90].

Family BUSKIIDAE

BUSKIA NITENS Alder *Hincks*, 1880, p. 532.

Off Contrary Head, 1901 [159].

Family CYLINDROECIIDAE

CYLINDROECIUM DILATATUM (Hincks) *Hincks*, 1880, p. 536.

Off Port Erin, 10-15 fm., 1886 [III]. Round the Calf, 1893 [74].

CYLINDROECIUM PUSILLUM *Hincks* *Hincks*, 1880, p. 537.

Off Contrary Head, 1901 [159].

Family TRITICELLIDAE

TRITICELLA BOECKI G. O. Sars *Sars*, 1873, pp. 387, 397.

On *Calocaris macandreae*, nine to ten miles west of Port Erin, 48 fm., muddy bottom, 1894 [75]. On *Calocaris macandreae*, seven and a half to eleven miles north-west of Bradda Head, 47-60 fm., 1894 [75]. 16-20 fm., east of the Calf Sound, 1895 [156].

Family VALKERIIDAE

VALKERIA TREMULA *Hincks* *Hincks*, 1880, p. 554.

Recorded as dredged off the Isle of Man but no locality given, 1880 [III].

VALKERIA UVA (Linné) *Hincks*, 1880, p. 551.

On fuci and *Corallina*, between tide marks, Port Erin Bay, 1900 [90]. 15-30 fm. off the south end of the island, 1900 [158].

Family MIMOSELLIDAE

MIMOSELLA GRACILIS Hincks *Hincks*, 1880, p. 556.

Between Port Erin and the Calf, 10-15 fm., 1886 [111].

Class ENTOPROCTA

Family PEDICELLINIDAE

PEDICELLINA CERNUA (Pallas) *Hincks*, 1880, p. 565.

On *Corallina officinalis*, in pools at L.W.O.S.T., Perwick Bay, fairly common, July 1931 (H.B.M.). On algae on Port Erin Breakwater and Bradda Head, 1900 [90]. Off Bradda Head and Bay Fine, 1900 [90]. On the walls of the aquarium at the Biological Station, Port Erin, 1906 [28]. Seven miles west of Peel, 21 fm., 1895 [76].

BARENTSIA GRACILIS (Sars) *Hincks*, 1880, p. 570, as *Pedicellina gracilis*.

Between Port Erin and the Calf, 10-15 fm., 1886 [111]. Four and a half miles west of Cronk-ny-Arrey-Laa, 22 fm., 1894 [75]. Six miles west of Contrary Head, 37 fm., 1894 [74].

LOXOSOMA SINGULARE Keferstein *Claparède*, 1863, p. 105.

On the dorsal surface, under the elytra, of *Aphrodite aculeata*. Common on the one specimen examined. The Breast, 20 fm., Apl. 1933 (H.B.M.).

Phylum ECHINODERMATA

Class CRINOIDEA

Family ANTEDONIDAE

ANTEDON BIFIDA (Pennant) *Mortensen*, 1927, p. 28.

Common all round the south of the island: the Breast, off the Breakwater, Port Erin, Bay Fine, between Burroo Nedd and Spanish Head. One or two specimens taken between tide marks, possibly brought in by fishing boats (H.B.M.). Similar distribution round the south end of the island, 1900 [19, 90]. One mile west of the Niarbyl, 12 fm., 1894 [75]. Off Douglas Bay, 1867 [52]. The polychaete *Myzostomum cirriferum* is frequently found on this species (H.B.M.).

Breeding: Pentacrinoid larvae on weeds, 10-20 fm., off Port Erin, Aug. [70]. Fully grown pentacrinoid larvae on shells, between Bay Fine and Bradda, Aug. (H.B.M.).

Class ASTEROIDEA

Order PHANEROZONIA

Family ASTROPECTINIDAE

ASTROPECTEN IRREGULARIS (Pennant) *Mortensen*, 1927, p. 57.

Taken occasionally in the trawl; single specimens from off the Charran and between Bay Fine and Bradda (H.B.M.). Port Erin Bay, 1898 [20]. Off Bradda Head, 1900 [90]. Dredged between Laxey and the Dhoon, 1890,-91 [172].

Family LUIDIIDAE

LUIDIA SARSI Düben & Koren *Mortensen*, 1927, p. 69.

One large specimen dredged between Bay Fine and Bradda Head, 17 fm., Aug. 1932 (H.B.M.).

Breeding: the above specimen was a female containing large un-ripe eggs (H.B.M.).

LUIDIA CILIARIS (Philippi) *Mortensen*, 1927, p. 70.

Between the Calf and Port Erin, 20 fm., 1889 [19]. Two to three miles west of the Calf, 19 fm., 1894 [75]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Several times in 20 fm., on scallop bank, four miles off north-west shore, 1841 [49].

Breeding: larvae in small numbers in plankton, June and July, 1909, but not seen 1910-1914 [30].

Family PORANIIDAE

PORANIA PULVILLUS (O. F. Müller) *Mortensen*, 1927, p. 90.

Frequent in the trawl all round the south of the island: Breast, Bay Fine, etc. (H.B.M.). Off Halfway Rock, 1893,-95 [74, 76]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Seven miles west of Peel, 21 fm., 1895 [76]. Six miles north-west of Port Erin, 33 fm., 1893 [74]. Five to eight miles west of Dalby, 20 fm., 1894 [75]. Four miles off Glen Meay, 20 fm., 1894 [75]. Frequent on the north-east coast among scallops in deep water, 1841 [49].

Order SPINULOSA

Family ASTERINIDAE

ASTERINA GIBBOSA (Pennant) *Mortensen*, 1927, p. 98.

Common in pools between M.T. and L.W., both under stones and on *Corallina officinalis*; Port Erin, Port St. Mary (H.B.M.). Baie-ny-Carrickey, Fleshwick Bay, 1886 [70]. In pools at low water among limestone rocks at Castletown, 1841 [49].

Breeding: Spawning in laboratory, 18 July 1931; spawn under stones on the shore, 22 July 1931 (H.B.M.).

PALMIPES MEMBRANACEUS Linck *Mortensen*, 1927, p. 100.

Not uncommon off Port Erin, on the Breast, and especially in Bay Fine (H.B.M.). Not uncommon in deep water off Port Erin, 1892 [73]. Fleshwick Bay, 12-18 fm., 1893 [74]. Seven miles west of Fleshwick Bay, 1892 [74]. Three miles west of Fleshwick, 1892 [73]. Two to three miles north-west of the Calf, 19 fm., 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles north-west of Port Erin, 33 fm., 1893 [74]. Four to eight miles west of Dalby, 20-25 fm., 1893,-94 [74, 75]. Dredged between Laxey and the Dhoon, 1890,-91 [172]. Off Ramsey, 1878 [53].

Family SOLASTERIDAE

SOLASTER (CROSSASTER) PAPPOSUS (Linné) *Mortensen*, 1927, p. 112.

Fairly common in the trawl round the south of the island; the Breast, Bay Fine, between Burroo Nedd and Spanish Head (H.B.M.). Off Bradda Head, Bay Fine and Kitterland, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Fleshwick Bay, 12-18 fm., 1893 [74]. North-west of the Calf, 18 fm., 1893 [74]. Seven miles west of Peel, 21 fm., 1895 [76]. Frequently trawled off Laxey [105].

SOLASTER ENDECA (Linné) *Mortensen*, 1927, p. 115.

Fairly common in the trawl round the south of the island (H.B.M.). Bay Fine, 1900 [90]. Off Halfway Rock, 18 fm., 1895 [76]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Dredged between Laxey and the Dhoon, 1890-91 [172]. Off Ramsey, 1878 [53].

Breeding : Spawning in the aquarium, 19 Apl., 1932 (H.B.M.).

Family ECHINASTERIDAE

HENRICIA SANGUINOLENTA (O. F. Müller) *Mortensen*, 1927, p. 118.

A few found at L.W.E.S.T. at the Calf Sound, and the Ledges, Port St. Mary (H.B.M.). Port Erin, among *Laminaria* roots, 1900 [90]. Mouth of Port Erin Bay, 17 fm., 1895 [76]. Off Halfway Rock, 18 fm., 1895 [76]. Off Aldrick, 18 fm., 1894 [75]. Several dredged off Port Erin, and between Port St. Mary and the Calf, 1886 [70].

Order FORCIPULATA

Family STICMASTERIDAE

STICHASTRELLA ROSEA (O. F. Müller) *Mortensen*, 1927, p. 136.

Not uncommon on the Breast (H.B.M.). North of the Calf, 22 fm., 1893 [74]. One and a half miles north of Kitterland, 19 fm., 1894 [75]. Two to three miles north-west of the Calf Sound, 19 fm., 1894 [75]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Six miles west of Port Erin, 24 fm., 1892 [73]. Three miles west of Fleshwick, 20 fm., 1892 [73]. Four miles west of Dalby, 25 fm., 1893 [74].

Family ASTERIIDAE

ASTERIAS RUBENS Linné *Mortensen*, 1927, p. 139.

Small and medium sized specimens fairly common under stones on the shore near L.W., Port Erin, Port St. Mary, Calf Sound, Niarbyl. Very abundant in the trawl all round the south of the island ; much larger specimens are taken in deep water than on the shore ; Breast, Bay Fine, Fleshwick Bay, Port Erin Bay (H.B.M.). Plentiful on the south coast, 1886 [70, 74, 76, 90]. Off Ramsey, 1878 [53]. Abundant off Laxey [105].

Breeding : Port Erin Bay—the commonest echinoderm larva in the plankton. Blastulae found several times as early as the end of Jan. 1907-1912 in numbers about mid-Feb. Absent in 1913. Common in 1914. Bipinnaria larvae in numbers in early Mar., but not found later in the year [30].

MARTHASTERIAS GLACIALIS (Linné) *Mortensen*, 1927, p. 143.

Trawled on the Breast and between Bay Fine and Bradda, but not very common. Specimens are often very large, one from the Breast measuring 36 inches across (H.B.M.). North of the Calf, inshore, 14 fm., 1894 [75]. Between the Calf and Port Erin, 1878 [53].

Breeding: Port Erin Bay, from the end of March to 20 Apl. 1914, *Bipinnaria* larvae fairly common. Rare in previous years [30].

Class OPHIUROIDEA

Order OPHIURAE

Family OPHIOTRICHIDAE

OPHIOTRICH FRAGILIS (Abildgaard) *Mortensen*, 1927, p. 174.

Very abundant in the trawl round the south of the island; common four miles west of the Chickens Rock, 37 fm.; not uncommon under stones at low water: Port Erin, the Calf Sound, Niarbyl (H.B.M.). Common under stones at low water in Port Erin Bay; also off Bay Fine, Aldrick, Spanish Head, etc., 1900 [90]. In great numbers off Port St. Mary and Spanish Head, 10-20 fm., bottom chiefly nullipores and gravel; also at low water, Douglas Bay, 1886 [18]. Seven miles west of Peel, 21 fm., 1895 [76]. Off Ramsey, 1878 [53]. On the shore, Ballaugh, 1841 [49].

Breeding: Port Erin—plutei, June, July, 1907 [57]. Metamorphosing larvae abundant July and early Aug. 1907, 1908. A few in the same months, 1909, 1913. 1911, small numbers at the end of September. More abundant at the same time, 1912, 1913 [30].

Family OPHIOCOMIDAE

OPHIOCOMINA NIGRA (Abildgaard) *Mortensen*, 1927, p. 178.

Abundant in the trawl all round the south of the island: the Breast, Bay Fine, off Port Erin Breakwater, between Burroo Nedd and Spanish Head (H.B.M.). 10-20 fm. off Spanish Head, and between Port St. Mary and the Calf, several; bottom chiefly nullipores and gravel, 1886 [18]. Off Bay Fine and Aldrick, 1900 [90]. North-west of the Calf, 18 fm., numerous, 1893 [74]. In enormous profusion, four miles west of Fleshwick Bay, 1893 [74]. Off Ramsey, 1878 [53].

Family OPHIACTIDAE

OPHIOPHOLIS ACULEATA (Linné) *Mortensen*, 1927, p. 204.

Common on the Breast and Bay Fine (H.B.M.). Under stones near Lifeboat House, Port Erin, L.W.S.T., Apl. 1937 (N.B.E.). Port Erin

Bay, under stones at low water, 1900 [90]. Off Port Erin, 12 fm., bottom gravel and stones; off Port St. Mary, 20 fm., 1886 [18]. Common in deep water off the Isle of Man, 1841 [49]. Between Kitterland and Halfway Rock, 17 fm., 1893 [74]. North-west of the Calf, 18 fm., 1893 [74]. Four miles off Glen Meay, 20 fm., 1894 [75]. Off Ramsey, 1878 [53].

Breeding: a few young stages, probably of this species, in Feb. 1912. Fair numbers in Feb. and Mar. 1913 [30].

Family AMPHIURIDAE

AMPHIURA CHIAJEI Forbes *Mortensen*, 1927, p. 212.

West of the Isle of Man, 70 fm., 1893 [135]. Seven miles west of Peel, 21 fm., 1895 [76].

ACROCNIDA BRACHIATA (Montagu) *Mortensen*, 1927, p. 218.

Off Ramsey, 1878 [53]. One specimen dredged in sand, 1-5' fm., Port Erin Bay, Oct. 1933 (H.B.M.).

AMPHIPHOLIS SQUAMATA (Delle Chiaje) *Mortensen*, 1927, p. 221.

Common everywhere in pools on *Corallina officinalis*: Port Erin, Port St. Mary (H.B.M.). Port Erin Bay, in coralline pools and under stones; off Port Erin Breakwater, and Bay Fine, 1900 [90]. 12 fm. off Port Erin; in rock pools at Port Erin and Fleshwick Bay on *Corallina officinalis*, 1886 [18]. In deep water round the Manx coast, 1841 [49]. Off Ramsey, 1878 [53].

Breeding: specimens with young, Port St. Mary harbour, 20 July 1932 (J.H.O.).

Family OPHIOLEPIDAE

OPHIURA TEXTURATA Lamarck *Mortensen*, 1927, p. 236.

Common in the trawl all round the south of the island; sometimes very abundant: Breast, Bay Fine, off the Breakwater, Port Erin, between Burroo Nedd and Spanish Head (H.B.M.). Mouth of Port Erin Bay, off Port Erin Breakwater, Bay Fine and Aldrick, 1900 [90]. A quarter of a mile west of Fleshwick Bay, 13 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles west of Dalby, 30 fm., 1894 [75].

Breeding: Port Erin Bay—larvae sparingly in July and early Aug. 1907, 1908. Rather larger numbers Sept. 1911, 1912, and July and Sept. 1913 [30].

OPHIURA ALBIDA Forbes *Mortensen*, 1927, p. 239.

10-12 fm. off Port Erin, bottom gravel and stones; 10-20 fm., off Spanish Head, bottom chiefly nullipora and gravel, 1886 [18]. Mouth of Port Erin Bay, off Port Erin, Bay Fine and Aldrick, 1900 [90]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles west of Dalby, 30 fm., 1894 [75].

Breeding: Port Erin—plutei, June and July 1907 [57]. Larvae almost certainly of this species, in considerable numbers, July 1907, 1908. Very rare 1909, 1910. Small numbers, Sept. 1911. More abundant, Sept. 1912. Abundant, July and Sept. 1913 [30].

Class ECHINOIDEA

Order DIADEMATOIDEA

Family ECHINIDAE

PSAMMECHINUS MILIARIS (Gmelin) *Mortensen*, 1927, p. 294.

Not uncommon under stones at L.W.S.T. on the south side of Port Erin Bay; usually fairly large. The Calf Sound, L.W.E.S.T., numerous but small. West of the harbour, Port St. Mary, a few at L.W.S.T. Small specimens frequently taken in the trawl all round the south of the island, but commonest near shore: the Breast, Bay Fine, between Burroo Nedd and Spanish Head. Very abundant in Fleshwick Bay. About five small specimens among about five hundred *Echinus esculentus* taken from time to time in whelk pots three miles west of the Chickens Rock in 35 fm., size up to ca. 2 cm. diam. (H.B.M.). Frequent in summer off Port Erin and Port St. Mary, 1886 [70]. At low water on the south side of Port Erin Bay, 1900 [90].

Breeding: plutei tolerably common July 1907, 1908. None seen in 1909, -10. Some found in Sept. 1911, 1912, 1913. The larvae of this species are much commoner than those of *Echinus esculentus*, although the adults are much less common [30]. 23 Mar. 1932, a number of adults from the shore were about 50 per cent. ripe and 50 per cent. ripening (J.H.O.). 1 Apl. 1931, two specimens spawning in the laboratory. 8 Apl. 1932, four specimens from the shore were full and ripe (H.B.M.). 23-31 Aug. 1932, about forty specimens trawled in Fleshwick Bay were about 50 per cent. half-spent and the rest fully spent (D.H.).

ECHINUS ESCULENTUS Linné *Mortensen*, 1927, p. 297.

Large specimens common on the shore in some localities, but small specimens less than about 4 cm. diameter never found between

tide marks. The Breakwater, Port Erin, extremely abundant from M.T. down to several fathoms. Maximum size, 11 cm. diameter. Several thousand specimens a year are removed from this breakwater without in any way depleting the stock. Rare elsewhere in Port Erin Bay. Niarbyl, very abundant at L.W.E.S.T. Fleshwick Bay, occasionally. The Calf Sound not uncommon at L.W.S.T. Abundant in the trawl all round the south of the island, all sizes up ca. 8 cm. diameter, but rarely larger; the Breast, Fleshwick Bay, off Port Erin, Bay Fine, between Burroo Nedd and Spanish Head. Frequent in lobster pots close inshore from the Calf Sound to Fleshwick Bay. Small specimens up to 5 cm. diameter common in whelk pots three miles west of the Chickens Rock, 35 fm. (H.B.M.). Off Peel [76]. Very abundant off Laxey, but very rarely found on the shore there [105]. The polychaete *Scalissetosus assimilis* is found among the spines of about 20 per cent. of the specimens from all grounds, except between tide marks (H.B.M.).

Breeding: plutei, Port Erin Bay, June, July, 1907, common [57]. Fully developed plutei rarely found [30]. First larvae seen in Port Erin Bay on 19 and 23 Mar. 1932 (H.B.M.). On Port Erin Breakwater: some males ripe all the year; first ripe ova found in the beginning of February spawning, both sexes started Mar 11, finished about 1 May 1932; started 25 Mar., finished about 5 June 1931. Breast, 20 fm.: first ripe sperm about end of Nov., 90 per cent. ripe by beginning of Mar.; first ripe ova about 1 Mar.; spawning started 1 Apl., ended about 20 May 1932. Chickens ground, 35 fm.; male and female commence ripening about mid-February; spawning same time as on Breast in 1932. 1931 later than 1932, but no exact dates available (H.B.M.).

Order CLYPEASTROIDEA

Family FIBULARIIDAE

ECHINOCYAMUS PUSILLUS (O. F. Müller) *Mortensen*, 1927, p. 316.

Probably common all round the south of the island on a gravelly bottom. Dead shells are abundant, especially on the Warts Bank. Live specimens in Port Erin Bay, and between Burroo Nedd and Spanish Head (H.B.M.). Off Port Erin, 10-20 fm.; off Spanish Head, 15 fm., bottom nullipores, 1886 [70]. Off the harbour buoy, Port Erin, Bay Fine, Aldrick and Halfway Rock, 1900 [90]. Seven miles west of Peel, 21 fm., 1895 [76]. Seven miles south of the Calf, 30 fm., 1894 [75].

Breeding: plutei rare in the plankton in Port Erin Bay. A small number of fully-developed plutei in July and early Aug. 1907, and

a few since. Latest date found, Nov. 1913 [30]. 30 Mar. 1932, four adults opened. Two had practically no gonad, one was a half-ripe female, and one a ripe male. Two specimens examined in Nov. 1933—one a spent female and the other a full, ripe male (H.B.M.).

Order SPATANGOIDEA

Family SPATANGIDAE

SPATANGUS PURPUREUS O. F. Müller *Mortensen*, 1927, p. 328.

On the scallop banks off the Isle of Man, abundant, generally on the cleanest part of the bank. On its spines we sometimes find in considerable numbers *Montacuta substriata*, 1841 [49]. Two small specimens dredged on the Breast, 17 fm., Nov. 1933 (H.B.M.). One mile off Aldrick, 18 fm., 1894 [75]. One mile west of the Calf, 20 fm., 1893 [74]. Two miles south-east of the Calf, 1894 [75]. Eight to nine miles west of Port Erin, 35 fm., 1894 [75].

ECHINOCARDIUM CORDATUM (Pennant) *Mortensen*, 1927, p. 331.

Abundant at L.W.S.T. in the sand at Port Erin; a few at L.W.E.S.T. in Port St. Mary Bay; has not been found elsewhere in the island except for a single live fragment at Ramsey. A few trawled on the Breast (H.B.M.). Six miles west of Port Erin, 24 fm., 1892 [73]. One mile south of Spanish Head, 19 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76].

Breeding: Port Erin Bay—larvae in considerable numbers in July and Aug. 1907. Smaller numbers in July and Aug. 1908. None seen 1909-1912. 1913, a few. In 1907, 1908, all stages of metamorphosis were found; post-larvae near the bottom [30]. In specimens from Port Erin (1932) there were no ripe gonads in February: at the end of March most of the males were full and ripe, but very few ripe eggs were found; by the end of April 30 per cent. of the females were full and ripe, and by the end of May all were ripe: at the end of June about half of both sexes were spent or spending: at the beginning of September, 75 per cent. were fully spent, and the rest were spending (H.B.M.).

ECHINOCARDIUM FLAVESCENS (O. F. Müller) *Mortensen*, 1927, p. 334.

Small specimens not uncommon in the trawl, larger ones occasionally, but usually damaged: Fleshwick Bay, off Fleshwick Bay, between Bay Fine and Bradda Head, and one specimen in Port Erin Bay (H.B.M.). Off Port Erin, 15-20 fm.; small specimens off Bradda Head, 15 fm., 1886 [70]. 12-46 fm., west of the Isle of

Man, 1893 [72]. One mile west of Bradda Head, 15 fm., 1893 [74]. Six miles west of Port Erin, 24 fm., 1892 [73]. Seven miles south of the Calf, 30 fm., 1894 [75]. One mile west of Niarbyl, 24 fm., 1894 [75].

Breeding: larvae probably of this species abundant, end of Feb. 1911-1914. 1914, abundant from March on, and numbers of fully-developed larvae about mid-April [30].

BRISSOPSIS LYRIFERA (Forbes) *Mortensen*, 1927, p. 338.

Six miles north-west of Port Erin, 33 fm., sandy-mud bottom, 1893 [74]. Seven and a half to eleven miles north-west of Bradda Head, 47-60 fm., mud bottom, 1894 [75]. Nine to ten miles west of Port Erin, 48 fm., mud bottom, 1894 [75]. In quantity ten miles north-west of Port Erin, 50 fm., mud bottom, 1893 [74]. Six and a half miles west of Contrary Head, 30 fm., mud bottom, 1894 [75]. Fourteen miles west of Dalby, 60 fm., 1892 [73].

Class HOLOTHURIOIDEA

Order DENDROCHIROTA

Family CUCUMARIIDAE

CUCUMARIA HYNDMANI Thompson *Mortensen*, 1927, p. 400.

Two specimens trawled off Port Erin, Apl. 1931, and one on the Breast, May 1934 (H.B.M.). Under stones at extreme low water, Port Erin Bay, rare. Off Port Erin, 20 fm., 1900 [90]. Port Erin Bay, low water, May 1902 (H.C.C.). Three specimens, twenty miles south-east of Port Erin, 20 fm., 1886 [70]. On a piece of limestone from deep water off the Calf, 1903 [25]. Four miles west of Glen Meay, 21 fm., 1894 [75].

CUCUMARIA SAXICOLA Brady & Robertson *Mortensen*, 1927, p. 401.

Three specimens from the Breakwater and near the jetty, Port Erin, Apl. 1935 (F.J.B.). Two specimens under stones at L.W.E.S.T., Niarbyl, Mar. 1932 (H.B.M.). At Calf Sound, similarly, Apl. 1937 (K.M.W.).

CUCUMARIA LACTEA (Forbes) *Mortensen*, 1927, p. 402.

One specimen from the mouth of Port Erin Bay, and one specimen off Port Erin (H.B.M.). Off Port Erin, 1900 [90]. One specimen off Spanish Head, 15 fm., 1886 [70]. On the shores of the Isle of Man, 1841 [49].

THYONE FUSUS (O. F. Müller) *Mortensen*, 1927, p. 406.

Off Port Erin, 20 fm., one specimen, Apl. 1931, and several on the Breast, 1934 (H.B.M.). One specimen off Port Erin, 15 fm., 1886 [70]. Off Port Erin, 20 fm., 1900 [90]. North-west of the Calf, 18 fm., 1893 [74]. Same locality, 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [81]. Four miles west of the Chickens Rock, 38 fm., 1894 [75]. Five miles off Dalby, 30 fm., 1893 [74]. One small specimen on a scallop bank, 1841 [49].

THYONE INERMIS Heller *Mortensen*, 1927, p. 408.

Two specimens on the Breast and one smaller one a mile outside the Hault bank, in about 12 fm., May 1934 (H.B.M.).

THYONE RAPHANUS Düben & Koren *Mortensen*, 1927, p. 407.

One specimen dredged in Bay Fine, Apl. 1933, and four on the Hault bank, May 1934 (H.B.M.). Off Port Erin, 20 fm., 1900 [90]. One and a half miles west of Bradda Head, 12-15 fm., 1893 [74]. Two to three miles north-west of the Calf Sound, 19 fm., 1894 [75]. Five miles off Dalby, 30 fm., bottom sand and mud, 1893 [74]. Six miles west of Contrary Head, 37 fm., 1894 [74].

PSEUDOCUCUMIS MIXTA Östergren *Mortensen*, 1927, p. 410.

One specimen, off Port Erin, 20 fm., Apl. 1932 [116].

Order APODA

Family SYNAPTIDAE

LEPTOSYNAPTA INHAERENS (O. F. Müller) *Mortensen*, 1927, p. 427.

In sand and muddy gravel, 3 fm., Port Erin Bay, 1900 [90]. Six miles south-east of the Calf, 34 fm., 1895 [76]. Used to occur in muddy gravel between tide marks in Port Erin Bay, but has not been found there in the past sixteen years (1898-1914) [30].

Breeding: a small number of Auricularia and Pupa stages in July, 1907, and several in July 1908 [30].

Phylum TUNICATA

Order ASCIDIACEA

Family MOLGULIDAE

EUGYRA ARENOSA (Alder & Hancock) *Lacaze-Duthiers*, 1877, p. 648 ;
Ärnäck-Christie-Linde, 1928, p. 69 ; *Hartmeyer*, 1923, p. 30.

Fairly abundant off Halfway Rock and off Spanish Head, 10-20 fm., 1886 [65, 68]. North side of Fleshwick Bay, 15-18 fm., 1893 [74]. Five miles west of Dalby, 30 fm., 1894 [75]. Seven miles west of Peel, 21 fm., 1895 [76]. Four miles west of Contrary Head, 18 fm., 1894 [75].

MOLGULA OCCULTA Kupffer *Lacaze-Duthiers*, 1877, p. 499, as *Anurella roscovita* ; *Ärnäck-Christie-Linde*, 1928, p. 30.

Off Bradda Head and Spanish Head, 1900 [90]. A large number off the south end of the island, chiefly between Port Erin and the Calf, and off Spanish Head, 10-20 fm. ; off Bradda Head, 15 fm., 1886 [65, 68].

MOLGULA CITRINA Alder & Hancock *Hartmeyer*, 1923, p. 97.

Port Erin, under stones, 1900 [90]. Port St. Mary, under stones, 1896 [78]. Round the Calf, 1893 [65]. [74]. Douglas, 1907 [2]. [65].

Family PYURIDAE

BOLTENIA ECHINATA (Linné) *Hartmeyer*, 1923, p. 149.

Between Port Erin and the Calf, 20 fm., 1889 [65].

PYURA TESSELLATA (Forbes) *Lacaze-Duthiers & Delage*, 1892, p. 138, as *Forbesella tessellata* ; *Ärnäck-Christie-Linde*, 1928, p. 81.

25-35 fm., near Port Erin, 1893 [72]. One and a half miles north of Kitterland, 19 fm., 1894 [75]. East and south of the Calf, 15-30 fm., 1900 [65]. [81]. Four miles west of Dalby, 15 fm., 1893 [74].

PYURA SAVIGNYI (Philippi) *Lacaze-Duthiers & Delage*, 1892, p. 88, as *Cynthia morus* ; *Ärnäck-Christie-Linde*, 1928, p. 82, as *Pyura (Cynthia) morus*.

Generally distributed round the south of the island : Port Erin Bay [76], off Halfway Rock [74, 76], Aldrick and Bay Fine [74], round the Calf [65, 74, 75, 81].

Family STYELIDAE

STYELA CORIACEA (Alder & Hancock) Hartmeyer, 1923, p. 220.

Recorded from the Isle of Man but no locality given [65].

POLYCARPA POMARIA (Savigny) Hartmeyer, 1923, p. 273; Lacaze-Duthiers & Delage, 1892, pp. 196 and 205, as *P. varians* and *P. tuberosa*.

Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Three quarters of a mile east of Santan Head, 13 fm., 1898 [79]. Bay Fine, 12 fm., 1886 [68].

POLYCARPA RUSTICA (Linné) Lacaze-Duthiers & Delage, 1892, p. 217.

Large numbers on the basal parts of *Laminaria* and other large algae on the shore and in shallow water; near Port St. Mary and Spanish Head, 1886 [68].

POLYCARPA FIBROSA (Stimpson) Lacaze-Duthiers & Delage, 1892, p. 231, as *Polycarpa comata*; Hartmeyer, 1923, p. 263.

Two to three miles north-west of the Calf Sound, 19 fm., 1893 [75]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Three quarters of a mile east of St. Ann's (Santan) Head, 13 fm., 1898 [79]. Four miles west of Fleshwick, 23 fm., 1893 [74]. Off Halfway Rock, 15 fm., 1886 [68].

DENDRODOA GROSSULARIA (van Beneden) Lacaze-Duthiers & Delage, 1892, p. 178, as *Stylopsis grossularia*; Hartmeyer, 1923, p. 314.

On rocks, Gansey, fairly abundant, L.W.S.T., Mar. 1936 (N.E.E.). Abundant off Port Erin, off Port St. Mary, and off Spanish Head, 10-25 fm., 1886 [68]. Port Erin harbour buoy, abundant, 1898 [79]. Off Halfway Rock, 18 fm., 1895 [76]. East and south of the Calf, 15-30 fm., 1900 [81]. Six miles west of Port Erin, 24 fm., 1892 [73]. Three quarters of a mile east of St. Ann's (Santan) Head, 13 fm., 1898 [79]. Seven miles west of Peel, 21 fm., 1895 [65]. [76].

STOLONICA SOCIALIS Hartmeyer Hartmeyer, 1904, p. 215; Lacaze-Duthiers & Delage, 1892, p. 250, as *Stolonica aggregata* = *Thylacium aggregatum*.

A single colony, on the stalk of *Laminaria*, washed ashore, Poyllvaish, Aug. 1931 (J.H.O.).

DISTOMUS VARIOLOSUS Gaertner Lacaze-Duthiers & Delage, 1892, p. 263, as *Heterocarpa glomerata*; Hartmeyer, 1923, p. 333.

Off Spanish Head, and off the Stack, 1894 [65].

Family BOTRYLLIDAE

BOTRYLLUS SCHLOSSERI (Pallas) var. TYPICA Giard, 1872, p. 624 ;
Hartmeyer, 1923, p. 344.

Common round the south end of the island on algae and on stones, between tide marks : Port Erin, Baie-ny-Carrickey, 1886 [68]. 1900 [90]. Round the Calf, 1893 [74]. On stones at low water, Ballaugh, 1853 [51]. Off Halfway Rock, 15 fm. ; off Bradda Head, 20 fm., 1886. Port St. Mary, 1893. Calf, 1894. Douglas Bay, 1852 [65].

BOTRYLLOIDES LEACHI Savigny *Giard*, 1872, p. 632, as *B. rubrum* ;
Hartmeyer, 1923, p. 361, as *Botryllus leachi*.

Common round the south end of the island ; in deep water off Spanish Head on algae and zoophytes, also on algae on the shore at Port Erin and Baie-ny-Carrickey, 1886 [68]. Round the Calf, 1893 [74]. Common at Port Erin and Port St. Mary, 1892 [73]. On the walls of the storage tanks, Port Erin, Oct. 1930 (H.B.M.) [65].

Family RHODOSOMATIDAE

CORELLA PARALLELOGRAMMA (O. F. Müller) *Hartmeyer*, 1901, p. 42.
[= *C. larvaeformis* Hancock].

Off the Castles, Bay Fine, and Spanish Head, 1900 [90]. Port Erin harbour buoy, 1898 [79]. Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Off Halfway Rock, 18 fm., 1895 [76]. Common outside the Breakwater, Port Erin and Bay Fine, 1892 [73]. Round the Calf, 15-30 fm., 1900 [81]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Three quarters of a mile east of St. Ann's (Santan) Head, 13 fm., 1898 [79]. Ballaugh, 20 fm., 1848 [66]. Laxey Head, 1852 [66].

Family ASCIDIIDAE

ASCIDIA MENTULA O. F. Müller *Garstang*, 1891^o, p. 130.

Generally distributed round the south of the island : Port Erin Bay, 17 fm., 1895 [76]. On the harbour buoy, Port Erin, 1898 [79], 1903 [25]. Off Halfway Rock, 1893 [74], 1895 [76]. Bay Fine, 1893 [74]. One and a half miles north of Kitterland, 19 fm., 1894 [75]. Two miles west of Bradda Head, 23 fm., 1894 [75]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Off Clay Head, 20 fm., 1892 [73]. Three quarters of a mile east of Santan Head, 13 fm., 1898 [66]. [79].

ASCIDIA CONCHILEGA O. F. Müller *Garstang*, 1891^c, p. 125, as *A. depressa*.

Generally distributed round the south of the island : off Halfway Rock, 1895 [76]. Aldrick and Bay Fine, 15-20 fm., 1900 [74]. North of the Calf, 1894 [75]. Round the Calf, 1893 [74]. 1900 [81]. Under stones, near L.W., Baie-ny-Carrickey, 1886 [68]. Under stones, Port St. Mary, 1892 [73]. One and a half miles west of the Chickens Rock, 26 fm., 1894 [75]. Four miles off Fleshwick, 23 fm., 1893 [74]. Five miles north-west of the Chickens Rock, 25 fm., 1894 [66]. [75].

ASCIDIA VIRGINEA O. F. Müller *Hartmeyer*, 1901, p. 36, as *A. venosa*.

Generally distributed round the south of the island : Port Erin Bay, 1895 [76]. Off Port Erin and Port St. Mary, 10-20 fm., often associated with *Modiolaria marmorata*, 1886 [68]. Aldrick and Bay Fine, 15-20 fm., 1893 [74]. Fleshwick Bay, 13-20 fm., 1893 [74]. Round the Calf, 1893 [74], 1900 [81]. Four miles west of Fleshwick, 23 fm., 1893 [74]. Seven miles west of Fleshwick, 1893 [74]. Seven miles west of Peel, 21 fm., 1895 [76]. Five miles west of Dalby, 30 fm., 1894 [75]. Port Mooar [53a]. North-east and south of the Bahama Bank, shoal water, 1893 [74].

ASCIDIELLA ASPERSA (O. F. Müller) *Herdman*, 1881, p. 281, and 1894, p. 433, Pl. 34; *Hartmeyer*, 1924, p. 81.

On stones, Port Erin Bay, off the Breakwater, Bay Fine, 1900 [90]. Off Port St. Mary, 10-20 fm., 1886. Groudle Bay, 1889 [148]. West of Port Erin, 33 fm., 1893. Fleshwick Bay, 13-15 fm., east and south of the Calf, 15-30 fm., 1900 [81]. Port Erin Bay, 17 fm., 1895 [76]. Off St. Ann's (Santan) Head, 13 fm., 1899 [66]. [79].

PHALLUSIA MAMMILLATA (Cuvier). *Traustedt*, 1883, p. 456.

Recorded as rare in the Isle of Man, but no locality given [2].

Family CIONIDAE

CIONA INTESTINALIS (Linné) *Hartmeyer*, 1904, p. 297. [= *C. fascicularis* Hancock].

Generally distributed round the south of the island : Harbour buoy, Port Erin, 1893 [10], 1895 [142], 1897 [79], 1903 [25]. On the walls of the upper storage tank, Port Erin, 1930 (H.B.M.). North-west of the Calf, 19 and 20 fm., 1893 [74, 75]. Round the Calf, 15-30 fm., 1900 [81]. Off Port St. Mary, 10-20 fm. Off Spanish Head, 1886 [66].

Family PEROPHORIDAE

PEROPHORA LISTERI Forbes *Garstang*, 1891^B, p. 58; *Hartmeyer*, 1924, p. 88.

Off Bay Fine and Spanish Head, 1900 [90]. Port Erin Bay, 17 fm., 1895 [76]. One and a half miles north of Kitterland, 19 fm., 1894 [75]. Three quarters of a mile north of Kitterland, 18 fm., 1893 [74]. Enormous masses, three-quarters of a mile north-west of St. Ann's (Santan) Head, 13 fm., 1898 [79]. [66].

Family POLYCITORIDAE

CLAVELINA LEPADIFORMIS (O. F. Müller) *Garstang*, 1891^B, p. 51.

Abundant off the south end of the Isle of Man; frequently off Halfway Rock, Bay Fine, Spanish Head and Port St. Mary, 10-25 fm., and off Port Erin, 1886 [68]. Breast, 1934 (H.B.M.). In Pat's Dub and off the Breakwater, Port Erin, 1900 [90]. North of the Calf, close inshore, 14 fm., 1894 [75]. Three quarters of a mile west of St. Ann's (Santan) Head, 13 fm., 1898 [79]. Groudle Bay, 1889 [66].

Family SYNOICIDAE

SIDNYUM TURBINATUM Savigny *Giard*, 1872, p. 639, as *Circinalium concrescens*; *Hartmeyer*, 1924, p. 216.

North end of the island, 1886 [68]. Douglas Bay, 1912 [2]. [66].

AMAROUCIUM NORDMANNI Milne-Edwards *Giard*, 1872, p. 636.

One colony, 4 cm. diam., under an overhanging ledge, on the south side of Niarbyl, near L.W.S.T., Apl. 1936 (J.A.K.).

AMAROUCIUM PROLIFERUM Milne-Edwards *Hartmeyer*, 1924, p. 211.

A few small colonies at L.W., Baie-ny-Carrickey, 1886 [68]. Round the Calf, 1893 [74]. Three quarters of a mile west of St. Ann's (Santan) Head, 13 fm., 1898 [79]. Port Erin, 1880; Port St. Mary, 1894; Douglas, 1889 [66].

MORCHELLIUM ARGUS (Milne-Edwards) *Herdman*, 1891, p. 625.
[=*Morchelloides alderi* Herdman].

Common off the south end of the island in deep water: off Halfway Rock, off Bay Fine and off Spanish Head, 15-25 fm., 1886 [68]. On stones, and roots of *Laminaria*, Port Erin, 1900 [90]. In coralline pools about M.T., Port Erin (H.B.M.). Round the Calf,

- 1893 [74]. Small colonies in the deeper shore pools at Port Erin,
 1886 [68]. Near Port Erin, 1894. Off St. Ann's Head, 13 fm.,
 1898 [66].

POLYCLINUM AURANTIUM Milne-Edwards *Giard*, 1872, p. 642, as
P. sabulosum; *Hartmeyer*, 1924, p. 184.

Near Port St. Mary, 1894 [66]. Douglas, 1912 [2].

Family DIDEMNIDAE

DIPLOSOMA LISTERIANUM (Milne-Edwards) var. GELATINOSUM (Milne-
 Edwards) *Lahille*, 1890, p. 107; *Hartmeyer*, 1924, p. 172.

Attached to stones and algae at L.W. in tidal pools at Port Erin
 and Baie-ny-Carrickey, 1886 [68]. On a submerged rope, Port Erin
 Bay, 1895 [76]. Near Spanish Head, 1889. Calf, 1894; Douglas,
 1889; east and south of the Bahama Light, 1894 [66].

var. PUNCTATUM (Forbes) *Hartmeyer*, 1924, p. 173.

Recorded from the Isle of Man but no locality given, 1853 [51].

var. KOEHLERI (Forbes) *Hartmeyer*, 1924, p. 173; *Lahille*, 1890,
 p. 109, as *D. koehlerianum-listeri*.

Attached to hydroids, algae, polyzoa and occasionally to stones,
 Port Erin and Port St. Mary, 1886 [68].

DIPLOSOMA SPONGIFORME (Giard) *Hartmeyer*, 1924, p. 174.

Near Port St. Mary, 1894 [66].

DIDEMNUM ASPERUM (Milne-Edwards) *Alder & Hancock*, 1911 (1912),
 p. 45, as *Leptoclinium asperum*.

Common under stones and attached to algae, at L.W., Port Erin,
 and Baie-ny-Carrickey, 1886 [68]. Off Port Erin, 1900 [90].

DIDEMNUM DURUM (Milne-Edwards) *Alder & Hancock*, 1911 (1912),
 p. 46, as *Leptoclinium durum*.

Several small colonies on the roots of *Laminaria*, near Port St.
 Mary, and from Spanish Head, 1886 [68]. On rocks, Port St. Mary,
 Mar. 1932 (N.B.E.). Off the Breakwater, Port Erin, 1900 [90].
 Douglas Bay, 1912 [2].

DIDEMNUM GELATINOSUM Milne-Edwards *Alder & Hancock*, 1911
 (1912), p. 32.

Round the Calf, 1893 [74]. North-east and south of the Bahama
 Bank, shoal water, 1893 [74].

DIDEMNUM MACULOSUM (Milne-Edwards) *Alder & Hancock*, 1911 (1912), p. 44, as *Leptoclinum maculosum*.

Common in shallow water round the south end of the island, chiefly attached to the roots of *Laminaria* and other algae: near Spanish Head, Baie-ny-Carrickey, near Port Erin at low water, 1886 [68]. Round the Calf, 1893 [74]. Off Halfway Rock, 18 fm., 1895 [76]. Calf Sound and Port St. Mary, L.W.E.S.T., Mar. 1932 (N.B.E.).

TRIDIDEMNUM TENERUM Verrill *Hartmeyer*, 1924, p. 130.

Recorded from the Isle of Man but no locality given, 1924 [66].

Order APPENDICULARIA

Family APPENDICULARIIDAE

OIKOPLEURA DIOICA Fol *Lohmann*, 1896, p. 76.

1907, during the whole year. Dec.-Mar., small numbers. Apl.-Nov., considerable numbers. Maximum (not very marked) in Apl. [87]. 1908, taken throughout the year [88].

Breeding: taken with ova at the end of Apl., young stages at the end of May, 1893 [10].

FRITILLARIA BOREALIS Lohmann *Lohmann*, 1896, p. 49.

In the plankton (N.B.E.).

Phylum ENTEROPNEUSTA

Tornaria larvae of *Balanoglossus* sp. Bourne, 1889, p. 63.

In surface tow-nettings, Port Erin Bay, June, 1899 (H.C.C.).
Fairly abundant in the plankton, Port Erin Bay, June and July,
1907 [57].

Phylum VERTEBRATA

Class PISCES

Sub-Class CHONDRICHTHYES

Order CYCLOSTOMI

Family PETROMYZONTIDAE

PETROMYZON MARINUS Linné *Day*, 1880-84, II, p. 356, Pl. 178.

One specimen, taken eating a cod, off Port Erin, 1918 [32].

PETROMYZON FLUVIATILIS Linné *Day*, 1880-84, II, p. 359, Pl. 179, 1.

Not uncommon in the Isle of Man, 1893 [106]. *Ammocoetes* recorded, but no locality given, 1879 [41].

Family MYXINIDAE

MYXINE GLUTINOSA Linné *Day*, 1880-84, II, p. 364, Pl. 179, 4.

One specimen taken, attached to a cod, off the Calf, ca. 1926 (T.N.C.).

Order ELASMOBRANCHII

Sub-Order SELACHII

Family SCYLLIDAE

SCYLLIUM CANICULA (Linné) *Day*, 1880-84, II, p. 309, Pl. 159, 1.

This is the commonest dog-fish taken round the Isle of Man. Taken all the year round, but most abundantly in the spring; when more females taken than males in a ratio of about 5 : 1; chiefly on long lines set for cod (w.c.s.).

Breeding: laying throughout the year in the aquarium (T.N.C., H.B.M.).

SCYLLIUM CATULUS Cuvier *Day*, 1880-84, II, p. 312, Pl. 159, 2.

Not at all common round the island (w.c.s.). Occasionally off Port Erin and round the Isle of Man, 1902 [86]. One specimen off Port Erin, 1918 [32]. One female, Port Erin, 1931 (R.A.F.). One female at Port Erin, 1932, length 3 ft. 3 in. (H.B.M.).

Family CARCHARIIDAE

GALEUS VULGARIS Fleming *Day*, 1880-84, II, p. 292, Pl. 153.

Rare round the Isle of Man. A few taken regularly on hand lines in the Calf Sound in the summer (H.B.M.). King William's Bank, one specimen, 1912 [131].

CARCHARIAS GLAUCUS (Linné) *Day*, 1880-84, II, p. 289, Pl. 152.

A single record from Douglas, 1879 [41] [106].

MUSTELUS VULGARIS Müller & Henle *Day*, 1880-84, II, p. 295, Pl. 155.

Occasionally taken in the summer months, 1902 [86].

Family LAMNIDAE

LAMNA CORNUBICA (Gmelin) *Day*, 1880-84, II, p. 297, Pl. 156.

Occasionally taken in herring nets on the west and south of the island in the summer (w.c.s.). Occasionally in summer on long lines in the neighbourhood of the Calf, 1902 [86].

SELACHE MAXIMA (Gunnerus) *Day*, 1880-84, II, p. 303, Pl. 158, 1.

About seven specimens seen in Port Erin Bay and the neighbourhood, July 1927 [36]. A young one seen in Fleshwick Bay and again in Port Erin Bay, Aug. 1933 (H.B.M.). Several, up to ten at one time, seen round the south coast, from Langness to Fleshwick, May 1937 (w.c.s.).

Family SPINACIDAE

ACANTHIAS VULGARIS Risso *Day*, 1880-84, II, p. 315, Pl. 160, 2.

Taken off the south-west of the island, off Port Erin and round the Calf, but not off Peel—on the summer herring grounds. Not taken very close inshore or in any great quantity. July and Aug., and some in Sept. (w.c.s.). Frequent on long lines round the Calf, 1902 [86]. Several, on long lines, five to seven miles west of Port Erin, Apl., May 1937 (H.W.)

Family RHINIDAE

RHINA SQUATINA (Linné) *Day*, 1880-84, II, p. 326, Pl. 163.

Not common. May occur at intervals (w.c.s.). Single records, 1840 [48], 1879 [41], 1893 [106]. One specimen off Niarbyl, May 1932 (J.R.B.), and another in May 1933 (H.B.M.).

Sub-Order BATOIDEI

Family RAJIDAE

A. *Rajae clavatae*

RAJA CLAVATA Linné *Clark*, 1926, p. 24, Pl. 8-10.

Taken on both sides of the island, but chiefly on the east; inshore in summer, and in deeper water in winter. Taken throughout the

year. Steam trawlers land them throughout the year and there is a long-line fishery for them in the summer off Ramsey (W.C.S.). This is the commonest species round the island (T.N.C.).

RAJA CIRCULARIS Couch *Clark*, 1926, p. 34, Pl. 16-18.

A single specimen trawled in Bay Fine, 12 fm., Apl. 1933 (H.B.M., W.C.S.).

RAJA MACULATA Montagu *Clark*, 1926, p. 11, Pl. 3a and 3b, as *R. montagui*.

Not uncommonly taken on long lines off Port Erin, 1902 [86]. Isle of Man, 1893 [106], 1879 [41].

B. *Rajae laeves*

RAJA BATIS Linné *Clark*, 1926, p. 50, Pl. 31b-33.

Occasionally taken on cod lines. Most abundant in the summer (T.N.C.).

RAJA OXYRHYNCHUS Linné *Clark*, 1926, p. 55, Pl. 34-36.

Recorded from the Isle of Man but no locality given, 1879 [41], 1893 [106].

RAJA MARGINATA Lacépède *Clark*, 1926, p. 47, Pl. 28-31a.

Occasionally taken on long lines off Port Erin, 1902 [86]. Isle of Man, 1879 [41].

Family TRYGONIDAE

TRYGON PASTINACA (Linné) *Day*, 1880-84, II, p. 350, Pl. 175.

A specimen taken off the Point of Ayre, Aug. 1926; cast in the Manx Museum.

Sub-Class OSTEICHTHYES

Order GANOIDEI

ACIPENSER STURIO Linné *Day*, 1880-84, II, p. 280, Pl. 150, 1-3.

Has been taken, rarely, round the Isle of Man, 1902 [86]. One was taken in Aug. 1885, off the Bahama Bank [106].

Order TELEOSTEI

Sub-Order PHYSOSTOMI

I. CLUPEIFORMES

Family CLUPEIDAE

CLUPEA HARENGUS Linné *Day*, 1880-84, II, p. 208, Pl. 138, 2.

In early June shoals of young herrings (2 and 3 year, with smaller numbers of 4 year) come to the south-west of the island, between Peel and the Calf, and remain there until Aug. (maximum at the end of July). Gonads are stages I and II when they arrive, and mostly stage V by Aug., when they move offshore, presumably to a spawning ground. In early Aug. larger and older fish (3-10 years, mostly about 5,—gonads stage V) approach the Calf from the south and remain until the end of Sept., when they are mostly spent. From Feb. to Apl. recently spawned fish are taken in Port Erin Bay and similar fish off Peel in the first few weeks of Mar. (w.c.s.).

CLUPEA SPRATTUS Linné *Day*, 1880-84, II, p. 231, Pl. 139, 2.

Big shoals of young fish are occasionally seen in all the bays of the island, but they do not occur every year; one adult fish caught in anchored herring-net, Port Erin Bay, Apl. 1937 (w.c.s.).

Breeding: eggs in the plankton—Apl. 2, 1907; Apl. 27, 1908; May 3-June 19, 1909; June 3-Sept. 17, 1910; June 5-Sept. 19, 1911; July 8-July 31, 1912 [132]. May 25-July 30, 1914 [133]. Pelagic larvae most abundant at the end of Apl., never after the end of Sept. [132].

CLUPEA ALOSA Linné *Day*, 1880-84, II, p. 234, Pl. 140.

A single specimen in herring nets off Peel, Sept. 1933 (H.B.M.).

CLUPEA FINTA Cuvier *Day*, 1880-84, II, p. 236, Pl. 141.

Peel, Aug. 1931, two specimens taken among herrings [116].

CLUPEA PILCHARDUS Walbaum *Day*, 1880-84, II, p. 224, Pl. 139, 1.

One specimen from a herring net in Port Erin Bay, July 1927; another, similarly, May 1937 (w.c.s.).

Family SALMONIDAE

SALMO SALAR Linné *Day*, 1880-84, II, p. 66, Pl. 110 and 111, 1.

Runs up the Sulby, Santon and Douglas rivers, from Sept. to Dec. There is a net fishery for them in Ramsey Bay from Mar. to Oct., and occasional fish are netted in all the bays of the island (w.c.s.).

SALMO TRUTTA Linné *Day*, 1880-84, II, p. 84, Pl. III, 1, and II2, 1 and 2.

Runs up the Sulby River and all suitable streams, probably all the year round. There is a good run in Feb. They are taken in fixed nets in Ramsey Bay and single fish all round the island (w.c.s.).

ARGENTINA SPHYRAENA Ascanius *Day*, 1880-84, II, p. 136, Pl. 125.

One specimen washed ashore, Port Erin, Nov. 1927 [139]. Two specimens trawled by fishermen on the Breast, ca. 17 fm., Feb. 1931 [115].

2. APODES

Family ANGUILLIDAE

ANGUILLA VULGARIS Turton *Day*, 1880-84, II, p. 241, Pl. 142.

Common in all suitable streams. Elvers running up the latter in the spring (w.c.s.).

— CONGER VULGARIS Cuvier *Day*, 1880-84, II, p. 250, Pl. 142, 2.

Very abundant, inshore, in the summer, but some are taken throughout the year. There is no special fishery for them [w.c.s.].

Sub-Order PHYSOCLYSTI

1. SCOMBRESOCIFORMES

Family BELONIDAE

BELONE ACUS Risso *Day*, 1880-84, II, p. 147, Pl. 127, 1, as *B. vulgaris*.

Taken in summer in the herring nets but not very frequently (w.c.s.). Port Erin Bay, one specimen, 1931; Douglas Bay, 1932, one specimen (H.B.M.). One, taken alive at Port Erin, Jan. 1935 (J.R.B.).

SCOMBRESOX SAURUS Walbaum *Day*, 1880-84, II, p. 151, Pl. 127, 2.

One specimen washed ashore at Peel, Nov. 1932 (J.R.B., H.B.M.). One specimen seen in the fish market at Peel, Aug. 1933 (J.R.B.).

2. SYNGNATHIFORMES

Family GASTEROSTEIDAE

— SPINACHIA VULGARIS Fleming *Day*, 1880-84, I, p. 246, Pl. 68, 5, as *Gasterosteus spinachia*.

Not uncommon in the trawl, close inshore, generally among weeds : Port Erin Bay, Bay Fine, Fleshwick ; young, 1-2 inches long, common in Pat's Dub, Port Erin, about M.T., June 1933 (H.B.M.).

GASTEROSTEUS ACULEATUS Linné Day, 1880-84, I, p. 238, Pl. 68, 1, 2 and 3.

In brackish water at the mouth of streams, 1893 [106]. Large shoals taken alive in herring nets, four and half and ten miles north-west of Peel, Sept. 1933 (H.B.M.).

Family SYNGNATHIDAE

ENTELURUS AEQUOREUS (Linné) Day, 1880-84, II, p. 261, Pl. 144, as *Nerophis aequoreus*.

Occasionally taken in the Isle of Man, 1840 [48]. One specimen trawled off Port St. Mary, Mar. 1932 (H.B.M.).

NEROPHIS OPHIDION (Linné) Day, 1880-84, II, p. 262, Pl. 144, 5.

Occasionally taken in the Isle of Man, 1840 [48].

NEROPHIS LUMBRICIFORMIS (Pennant) Day, 1880-84, II, p. 263, Pl. 144, 6.

Common under stones at L.W.S.T. in Port Erin Bay, 1902 [86]. Among weeds in pools about L.W., generally distributed (H.B.M.).

SYNGNATHUS ACUS Linné Day, 1880-84, II, p. 259, Pl. 144, 1 and 2.

Not uncommon, 1893 [106]. Occasionally taken in Port Erin Bay, 1902 [86]. Aldrick and Bay Fine, 15-20 fm., 1893 [74]. One specimen trawled off Fleshwick and one in Port Erin Bay, 1932 (H.B.M.).

Breeding : male, carrying eggs, May.

SYNGNATHUS TYPHLE Linné Day, 1880-84, II, p. 257, Pl. 144, 3, as *Siphonostoma typhle*.

One specimen, off Port Erin, Sept. 1894 [86].

3. PLECTOGNATHI

Family ORTHAGORISCIDAE

ORTHAGORISCUS MOLA (Linné) Day, 1880-84, II, p. 272, Pl. 148.

Occasionally taken in Aug. by the herring boats. One landed at Port St. Mary (W.C.S.).

4. *AMMODYTIFORMES*

Family AMMODYTIDAE

AMMODYTES LANCEOLATUS Lesauvage *Day*, 1880-84, I, p. 329, Pl. 92, 1.

Taken all round the island, but much less commonly than the next species (H.B.M.). In Ramsey Bay and off the south of the island, 1893 [106]. One specimen from the sand close to the old Biological Station at Port Erin, 1902 [86].

AMMODYTES TOBIANUS Linné *Day*, 1880-84, I, p. 331, Pl. 92, 2.

Common in the sand in Port Erin Bay (H.B.M.). Huge shoals of young and adults in all the bays round the island in the summer (W.C.S.).

5. *ATHERINIFORMES*

Family MUGILIDAE

MUGIL CHELO Cuvier* *Day*, 1880-84, I, p. 232, Pl. 67.

Shoals come into Castletown Bay and Harbour in summer, and into Port Erin Bay in late summer and autumn, until Nov.; numbers seen and caught at Port Erin, 30 Apl. 1937 (W.C.S.). Spring and summer, off the north-west coast, inshore, 1893 [106].

6. *GADIFORMES*

Family GADIDAE

GADUS AEGLEFINUS Linné *Day*, 1880-84, I, p. 283, Pl. 79.

Very seldom taken now but there used to be an extensive fishery for them. Single specimens are taken on cod lines in the winter and spring off Port Erin and Peel (W.C.S.). A number caught on long lines, along with *G. morrhua*, off Port Erin, Feb. 1936 (W.C.S.). Recorded as frequent in 1902 [86].

Breeding: eggs taken in the plankton from the beginning of March to the middle of May: Mar. 29 - Apl. 26, 1907; Apl. 7 - May 20, 1908; Mar. 27 - Apl. 14, 1909; Mar. 11 - May 22, 1910; none found in 1911, -12 [132]. May 1914 [133]. June 1918 [134].

GADUS MORRHUA Linné *Day*, 1880-84, I, p. 275, Pl. 78.

The main fishery is from Jan. to Apl. Large full fish are taken all round the coast from about five miles offshore outwards. These

* This species requires revision. See: Mohr, E. W., 1929. *Die Fische der Nord- und Ostsee*, Leipzig, XII, g. 38.

spawn about Mar. In summer younger fish are taken, but not in such numbers. These move inshore in Aug. and Sept., and are taken close inshore until the end of Nov. (w.c.s.).

Breeding : eggs taken in the plankton from the end of Feb. to the beginning of May : Mar. 29 - Apl. 27, 1907 ; Mar. 4 - Apl. 29, 1908 ; Mar. 12 - May 3, 1909 ; Feb. 25 - May 12, 1910 ; Apl. 12 - Apl. 30, 1911 ; Mar. 4 - May 9, 1912 [132]. Feb. 26 - Apl. 20, 1914 [133]. Mar. - May 1918 [134].

GADUS LUSCUS Linné *Day*, 1880-84, I, p. 286, Pl. 80.

Taken most summers in good quantities, just outside Port Erin Bay, and by trawlers further out (w.c.s.).

Breeding : eggs of this (?) species in the plankton : Apl. 1905 [128], Feb.-Mar. 1906 [130], Apl. 1907 [87], Mar.-Apl. 1918 [134].

GADUS MERLANGUS Linné *Day*, 1880-84, I, p. 290, Pl. 82.

Taken all the year round and all round the island, but rather more abundant in July than at other times. The young are usually taken in the bays and the older ones further out (w.c.s.).

Breeding : eggs in the plankton from the end of May to the beginning of Mar. : Feb. 26 - Apl. 27, 1907 ; Mar. 13 - May 12, 1908 ; Mar. 26 - May 24, 1909 ; Mar. 11 - Apl. 30, 1910 ; Mar. 4 - Apl. 30, 1911 ; Mar. 4 - Apl. 30, 1912 [132]. Mar. 4 - May 4, 1914 [133]. Mar. - May 1918 [134].

GADUS POLLACHIUS Linné *Day*, 1880-84, I, p. 296, Pl. 83, 2.

Taken all the year round. They are common close to the rocks in the summer and move into deeper water in the winter (w.c.s.).

GADUS VIRENS Linné *Day*, 1880-84, I, p. 293, Pl. 84.

Very abundant in the summer, all round the island, close inshore. Shoals of young come into the bays about Oct.-Dec. (w.c.s.).

Breeding : eggs of this (?) species in the plankton : Apl. 1905 [128]. Apl. 1907 [87]. Jan. 28 - Mar. 31, 1914 [133]. Jan.-Mar. 1918 [134].

GADUS ESMARKII Nilsson *Smitt*, 1892, p. 508.

Trawled, ten miles north-west of Bradda Head, 40 fm., Aug. 1921 (w.c.s.).

MERLUCCIIUS MERLUCCIIUS (Linné) *Day*, 1880-84, I, p. 300, Pl. 85, 1, as *M. vulgaris*.

Trawled in depths of 30 fm. and over on the west coast of the island (never on the east coast), from May to Oct. Most abundant

in June and July. Fairly abundant in the summer (w.c.s.). One young specimen, 34 cm. long, trawled on the Breast, 20 fm., Apl. 1932 [116].

Breeding : eggs running freely, 5th Apl. 1896 [80].

PHYCIS BLENNOIDES (Brünn) *Day*, 1880-84, I, p. 303, Pl. 85, 2.

Trawled to the west of the island in deep water but only very occasionally (w.c.s.). From 1882-1885, several specimens trawled off Peel, from a muddy bottom. Taken from Apl. to the end of July. Two or three were females having small roe, 1893 [106].

MOLVA VULGARIS Fleming *Day*, 1880-84, I, p. 305, Pl. 86.

Not very abundant. Occasionally taken on long lines in deep water on both sides of the island, chiefly in winter (w.c.s.).

Breeding : eggs only once found in the plankton between 1907 and 1912, i.e., Apl. 27, 1906 [130, 132].

ONOS MUSTELA (Linné) *Day*, 1880-84, I, p. 314, Pl. 88, 2, as *Motella mustela*.

Near the Breakwater, Port Erin, 1899 [102a]. At Fleshwick and Port St. Mary, in pools, L.W.S.T., Apl. 1937 (E.L.C.).

ONOS TRICIRRATUS (Bloch) *Day*, 1880-84, I, p. 317, Pl. 88, 1-3, as *Motella tricirrata*.

Fairly common and generally distributed, under stones and in pools near L.W. One specimen four miles west of the Chickens Rock, 37 fm. (H.B.M.). Not uncommon in Port Erin Bay, 1902 [86]. Castletown and Gob-ny-Rona, near Ramsey, 1893 [106].

RANICEPS RANINUS (Linné) *Day*, 1880-84, I, p. 320, Pl. 90, 1.

One specimen, taken on a long line off Port Erin, June, 1901 [24].

7. BLENNIFORMES

Family BLENNIIDAE

BLENNIUS GATTORUGINE Bloch *Day*, 1880-84, I, p. 198, Pl. 59, 1.

Port Erin, May 1901 (H.C.C.). Pat's Dub, Port Erin, Mar. 1937 (F.J.B.).

BLENNIUS PHOLIS Linné *Day*, 1880-84, I, p. 203, Pl. 60, 2.

Common everywhere in pools between tide marks (H.B.M.).

BLENNIUS OCELLARIS Linné *Day*, 1880-84, I, p. 201, Pl. 59, 2.

Dredged on a scallop bank off Ballaugh, in 20 fm., June, 1834 [86].

CHIROLOPHIS ASCANII (Walbaum) *Day*, 1880-84, I, p. 206, Pl. 60, 3.

One specimen caught in a rock pool in the Isle of Man, 1893 [106]. One in a crab pot at Port Erin, Mar., and also on the shore in May 1902 [24].

CENTRONOTUS GUNNELLUS (Linné) *Day*, 1880-84, I, p. 208, Pl. 61, 1.

Common everywhere under stones between tide marks (H.B.M.).

8. TRACHINIFORMES

Family TRACHINIDAE

TRACHINUS DRACO Linné *Day*, 1880-84, I, p. 79, Pl. 30.

One specimen taken by a trawler off the Bahama Bank, Dec. 1883 [106].

TRACHINUS VIPERA Cuvier & Valenciennes *Day*, 1880-84, I, p. 81, Pl. 31.

Recorded as not uncommon, 1893 [106]. Taken occasionally in sand in Port Erin Bay (T.N.C.). One at L.W.S.T., Apl. 1937 (N.B.E.)

Family CALLIONYMIDAE

CALLIONYMUS LYRA Linné *Day*, 1880-84, I, p. 174, Pl. 54.

Recorded in 1840 as occurring in Manx waters [48]. Frequently taken in the dredge from Bradda Head to Bay Fine, Aug., Sept. 1899 [102A]. Taken occasionally off Port Erin from July to Sept., but not at other times (T.N.C.). One specimen on the Breast, Aug. 1931 (H.B.M.).

Breeding : eggs generally distributed in the plankton from the end of Feb. to the first week of Aug. : May-June 1903 [127]; Mar.-May 1906 [130]; Feb. 26-Apl. 30, 1907; Apl. 2-Aug. 7, 1908; Mar. 5-June 25, 1909; Mar. 15-July 26, 1910; Mar. 2-May 1, 1911; Mar. 4-June 3, 1912 [132]; Feb. 10-June 29, 1914 [133]; Mar.-May 1918 [134].

CALLIONYMUS MACULATUS (Rafinesque) *Day*, 1880-84, I, p. 177, Pl. 53, 5.

Adult not recorded from the Isle of Man.

Breeding : eggs in the plankton : Port Erin Bay, July 1905 [128]; July 1906 [130]. Three miles west of the Sloc, Apl. 1907 [87]. Ten miles west-north-west of Port Erin, Apl. 1907 [87].

Family GOBIESOCIDAE

LEPADOGASTER BIMACULATUS (Donovan) Day, 1880-84, I, p. 192, Pl. 57, 3.

Adults taken occasionally in the trawl round the south of the island: off Fleshwick, and on the Breast. Young among *Zostera marina* at L.W.E.S.T. in Chapel Bay (H.B.M.). Fleshwick Bay, 12 fm., 1893 [74]. Common in Port Erin Bay, 1902 [86]; Apl. 1936 (M.W.P.).

LEPADOGASTER GOUANI Lacépède Day, 1880-84, I, p. 189, Pl. 57, 1.

Common and generally distributed. Under stones near L.W. and in pools (H.B.M.).

Breeding: eggs attached to the undersides of stones, between tide marks, Aug. 15 (J.H.O.).

LEPADOGASTER DECANDOLLI Risso Day, 1880-84, I, p. 191, Pl. 57, 2.

In pools and in the dredge round Port Erin, 1899 [102A]. Occasionally taken in Port Erin Bay, 1902 [86].

Family LOPHIIDAE

LOPHIUS PISCATORIUS Linné Day, 1880-84, I, p. 73, Pl. 29.

Taken in the trawl in deep water all round the island but not very common (W.C.S.).

Breeding: eggs found floating off Port Erin, July [56].

9. GOBIIFORMES

Family GOBIIDAE

GOBIUS NIGER Linné Holt & Byrne, 1901, p. 43; Lebour, 1919, p. 74, Pl. 4, fig. 24; Petersen, 1917, Pl. 1, 6.

In pools, all round Port Erin Bay, Aug., Sept., 1899 [102A].

GOBIUS (GOBIUS) PAGANELLUS Linné Holt & Byrne, 1901, p. 45, Pl. 1 and 2; Lebour, 1919, p. 71, Pl. 4, 23.

Several specimens from pools at L.W.E.S.T. at Port St. Mary (H.B.M.).

GOBIUS (GOBIUSCULUS) FLAVESCENS Fabricius Holt & Byrne, 1901, p. 49, as *G. ruthensparri*; Lebour, 1919, p. 69, Pl. 3, 14; Petersen, 1917, Pl. 1, 18.

Common in pools at Port Erin. One specimen trawled off Fleshwick (H.B.M., J.H.F.). In Ramsey Bay, 1893 [106].

GوبيUS (GوبيUSCULUS) PICTUS Malmgren *Holt & Byrne*, 1901, p. 54, Pl. 2, 1; *Lebour*, 1919, p. 60, Pl. 1, 4 and 5, and Pl. 2, 1; *Petersen*, 1919, Pl. III, 3.

Fairly common in pools between tide marks at Port Erin. A few dredged off Port Erin and off Fleshwick, 1931 [116].

GوبيUS JEFFREYSI Günther *Holt & Byrne*, 1901, p. 55; *Lebour*, 1919, p. 65, Pl. III, 1 and 2.

One specimen trawled off the south end of the island, 1902 [86].

10. HETEROSOMATA

A. PLEURONECTIFORMES

Family HIPPOGLOSSIDAE

HIPPOGLOSSUS VULGARIS Fleming *Day*, 1880-84, II, p. 5, Pl. 94.

Occasionally specimens taken round the island, usually by trawlers, but not frequent (H.B.M.) [86, 106, 137].

DREPANOPSETTA PLATESSOIDES Fabricius *Day*, 1880-84, II, p. 9, Pl. 95, as *Hippoglossoides limandoides*.

Occasionally taken in deep water to the west of the island (w.c.s.).

Breeding: eggs occasionally in the plankton from the middle of Mar. to the end of Apl. [130]; Apl. 1906 [132]; Mar. 29-Apl. 10 1907; Apl. 14, 1908; Mar. 27-Apl. 24, 1909; 1910-1912, not found [132]. Apl. 2-20, 1914 [133].

Family PLEURONECTIDAE

PLEURONECTES FLESUS Linné *Day*, 1880-84, II, p. 33, Pl. 105.

Occasionally taken in Douglas and Ramsey Bay (w.c.s.).

Breeding: eggs in the plankton, Port Erin Bay: May 1904 [127]. Apl. 1907 [87].

PLEURONECTES PLATESSA Linné *Day*, 1880-84, II, p. 25, Pl. 101.

Taken throughout the year. There is a good fishery at Peel from Apl. to Dec. Caught in the bays all round the island in the summer months. Young are abundant in all the bays. Large fish come into the bays from Sept. to Dec. (w.c.s.). More females are always taken than males (T.N.C.).

Breeding: spawning at Port Erin from Feb. to the end of Apl. There is a spawning ground about one mile north-west of Niarbyl (w.c.s.). Eggs in the plankton from the middle of Feb. to the beginning of May. Larvae and post-larvae frequent in surface

tow-nettings from Mar. 11 to Apl. 30 [132]. Eggs : Mar. 1904 [127]. Apl. 1905 [128]. Feb., Mar. 1906 [130]. Feb. 22-Apl. 5, 1907; Mar. 13-Apl. 23, 1908; Feb. 18-May 8, 1909; Feb. 28-Apl. 22, 1910; Feb. 9-Apl. 30, 1911; Mar. 4-Apl. 15, 1912 [132]. Feb. 26-Apl. 20, 1914 [133]. Feb.-Apl. 1918 [134].

PLEURONECTES MICROCEPHALUS Donovan *Day*, 1880-84, II, p. 28, Pl. 102.

Fairly plentiful all round the island; taken throughout the year, but chiefly from June to Aug. (w.c.s.).

Breeding: eggs in the plankton: June 1904 [127]. May 1906 [130]. 1907-1912, none found [132]. Apl. 1914 [133].

PLEURONECTES CYNOGLOSSUS Linné *Day*, 1880-84, II, p. 30, Pl. 103.

Taken only on the west of the island in deep water in the summer (w.c.s.). Fair quantities found west of the island and off the Calf Sound, 1902 [86].

Breeding: spawning fish taken, north-west of Port Erin, Apl. 1918 [78A].

PLEURONECTES LIMANDA Linné *Day*, 1880-84, II, p. 31, Pl. 104.

Taken commonly all round the island, throughout the year, but chiefly in the summer (w.c.s.).

Breeding: eggs in the plankton from the middle of Feb. to the beginning of June [132]. Apl. 1903 [127]. Apl. 1905 [128]. Feb. 22-Apl. 30, 1907; Mar. 11-June 6, 1908; Mar. 12-May 17, 1909; May 2-May 9, 1910; Feb. 17-Mar. 4, 1911; Mar. 4-Apl. 15, 1912 [132]. Apl. 4-17, 1914 [133].

RHOMBUS MAXIMUS Linné *Day*, 1880-84, II, p. 11, Pl. 96.

Taken all round the island, chiefly in the summer, but not plentiful; usually taken in the trawl but occasionally on long lines (w.c.s.).

Breeding: spawning fish taken five miles west of Dalby, 30 fm., bottom sand and mud, June 1893 [74]. Eggs in the plankton: Port Erin Bay, June-Aug. 1903; Apl. and June 1904 [127]. Apl., May, July, Aug. 1905 [128]. July 1906 [130].

RHOMBUS LAEVIS (Rondelet) *Day*, 1880-84, II, p. 14, Pl. 97.

Taken all round the island in the summer but not very plentiful (w.c.s.).

Breeding: eggs very rare off the Isle of Man [132]. Apl., May 1905 [128]. July 1906 [130]. Apl. 1907. 1908-1912, none found [132].

LEPIDORHOMBUS WHIFF (Walbaum) *Day*, 1880-84, II, p. 21, Pl. 98, as *Arnoglossus megastoma*.

Taken on the west side of the island in deep water but not common (w.c.s.). Trawled in deep water to the west and south-west of the Isle of Man, on the mud, all the year round, but chiefly in the summer, 1902 [86].

Breeding : eggs frequent in the plankton from Mar. to May [132]. May 1904 [127]. Mar. 29-Apr. 27, 1907; Apl. 15-Apr. 29, 1908; Mar. 27-May 24, 1909; Apl. 8-May 31, 1910; Apl. 12-May 15, 1911; Mar. 4-May 9, 1912 [132]. Frequently outside Port Erin Bay but very irregularly inside, Mar. 21-Apr. 20, 1914 [133]. Mar., Apl., 1918 [134].

SCOPHTHALMUS NORVEGICUS (Günther) *Günther*, 1862, IV, p. 412; *Couch*, 1864, III, p. 175, Pl. 167, as *Rhombus norvegicus*.

One record from south-west of the Chickens Rock, 1896 [78].

ZEUGOPTERUS PUNCTATUS (Bloch) *Day*, 1880-84, II, p. 18, Pl. 100.

Has been taken off the south end of the island [86]. Not common (w.c.s.).

Breeding : eggs of this (?) species, Apl. to June, in the plankton [87, 127, 128, 130, 132, 133, 134].

ARNOGLOSSUS LATERNA (Walbaum) *Kyle*, 1913, p. 64, figs. 9 and 9a.

One specimen trawled south of the Castles Rock, Port Erin, 5-10 fm., Mar. 1936 (J.W.J., G.A.C., det. J.H.O.) ; similarly, Apl. 1937 (B.T.P.)

Breeding : eggs in the plankton, five to ten miles west of Port Erin, 0-20 fm., Apl. 1907 [87].

B. SOLEA FORMES

Family SOLEIDAE

SOLEA VULGARIS Quensel *Day*, 1880-84, II, p. 39, Pl. 106.

Some are taken all round the island throughout the year, but chiefly in May (w.c.s.).

Breeding : there is a spawning ground about twenty miles south-south-east of Douglas, muddy bottom. Spawning in May (w.c.s.). No eggs found in the plankton, 1907-1912 [132].

SOLEA LUTEA (Risso) *Day*, 1880-84, II, p. 44, Pl. 108, 2.

Adults not recorded from the island.

Breeding : eggs occasionally in the plankton in the spring and early summer [132]. June 1904 [127]. Apl., May 1906 [130]. Mar. 4-July 31, 1907; Mar. 11, 1908; 1909-1912, none found [132].

SOLEA LASCARIS (Risso) *Day*, 1880-84, II, p. 42, Pl. 107.

Recorded 1879 [41], and 1893 [106] See below also.

Breeding: spawning fish taken, north-west of Port Erin, Apl. 19, 1897 [78A].

II. SCLEROPAREI

Family SCORPAENIDAE

SEBASTES MARINUS (Linné) *Day*, 1880-84, I, p. 42, Pl. 18, as *S. norwegicus*.

One specimen trawled fifteen miles north-west of the Calf, ca. 1927 (Manx Museum).

Family TRIGLIDAE

TRIGLA GURNARDUS Linné *Day*, 1880-84, I, p. 62, Pl. 25.

Very common all round the island in the summer. The young are taken in the bays in the summer (w.c.s.).

Breeding: eggs of this (?) species in the plankton, Apl. to July [87, 127, 130, 132].

TRIGLA HIRUNDO Bloch *Day*, 1880-84, I, p. 59, Pl. 24.

Occurs rarely (w.c.s.). July to Sept. (T.N.C.). Off the coasts in July and Aug. Not common, 1893 [106].

TRIGLA CUCULUS Linné *Day*, 1880-84, I, p. 58, Pl. 53.

Not uncommon round the island in the summer (w.c.s.). July to Oct. (T.N.C.).

Family COTTIDAE

COTTUS SCORPIUS Linné *Day*, 1880-84, I, p. 49, Pl. 20, 1.

Common in pools between tide marks, 1893 [106]. Recorded from the island, 1840 [48].

— COTTUS BUBALIS Euphrasén *Day*, 1880-84, I, p. 51, Pl. 20, 2.

Fairly common in pools all round the south of the island. Two specimens trawled in Bay Fine, ca. 15 fm. (H.B.M.).

Breeding: eggs under stones in pools, Port St. Mary, 26 Mar. (H.B.M.).

Family AGONIDAE

AGONUS CATAPHRACTUS (Linné) *Day*, 1880-84, I, p. 67, Pl. 28, 1.

Rare round the Isle of Man. One record by Forbes, 1840 [48]. One specimen trawled off Fleshwick, Aug. 1931 (H.B.M.).

Breeding: post-larvae in the plankton, one mile west of Bradda Head, Apl. 1907 [87].

Family CYCLOPTERIDAE

CYCLOPTERUS LUMPUS Linné *Day*, 1880-84, I, p. 179, Pl. 55.

Taken fairly frequently round the island. Young ones—ca. 2 cm. long—are taken frequently in tow-nettings and adhering to ropes, etc., in Port Erin Bay (H.B.M.) [86, 106, 116].

Family LIPARIDIDAE

LIPARIS VULGARIS Fleming *Day*, 1880-84, I, p. 184, Pl. 56, 1.

Occasionally found under stones and among *Laminaria* in Port Erin Bay, 1902 [86]. Port Erin Bay, as above, Jan. 1936 (J.R.B.).

—LIPARIS MONTAGUI (Donovan) *Day*, 1880-84, I, p. 186, Pl. 56, 2.

Fairly common under stones near L.W., round the south of the island (H.B.M.).

12. LABRIFORMES

Family LABRIDAE

LABRUS BERGGYLTA Ascanius *Day*, 1880-84, I, p. 252, Pl. 70 and 71.

Very common near weedy rocks all round the island. They are caught inshore from about June to Nov.; later they move out into deeper water (w.c.s.).

LABRUS MIXTUS Kröyer *Day*, 1880-84, I, p. 256, Pl. 72, 1 and 2.

Fairly common near the rocks all round the island from about June to Nov., moving into deeper water in the winter (w.c.s.).

—CRENILABRUS MELOPS (Linné) *Day*, 1880-84, I, p. 260, Pl. 73.

Recorded from the island in 1840 [48]. Two young specimens (2.5 cm. long) trawled off Fleshwick, Aug. 1931 (H.B.M.).

CTENOLABRUS RUPESTRIS (Linné) *Day*, 1880-84, I, p. 264, Pl. 74.

Adult not recorded from the island.

Breeding: eggs in the plankton in small numbers from the beginning of June to the end of Sept.: Aug. 13-Sept. 30, 1907; June 6 and Aug. 6, 1908; 1909, not found; Aug. 10 and 12, 1910; 1911, not found; Aug. 9, 1912 [132].

CENTROLABRUS EXOLETUS (Linné) *Day*, 1880-84, I, p. 267, Pl. 76.

Two miles east of Port St. Mary, Feb. 1896 [86].

CORIS JULIS Günther *Day*, 1880-84, I, p. 269.

Port St. Mary, 1896 [102B].

13. CARANGIFORMES

Family CARANGIDAE

CARANX TRACHURUS (Linné) *Day*, 1880-84, I, p. 124, Pl. 44.

Taken at times in the summer, usually by herring boats off the south-west of the island. Does not occur regularly, and is never abundant (w.c.s.). Off Laxey, Sept. 1892 [106].

Family ZEIDAE

ZEUS FABER Linné *Day*, 1880-84, I, p. 138, Pl. 48.

Taken occasionally in the summer months—June to Sept. (T.N.C.). Once or twice off Port Erin, but rare (w.c.s.). One in Ramsey Bay, May, 1883 [106].

14. PERCIFORMES

Family SERRANIDAE

MORONE LABRAX (Linné) *Day*, 1880-84, I, p. 8, Pl. 2, as *Labrax lupus*.

Said to be taken regularly at Peel, on long lines set close inshore. Taken all the year but chiefly in the summer months. Also reported from Point of Ayre (H.B.M.). Plentiful in July, 1893 [106].

Family SPARIDAE

PAGELLUS CENTRODONTUS de la Roche *Day*, 1880-84, I, p. 36, Pl. 13.

Taken regularly off the Calf from May to Sept.; a few as early as

May (w.c.s., T.N.C.). Abundant in the summer outside Port Erin Bay, taken on lines, 1902 [86]. Not often taken there now (H.B.M.).

Family MULLIDAE

MULLUS SURMULETUS Linné *Day*, 1880-84, I, p. 22, Pl. 8, 2.

About July; not common, 1893 [106]. Rare. I have never seen one here (T.N.C.).

15. *SCOMBRIFORMES*

Family SCOMBRIDAE

SCOMBER SCOMBRUS Linné *Day*, 1880-84, I, p. 83, Pl. 32 and 33.

Very abundant all round the island from June to Oct. (w.c.s.).

Breeding: eggs only once taken in the plankton from 1907 to 1912, i.e., June 3, 1912 [132]. Two specimens from Port Erin Bay, July 27, and two on July 30, 1914 [133]. Aug. and Sept. 1918 [134].

SCOMBER COLIAS Gmelin *Day*, 1880-84, I, p. 91, Pl. 34.

Recorded from the island in 1879 [41]. No subsequent record (H.B.M.).

EUTHYNNUS PELAMYS (Linné) *Day*, 1880-84, I, p. 100, Pl. 37, as *Thynnus pelamys*.

Recorded as having been taken off the Isle of Man, 1902 [86].

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