

A NOMENCLATURAL INDEX TO "A HISTORY OF THE BRITISH MARINE POLYZOA"

BY T. HINCKS (1880)

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1. INTRODUCTION

HINCKS' great work "A History of the British Marine Polyzoa" was published in 1880. Some measure of its status can be gauged from a comparison of both text and plates with those of Johnston's "British Zoophytes" (1847). Benefiting from the works of Gray (1848), Busk (1852, 1854, 1859, 1875) and Smitt (1865-72), as well as from shorter contributions by himself and other naturalists, Hincks produced a monograph in which the species were taxonomically well ordered, accurately and unmistakably described, and illustrated with clarity and fidelity. The result was a book which had a much greater significance than just that of a descriptive catalogue for identifying British marine Polyzoa.

Hincks maintained some large, unwieldy and now clearly unnatural genera (e.g. *Membranipora* s. lat., *Lepralia*, *Cellepora*). Later taxonomists, such as Norman (1903), Levinsen (1909) and Canu & Bassler (in a wide range of publications) have split these large assemblages into smaller, more homogeneous units. The importance of Hincks' book lies in the fact that so many of today's genera and their types have been based on his descriptions and plates.

In addition to being a source-book to workers on Polyzoa all over the world, it remains the most comprehensive text for biologists wishing to identify marine Polyzoa in western Europe. (A key to the genera was subsequently provided by

Harmer, 1896 : 525.) The general user of the book today is handicapped by Hincks' nomenclature, now frequently obsolete. New genera have been introduced; specific names have changed through the operation of the Law of Priority, through "splitting", or because Hincks had wrongly synonymized the species he was describing. His "varieties", in particular, constitute a hazard. Some are varieties in a modern (though not genetically defined) sense, others simply growth forms; some represent fossils unknown from Recent seas, others have never been found in Britain—such particulars are often not clearly stated. Many of the "varieties" are now recognized as specifically distinct: such is often the case with his "deep-water" forms, where one name conceals two ecologically complementary species, whose proper discrimination is important. All this affects not only the name, but also the geographical distribution of the taxa, and Hincks' statements of distribution beyond the British Isles are quite unreliable.

Finally, a fauna is not static: immigrant species, as well as a few then overlooked, have increased the number found around the British Islands. The British collections (his own and those of various contemporaries, particularly Norman and Jelly) on which Hincks worked, were gathered from the seas immediately surrounding the British Isles. Within these limits Hincks' work is remarkably complete. Very few forms have been found that are not at least recognizably mentioned in the book. For the present list the larger area shown on the map (Text-fig. 4) has been covered, as explained on p. 237. Except for the Entoprocta, the long list of additional species consists largely of records from localities outside Hincks' range, and is not to be seen as a list of his omissions.

Many users of the "British Marine Polyzoa", having made an identification, want to know the currently valid name. This need has determined the arrangement of this paper. The presentation shows, on the left, the page number and then the name used by Hincks. Then follows the name I accept, with author and date. Where explanatory notes are required, these follow; they include a reference to any closely similar species subsequently discovered around Britain. Species not included by Hincks are listed separately (p. 235).

Merely to present the specific name used by Hincks, together with its modern equivalent, would be unsatisfactory for several reasons. Sometimes, for a proper identification to be made, Hincks' descriptions must be supplemented, and in such cases appropriate references have been given. Occasionally there is lack of unanimity among workers as to what the "right" name is: where possible I have stated my own views. In a majority of cases the name listed is the one in current use, but I have provided the essential documentation concerning the adoption of that name. Obviously I have not been able to assess the merits of every name given; some names therefore represent the considered opinion of other workers. Nevertheless, there are many cases in which new or rediscovered information about generic and specific names and their authorship is included.

Finally, this list is intended as a working document, not as a final judgment. I hope it will assist users of the "British Marine Polyzoa" to obtain the maximum value from the book, and serve as a signpost to some of the remaining nomenclatural problems, and that it may prepare the way for a formal checklist.

The main part of the index originates from a set of record cards maintained for some years at the British Museum (Natural History) by Dr. Anna B. Hastings, and the idea of a compilation of this kind is hers. As, however, I had the time and facilities to prepare the index for publication, I undertook to do so. During this process the paper ceased to be a list and became the documented account which follows. Throughout the work I have been encouraged by Dr. Hastings, who also placed at my disposal a number of unpublished manuscripts, references to which have been given as appropriate. It gives me great pleasure to thank Dr. Hastings both for making available these important sources of information and for her continued interest throughout the preparatory period. Some of the work has been carried out at the British Museum (Natural History); Miss Patricia L. Cook has here always given me every assistance, and I wish to thank her for this valuable help.

2. INDEX TO THE "BRITISH MARINE POLYZOA"

CHEILOSTOMATA

- 4 *Aetea anguina*, Linnaeus: ***Aetea anguina*** (Linnaeus, 1758).
Type-species by monotypy of *Aetea* Lamouroux (1812 : 184).
- 6 *A. recta*, Hincks: ***Aetea sica*** (Couch, 1844).
There are no valid grounds for rejecting the name introduced by Couch (1844 : 102)—see Marcus (1955 : 278, 314)—despite Hincks' (1880a : 7, footnote) objection to it.
- 8 *A. truncata*, Landsborough: ***Aetea truncata*** (Landsborough, 1852).
- 14 *Eucratea chelata*, Linnaeus: ***Scruparia chelata*** (Linnaeus, 1758) and
Scruparia ambigua (d'Orbigny, 1841).
Eucratea chelata as described by Hincks comprises two species, which have been separated and defined by Hastings (1941). 294 *Hippothoa cassiterides* (see p. 224) is also referred to *S. ambigua*.
Scruparia chelata (*Sertularia chelata* Linnaeus, 1758) was selected by Harmer (1923 : 316) as type-species of *Scruparia* Oken (1815). Oken's *Lehrbuch* (1815) was later rejected for nomenclatural purposes by the International Commission on Zoological Nomenclature (1956). Application for the validation of *Scruparia* has subsequently been made to the International Commission by Ryland (1967a).
Var α *repens*. Probably ***S. ambigua*** (d'Orbigny), see Hastings (1941).
Var. β *gracilis*: ***S. ambigua*** (d'Orbigny), see Hastings (1941).
- 18 *Gemellaria loricata*, Linnaeus: ***Eucratea loricata*** (Linnaeus, 1758).
Type-species of *Eucratea* Lamouroux (1812 : 183), selected by Harmer (1923 : 307).
- 24 *Scruparia clavata*, Hincks: ***Haplota clavata*** (Hincks, 1857).
Type-species by monotypy of *Haplota* Marcus (1940 : 208), discussed by Marcus (1950 : 13).
- 27 *Huxleya fragilis*, Dyster: ***Huxleya fragilis*** Dyster, 1858.
Type-species by monotypy of *Huxleya* Dyster (1858 : 260).

- 28 *Brettia pellucida*, Dyster: ***Brettia pellucida*** Dyster, 1858.

Type-species by monotypy of *Brettia* Dyster (1858 : 260).

- 29 *B. tubaeformis*: ***Bicellariella ciliata*** (Linnaeus, 1758).

Brettia tubaeformis, described by Hincks (1879 : 154), is based on the ancestrular parts of *Bicellariella ciliata* (see 68), here illustrated in Text-fig. 1.

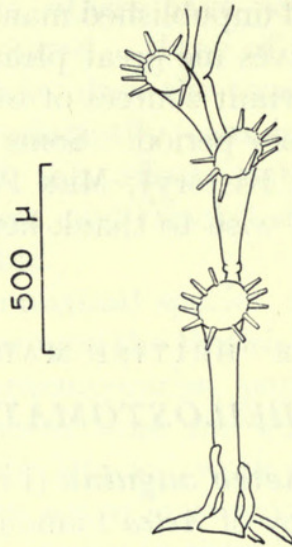


FIG. 1. Ancestrula and first zooids of *Bicellariella ciliata* (L.), Skomer, West Wales, 50 ft., June 1966.

- 34 *Cellularia Peachii*, Busk: ***Tricellaria peachii*** (Busk, 1851).

Type-species by original designation of *Bugulopsis* Verrill (1879 : 29; 1880 : 190), a genus maintained by Kluge (1962 : 367) and Prenant & Bobin (1966 : 441). Like Marcus (1940 : 162), however, I am following Harmer (1923 : 355), who included *Bugulopsis* in *Tricellaria*, commenting that *T. peachii* "appears to represent the extreme amount of loss of structures which typically occur in the genus, as shown by the disappearance of the frontal and marginal avicularia and of the scutum". Species showing comparable simplification in structure occur, for example, in *Bugula*.

- 38 *Menipea ternata*, Ellis and Solander: ***Tricellaria ternata*** (Ellis & Solander, 1786).

Type-species by monotypy of *Tricellaria* Fleming (1828 : 540).

- 42 *M. Jeffreysii*, Norman: ***Notoplites jeffreysii*** (Norman, 1868).

Hincks' figure of this species (Pl. IX, fig. 1), which is seriously inaccurate, has been reproduced by both Kluge (1962 : 370, fig. 231) and Prenant & Bobin (1966 : 445, fig. 147, I). Norman (1893 : 446) redescribed the species, and Ryland (1963b : 17, fig. 4) provided a new illustration.

Referred to *Notoplites* gen. n. by Harmer (1923 : 351).

- 45 *Scrupocellaria scruposa*, Linnaeus: ***Scrupocellaria scruposa*** (Linnaeus, 1758).

Type-species by monotypy of *Scrupocellaria* van Beneden (1845b : 26).

- 46 *S. elliptica*, Reuss: ***Scrupocellaria inermis*** Norman, 1867.

Norman (1893 : 451, footnote) showed that Hincks wrongly synonymized

- S. inermis* Norman (1867) with the fossil species *S. elliptica*. *S. inermis* Waters (1897 : 8) is a different species (Ryland, 1963b : 12).
- 48 *S. scabra*, Van Beneden: ***Scrupocellaria scabra*** (van Beneden, 1848).
- 50 *S. scrupaea*, Busk: ***Scrupocellaria scrupaea*** Busk, 1851.
- 52 *S. reptans*, Linnaeus: ***Scrupocellaria reptans*** (Linnaeus, 1758).
- 59 *Caberea Ellisii*, Fleming: ***Caberea ellisii*** (Fleming, 1814).
- 61 *C. Boryi*, Audouin: ***Caberea boryi*** (Audouin, 1826).
- 68 *Bicellaria ciliata*, Linnaeus: ***Bicellariella ciliata*** (Linnaeus, 1758).

See also 29 *Brettia tubaeformis* and Text-fig. 1. Type-species by monotypy of *Bicellariella* Levinsen (1909 : 431, pro *Bicellaria* de Blainville, preoccupied).

- 70 *B. Alderi*, Busk: ***Bicellarina alderi*** (Busk, 1860).

Type-species by monotypy of *Bicellarina* Levinsen (1909 : 99).

- 75 *Bugula avicularia*, Linnaeus: ***Bugula avicularia*** (Linnaeus, 1758).

Bugula was introduced by Oken (1815), in a work which was rejected for nomenclatural purposes by the International Commission in 1956. Application for validation of *Bugula* has been made to the International Commission by Ryland (1967a).

Compare *B. stolonifera* (p. 240).

- 77 *B. turbinata*, Alder: ***Bugula turbinata*** Alder, 1857.

- 80 *B. flabellata*, J. V. Thompson: ***Bugula flabellata*** (Thompson in Gray, 1848).

Compare *B. fulva* (p. 240).

- 82 *B. calathus*, Norman: ***Bugula calathus*** Norman, 1868.

- 84 *B. plumosa*, Pallas: ***Bugula plumosa*** (Pallas, 1766).

See discussion under 89 *B. purpurotincta*.

- 86 *B. gracilis*, Busk, var. *uncinata*, Hincks. Considered by Ryland (1960) to be based on *Bugula turrita* (Desor), and not British.

- 89 *B. purpurotincta*, Norman: ***Bugula purpurotincta*** Norman, 1868.

Kluge (1962 : 342) and Prenant & Bobin (1966 : 519) have incorrectly applied the name *fastigiata* to this species. They claim that *Cellularia fastigiata* Dalyell (1847 : 236) represents a valid introduction: but this is not the case, for Dalyell identified his species as *Sertularia fastigiata* Linnaeus (1758 : 815). Reference to Linnaeus shows that *S. fastigiata* was based on the Soft-feathered Coralline of Ellis (1755 : 33, pl. 18)—see discussion in Harmer (1930 : 81-84) on Linnaeus' use of Ellis' work. The Soft-feathered Coralline is indubitably the species currently known as *Bugula plumosa* (Pallas)—see 84—so that, by the Law of Priority, *B. fastigiata* must be the correct name for that species. However, to replace such a well-known name as *plumosa* would not be sensible, especially in view of the recent application of the Linnaean name to *B. purpurotincta*.

Likewise, the use of *fastigiata* by Alder (1856 : 149), in the binomen *Bugula fastigiata*, does not represent a valid introduction, since Alder identified his species as *Sertularia fastigiata*. The introduction of *purpurotincta*, in combination with *Bugula*, by Norman (1868 : 219) is valid.

Application for the suppression of *Sertularia fastigiata* has been made to the International Commission (Ryland, 1968c).

- 92 *B. Murrayana*, Johnston: ***Dendrobeania murrayana*** (Bean in Johnston, 1847).

Type-species by monotypy of *Dendrobeania* Levinsen (1909 : 99, 113).

Var. α (*fruticosa*, Packard): ***Dendrobeania fruticosa*** (Packard, 1863). See p. 240. According to Kluge (1962 : 330), however, the form illustrated by Hincks belongs to *D. pseudomurrayana* Kluge, 1955, var. *fessa* Kluge, 1955.

- 96 *Beania mirabilis*, Johnston: ***Beania mirabilis*** Johnston, 1840.

Type-species by monotypy of *Beania* Johnston (1840).

- 100 *Notamia bursaria*, Linnaeus: ***Epistomia bursaria*** (Linnaeus, 1758).

Type-species by original designation of *Epistomia* Fleming (1828 : 541).

- 106 *Cellaria fistulosa*, Linnaeus.

The complex nomenclatural tangle involving the three species of *Cellaria* has been referred to the International Commission on Zoological Nomenclature (Ryland, 1968a).

- 109 *C. sinuosa*, Hassall (see above).

- 112 *C. Johnsoni*, Busk (see above).

- 115 *Flustra foliacea*, Linnaeus: ***Flustra foliacea*** (Linnaeus, 1758).

Type-species of *Flustra* Linnaeus (1761), see Lang (1917).

- 118 *F. papyracea*, Ellis and Solander: ***Chartella papyracea*** (Ellis & Solander, 1786).

Type-species of *Chartella* Gray (1848), not by monotypy as stated by Harmer (1923), but now considered as selected by him.

The conclusions of Hastings (MS) on the status of the genus *Chartella*, which I have accepted, differ from those of Silén (1941 : 49–56) and Prenant & Bobin (1966 : 183) who follow him. Silén merged *Chartella* with *Carbasea* (see 123), but Hastings regards it as a valid genus. Among characters distinguishing the two genera, the nature of the brood-chamber is particularly important. *Chartella* has endozooidal ovicells closed by a special membranous operculum; *Carbasea* has either internal ovisacs or endozooidal ovicells closed by the zooidal operculum (Hastings, MS on *Chartella*).

- 120 *F. securifrons*, Pallas: ***Securiflustra securifrons*** (Pallas, 1766).

Type-species by original designation of *Securiflustra* Silén (1941).

Var. (*papyracea*, Dalyell). This species displays a number of variations in colony form. One of these, in which the fronds were wider than usual, was illustrated by Dalyell (1848 : 22, Pl. VII) as *Flustra papyracea*? Hincks listed this as a variety, without renaming it, though it hardly deserves varietal status (Hastings, MS on *Securiflustra*). This name should not be confused with *Chartella papyracea* (Ellis & Solander).

- 122 *F. Barleei*, Busk: ***Chartella barleei*** (Busk, 1860).

Type-species by original designation of *Terminoflustra* Silén (1941) which, however, Hastings places in the synonymy of *Chartella* Gray. The presence of avicularia hardly seems a character of sufficient importance to warrant generic separation of species currently classified as *Terminoflustra* from *Chartella* (cf. *Bugula neritina* and other species of that genus). The resem-

blance is otherwise close, particularly in the form and method of closure of the ovicells (Hastings, MS on *Chartella*).

- 123 *F. carbacea*, Ellis and Solander: ***Carbacea carbacea*** (Ellis & Solander, 1786).
Type-species by absolute tautonymy of *Carbacea* Gray (1848), see Harmer (1923 : 301).

- 129 *Membranipora Lacroixii*, Audouin: ***Conopeum reticulum*** (Linnaeus, 1767).
Type-species by monotypy of *Conopeum* Gray (1848 : 108, 146). The Linnaean name has priority over that of Audouin (see Harmer, 1926 : 210); in any case it seems unlikely that *Membranipora lacroixii* Busk (1854 : 60 pars) and Hincks (1880a : 129) belong to Audouin's species (Levensen, 1909 : 144).
Compare also *C. seurati* (p. 238).

- 131 *M. monostachys*, Busk: ***Electra monostachys*** (Busk, 1854).

E. monostachys is without question the valid name for this species, often at present (e.g. by Marcus, 1940 : 118; Prenant & Bobin, 1966 : 150) called *E. hastingsae* Marcus. Busk (1854 : 61) based his account on two species, both still present in his collection, but only one was illustrated (Pl. LXX, 1-4), and figure 3 at least is based on a specimen in the British Museum (1899. 7.1.1089). Hincks (1880a) used this, together with additional material, when preparing his account of *M. monostachys*. Marcus (1937 : 39; 1950 : 7), believing that all Busk's material belonged to *Electra crustulenta* (Pallas), introduced *E. hastingsae* for what he thought to be *E. monostachys* Hincks non Busk. As they are the same, Marcus' name is a junior synonym (Hastings, MS on brackish-water membraniporine Polyzoa).

Var. α (*fossaria*): ***Electra crustulenta*** (Pallas, 1766). Borg (1931) elucidated the synonymy of *Electra crustulenta*, including in that species *Membranipora monostachys* var. *fossaria* Hincks. Borg recognized var. *fossaria*, together with a number of other varieties of *E. crustulenta* which he considered to be morphologically and ecologically or geographically distinct; if valid, these would today be regarded as subspecies. One of them, at least, represents a distinct species (var. *spiculata*, which is *Conopeum seurati*, see p. 238). Zeeland is the type-locality for *E. crustulenta*, and Britain is the type-locality of var. *fossaria*, so, if Borg was right in identifying his material from Holland with the latter, the name *fossaria* can have no subspecific validity. British *E. crustulenta* shows variation, but it is not yet clear whether varieties are distinguishable or whether the varieties *fossaria*, *typica* and *baltica* recognized by Borg (1931) will prove to be distinct. A full revision, based on plentiful material, is needed (Hastings, MS on brackish-water membraniporine Polyzoa).

- 134 *M. catenularia*, Jameson: ***Pyripora catenularia*** (Fleming, 1828).

This species should be attributed to Fleming, see Thomas & Larwood (1956).

- 137 *M. pilosa*, Linnaeus: ***Electra pilosa*** (Linnaeus, 1761).

The type-species of *Electra* Lamouroux (1816) is *Flustra verticillata* Ellis & Solander (1786), which has generally been considered as a junior synonym of *E. pilosa*—a view recently challenged by Bobin & Prenant (1960) and Prenant & Bobin (1966 : 136).

Electra Gray (1866) [Mammalia] is a junior homonym.

Var. α (*dentata*): var. ***dentata*** Ellis & Solander, 1786.

Var. β (*laxa*, Smitt): var. ***laxa*** Smitt, 1868.

Var. γ [Pallas, in text]: var. ***ellisina*** Moll, 1803. This variety (a growth form of the colony), which has also been named var. *flustriformis* (Norman, 1894 : 120) is referred by Prenant & Bobin (1966 : 146) to var. *ellisina* Moll (1803 : 41), which was based on the Irregular spongy foliaceous Coralline of Ellis (1755 : 73, pl. 29 D, 31).

Norman (1894) described many varieties of *E. pilosa* (see also Prenant & Bobin, 1966 : 145).

140 *M. membranacea*, Linnaeus: ***Membranipora membranacea*** (Linnaeus, 1767).

Type-species of *Membranipora* de Blainville (1830 : 447), see Borg (1931 : 5).

143 *M. hexagona*, Busk.

Based on damaged zooids of some other species (Hastings, 1966 : 66); not *M. hexagona* (v. Hagenow, 1839) in Voigt (1959) and Berthelsen (1962).

143 *M. lineata*, Linnaeus: ***Callopora lineata*** (Linnaeus, 1767).

Type-species by monotypy of *Callopora* Gray (1848).

Var. α (in text): a minor variant.

147 *M. craticula*, Alder: ***Callopora craticula*** (Alder, 1856).

Referred to *Callopora* by Norman (1903a : 589).

149 *M. spinifera*, Johnston: ***Cauloramphus spiniferum*** (Johnston, 1832).

Type-species by original designation of *Cauloramphus* Norman (1903a : 587).

151 *M. flustroides*, Hincks: ***Hincksina flustroides*** (Hincks, 1877).

Type-species by original designation of *Hincksina* Norman (1903a : 585).

152 *M. discreta*, Hincks: ***Callopora discreta*** (Hincks, 1862).

Referred to *Callopora* by Osburn (1923 : 7).

153 *M. curvirostris*, Hincks: ***Parellisina curvirostris*** (Hincks, 1862).

Type-species by original designation of *Parellisina* Osburn (1940).

154 *M. unicornis*, Fleming: ***Tegella unicornis*** (Fleming, 1828).

Type-species of *Tegella* Levinsen (1909 : 152) designated by Canu & Bassler (1920).

156 *M. Dumerilii*, Audouin: ***Callopora dumerilii*** (Audouin, 1826).

Referred to *Callopora* by Norman (1903a : 589).

158 *M. solidula*, Alder and Hincks: ***Alderina solidula*** (Hincks, 1860).

Referred to *Alderina*, with reservations, by Norman (1903a : 596).

159 *M. aurita*, Hincks: ***Callopora aurita*** (Hincks, 1877).

Referred to *Callopora* by Norman (1903a : 589).

160 *M. imbellis*, Hincks: ***Alderina imbellis*** (Hincks, 1860).

Type-species by original designation of *Alderina* Norman (1903a : 596).

162 *M. Flemingii*, Busk: ***Amphiblestrum flemingii*** (Busk, 1854).

Gray (1848) introduced *Amphiblestrum* monotypical for *Flustra membranacea* Müller, which is generally accepted as a synonym of *Electra crustulenta* (Pallas) not of *Membranipora membranacea* (Linn.), see Borg (1931 : 2, 10). Gray listed a number of specimens referred to Müller's species by Johnston. The latter's account (1847 : 328) was evidently based on more than one species, one of which was *Electra crustulenta*. Gray's brief definition (p. 146) is applicable, as far as

it goes, to *E. crustulenta*, but not to the other species. Of the Johnston specimens remaining in the British Museum, none belongs to *E. crustulenta*. They comprise three somewhat similar species which had not been distinguished from each other when Gray was writing (*Tegella unicornis*, *Callopora aurita* and *Amphiblestrum flemingii* in this list). Busk (1854 : 58) examined this material and introduced the name *Membranipora flemingii*, based on more than one species. It remained for Hincks (1880) satisfactorily to discriminate the species involved, so giving an unambiguous definition of *M. flemingii* (Hastings, MS on the collections of George Busk and George Johnston).

Busk (1854) did not at first adopt the genus *Amphiblestrum*. When he did so (1884 : 65) he took *M. flemingii* as the type-species. This selection was accepted by Norman (1903a : 586, 596), and by most subsequent authors. While final acceptance of *M. flemingii* as type-species must depend on its recognition by the International Commission, it would, in our view, be detrimental to nomenclatural stability to accept Borg's (1931 : 29) view that the type-species of *Amphiblestrum* should be *Flustra membranacea* Müller. *Amphiblestrum* would then become a subjective junior synonym of *Electra* Lamouroux.

164 *M. cornigera*, Busk: ***Larnacicus corniger*** (Busk, 1860).

Type-species by original designation of *Larnacicus* Norman (1903b : 87).

166 *M. Rosselii*, Audouin: ***Rosseliana rosselii*** (Audouin, 1826) and

R. rosselii var. ***multijuncta*** (Waters, 1879).

Flustra Rosselii Audouin (1826) is type-species by original designation of *Rosseliana* Jullien (1888 : 78). *Membranipora Rosselii* in Hincks comprises two taxa: *Rosseliana rosselii* and its variety *multijuncta* (Waters, 1879 : 120, Pl. XIII, fig. 4, as *Diachoris patellaria* var. *multijuncta*) (Hastings, MS on *Rosseliana* and *Mollia*). This variety is referred to as *Rosseliana* "sp. nov." by Gautier (1962 : 63-64). Hincks' illustration (Pl. XXII, fig. 4) probably represents *R. rosselii* s. str., but the zooids depicted are not very typical. *R. rosselii* and its variety may be distinguished as follows (Hastings, MS):

Cryptocyst of majority of zooids not occupying more than half the length of aperture, its transverse border straight or concave and without opesiular indentations; connecting tubes not visible

R. rosselii

Cryptocyst occupying more than half the length of the aperture, its border somewhat convex, often with a trace of opesiular indentations; connecting tubes usually visible in at least part of the colony

var. ***multijuncta***

167 *M. trifolium*, S. Wood: ***Amphiblestrum solidum*** (Packard, 1863).

According to Lagaaij (1952 : 26), the North Atlantic species described by Hincks under this name is not the same as Wood's (1844) species and should be called *Amphiblestrum solidum* (Packard, 1863).

Var. α (*quadrata*): var. ***quadrata*** Hincks, 1880.

169 *M. minax*, Busk: ***Amphiblestrum minax*** (Busk, 1860).

Type-species by original designation of *Ramphonotus* Norman (1894), which

does not, however, in the opinion of Hastings and myself, differ sufficiently in any significant way from *Amphiblestrum* Gray to warrant its separate maintenance.

In his Introduction, Hincks (1880a : lxxiii) distinguished as *M. princeps* sp. n. the form illustrated by Smitt (1868a, Pl. 20, fig. 44), in which the avicularium is larger than usual. Norman (1903a) argued that this form merely shows the avicularia in a more developed state, a conclusion accepted by subsequent writers.

- 170 *M. nodulosa*, Hincks: ***Ammatophora nodulosa*** (Hincks, 1877).

Type-species by original designation of *Ammatophora* Norman (1903b : 88).

- 172 *Megapora ringens*, Busk: ***Megapora ringens*** (Busk, 1856).

Type-species by original designation of *Megapora* Hincks (1877c).

- 174 *Micropora coriacea*, Esper: ***Micropora coriacea*** (Johnston, 1847) and ***Micropora normani*** Levinsen, 1909.

Hincks' account includes two species (Hastings, 1966), *M. coriacea* (Johnston), non Esper (1806-?, Pl. 7), type-species by monotypy of *Micropora* Gray (1848), see Harmer (1926) and Brown (1952), and *M. normani* Levinsen (1909 : 162).

Flustra coriacea Esper (1806-?) is a synonym of *Cellepora* (now *Calpensia*) *nobilis* Esper (1796 : 145). So is *Eschara impressa* Moll (1803), recorded from the Channel Islands by Norman (1907) as *Micropora impressa* (see p. 239). *Membranipora calpensia* Busk (1854), type-species by original designation of *Calpensia* Jullien (1888 : 78), which has generally been considered as a further synonym of *Calpensia nobilis* (Esper), has been shown by Buge (1957 : 173) to be a distinct species.

- 175 *M. complanata*, Norman.

The taxonomic placing of *Lepralia complanata* Norman (1864) is uncertain, and has been discussed by Gautier (1962 : 67). It is not a *Micropora*, but an ascophoran: as a temporary measure it can still be called *Lepralia*, which, in the opinion of Harmer (1957 : 1101) has no type-species and "... should remain available for the numerous species referred by authors to that genus, at present not placed in other genera". See also Harmer (1897 : 52).

- 178 *Steganoporella Smittii*: ***Thalamoporella rozieri*** (Audouin, 1826).

Placed by Harmer (1926) in the synonymy of *Flustra rozieri* Audouin, type-species by original designation of *Thalamoporella* Hincks (1887 : 164).

- 181 *Setosella vulnerata*, Busk: ***Setosella vulnerata*** (Busk, 1860).

Type-species by original designation of *Setosella* Hincks (1877c).

- 185 *Cribrilina radiata*, Moll: ***Cribrilaria radiata*** (Moll, 1803).

Type-species by original designation of *Cribrilaria* Canu & Bassler (1929 : 33). Placed by Harmer (1926 : 475) and many subsequent authors including Prenant & Bobin (1966 : 589) in *Colletosia* Jullien (1886). But the type-species of *Colletosia* is *Lepralia endlicheri* Reuss (1848), now known to be referable to *Umbonula* Hincks—see entry 317—(Bobies, 1956; Brown, 1958).

Form i [*radiata*]: ***Cribrilaria radiata*** (Moll, 1803).

Form ii [*innominata*]: var. ***innominata*** Couch, 1844.

The status of the "*innominata* form" (*Lepralia innominata* Couch, 1844 : 114) has been much argued, often with the result of its again receiving the status of species. I have followed Osburn (1950 : 187) in treating it as a variety, but note that Prenant & Bobin (1966 : 589) comment: "Nous avons la conviction personnelle que ces deux espèces sont indépendantes", so that the matter is far from settled.

Var. α : ***Puellina setosa*** (Waters, 1899).

Var. β . Friedl (1917) gave the name *Cribrilina radiata* var. *hincksi* to a variety described by Hincks (1880b : 74, Pl. X, fig. 7). Prenant & Bobin (1966 : 595) follow Canu & Bassler (1930 : 30) in giving the variety specific rank, and include among their illustrations a copy of the present var. β (1880a, Pl. XXV, fig. 4). In my opinion, however, var. β and *C. hincksi* are not the same.

Var. γ (*tenuirostris*). Not British.

- 190 *C. punctata*, Hassall: ***Cribrilina punctata*** (Hassall, 1841) and
C. cryptoecium Norman, 1903.

C. punctata is type-species by monotypy of *Cribrilina* Gray (1848).

Norman (1903b : 102) considered that Hincks had included two species under his *C. punctata*, and referred Pl. XXIV, fig. 3 and Pl. XXVI, fig. 3, to *C. cryptoecium* sp. n. Although not mentioned by Marcus (1940), *C. cryptoecium* is accepted by Kluge (1962 : 393) and Prenant & Bobin (1966 : 580).

Var. α . Norman (1903) considered this a variety of *C. punctata* s. str.

Recent examination of the type-specimen of *C. punctata* has revealed that it also belongs to *C. cryptoecium*. To avoid disrupting the established nomenclature, application has been made to the International Commission on Zoological Nomenclature (Ryland & Stebbing, 1968) to set aside the present lectotype (Lagaaij, 1952 : 56) and to designate a neotype such that the name *C. punctata* retains its accepted identity.

- 193 *C. annulata*, Fabricius: ***Cribrilina annulata*** (Fabricius, 1780).

- 196 *C. figularis*, Johnston: ***Figularia figularis*** (Johnston, 1847).

Type-species by original designation of *Figularia* Jullien (1886).

Var. α (*fissa*): ***Figularia fissa*** (Hincks, 1880). Harmer (1926 : 479) raised this variety to specific rank. It is not British.

- 198 *C. Gattyae*, Busk: ***Puellina gattyae*** (Landsborough, 1852).

Type-species by monotypy of *Puellina* Jullien (1886). *Lepralia gattyae* was not introduced by Busk (1854 : 73) but by Landsborough (1852 : 326), though the name may have been suggested by Busk.

Var. α . No information.

- 200 *Membraniporella nitida*, Johnston: ***Membraniporella nitida*** (Johnston, 1838).

Type-species of *Membraniporella* Smitt (1873 : 10) designated by Hincks (1877c : 526). Compare *Callopora rylandi* (p. 239), which is superficially similar in appearance.

- 202 *M. melolontha*, Busk: ***Aspidelectra melolontha*** (Landsborough, 1852).

Type-species by monotypy of *Aspidelectra* Levinsen (1909). As Hastings (1966 : 63) has noted, *Lepralia melolontha* was introduced by Landsborough (1852 : 319) and not by Busk (1854 : 78).

- 206 *Microporella ciliata*, Pallas: ***Microporella ciliata*** (Pallas, 1766).

Type-species by original designation of *Microporella* Hincks (1877c : 526). Application was made by Brown (1955) to place the genus *Microporella* and the species *ciliata* on the Official Lists of Names in Zoology (see also 244 *Schizoporella vulgaris*).

Var. *personata*: ***M. ciliata*** (Pallas), **personate form** (Harmer, 1957 : 961).

Californian variety: ***M. cribrosa*** Osburn, 1952. Not British.

Australian variety: ***M. orientalis*** Harmer, 1957. Not British.

- 211 *M. Malusii*, Audouin: ***Fenestrulina malusii*** (Audouin, 1826).

Type-species by original designation of *Fenestrulina* Jullien (1888 : 37).

While I follow all recent authors in referring *M. malusii* to *Fenestrulina* Jullien, it should be noted that the genus has not yet been satisfactorily defined in a way that makes clear how it differs from *Microporella* s. str. (cf. Levinsen, 1909 : 329).

Var. α (*thyreophora*): var. ***thyreophora*** Busk, 1857. Not British.

Var. β (*vitrea*). No information.

Another variety, not mentioned in the text, was illustrated by Hincks in Pl. XXIX, fig. 12.

- 214 *M. impressa*, Audouin: ***Haplopoma graniferum*** (Johnston, 1847).

Lagaaij (1952 : 61) and Ryland (1963a : 16) have shown that *Microporella impressa* Hincks (excluding the varieties) non Audouin, is the species described by Johnston (1847 : 309) as *Lepralia granifera*. *Haplopoma impressum* Marcus (1940 : 216) non Audouin is *H. planum* Ryland (1963a : 14), see p. 241.

Var. α (? *bimucronata*, Moll : var. *cornuta*, Busk): ***Haplopoma bimucronatum*** (Moll, 1803). This variety is the *Eschara bimucronata* of Moll (1803), but not the var. *cornuta* of Busk (1854 : 83) which is probably, as described, a variety of *H. graniferum* (Johnston).

Var. β (*glabra*): ***Haplopoma impressum*** (Audouin, 1826). This variety (*Haplopoma impressum* var. *glabra* in Marcus, 1940 : 216) is true *Flustra impressa* Audouin (1826), see Lagaaij (1952 : 62) and Ryland (1963a : 11), type-species by monotypy of *Haplopoma* Levinsen (1909 : 280).

Var. γ (*pyriformis*, Busk): ***Haplopomella pyriformis*** (Busk, 1859). Placed by Buge (1953) in *Haplopomella* gen. n., of which it is type-species. Fossil only.

- 216 *M. violacea*, Johnston: ***Reptadeonella violacea*** (Johnston, 1847).

Type-species of *Reptadeonella* Busk (1884 : 180). The validity of *Reptadeonella*, for encrusting Adeonidae, has often been questioned, and its continued use appears to be largely a matter of convenience. It was maintained by Harmer (1957 : 814), whom I have followed.

Var. α : ***Reptadeonella insidiosa*** (Jullien, 1903). *Adeonella insidiosa* was introduced by Jullien (1903 : 54) for this variety. Compare, however, the view of Levinsen (1909 : 284).

- Var. β (*plagiopora*): ***Reptadeonella plagiopora*** (Busk, 1859). Not British.
- 220 *Diporula verrucosa*, Peach: ***Diporula verrucosa*** (Peach, 1868).
Type-species by original designation of *Diporula* Hincks (1879 : 156).
- 224 *Chorizopora Brongniartii*, Audouin: ***Chorizopora brongniartii*** (Audouin, 1826).
Type-species by original designation of *Chorizopora* Hincks (1879).
- 229 *Porina borealis*, Busk: ***Tessaradoma boreale*** (Busk, 1860).
Type-species by monotypy of *Tessaradoma* Norman (1869). The non-availability of the specific name *gracile* M. Sars (1851), used by Marcus (1940), was discussed by Harmer (1957 : 852).
- 230 *Porina tubulosa*, Norman: ***Cylindroporella tubulosa*** (Norman, 1869).
Type-species by original designation of *Cylindroporella* Hincks (1877c).
- 233 *Anarthropora monodon*, Busk: ***Anarthropora monodon*** (Busk, 1860).
Type-species of *Anarthropora* Smitt (1868b), designated by Norman (1869).
- 235 *Lagenipora socialis*, Hincks: ***Lagenipora lepralioides*** (Norman, 1868).
L. socialis is the type-species by monotypy of *Lagenipora* Hincks (1877b : 214). Norman (1903b : 108) recognized that *L. socialis* was the same as *Celleporella lepralioides* Norman (1868), included separately by Hincks (1880a : 414). *Celleporella* as used by Norman was not the same genus as *Celleporella* Gray (1848), see Harmer (1957 : 822).
- 238 *Schizoporella unicornis*, Johnston: ***Schizoporella unicornis*** (Johnston in Wood, 1844).
Type-species by original designation of *Schizoporella* Hincks (1877c).
Form *ansata*: ***Schizoporella dunkeri*** (Reuss, 1848). The "deep-water form" of Hincks is not *Lepralia ansata* Johnston (1847), but *L. Dunkeri* Reuss (1848), described and discussed by Ryland (1968b). (See also *Schizoporella magnifica* Hincks and *S. longirostris* Hincks, p. 241.)
- 241 *S. spinifera*, Johnston: ***Escharina spinifera*** (Johnston, 1847).
Referred to *Escharina* Milne Edwards (1836) by Levinsen (1909).
- 243 *S. Alderi*, Busk: ***Escharina alderi*** (Busk, 1856).
Referred to *Escharina* by Levinsen (1909). Norman (1907) has distinguished a number of growth forms.
- 244 *S. vulgaris*, Moll: ***Escharina vulgaris*** (Moll, 1803).
Type-species by original designation of *Escharina* Milne Edwards (1836 : 218, also 230-231). Application to place the genus *Escharina* and the species *vulgaris* on the Official Lists of Names in Zoology was made by Brown (1955).
- 246 *S. simplex*, Johnston: ***Escharina johnstoni*** (Quelch, 1884).
Referred to *Escharina* by Levinsen (1909 : 326) but, whether as *Schizoporella* or *Escharina*, *simplex* Johnston (1847 : 305) is preoccupied by *simplex* d'Orbigny (1841). Quelch (1884 : 217) accordingly introduced a new name for the present species.
- 247 *S. linearis*, Hassall: ***Schizomavella linearis*** (Hassall, 1841).
Var. α (*hastata*, Hincks): ***Schizomavella hastata*** (Hincks, 1862). Gautier (1962 : 139) argued in favour of restoring this form to the rank of species, noting that the orifice and operculum are different from those of *S. linearis*.

Var. β (*mamillata*): var. ***mamillata*** Hincks, 1880. Treated as a species by Gautier (1958), but later (1962 : 143) as a variety. Not British but Mediterranean.

Var. γ (*nitida*): var. ***nitida*** Hincks, 1880. Not British but Mediterranean.

Var. δ (*crucifera*, Norman): var. ***crucifera*** Norman, 1869.

- 252 *S. sanguinea*, Norman: ***Schizobrachiella sanguinea*** (Norman, 1868).

Type-species by original designation of *Schizobrachiella* Canu & Bassler (1920 : 353).

- 254 *S. cristata*, Hincks: ***Schizomavella cristata*** (Hincks, 1879).

Probably referable to *Schizomavella*.

- 255 *S. biaperta*, Michelin: ***Buffonellaria divergens*** (Smitt, 1873).

The situation regarding this species, known in current literature as *Stephanosella biaperta* (Michelin), is extremely confused. *Eschara biaperta* was described by Michelin (1848 : 330, Pl. 79, fig. 3) from what is now termed the Savignéen facies of the Helvétian (Upper Miocene) at Doué-la-Fontaine (Maine-et-Loire), France (Buge, 1957). It is the type-species by original designation of *Stephanosella* Canu & Bassler (1917 : 40). The present confusion stems from the lack of precision in Michelin's description and a figure too small to show detail. Moreover, there is no type-specimen. Through the kindness of Dr. Émil Buge, I have been able to examine specimens from the Savignéen of Channay and Savigné-sur-Lathan (Indre-et-Loire), some 50 km. from Doué-la-Fontaine. Thus, though not exact topotypes, they are from a nearby exposure of the same facies; and they agree perfectly with Michelin's figure.

The encrusting convex zooids have a finely porous frontal wall, and a semi-circular orifice provided with a narrow sinus (Text-fig. 2a). A prominent avicularian chamber is frequently present to one side of the orifice, and the mandible appears to be short and triangular with a rounded apex. The zooids have the appearance of an *Escharina* or *Schizoporella*, but, in the absence of ovicells, the question of generic relationship cannot be pursued. Busk (1859 : 47, Pl. 7, fig. 5) recorded *Lepralia biaperta* (?) from the English Coralline Crag (Pliocene), but his species was clearly different from the Savignéen specimens I have examined.

Smitt (1868b : 14, 98, Pl. 24, figs. 70-73), probably misled by Busk's figure, appears to have been the first author to apply Michelin's name to a Recent species. Smitt's *Escharella biaperta* is a species now well-known in Arctic regions, and further descriptions of it have been given by Nordgaard (1906 : 15, Pl. 1, figs. 12-14), Osburn (1952 : 368, Pl. 42, figs. 1-2), and Kluge (1962 : 477, fig. 370). There is very close agreement between the accounts of these four authors. The frontal wall is a smooth holocyst with marginal pores, and the orifice is elliptical with a shallow sinus and rounded condyles (Text-fig. 2b). Thus this species differs both in the form of the frontal wall and in the shape of the orifice from the Savignéen fossil.

In his account of polyzoa from Florida, Smitt (1873) again reported Michelin's species, this time using the combination *Hippothoa biaperta* (p. 46, Pl. 8, figs.

173-176). *H. biaperta* is clearly based on more than one species. In the same paper he introduced *H. divergens* (p. 47, Pl. 9, figs. 177 and 179). Hincks (1880a : 255) regarded these two species as identical, and most subsequent authors have accepted his opinion. Canu & Bassler (1927 : 8), however, created the genus *Buffonellaria* for *H. divergens* (form *typica*, Smitt's fig. 179).

The species described by Hincks (1880a : 255, Pl. XL, figs. 7-9), as *Schizoporella biaperta*, is identical with Smitt's *H. divergens*. Hincks recognized this, but treated *divergens* as a variety of *biaperta*. All British specimens were then referred to this variety. It differs from the Arctic species referred to above by having a very much deeper sinus to the orifice (Text-fig. 2c). I have examined a number of specimens in the British Museum, from Britain, France, Spain and Madeira, and find that the deep sinus is a constant character.

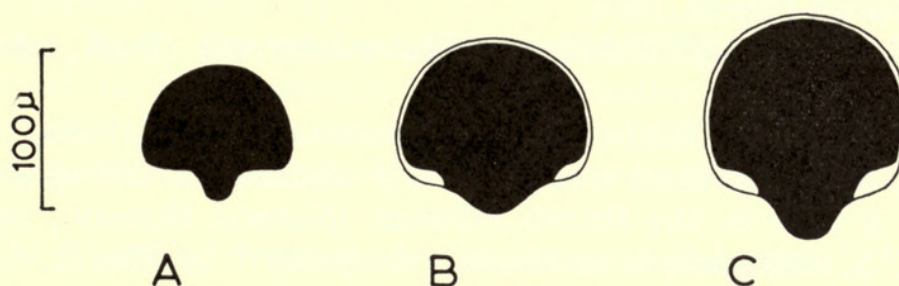


FIG. 2. Shape of the orifice in *Stephanosella biaperta* auctt. A.—*S. biaperta* (Michelin), Savignéen of Channay, France (specimen from the Institut de Paléontologie, Paris, lent by É. Buge); B.—*Buffonellaria* sp., Spitzbergen (Brit. Mus. 1862.3.13.49); C.—*B. divergens* (Smitt), Hastings, England (Brit. Mus. 1897.5.1.726).

Osburn (1952 : 320, 368) maintained that Hincks had confused *S. biaperta* (sensu Osburn) with another species, distinguished by having a tremocystal front wall, which he identified as *Schizoporella cornuta* (Gabb & Horn). It appears to me that this may be true only through Hincks' citation in synonymy of Smitt's *Hippothoa biaperta*. Curiously, Osburn does not mention Smitt's (1873) paper in his discussion of *S. cornuta*. Whether or not Smitt's *H. biaperta* is partly based on *S. cornuta*, the British species described by Hincks certainly is not.

Gautier (1962 : 155) appears to be correct in his assertion that the ovicellate specimen from Algeria (Brit. Mus. 1899.5.1.995), illustrated by Hincks in Pl. XL, fig. 9. represents another species—unnamed, but congeneric with the British material.

The following conclusions may be drawn from the foregoing discussion:

(a) The Recent species collectively known as *Stephanosella biaperta* (Michelin) are different specifically and generically from the Savignéen fossil which properly bears that name;

(b) The species found in southern Britain and southwards into warmer latitudes is conspecific with *Hippothoa divergens* Smitt, from Florida. It differs from a related Arctic species in the form of the orifice (Text-fig. 2b, c);

(c) *Hippothoa divergens* is type-species of *Buffonellaria*, and should be called *Buffonellaria divergens* (Smitt);

(d) The Arctic species called *Stephanosella biaperta* in current literature is congeneric with *B. divergens*, but specifically different and apparently unnamed;

(e) Hincks' Algerian specimen belongs to another species of *Buffonellaria*;

(f) *Schizoporella cornuta* is not a European species, but may have been included by Smitt (1873) in his Floridan *Hippothoa biaperta*.

- 258 *Schizoporella armata*, Hincks: ***Schizotheca armata*** (Hincks, 1862).

Levinsen (1909 : 294) allied this species to *Schizotheca* and *Rhynchozoon*, and the former appears to be the more appropriate.

- 260 *S. auriculata*, Hassall: ***Schizomavella auriculata*** (Hassall, 1842).

Type-species by original designation of *Schizomavella* Canu & Bassler (1917).

Var. α *ochracea* (= *Lepralia auriculata*, var. *Leontiniensis*, Waters [1878]): var. ***ochracea*** Hincks, 1862.

Var. β (*cuspidata*): ***Schizomavella umbonata*** (Busk, 1860)—see next entry.

- 264 *S. umbonata*, Busk: ***Schizomavella umbonata*** (Busk, 1860).

I have been unable to locate any type material of this species. There is, however, a slide in the British Museum (Natural History), 1963.2.12.155, labelled "*S. auriculata* v. *umbonata*. Guernsey" by Miss E. C. Jelly. This specimen has recently been relabelled as *S. auriculata* var. *cuspidata* Hincks. Following up this clue, both Dr. Anna B. Hastings and I have examined the Museum's specimens of var. *cuspidata*. In general appearance, zooids of *S. umbonata* and *S. auriculata* var. *cuspidata*, as depicted in Hincks' illustrations (Pl. XXIV, fig. 2, after Busk, and Pl. XXIX, fig. 8, respectively), are rather similar. The only major difference lies in the apparent presence of areolae in *S. umbonata*. Examination has shown that the frontal wall in var. *cuspidata* is a pleurocyst. The secondary thickening is granular, sometimes incorporating a small number of non-peripheral pores. The final appearance of the wall varies somewhat from colony to colony, but in 1963.2.12.155 the thickening forms distinct centripetally-directed ridges originating between the marginal pores, and reminiscent of the effect depicted by Busk (1860b : 143, Pl. 27, fig. 1) in his illustration. We believe that it is justifiable to place *S. auriculata* var. *cuspidata* Hincks, 1880, in the synonymy of *S. umbonata*.

The orifice of *S. umbonata*, despite some variation in the shape of the sinus, differs clearly from that of *S. auriculata* (Text-fig. 3).

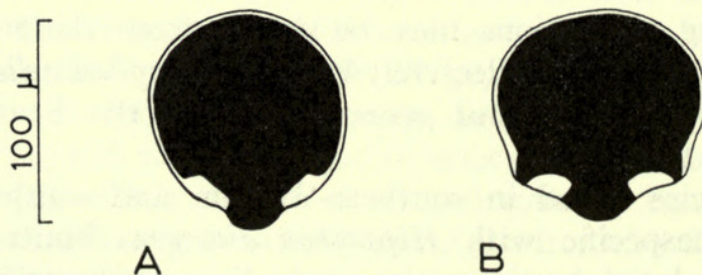


FIG. 3. A.—Orifice of *Schizomavella auriculata* (Hassall), Raasay Sound, Scotland (author's specimen); B.—Orifice of *S. umbonata* (Busk), unknown British locality (Brit. Mus. 1911.10.1.1558).

As just mentioned, the frontal wall of *S. umbonata* is a porous pleurocyst; in *S. auriculata*, on the other hand, it is a tremocyst. *S. umbonata* is thus specifically distinct from *S. auriculata*; indeed, following presently accepted taxonomic practice, the difference between the two is sufficient to warrant placing *S. umbonata* in a different genus (*S. auriculata* is type-species of *Schizomavella*). There is however, at the present time, no alternative genus available; and in any case, the full implications of regarding the mode of secondary thickening as invariably constituting a generic character have yet to be assessed. The remaining characters of *S. umbonata* suggest affinity with *S. auriculata*.

- 265 *S. discoidea*, Busk: ***Schizomavella discoidea*** (Busk, 1859).

Referred to *Schizomavella* by Gautier (1962); the description has been amplified by Ryland (1963c : 17).

- 266 *S. sinuosa*, Busk: ***Stomachetosella sinuosa*** (Busk, 1860).

Referred to *Stomachetosella* Canu & Bassler (1917) by O'Donoghue & O'Donoghue (1926).

Var. *armata*: var. ***armata*** Hincks, 1880. Not British; no additional information.

- 269 *S. Cecillii*, Audouin: ***Arthropoma cecillii*** (Audouin, 1826).

Type-species of *Arthropoma* Levinsen (1909 : 332), selected by Canu & Bassler (1920 : 351).

- 270 *S. cruenta*, Norman: ***Stomachetosella cruenta*** (Busk, 1854).

Referred to *Stomachetosella* by Osburn (1952 : 306). The name was introduced by Busk (1854 : 69).

- 271 *S. hyalina*, Linnaeus: ***Celleporella hyalina*** (Linnaeus, 1767).

Type-species by monotypy of *Celleporella* Gray (1848), but considered by Waters (1900) as referable to *Hippothoa*. The form of the colony (uniserial or coherent crust) does not provide a clear and valid distinction between *Hippothoa* and *Celleporella*, but they may prove to be distinguished by the types of polymorphic individuals present or by the nature of the interzoooidal communications. Further study is needed. (Hastings, MS on *Hippothoa*.)

Var. α (*cornuta*): This is ***Hippothoa cornuta*** Busk, 1854, var. ***aporosa*** Levinsen, 1909. Not British.

Var. β (*incrassata*): var. ***incrassata*** Hincks, 1880.

Var. γ (*tuberculata*): var. ***tuberculata*** Hincks, 1880. Not British; but not *Hippothoa hyalina* var. *tuberculata* Brown (1952).

The status of these three varieties and var. *tuberculata* Brown, together with a fourth variety that Hincks defined and figured (p. 274; Pl. XLV, fig. 3) but did not name, is being considered by Hastings (MS on *Hippothoa*).

- 276 *S. venusta*, Norman: ***Trypostega venusta*** (Norman, 1864).

Type-species by monotypy of *Trypostega* Levinsen (1909).

- 279 *Mastigophora Dutertrei*, Audouin: ***Escharina dutertrei*** (Audouin, 1826).

Referred to *Escharina* by Levinsen (1909).

Form α : ***Escharina dutertrei*** (Audouin).

Form β . No information.

- 281 *M. Hyndmanni*, Johnston: ***Escharina hyndmanni*** (Johnston, 1847).

Type-species of *Herentia* Gray (1848) selected by Brown (1952) who, however, considered the genus to be synonymous with *Escharina*. Buge (1957 : 234) distinguished *Herentia* from *Escharina* chiefly on account of the interzooidal position of the vibracula. But Hastings (1963b : 168) showed that the vibracula are also of this kind in *E. vulgaris*, type-species of *Escharina*.

Var. *ensiformis* (in text) is not British.

Var. *porosa* (in text) is not British.

- 284 *Schizotheca fissa*, Busk: ***Schizotheca fissa*** (Busk, 1856).

Type-species by original designation of *Schizotheca* Hincks (1877c).

- 285 *S. divisa*, Norman: ***Schizotheca divisa*** (Norman, 1864).

- 288 *Hippothoa divaricata*, Lamouroux: ***Hippothoa divaricata*** Lamouroux, 1821.

Type-species by monotypy of *Hippothoa* Lamouroux (1821 : 82).

Var. α (*conferta*): var. ***conferta*** Hincks, 1880.

Var. β (*carinata*, Norman): var. ***carinata*** Norman, 1875.

Var. γ (*Patagonica*, Busk): ***Hippothoa patagonica*** Busk, 1852. A valid species (Hastings, MS on *Hippothoa*). Not British.

- 291 *H. expansa*, Dawson: ***Hippothoa expansa*** Dawson, 1859. (See addendum.)

- 293 *H. flagellum*, Manzoni: ***Hippothoa distans*** P. H. MacGillivray, 1869.

Hippothoa flagellum Manzoni (1870b) is a junior synonym of *H. distans* MacGillivray (1869) (synonymy given by Harmer, 1957 : 951). The confusion which arose in Gautier's (1962 : 119) account will be explained by Hastings (MS on *Hippothoa*).

- 294 [*H. cassiterides*, Couch]: On the basis of Fig. 87 in Johnston (1847 : 477), this is fairly clearly *Scruparia ambigua* (d'Orbigny)—see 14 *Eucratea chelata*.

- 297 *Lepralia Pallasiana*, Moll: ***Cryptosula pallasiana*** (Moll, 1803).

Type-species by original designation of *Cryptosula* Canu & Bassler (1925).

- 299 *L. canthariformis*, Busk.

Introduced by Busk (1860b : 143), but there is no further information, and no specimens are available.

- 300 *L. foliacea*, Ellis and Solander: ***Pentapora foliacea*** (Ellis & Solander, 1786).

Type-species of *Pentapora* Fischer (1807 : 307), designated by Hastings & Ryland (1968).

Var α (*fascialis*): ***Pentapora fascialis*** (Pallas, 1766). Opinion has been divided as to the status of *Eschara fascialis* Pallas (1766 : 43). I have accepted the most recent view, that of Gautier (1962 : 165). In any case, it would not seem nomenclaturally permissible to regard *fascialis* (1766) as a variety of *foliacea* (1786).

Var. β (*bidentata*, M.-Edwards). This is based on the appearance of the older ovicellate zooids (Hastings & Ryland, 1968): it is not a variety.

- 305 *L. pertusa*, Esper: ***Hippoporina pertusa*** (Esper, 1796).

Referred to *Hippodiplosia* Canu (1916) by Marcus (1940 : 251) and others; but is, in fact, the type-species of *Hippoporina* Neviani (1895 : 109), designated by Waters (1918 : 98), see discussion in Hastings & Ryland (1968).

- 307 *L. adpressa*, Busk: ***Hippopodinella lata*** (Busk, 1856).
Not *L. adpressa* Busk (1854 : 82), see Lagaaij (1952 : 129), but *L. lata* Busk (1856 : 309).
Var. α : ***Hippopodinella adpressa*** (Busk, 1854). This is *L. adpressa* Busk (1854), type-species by original designation of *Hippopodinella* Barroso (1924), and not British.
- 309 *L. hippopus*, Smitt: ***Hippoporella hippopus*** (Smitt, 1867).
Type-species by monotypy of *Hippoporella* Canu (1917).
- 311 *L. edax*, Busk: ***Hippoporidra edax*** (Busk, 1859).
Type-species by original designation of *Hippoporidra* Canu & Bassler (1927).
- 315 *L. polita*, Norman: ***Hemicyclopora polita*** (Norman, 1864).
Type-species by original designation of *Hemicyclopora* Norman (1894).
L. discrepans Jullien (1903 : 72) appears to be a synonym.
- 317 *Umbonella* [replaced on p. cxxxviii and in Vol. II by *Umbonula*] *verrucosa*, Esper: ***Umbonula littoralis*** Hastings (1944) and
Umbonula oviceolata Hastings (1944).
U. verrucosa is type-species by monotypy of *Umbonula* Hincks (1880). Hincks included two different species under this heading (regarding them merely as shallow and deep-water forms), which have been described subsequently as *Umbonula littoralis* Hastings (1944) and *U. oviceolata* Hastings (1944), illustrated by Hincks in Pl. XXXIX, figs. 1 and 2 respectively. The latter, which alone extends into the Mediterranean (Gautier, 1962), is evidently, as Hastings suggested, identical with Esper's species. Since the name *Cellepora verrucosa* Esper (1790) is a junior homonym of *C. verrucosa* Linnaeus (1767), it is invalid and not available for the type-species of the genus, which is, therefore, *Umbonula oviceolata* Hastings.
- 323 *Porella concinna*, Busk: ***Porella concinna*** (Busk, 1854).
Var. α (*Belli*, Dawson): ***Porella concinna*** var. ***belli*** Dawson, 1859. *Lepralia Belli* Dawson (1859 : 256) has been the source of considerable confusion in the past, but Kluge's recent opinion (1962 : 432) is to agree with Hincks in regarding it as a variety of *P. concinna*.
Var. β (*gracilis*): ***Smittina bella*** (Busk, 1860). This "variety" is *Smittina bella* (see Norman, 1894; and Osburn 1952 : 403), which Hincks described on p. 352.
- 326 *P. minuta*, Norman: ***Porella minuta*** (Norman, 1869).
- 329 *P. struma*, Norman: ***Porella struma*** (Norman, 1868).
- 330 *P. compressa*, Sowerby: ***Porella compressa*** (Sowerby, 1805).
It is frequently assumed, e.g. by Bassler (1953) and Harmer (1957), that this species is type of the genus *Porella*. However, if Lagaaij's discussion (1952 : 97) is read in conjunction with Art. 70 of the International Rules, it seems that *Millepora cervicornis* Pallas (1766) should be taken as the species intended by Gray (1848).
In view of Osburn's (1952 : 391) clear indication that *Millepora compressa* Sowerby (non Linnaeus, 1758) and *M. cervicornis* are not congeneric, the type-

species must be fixed by application to the International Commission (Ryland 1968d).

334 *P. Laevis*, Fleming: ***Porella laevis*** (Fleming, 1828).

336 *Escharoides rosacea*, Busk: ***Ragionula rosacea*** (Busk, 1856).

Generic placing is confused on both nomenclatural and systematic grounds. Verrill (in Kumlien, 1879 : 149; also Verrill, 1880 : 196) proposed *Escharopsis* for "two Northern Atlantic species *E. lobata* (Lamx. [1821 : 40]) = *E. Sarsii* Smitt [1868b : 24-25], and *E. rosacea*, both common in the Gulf of St. Lawrence". The type-species was designated by Norman (1903 : 123) as "*Escharopsis lobata*, Lamouroux, = *E. Sarsii*, Smitt". The doubt expressed by Smitt (1868) as to whether his *Escharoides Sarsii* was truly *Eschara lobata* Lamouroux has persisted. At least, there is nothing in Lamouroux' diagnosis contrary to the view of their being conspecific, nor in the provenance of his specimen "Sur le *Fucus nodosus*, aux environs du banc de Terre-Neuve". The provisions of Art. 70 of the International Rules apply to both Verrill's and Norman's papers, so that Lamouroux' name should be accepted. Thus it is not true that *Escharopsis* is an invalid genus (Osburn, 1952; Bassler, 1953; but cf. Kluge, 1962), but the type should be called *Escharopsis lobata* (Lamouroux, 1821) and not *E. sarsii* (Smitt, 1868) as in Kluge (1962).

Kluge places *Escharoides rosacea* in the same genus, as *Escharopsis rosacea* (Busk, 1856), and there is nothing nomenclaturally against this. Osburn (1952 : 310) remarks, however, that this species was formerly assigned to various genera (including *Escharopsis*) "until Canu and Bassler [1927] very properly erected a new genus for it". In Osburn's view, which I have provisionally accepted, the species is *Ragionula rosacea*, type-species by original designation of *Ragionula* Canu & Bassler (1927 : 7).

339 *E. quincuncialis*, Norman.

This species is now generally referred to *Leiosella* Canu & Bassler (1917 : 48) (Canu & Bassler, 1925; Gautier, 1962) as *L. quincuncialis* (Norman, 1867). In my opinion, however, the generic position of this species requires further consideration.

341 *Smittia Landsborovii*, Johnston: ***Smittina landsborovii*** (Johnston, 1847).

Type-species by original designation of *Smittina* Norman (1903b : 120) (pro *Smittia* Hincks 1879, preoccupied).

Form α (*crystallina*, Norman): var. ***crystallina*** Norman, 1867.

Form β (? *porifera*, Smitt). *Escharella porifera* Smitt (1868b : 9) f. *typica*, which was not indicated by Hincks (in synonymy), is referred to as *Schizomavella porifera* (Smitt, 1868) by Osburn (1952 : 332); f. *minuscula* is referred to as *Smittina minuscula* (Smitt, 1868) by Kluge (1962 : 426); f. *majuscula* is referred to *Smittina arctica* (Norman, 1894) by Osburn (1952 : 402), but as *Smittina majuscula* (Smitt, 1868) by Kluge (1962 : 425), which appears to be nomenclaturally correct. However, all three species are Arctic, and most unlikely to have been found by Hincks (1880a : 345) off the south coast of Devon.

346 *S. reticulata*, J. Macgillivray: ***Smittoidea reticulata*** (J. Macgillivray, 1842).

Referred to *Smittoidea* gen. n. by Osburn (1952 : 409).

- 348 *S. affinis*, Hincks: ***Smittina affinis*** (Hincks, 1862).
This species, introduced by Hincks (1862 : 206), does not appear to conform to the diagnoses of any of the genera formerly regarded as comprising *Smittina* s. lat. as defined by (Osburn, 1952). The difference lies solely in the orientation of the avicularium, otherwise it is closely similar to species of *Smittina* s. str. The definition of this genus must evidently include a statement that the avicularium may be longitudinally or transversely orientated, or wanting (as in *S. cheilostoma*).
- 349 *S. cheilostoma*, Manzoni: ***Smittina cheilostoma*** (Manzoni, 1870).
- 350 *S. marmorea*, Hincks: ***Smittoidea marmorea*** (Hincks, 1877).
Referred to *Smittoidea* gen. n. by Osburn (1952).
- 352 *S. bella*, Busk: ***Smittina bella*** (Busk, 1860).
See also under 323 *Porella concinna*.
- 353 *S. trispinosa*, Johnston: ***Parasmittina trispinosa*** (Johnston, 1838).
Referred to *Parasmittina* gen. n. by Osburn (1952).
Var. α (*Jeffreysi*, Norman): ***Parasmittina jeffreysi*** (Norman, 1876) [in Jeffreys, 1876 : 208]. Type-species by original designation of *Parasmittina* Osburn (1952).
- 357 *Phylactella labrosa*, Busk: ***Phylactella labrosa*** (Busk, 1854).
Type-species of *Phylactella* Hincks (1879) designated by Canu & Bassler (1917). Bassler (1953) renamed *P. labrosa* Hincks (1880a) as *Phylactellipora hincksi*, on the fallacious assumption that *P. labrosa* Hincks was different from *P. labrosa* Busk (see Ryland, 1963b).
Osburn's (1952) account of this genus is extremely confused, and his designation of *Lepralia collaris* Norman (see below) as type-species is invalid. *Phylactella* Hincks is a junior objective synonym of *Alysidota* Busk (1856), type-species *Lepralia labrosa* Busk (1856) by original designation, but which is pre-occupied by *Alysidota* Agassiz (1846). *Alysidotella* Strand (1928), proposed specifically to replace *Alysidota* Busk non Agassiz, is therefore a junior objective synonym of *Phylactella* Hincks.
- 358 *P. collaris*, Norman: ***Phylactellipora collaris*** (Norman, 1867).
Type-species by original designation of *Phylactellipora* Bassler (1953 : 217), who, however, reversed the diagnoses of *Phylactella* and *Phylactellipora* (Ryland, 1963b : 29).
- 359 *P. eximia*, Hincks: ***Phylactella eximia*** (Hincks, 1860).
- 360 *Mucronella Peachii*, Johnston: ***Escharella immersa*** (Fleming, 1828).
Type-species of *Escharella* Gray (1848) selected by Norman (1903b : 117). For a discussion of the priority and validity of both *Escharella* and *immersa* Fleming, see Ryland (1963b : 18).
Var. α (*labiosa*, Busk): var. ***labiosa*** Busk, 1856.
Var. β (*octodentata*): ***Escharella octodentata*** (Hincks, 1880). For discussion of status, see Ryland (1963b : 24).
- 363 *M. ventricosa*, Hassall: ***Escharella ventricosa*** (Hassall, 1842).
See also p. 242.
- 366 *M. variolosa*, Johnston: ***Escharella variolosa*** (Johnston, 1838).

- 368 *M. laqueata*, Norman: ***Escharella laqueata*** (Norman, 1864).
- 369 *M. abyssicola*, Norman: ***Escharella abyssicola*** (Norman, 1869).
- 370 *M. microstoma*, Norman: ***Hemicyclopora microstoma*** (Norman, 1864).
Referred by Ryland (1963b : 27, footnote) to *Hemicyclopora* Norman (1894), so *Escharella microstoma* in Kluge (1962) cannot be the same species.
- 371 *M. coccinea*: ***Escharoides coccineus*** (Abildgaard, 1806).
Type-species of *Escharoides* Milne Edwards (1836 : 218, 259) subsequently designated by Verrill in Kumlien (1879 : 149).
Var. α (*mamillata*): ***Escharoides mamillata*** (Wood, 1844). Considered a species by Lagaaij (1952) and Ryland (1963c).
- 376 *M. pavonella*, Alder: ***Umbonula arctica*** (M. Sars, 1851).
Referred to *Umbonula* Hincks by Harmer (1902 : 296). *Lepralia arctica* Sars takes priority over *Eschara pavonella* Alder, 1864.
- 378 *Palmicellaria elegans*, Alder: ***Palmicellaria elegans*** Alder, 1864.
Type-species by monotypy of *Palmicellaria* Alder (1864).
- 379 *P. Skenei*, Ellis and Solander: ***Palmicellaria skenei*** (Ellis & Solander, 1786).
Var. α (*bicornis*): var. ***bicornis*** Busk, 1859. Varietal status discussed by Ryland (1963c).
Var. β (*foliacea*): var. ***foliacea*** Hincks, 1880.
Var. *tridens* (in text): var. ***tridens*** Busk, 1856. Not British.
- 382 *P. lorea*, Alder: ***Palmicellaria lorea*** (Alder, 1864). No additional information.
- 384 *P. (?) cribraria*, Johnston: ***Palmicellaria cribraria*** (Johnston, 1847).
No additional information.
- 385 *Rhynchopora bispinosa*, Johnston: ***Rhynchozoon bispinosum*** (Johnston, 1847).
Type-species of *Rhynchozoon* Hincks, 1895 (Index, p. v) pro *Rhynchopora* Hincks, 1877b (preoccupied by *Rhynchopora* King [Brachiopoda]), of which it was type-species by original designation.
- 391 *Retepora Beaniana*, King: ***Sertella beaniana*** (King, 1846).
Type-species of *Sertella* Jullien (1903) selected by Canu & Bassler (1920). For additional species of *Sertella* see p. 242.
- 395 *R. Couchii*, Hincks: ***Sertella couchii*** (Hincks, 1878).
Referred to *Sertella* by Jullien (1903).
- 398 *Cellepora pumicosa*, Linnaeus: ***Celleporaria pumicosa*** (Pallas, 1766).
Hincks was incorrect in attributing this species to Linnaeus (1767), and has caused subsequent confusion by doing so. *Millepora pumicosa* was introduced by Pallas (1766 : 254), and his first reference was to Ray and the second to the Porous Eschara of Ellis (1755 : 75, Pl. 27 F), which has been accepted by subsequent authors (Johnston, 1847; Busk, 1854; Hincks, 1880a) as being the species they knew as *Cellepora pumicosa*. It is true that Pallas founded his *M. pumicosa* on more than one species, but this does not prevent availability of his name (International Rules, Art. 17 [2]). The *Cellepora pumicosa* of Linnaeus (1767 : 1286) was a branching form, and certainly not that described by Ellis or later authors, and his selection must be disregarded. Johnston (1847), Gray (1848) and Busk (1854) themselves evidently grouped more than

one species under the name *Cellepora pumicosa*, see Lagaaij (1952 : 131), but none of these was branched, and one of them was certainly the species re-described by Hincks. Busk (1854, Pl. CX, figs. 5-6) gave clear illustrations which define the species he intended (it is impossible to accept Lagaaij's view that these depict *Cellepora armata* Hincks), and the position may be regarded as having finally been stabilized by Hincks (1880). Thus the identity of the species known as *Cellepora pumicosa* is not in doubt. It is so obviously not the one described by Linnaeus, that it now seems surprising that he should have been credited with the species by Hincks. Recent writers have used the attribution "Hincks" or "*auctt. non* Linnaeus", with the inherent implication that *Cellepora pumicosa* as used was an invalid name. The situation is rectified by restoring Pallas' authorship, excluding *Cellepora pumicosa* Linnaeus (1767) from the recognized synonymy of the species, and regarding Hincks as having selected the species to which the name should apply.

Final stabilization of this species requires the designation of a type specimen. NEOTYPE (here chosen): British Museum (Natural History) 1899.5.1.1301, specimen 3 (on piece of shell); South Devon.

C. pumicosa appears to be referable to *Celleporaria* Lamouroux (1821) as defined by Harmer (1957 : 663). Harmer's revival of *Celleporaria*, to replace *Holoporella* Waters, was a matter of priority, but his change of type-species is unacceptable. He proposed (p. 663, footnote) that, since Bassler (1935 : 68) had stated that *Cellepora cristata* Lamarck, type-species of *Celleporaria*, was unrecognizable, another genosyntype (*C. oculata* Lamarck) should be chosen as type-species. This is not in accordance with the International Rules, and is, moreover, unnecessary, for he proceeded to state (p. 663) that Lamouroux' figure "leaves little doubt" that *C. cristata* is identical with *C. repleta* (Waters). If Harmer recognized *C. cristata* rightly, it is congeneric with *C. oculata*, and his definition of *Celleporaria* can be retained with the correct type-species.

Pouyet's (1963 : 12) reason for preferring *Holoporella* Waters (1909) to *Celleporaria* Lamouroux is inadmissible. If definition, rather than type-species, were to be taken as the criterion of recognition for a genus, then most of those introduced before the mid-nineteenth century would have to be abandoned!

401 *C. ramulosa*, Linnaeus: ***Omalosecosa ramulosa*** (Linnaeus, 1767).

Type-species by original designation of *Omalosecosa* Canu & Bassler (1925).

403 *C. dichotoma*, Hincks: ***Buskea dichotoma*** (Hincks, 1862).

Type-species by original designation of *Harmerella* Lagaaij (1952 : 140), which appears, however, to be a junior subjective synonym of *Buskea* Heller (1867), type-species by monotypy: *Buskea nitida* Heller, 1867.

Var. α (*attenuata*, Alder): var. ***attenuata*** Alder, 1864.

406 *C. avicularis*, Hincks: ***Turbicellepora avicularis*** (Hincks, 1860).

For discussion of this genus and the reasons for its establishment, see Ryland (1963b : 33).

Pouyet (1965) proposes to retain *Schismopora* P. H. MacGillivray, for this and related species, by altering the type-species (*Cellepora costata* MacGillivray, selected by Gregory, 1893), as suggested by Harmer (1957 : 908). It should

be noted, however, that a valid choice of type-species can be revoked only by decision of the International Commission on Zoological Nomenclature.

409 *C. tubigera*, Busk: ***Turbicellepora tubigera*** (Busk, 1859).

410 *C. armata*, Hincks: ***Turbicellepora armata*** (Hincks, 1860).

411 *C. Costazii*, Audouin: ***Celleporina hassallii*** (Johnston, 1847).

Harmer (1957 : 901) has shown that the British species *C. hassallii*, type-species by monotypy of *Celleporina* Gray (1848), is different from though congeneric with *C. costazii* (Audouin, 1826).

Var. α (*tubulosa*): var. ***tubulosa*** Hincks, 1880.

414 *Celleporella lepralioides*, Norman: ***Lagenipora lepralioides*** (Norman, 1868).

For discussion, see 235 *Lagenipora socialis*, Hincks.

415 *C. pygmaea*, Norman: ***Lagenipora pygmaea*** (Norman, 1869).

For discussion of this species and its generic placing, see Ryland (1963b : 30).

CYCLOSTOMATA

419 *Crisia cornuta*, Linnaeus: ***Crisidia cornuta*** (Linnaeus, 1758).

Type-species by original designation of *Crisidia* Milne Edwards (1838).

Var. α (*geniculata*): ***Filicrisia geniculata*** (Milne Edwards, 1838). Type-species by monotypy of *Filicrisia* d'Orbigny (1853 : 604).

420 *C. eburnea*, Linnaeus: ***Crisia eburnea*** (Linnaeus, 1758).

Type-species of *Crisia* Lamouroux (1812 : 183), see Harmer (1923).

Var. α (*aculeata*, Hassall): ***Crisia aculeata*** Hassall, 1841. Harmer (1891) has amplified the description of this and other British species.

Var. β (*producta*, Smitt): ***Crisiella producta*** (Smitt, 1865). Type-species by original designation of *Crisiella* Borg (1924). There appear to be no definite British records of *C. producta*.

422 *C. denticulata*, Lamarck: ***Crisia denticulata*** (Lamarck, 1816).

Var. α : ***Crisia ramosa*** Harmer, 1891.

425 *Stomatopora granulata*, M.-Edwards: ***Stomatopora trahens*** (Couch, 1841).

The species described by Hincks is not *Alecto granulata* Milne Edwards (1838), see Lagaaij (1963 : 208), but *Tubulipora trahens* Couch. Couch described the species a second time (1844 : 105) and illustrated it in Pl. IX, fig. 5 (not fig. 3 as stated in the text, see Gregory, 1896 : 48, footnote).

427 *S. major*, Johnston: ***Diaperoecia major*** (Johnston, 1847).

Referred to *Diaperoecia* Canu (1918) by O'Donoghue & O'Donoghue (1926 : 23). Description amplified by Hastings (1963 : 122).

429 *S. dilatans*, Johnston: ***Oncousoecia dilatans*** (Johnston, 1847).

Type-species of *Oncousoecia* Canu (1918 : 325), designated by Osburn (1933).

Supplementary description given by Hastings (1963 : 117).

430 *S. johnstoni*, Heller: ***Diaperoecia johnstoni*** (Heller, 1867).

Referred to *Diaperoecia* by O'Donoghue & O'Donoghue (1926).

Var. α (*robusta*). No information.

432 *S. expansa*.

Preoccupied by *Stomatopora* [referred to *Tubulipora* by Borg, 1933 : 518] *expansa* Packard (1863 : 406), see Jelly (1889 : 255).

433 *S. incurvata*, Hincks: ***Stomatopora incurvata*** (Hincks, 1860).

Introduced as a nomen nudum (Hincks, 1858). The form described by Balavoine (1958 : 56, Pl. I, fig. 6) as *Stomatopora Roberti Lamii* gen. et sp. n. falls within the range of variation recorded for the present species by Hincks and evident in specimens in the collections of the British Museum (Natural History) (P. L. Cook, pers. comm.). I regard Balavoine's species as being synonymous with *S. incurvata*.

434 *S. diastoporides*, Norman: ***Oncousoecia diastoporides*** (Norman, 1869).

Referred to *Oncousoecia* Canu (1918) by Osburn (1933).

435 *S. compacta*, Norman. No additional information.

436 *S. incrassata*, Smitt: ***Proboscina incrassata*** Smitt, 1865.

Referred back to *Proboscina* Audouin (1826) by O'Donoghue & O'Donoghue (1926).

437 *S. deflexa*, Couch: ***Entalophora deflexa*** (Couch, 1841).

There seems little doubt that, as proposed by Marcus (1950 : 6), *Entalophora clavata* (Busk, 1859) described by Hincks on p. 456 is a junior synonym of the present species.

438 *S. fungia*, Couch: ***Tubulipora penicillata*** (Fabricius, 1780).

The conspecificity of *Tubulipora fungia* Couch (1841 : 72) with *Tubulipora penicillata* Fabricius (1780 : 429), suspected by Nordgaard (1918), is accepted by Kluge (1962 : 104).

441 *S. fasciculata*: ***Filifascigera fasciculata*** (Hincks, 1880).

Referred to *Filifascigera* d'Orbigny (1853 : 684) by Osburn (1953).

444 *Tubulipora lobulata*, Hassall: ***Tubulipora lobifera*** Hastings, 1963.

The species described by Hincks is not *T. lobulata* Hassall (1841), see Hastings (1963a); also, fig. 5-5a on Pl. LXI illustrates not this species but *Oncousoecia dilatans*.

446 *T. flabellaris*, Fabricius: ***Tubulipora phalangea*** Couch, 1844.

T. flabellaris (Fabricius, 1780) is probably not a British species (Harmer, 1898); see also p. 244.

448 *T. fimbria*, Lamarck: ***Tubulipora plumosa*** Harmer, 1898.

For discussion of identity of British species, see Harmer (1898); for discussion of authorship of *T. plumosa*, see Ryland (1963b).

451 *Idmonea Atlantica*, E. Forbes: ***Idmidronea atlantica*** (Forbes in Johnston, 1847).

Placed by Borg (1944) in *Idmidronea* Canu & Bassler (1920), and not as claimed by Kluge (1962) the type-species of *Idmonea*, which is a synonym of *Tubulipora* Lamarck (1816) (see Harmer, 1898 : 86; Borg, 1944 : 32).

Var. α (*tenuis*, Busk): ***Idmidronea flexuosa*** (Pourtales, 1867). As pointed out by Osburn (1953), the identity of var. *tenuis* Busk (1875) with *Idmonea flexuosa* Pourtales cannot be regarded as absolutely certain. There are no British records.

- 453 *I. serpens*, Linnaeus: ***Tubulipora liliacea*** (Pallas, 1766).
Identity recognized by Harmer (1898).
Var. α (*radiata*). No information.
- 456 *Entalophora clavata*, Busk: ***Entalophora deflexa*** (Couch, 1841).
See 437 *Stomatopora deflexa*, Couch.
- 458 *Diastopora patina*, Lamarck: ***Berenicea patina*** (Lamarck, 1816).
For use and validity of *Berenicea* Lamouroux (1821), see Buge (1957 : 62).
- 462 *D. obelia*, Johnston: ***Diplosolen obelia*** (Johnston, 1838).
Type-species by original designation of *Diplosolen* Canu (1918).
- 463 *D. Sarniensis*, Norman: ***Berenicea sarniensis*** (Norman, 1864).
- 464 *D. suborbicularis*: ***Berenicea suborbicularis*** (Hincks, 1880).
- 468 *Hornera lichenoides*, Linnaeus: ***Hornera lichenoides*** (Linnaeus, 1758).
- 469 *H. violacea*, Sars: ***Stegohornera violacea*** (M. Sars, 1863).
Type-species by monotypy of *Stegohornera* Borg (1944 : 177).
- 473 *Lichenopora hispida*, Fleming: ***Disporella hispida*** (Fleming, 1828).
Type-species by monotypy of *Disporella* Gray (1848), reintroduced by Borg (1944). See also *D. venabulum* (p. 245).
Var. α (*meandrina*, Peach). No information.
Var. β : ***Disporella mamillata*** (Lagaaij, 1952). Appears to be congeneric with *D. hispida* (Fleming).
- 476 *L. radiata*, Audouin: ***Lichenopora radiata*** (Audouin, 1826).
- 478 *L. verrucaria*, Fabricius: ***Lichenopora verrucaria*** (Fabricius, 1780).
- 479 *L. regularis*, D'Orbigny: ***Actinopora stellata*** (Koch & Dunker, 1837).
The type-species of *Actinopora* d'Orbigny (1853 : 762) is *A. regularis* d'Orbigny (1853) designated by Gregory (1896 : 174), but which was placed by Gregory (1909 : 21) under the synonymy of *Ceriopora stellata* Koch & Dunker (1837).
- 481 *Domopora stellata*, Goldfuss: ***Domopora truncata*** (Fleming, 1828).
According to Gregory (1909 : 277-279), the species described by Hincks is different from the one named by Goldfuss (1826 : 39). Fleming (1828) introduced *Tubulipora truncata*, noting specifically that it was not *Myriapora truncata* Pallas (1766). From his description it is quite clear that the species intended was that later called *Domopora stellata* by Hincks.
- 485 *D. truncata*, Jameson.
If, as Hincks maintained, this is a distinct species, it requires a new name. The name *truncata* was not introduced by Jameson (1811), who merely recorded *Millepora truncata* Linnaeus (1767) from the Shetland Islands. Reference to Linnaeus (1767) shows that the species concerned is *Myriapora truncata* Pallas (1766), which definitely does not occur in the Shetland Islands. (The validity of *Myriapora* is upheld by Lagaaij, 1952). Jameson's species was, presumably, the one later and quite properly described as *Tubulipora truncata* by Fleming (see above).
- 486 *Tubulipora hyalina*, Couch. Unrecognizable.

CTENOSTOMATA

- 491 *Alcyonidium gelatinosum*, Linnaeus: ***Alcyonidium gelatinosum*** (Linnaeus, 1767).

Type-species by monotypy, through its junior synonym *A. diaphanum* Lamouroux (1813), of *Alcyonidium* Lamouroux (1813). Kluge (1962 : 189) distinguishes a var. *diaphanum*, attributed to Farre (1837), which is incorrect. *A. gelatinosum* as described by Hincks, probably also includes *A. proliferans* Lacourt (1951), which may in fact only be a growth form (see p. 243).

- 493 *A. hirsutum*, Fleming: ***Alcyonidium hirsutum*** (Fleming, 1828).

- 495 *A. mamillatum*, Alder: ***Alcyonidium mamillatum*** Alder, 1856.

- 496 *A. lineare*, Hincks.

Borg's (1933 : 546) view that this is a growth form of *A. mamillatum* is accepted by Prenant & Bobin (1956 : 199).

- 497 *A. disjunctum*, Hincks: ***Alcyonidium disjunctum*** Hincks, 1877.

No additional information.

- 498 *A. mytili*, Dalyell: ***Alcyonidium mytili*** Dalyell, 1848.

The status of *A. mytili* possibly deserves further study, but I list it here in the sense defined by Prenant & Bobin (1956 : 217) and Matricon (1960).

- 500 *A. albidum*, Alder: ***Alcyonidium albidum*** Alder, 1856.

- 501 *A. polyoum*, Hassall: ***Alcyonidium polyoum*** (Hassall, 1841).

- 502 *A. parasiticum*, Fleming: ***Alcyonidium parasiticum*** (Fleming, 1828).

- 504 *A. radiatum*, Alder, MS. *A nomen nudum*.

- 506 *Flustrella hispida*, Fabricius: ***Flustrellidra hispida*** (Fabricius, 1780).

Type-species by original designation of *Flustrellidra* Bassler (1953) pro *Flustrella* Gray (1848), preoccupied by *Flustrella* Ehrenberg (1839 : 90).

- 509 *Arachnidium hippothoides*, Hincks: ***Arachnidium hippothoides*** Hincks, 1859.

Type-species by monotypy of *Arachnidium* Hincks (1859).

- 510 *A. clavatum*, Hincks: ***Arachnidium clavatum*** Hincks, 1877.

- 511 *A. fibrosum*: ***Arachnidium fibrosum*** Hincks, 1880.

- 513 *Vesicularia spinosa*, Linnaeus: ***Vesicularia spinosa*** (Linnaeus, 1767).

Type-species of *Vesicularia* J. V. Thompson (1830), discussed by Harmer (1915 : 61).

- 516 *Amathia lendigera*, Linnaeus: ***Amathia lendigera*** (Linnaeus, 1767).

Type-species by monotypy of *Amathia* Lamouroux (1812 : 184.)

- 519 *Bowerbankia imbricata*, Adams: ***Bowerbankia imbricata*** (Adams, 1800).

Type-species by monotypy, through its junior synonym *B. densa* Farre (1837), of *Bowerbankia* Farre (1837). *B. densa* is a growth form of *B. imbricata*.

- 521 *B. caudata*, Hincks: ***Bowerbankia gracilis*** Leidy, 1855.

Synonymy of *Valkeria caudata* Hincks (1877 : 215) with *B. gracilis* Leidy was accepted by Bobin & Prenant (1954).

- 522 *B. pustulosa*, Ellis & Sol.: ***Bowerbankia pustulosa*** (Ellis & Solander, 1786).

- 524 *B. citrina*, Hincks: ***Bowerbankia citrina*** (Hincks, 1877).

- 525 *B. gracillima*, Hincks: ***Bowerbankia gracillima*** (Hincks, 1877).

- 527 *Avenella fusca*, Dalyell: ***Avenella fusca*** Dalyell, 1848.
Type-species by monotypy of *Avenella* Dalyell, 1848.
- 529 *Farrella repens*, Farre: ***Farrella repens*** (Farre, 1837).
Type-species of *Farrella* Ehrenberg (1839, Table 2, following p. 120) pro *Lagenella* Farre (1837 : 403), preoccupied, of which it was type by monotypy.
Form *elongata*. A growth form according to Marcus (1926 : 50), a conclusion accepted by Prenant & Bobin (1956) and Miss P. L. Cook (pers. comm.). I do not follow Osburn & Soule (1953), therefore, in regarding *Farrella elongata* (van Beneden, 1845[a]) as a species.
- 532 *Buskia nitens*, Alder: ***Buskia nitens*** Alder, 1856.
Type-species by monotypy of *Buskia* Alder (1856).
- 535 *Cylindroecium giganteum*, Busk: ***Nolella stipata*** Gosse, 1855.
Type-species by monotypy of *Nolella* Gosse (1855 : 35). Harmer (1915 : 52) recognized that *Cylindroecium* Hincks (1880a) was a synonym of *Nolella* Gosse, though it was uncertain from the original description whether Gosse's name applied to the present species or to the following one: he thought the former. If the generic name *Nolella* is to be employed, so must the name *stipata*, which antedates *gigantea* Busk (1856), as in Osburn & Soule (1953) (cf. Prenant & Bobin, 1956).
- 536 *C. dilatatum*, Hincks: ***Nolella dilatata*** (Hincks, 1860).
- 537 *C. pusillum*: ***Nolella pusilla*** (Hincks, 1880).
Redescribed by Ryland (1958b).
- 539 *Anguinella palmata*, Van Beneden: ***Anguinella palmata*** van Beneden, 1845.
Type-species by monotypy of *Anguinella* van Beneden (1845[b]).
- 540 *Nolella stipata*, Gosse: ***Nolella stipata*** Gosse, 1855.
See 535 *Cylindroecium giganteum* (above).
- 543 *Triticella flava*, Dalyell: ***Triticella flava*** Dalyell, 1848.
Type-species by monotypy of *Triticella* Dalyell (1848).
- 545 *T. Korenii*, G. O. Sars: ***Triticella koreonii*** G. O. Sars, 1874.
T. Boeckii, Sars (in text) is a synonym (Silén, 1936).
- 547 *T. pedicellata*, Alder: ***Triticella pedicellata*** (Alder, 1856).
- 548 *Lagenella nutans* (mentioned in text). See *Mimosella verticillata* (p. 244).
- 549 *Hippuraria Egertoni*, Busk: ***Triticella koreonii*** G. O. Sars, 1874.
Identity recognized by Waters (1910 : 241, footnote) and further discussed by Harmer (1915 : 90).
- 551 *Valkeria uva*, Linnaeus: ***Walkeria uva*** (Linnaeus, 1758).
Type-species by monotypy, through its junior synonym *W. cuscuta* (Linnaeus), of *Walkeria* Fleming (1823) (f. *cuscuta* is a condition of growth of *W. uva*). The generic name was spelled *Walkeria* when introduced (Fleming, 1823), but altered to *Valkeria* by the same author in a later work (Fleming, 1828). In accordance with Art. 32 (a) and Appendix C II of the International Code of Zoological Nomenclature, the original spelling should be used.
- 554 *V. tremula*, Hincks: ***Walkeria tremula*** Hincks, 1862.
- 556 *Mimosella gracilis*, Hincks: ***Mimosella gracilis*** Hincks, 1851.
Type-species by monotypy of *Mimosella* Hincks (1851).

- 561 *Victorella pavid*a, Saville Kent: ***Victorella pavid*a** Kent, 1870.
Type-species by monotypy of *Victorella* Kent (1870). Compare *Tanganella muelleri* (p. 243), which is very similar—possibly identical.

ENTOPROCTA

- 565 *Pedicellina cernua*, Pallas: ***Pedicellina cernua*** (Pallas, 1774).
Hincks' citation of Pallas (1771 [actually 1778]) for the original description is incorrect. Type-species of *Pedicellina* by monotypy: *P. echinata* M. Sars (1835), a synonym of *Brachionus cernuus* Pallas.
Var. α (*glabra*). Glabrous form of *P. cernua* (discussed by Prenant & Bobin, 1956 : 102).
- 567 *P. nutans*, Dalyell: ***Pedicellina nutans*** Dalyell, 1848.
Description amplified by Ryland (1961a).
- 570 *P. gracilis*, Sars: ***Barentsia gracilis*** (M. Sars, 1835).
Referred by Hincks (1887) to *Barentsia* Hincks (1880c). Compare *B. benedeni* (p. 245).
- 573 *Loxosoma singulare*, Keferstein: ***Loxosomella fauveli*** Bobin & Prenant, 1953.
L. singulare is type-species of *Loxosoma* Keferstein (1862) by monotypy; but the species described by Hincks, and again by Atkins (1932), is not Keferstein's species. See also Prenant & Bobin (1956 : 78).
- 574 *L. phascolosomatum*, Carl Vogt: ***Loxosomella phascolosomata*** (Vogt, 1876).
Referred to *Loxosomella* gen. n. by Mortensen (1911).
- 575 *L. claviforme*: ***Loxosomella claviformis*** (Hincks, 1880).
Referred to *Loxosomella* Mortensen by Bobin & Prenant (1953).
There have been numerous additions in the genera *Loxosoma* and *Loxosomella*, see p. 245.

PTEROBRANCHIA

- 580 *Rhabdopleura Normani*, Allman: ***Rhabdopleura normani*** Allman, 1869.
Type-species by monotypy of *Rhabdopleura* Allman (1869).
- 581 *Rhabdopleura compacta*: ***Rhabdopleura compacta*** Hincks, 1880.
For validity see Stebbing (1968).

3. ADDITIONAL SPECIES RECORDED AROUND THE BRITISH ISLES

In certain cases, Hincks described under one name two forms now recognized as specifically distinct. These have been dealt with in the main section of the Index (as in 14, *Eucratea chelata* and 317, *Umbonella verrucosa*). On the other hand, there are species which have been described subsequently and were not covered by Hincks in a definitely recognizable manner (e.g. *Crisia ramosa*), or not at all (e.g. *Conopeum seurati* and *Hypophorella expansa*); and some have been introduced to Britain subsequently (e.g. *Bugula neritina*.) These are regarded as additional species and are included in the list which follows.



FIG. 4.

It would be neither practicable nor sensible, when dealing with a group of marine animals, to restrict the definition of "British" to coastal or territorial waters, particularly as a number of interesting records come from the deep water of the continental slope. Accordingly, the southern and northern limits of the area covered have been drawn at 46° and 62° N respectively.

The southern boundary at 46° N allows inclusion of the entire Brittany peninsula, with its marine stations at Dinard, Roscoff and Concarneau. This is a logical step from the traditional acceptance of the Channel Islands as part of the British area. In addition, it includes that section of the continental slope from which, in recent

FIG. 4. Position of stations yielding polyzoa new to the British fauna, and of other localities referred to in the text.

- ▲ Norwegian North Atlantic Expedition (Nordgaard, 1900).
10 : $61^{\circ} 41' \text{ N}$, $3^{\circ} 19' \text{ E}$; 402 m.

- "Michael Sars" (Nordgaard, 1907).
63 : $61^{\circ} 21' \text{ N}$, $5^{\circ} 12' \text{ W}$; 357 m.
64 : $61^{\circ} 10' \text{ N}$, $5^{\circ} 46' \text{ W}$; 290 m.
76 : $59^{\circ} 23' \text{ N}$, $7^{\circ} 50' \text{ W}$; 1100 m.
82 : $61^{\circ} 9' \text{ N}$, $7^{\circ} 54' \text{ W}$; 330 m.
277 : $57^{\circ} 6' \text{ N}$, $2^{\circ} 58' \text{ E}$; 68 m.
278 : $57^{\circ} 4' \text{ N}$, $4^{\circ} 14' \text{ E}$; 65 m.

- Irish investigations (Nichols, 1911).
151 : $54^{\circ} 17' \text{ N}$, $11^{\circ} 33' \text{ W}$; 719 m.
194 : $54^{\circ} 49' \text{ N}$, $10^{\circ} 30' \text{ W}$; 679 m.
353 : $50^{\circ} 37' - 50^{\circ} 40' \text{ N}$, $11^{\circ} 32' \text{ W}$; 457-991 m.
477 : $51^{\circ} 15' \text{ N}$, $11^{\circ} 47' \text{ W}$; 1293-1300 m.
479 : $51^{\circ} 20' \text{ N}$, $11^{\circ} 41' \text{ W}$; 656-1024 m.
504 : $50^{\circ} 42' \text{ N}$, $11^{\circ} 18' \text{ W}$; 1146-1432 m.
506 : $50^{\circ} 34' \text{ N}$, $11^{\circ} 19' \text{ W}$; 1207-1227 m.

- ◇ Deep-sea trawling (Kirkpatrick, 1889).
1 : approx. $50^{\circ} 50' \text{ N}$, $11^{\circ} 26' \text{ W}$; 576 m.

- ▼ "L'Hirondelle" (Jullien & Calvet, 1903).
(Longitudes refer to Greenwich, see p. 238.)
42 : $46^{\circ} 47' \text{ N}$, $3^{\circ} 52' 30'' \text{ W}$; 136 m.
44 : $46^{\circ} 27' \text{ N}$, $4^{\circ} 10' \text{ W}$; 166 m.
46 : $46^{\circ} 25' \text{ N}$, $3^{\circ} 35' 30'' \text{ W}$; 155 m.
85 : $46^{\circ} 31' \text{ N}$, $4^{\circ} 32' \text{ W}$; 180 m.

- ▽ "Princess Alice II", "L'Hirondelle II" (Calvet, 1931).
1043 : $59^{\circ} 03' \text{ N}$, $1^{\circ} 48' \text{ W}$; 88 m.
1535 : $47^{\circ} 46' \text{ N}$, $5^{\circ} 40' \text{ W}$; 132 m.
2974 : off Belle-Ile; 85 m.

- ◆ "Vienne" on La Chapelle Bank (Guérin-Ganivet, 1911a).
14 : $47^{\circ} 37' \text{ N}$, $6^{\circ} 30' \text{ W}$; 200 m.
15 : $47^{\circ} 30' \text{ N}$, $6^{\circ} 50' \text{ W}$; 400 m.

years, collections of Polyzoa have been made by R. V. "Sarsia" (Ryland, in preparation).

The northern boundary at 62° N passes clear of the Shetland Islands to the Norwegian coast at Nordfjorden. The well-studied area around Bergen is on the same latitude as Shetland. The Faroe Islands, which straddle latitude 62° N, have also been included.

The natural western boundary follows the continental slope (the 1500 m. isobath approximately sets the limit at the present time) from Faroe, west of Faroe Bank, Rockall Bank and Porcupine Bank, then across the Western Approaches into the Bay of Biscay. The eastern boundary lies at 14° E, which includes the Öresund and Kiel Bay within the area, but excludes the Baltic Sea.

A small number of High Arctic species, that do not occur in Norway south of the Lofoten Islands, have been recorded from the Faroe Islands (Kramp, 1934)—apparently colonized from Greenland and Iceland via the North Atlantic Transversal Ridge. Further southward spread by way of the Wyville Thomson Ridge to northern Scotland might also be possible, and one species (*Celleporina surcularis*) may perhaps have reached the Shetland Islands by this route (see comment on p. 242).

Many of the records, particularly from deep water, come from the reports of research ships, and the positions of relevant stations are indicated in Text-fig. 4, together with other localities mentioned in this list. (It should be noted that Jullien & Calvet, 1903, like Calvet, 1907, and Guérin-Ganivet, 1911a, measure longitude with reference to the Paris meridian, 2° 20' 14" east of Greenwich).¹

Some of the species listed are very imperfectly known, and the generic placing may be rather conjectural. In square brackets one or more references to descriptions follows the name, and then come details of the occurrence of the species.

POLYZOA

CHEILOSTOMATA (ANASCA)

Membranipora tenuis Desor, 1848 [Marcus, 1940 : 126; Prenant & Bobin, 1966 : 120].

Present in the Öresund (Levinsen, 1894; Marcus, 1940).

Membranipora tuberculata (Bosc, 1802) [Prenant & Bobin, 1966 : 115].

Washed up on Sargassum weed at Brest (Guérin-Ganivet, 1911b, as *M. tehuelcha*).

Conopeum seurati (Canu, 1928) [Prenant & Bobin, 1966 : 1207].

In brackish water, east, south and west coasts of Britain (Markowski, 1960, as *C. spiculatum*; Cook, 1962).

Sarsiflustra abyssicola (M. Sars in G. O. Sars, 1872) [Kluge, 1962 : 319; Prenant & Bobin, 1966 : 173].

Taken by the "Michael Sars" off the north-west of Scotland, St. 76 (Nordgaard, 1907). Type-species by monotypy of *Sarsiflustra* Jullien (Jullien & Calvet, 1903 : 43).

¹ My attention was drawn to this by Miss P. L. Cook.

Chartella calveti (Guérin-Ganivet, 1911) [Prenant & Bobin, 1966 : 193].

Occurs in shallow water in the Brest-Roscoff area. Placed by Prenant & Bobin in *Terminoflustra*, but see the comment on this genus under 122 (p. 212).

(?) *Crassimarginatella tensa* (Norman, 1903 : 595).

Dredged from fjords around Bergen and in Hardangerfjorden, and described as *Oochilina tensa*. The correct generic placing is not clear, but *Oochilina* is a junior objective synonym of *Crassimarginatella* Canu (1900).

Alderina aquitanica (Jullien, 1903) [Jullien & Calvet, 1903 : 45; Prenant & Bobin, 1966 : 214].

Off Brittany, St. 42. Described as *Biflustra aquitanica*, but Prenant & Bobin appear correct in referring the species to *Alderina* Norman.

Callopora rylandi Bobin & Prenant, 1965 [Prenant & Bobin, 1966 : 231].

Description based on specimens from Roscoff. Material from the Channel Islands is present in the British Museum (Natural History). Recently discovered in south-west Wales.

Tegella arctica (d'Orbigny, 1853) [Kluge, 1962 : 280].

Faroe Islands (Kramp, 1934).

Tegella armifera (Hincks, 1880) [Kluge, 1962 : 276; Prenant & Bobin, 1966 : 242].

Dredged to the east of the Orkney Islands, St. 1043 (Calvet, 1931).

Cauloramphus cymbaeformis (Hincks, 1877) [Kluge, 1962 : 298].

Faroe Islands (Kramp, 1934).

Chlidonia pyriformis (Bertoloni, 1810) [Levinsen, 1909 : 197, as *C. cordieri*].

Calvados (Normandy) (Busk, 1884 : 8, as *C. cordieri*).

Doryporella reticulata Ryland, 1963 [Ryland, 1963b : 9].

Bergen, where Korsfjorden meets the Atlantic, 75-180 m.

Calpensia nobilis (Esper, 1796) [Prenant & Bobin, 1966 : 337].

Guernsey (Norman, 1907, as *Micropora impressa*); La Chapelle Bank (Guérin-Ganivet, 1911a, as *M. impressa*). For taxonomic discussion see under 174 (p. 216).

Scrupocellaria elongata (Smitt, 1868) [Kluge, 1962 : 382, as *S. arctica*; Prenant & Bobin, 1966 : 409].

The var. *congesta* Norman (1903) was found in shallow water near Bergen (Ryland 1963b : 12, with a note on the name of the species).

Scrupocellaria grimaldii Jullien, 1903 [Jullien & Calvet, 1903 : 34; Prenant & Bobin, 1966 : 405].

Off Brittany, St. 42 and 85. It seems almost certain that this is actually *S. inermis* Norman (Hincks, 1880 : 46), but slight doubt remains as Jullien's illustration appears to indicate the presence of a single axillary vibraculum.

Scrupocellaria intermedia Norman, 1893 [Kluge, 1962 : 378; Prenant & Bobin, 1966 : 431].

The southernmost Norwegian record is from Trondheimsfjorden (Norman, 1893), but the species was identified by Nichols (1911 : 9) from St. 151, 353 and 477.

Notoplites harmeri Ryland, 1963 [Ryland, 1963b : 15].

Bergen, where Korsfjorden meets the Atlantic, 75-180 m.

Notoplites smitti (Norman, 1868) [Kluge, 1962 : 371].

A High Arctic species recorded, presumably in error, by Nichols (1911). However, Prenant & Bobin (1966 : 446) can hardly be correct in stating that *Notoplites jeffreysii* is the species intended, since Nichols observed a fork-shaped scutum. *Nordgaardia pusilla* (Nordgaard, 1907).

"Michael Sars" St. 76 (Nordgaard, 1907 : 5). Described as *Synnotum pusillum*, but Kluge (1962 : 362) created for it the new genus *Nordgaardia*.

Dendrobeatia elongata (Nordgaard, 1906) [Kluge, 1962 : 345, as *Bugula*; Prenant & Bobin, 1966 : 479]. (See addendum.)

The original specimen came from Boknfjorden, Stavanger, 140–343 m., which is still the most southerly known locality.

Dendrobeatia fruticosa (Packard, 1863) [Kluge, 1962 : 331; Prenant & Bobin, 1966 : 476].

No British records were included by Hincks (1880 : 92), but the species has been recorded off Cullercoats, Northumberland, by Roper (1913 : 38), and further east in the northern North Sea ("Michael Sars" St. 278, Nordgaard, 1907). Also Faroe Islands (Kramp, 1934). Var. *quadridentata* Lovén in Smitt, 1868 [Kluge, 1962 : 333] was recorded earlier by Nordgaard (1900) off the west coast of Norway, St. 10 of the North-Atlantic Expedition, but the synonymy of this var. has become so confused with that of *D. elongata* (Nordgaard, 1906, q.v.), that it is impossible to be sure to which taxon this refers.

Bugula fulva Ryland, 1960 [Ryland, 1960 : 78].

Widely distributed around the British Isles. The range of variation of *B. fulva* is now known (Ryland, 1962) to include the form originally described as *B. aquilirostris*.

Bugula neritina (Linnaeus, 1758) [Ryland, 1960 : 74].

Widely distributed in ports along the south coast of Britain; presumably introduced by shipping.

Bugula simplex Hincks, 1886 [Ryland, 1960 : 91].

Various localities in southern Britain (Ryland, 1958a).

Bugula stolonifera Ryland, 1960 [Ryland, 1960 : 78].

Ports in south-west Britain.

Kinetoskias smitti (Danielssen, 1868) [Marcus, 1940 : 194; Prenant & Bobin, 1966 : 545].

Recorded from the fjords of southern Norway (Nordgaard, 1906), the Skagerrak (Silén, 1936) and off the south-west of Ireland (Nichols, 1911, St. 506).

Kinetoskias arborescens (Danielssen, 1868) [Prenant & Bobin, 1966 : 548; Smitt, 1868a : 292, 353, Pl. XIX, 28–31, as *Bugula umbella*].

Taken by the Norwegian North-Atlantic Expedition, St. 2, from 1229 m. in Sognefjorden (Nordgaard, 1900). This is the most southerly record.

Erymophora gracilis (Nichols, 1911) [Prenant & Bobin, 1966 : 563].

Recorded by Nichols (1911 : 7; St. 477) off the south-west of Ireland, as *Brettia pellucida* var. *gracilis* nov., later raised to specific level as the type of *Erymophora* gen. n. by Hastings (1943). (See addendum.)

Gephyrotes nitidopunctata (Smitt, 1868) [Kluge, 1962 : 388; Prenant & Bobin, 1966 : 585].

Recorded from various fjords in the Bergen area (Nordgaard, 1906; Ryland, 1963b).

CHEILOSTOMATA (ASCOPHORA)

Haplopoma planum Ryland, 1963 [Ryland, 1963a : 14].

This is the northernmost species of *Haplopoma*, until recently confused with *H. impressum* auctt., which has its southern limit in the Bergen area, Hardangerfjorden, and the Shetland Islands. The "Michael Sars" record, St. 82 (Nordgaard, 1907), presumably belongs to this species.

Hippothoa expansa Dawson [see 291, p. 224] var. *transparens* Roper, 1913.

Northumberland. Almost certainly a growth form of *Celleporella hyalina* (Linnaeus) [271, p. 223], and not of *H. expansa*.

Myriozoella plana (Dawson, 1859) [Kluge, 1962 : 478, as *Schizoporella crustacea* (Smitt)]. (See addendum.)

Myriozoum crustaceum Smitt is type-species by monotypy of *Myriozoella* Levinsen (1909). Faroe Islands (Kramp, 1934, as *Myriozoum crustaceum*).

Schizomavella glebula (Jullien, 1903) [Jullien & Calvet, 1903 : 81].

St. 46. The suboral avicularium and type of ancestrula are characteristic of *Schizomavella* and not *Schizoporella*.

Schizoporella longirostris Hincks, 1886.

Collected recently at several localities among the Isles of Scilly, from 12-51 m. (P. J. Hayward, personal communication and in preparation).

Schizoporella magnifica Hincks, 1886 [Ryland, 1968b].

Recorded from two localities in southern Britain.

(?) *Schizoporella nomismata* Jullien, 1903 [Jullien & Calvet, 1903 : 80].

Off Brittany, St. 42. Correct generic placing not clear.

Smittina cervicornis (Pallas, 1766) [Gautier, 1962 : 204].

St. 15, La Chapelle Bank (Guérin-Ganivet, 1911a). I agree with Cook (1968) that *Smittina*, rather than *Porella*, is the correct genus for this species.

(?) *Smittina decipiens* Jullien, 1903 [Jullien & Calvet, 1903 : 101, 149].

Taken several times in the Bay of Biscay (Jullien & Calvet, 1903; Calvet, 1931), twice close to the coast of Brittany (Calvet, 1931 : St. 1535 and St. 2974 off Belle-Ile) and also from near the Orkney Islands (St. 1043). Correct generic placing not clear.

Smittoidea grimaldii (Jullien, 1903) [Jullien & Calvet, 1903 : 99, as *Smittia*].

Off Brittany, St. 85. Referable to *Smittoidea* Osburn (1952).

Porella patula (M. Sars, 1851) [Marcus, 1940 : 269].

Occurs in the Bergen area (Ryland, 1963b) and extends into the Skagerrak and Kattegat (Silén, 1951). Nordgaard (1912) showed that *Lepralia aperta* Boeck was synonymous with Sars' species. Kluge (1962 : 452), however, employs Boeck's name.

Porella proboscidea Hincks, 1888.

Obtained in the North Sea by the "Michael Sars", St. 277 (Nordgaard, 1907). There is some doubt as to which species this record actually refers. Kluge (1962) considered that Nordgaard's records of *P. proboscidea* belonged to *P. smitti* Kluge

(1907), though Nordgaard (1918) maintained that he had identified the species correctly.

Phoceana columnaris Jullien, 1903 [Jullien & Calvet, 1903 : 107, 154; Gautier, 1962 : 212].

Recorded by Jullien & Calvet from St. 44.

Escharella ventricosa Hassall, 1842, var. *peristomata* Kluge, 1962 [Ryland, 1963b : 26].

Shallow fjords, near Bergen. The status of this taxon requires investigation.

Hemicyclopora multispinata (Busk, 1861).

Recorded by Nichols (1911 : 21) from St. 151, 194 and 504. There is some doubt, however, as to whether this species (and not *H. polita* only) was obtained (Ryland, 1963b : 27, footnote). *Mucronella canalifera* Busk (1884) is placed by Cook (1968) under the synonymy of *H. multispinata*.

Marguetta pulchra Jullien, 1903 [Jullien & Calvet, 1903 : 73].

St. 14, La Chapelle Bank (Guérin-Ganivet, 1911a).

Bryocryptella torquata (Jullien, 1903) [Jullien & Calvet, 1903 : 77, as *Cryptella*].

St. 14, La Chapelle Bank (Guérin-Ganivet, 1911a).

Rhampostomella ovata (Smitt, 1868) [Kluge, 1962 : 540].

Faroe Islands (Kramp, 1934).

Rhampostomella plicata (Smitt, 1868) [Kluge, 1962 : 544].

Faroe Islands (Kramp, 1934).

Phidolopora elongata (Smitt, 1868) [Kluge, 1962 : 527, as *Retepora*].

Radösund near Bergen (Nordgaard, 1906). Referred to *Phidolopora* Gabb & Horn by Hansen (1962).

Sertella aquitanica Jullien, 1903 [Jullien & Calvet, 1903 : 60].

St. 15, La Chapelle Bank (Guérin-Ganivet, 1911a). The same author records it from the Concarneau region, "où cette espèce n'est pas absolument rare".

Sertella grimaldii (Jullien, 1903) [Jullien & Calvet, 1903 : 62].

St. 44. Although Jullien (p. 56) did not place this species in *Sertella* gen. n., he stated that it was congeneric with *Retepora cellulosa* Smitt, which Harmer (1933) referred to *Sertella* (see next entry).

Sertella septentrionalis Harmer, 1933 [Kluge, 1962 : 526, as *Retepora cellulosa*; Gautier, 1962 : 233].

St. Kilda (Ryland, 1965a). Name proposed by Harmer (1933 : 620) for *Retepora cellulosa* Smitt (1968b) non Linnaeus (1758).

Adeonellopsis distoma (Busk, 1859).

St. 14, La Chapelle Bank (Guérin-Ganivet, 1911a).

Celleporina surcularis (Packard, 1863) [Kluge, 1962 : 553].

Norman (1907) may have been correct in supposing that his specimen came from the Shetland Islands, as *C. surcularis* has been recorded from the Faroe Islands (Kramp, 1934), though in Norway it is not known to occur south of Tromsø (Nordgaard, 1918).

Turbicellepora coronopus (Wood, 1844) [Gautier, 1962 : 260, as *Schismopora*].

Recorded by Jullien & Calvet (1903) from St. 46 and 85. It should be noted that *T. coronopus* was not then being distinguished from *T. tubigera* Busk, and it is uncer-

tain which species was intended (Lagaaij, 1952; Gautier, 1962). Dinard (Balavoine, 1958, 1959).

Turbicellepora coronopusoida (Calvet, 1931) [Calvet, 1931 : 119; Gautier, 1962 : 261, as *Schismopora*].

Included in species list of St. 1043 from near the Orkney Islands, though this station is not mentioned on p. 119. Possibly a mistake, since the species is otherwise only known from the Mediterranean (Gautier, 1962).

Turbicellepora smitti (Kluge, 1962) [Ryland, 1963b : 34].

Recorded from the Bergen area (Ryland) and the Kattegat (Smitt, 1868b), and from the Faroe-Shetland Channel, "Michael Sars" St. 63 and 64 (Nordgaard, 1907).

Gemellipora eburnea Smitt, 1873 [Busk, 1884 : 5, Pl. XXXIV, 1, as *Pasythea*; Osburn 1940 : 463, Pl. 9, fig. 73-4].

Recorded by Nichols (1911 : 23) St. 151 and 479.

CTENOSTOMATA

Alcyonidium candidum Ryland, 1963 [Ryland, 1963b : 36].

Found on stones and on dead *Lophelia* coral from depths exceeding 50 m. in fjords in the vicinity of Bergen.

Alcyonidium proliferans Lacourt, 1951 [Prenant & Bobin, 1956 : 208].

Described from the Dutch coast, but possibly only a form of *A. gelatinosum* (L.) (Hincks, 1880a : 491).

Alcyonidium variegatum Prouho, 1892 [Prenant & Bobin, 1956 : 211].

For long only known from a single locality in the Mediterranean (Banyuls), but recently recorded from the Isle of Man (Eggleston, 1963).

Arachnidium simplex Hincks, 1880 [Hincks, 1880c : 284; Prenant & Bobin, 1956 : 26].

"71 miles W by S from Fastnet, 315 fath." (Kirkpatrick, 1889 : 446).

Immergentia suecica Silén, 1947 [Prenant & Bobin, 1956 : 230].

In dead *Pecten* shells, Gullmarfjorden, Sweden.

(?) *Immergentia* sp. Borings in a shell bearing *Hippothoa divaricata* from Guernsey, 18-27 m. (Brit. Mus. 1897.5.1.792) appear to belong to a species of *Immergentia* (Hastings, personal communication).

Tanganella muelleri (Kraepelin, 1887) [Braem, 1951 : 22].

Braem considered this controversial species sufficiently distinct from *Victorella pavida* Kent to create for it the new genus *Tanganella*. It was found in brackish waters near the Baltic coast of Germany.

Bulbella abscondita Braem, 1951 [Braem, 1951 : 34].

Found by Braem (p. 44) amongst *Victorella pavida* Kent, from London.

Hypophorella expansa Ehlers, 1876 [Prenant & Bobin, 1956 : 272].

Found in the tube lining of the polychaete *Chaetopterus*. First recorded in Britain by Harmer (1897), but now known from a number of localities in the British Isles, and as far north as Trondheim in Norway (Dons, 1939).

Amathia pruvoti Calvet, 1911 [Prenant & Bobin, 1956 : 287].

Found in Chichester Harbour (Stubbings & Houghton, 1964).

Amathia vidovici (Heller, 1867) [Prenant & Bobin, 1956 : 283].

Roscoff (Echalier & Prenant, 1951).

(?) *Bowerbankia pusilla* Jullien, 1903 [Prenant & Bobin, 1956 : 308].

St. 85 (Jullien & Calvet, 1903 : 31).

Penetrantia ditrupae (Norman, 1907) [Prenant & Bobin, 1956 : 324].

Found in the calcified tubes of the serpulid polychaete *Ditrupa arietina* dredged in the Shetland Islands. On the advice of Dr. Anna Hastings I have followed Silén's suggestion (1947 : 38) that Norman's *Terebripora ditrupae* may be a species of *Penetrantia*, though Marcus (1938 : 291) and Prenant & Bobin (1956 : 324) refer it to *Spathipora*. Obviously no placing can be final when based on borings only.

Penetrantia concharum Silén, 1946 [Prenant & Bobin, 1956 : 330].

Living in the dead shells of many species of mollusc, from Gullmarfjorden, Sweden. Recorded from the Isle of Man (Bruce, Colman & Jones, 1963).

Mimosella verticillata (Heller, 1867) [Prenant & Bobin, 1956, 264].

Roscoff (Echalier & Prenant, 1951). Mentioned by Hincks, p. 548, as *Lagenella nutans* Joliet.

Monobryozoon ambulans Remane, 1936 [Prenant & Bobin, 1956 : 335].

Discovered in "Amphioxus sand" off Heligoland.

Monobryozoon limicola Franzén, 1960.

Described from a muddy substratum in Gullmarfjorden, Sweden.

CYCLOSTOMATA

Tubulipora aperta Harmer, 1898 [Harmer, 1898 : 101; Marcus, 1940 : 66; Kluge, 1962 : 96].

Bergen area and the Skagerrak.

Tubulipora flabellaris (Fabricius, 1780) [Harmer, 1898 : 99; Marcus, 1940 : 60; Kluge, 1962 : 91].

The west of Scotland record (O'Donoghue, 1935) may or may not be an error, but there are records from the Skagerrak, Kattegat, Öresund, and from the Heligoland area.

Tervia irregularis (Meneghini, 1847) [Busk, 1875 : 13, Pl. 12, as *Idmonea*].

Appears to be common in the Bay of Biscay below 45° N, and was also recorded by Jullien & Calvet (1903) from St. 44, and by Nichols (1911 : 4) from St. 504.

Bicrisia abyssicola Kluge, 1962 [Ryland, 1967b : 270].

St. Kilda (Ryland, 1965a); fjords in the Bergen area (Ryland, 1967b).

Crisia constans Kluge, 1946 [Kluge, 1962 : 155; Ryland, 1967b : 273].

Recorded by Ryland from near Bergen, where Korsfjorden meets the Atlantic, 100–180 m.

Crisia klugei Ryland, 1967 [Kluge, 1962 : 157, as *C. denticulata* var. *borgi*; Ryland, 1967b : 275].

The *C. denticulata* of writers on sub-arctic Polyzoa. St. 10 of the Norwegian North-Atlantic Expedition (Nordgaard, 1900); Bergen, where Korsfjorden meets the Atlantic (Ryland, 1967b); the Skagerrak (Smitt, 1865).

Crisia ramosa Harmer, 1891 [Harmer, 1891 : 134, 163].

This widely distributed British species was probably the *C. denticulata* var. α of Hincks (1880a : 422), but the diagnostic characters, especially of the gonozoid, were not described.

Disporella venabulum Jullien, 1888 [Busk, 1859 : 116, as *Discoporella grignonensis*; Lagaaij, 1952 : 182, as *Lichenopora*].

Recorded (without further discussion) from the region of Dinard by Balavoine (1959 : 13), although his was the first published non-fossil record for this species. The identification was evidently made using Lagaaij (1952), who suspected (p. 182) that the Recent material of *D. hispida* in the British Museum (Natural History) might include specimens of the present species.

(?) *Lichenopora prolifica* Jullien, 1903 [Jullien & Calvet, 1903 : 119].

St. 85. “Both from the description and the figure it seems clear to me that this is no Calypstrostegeous species at all, but I am not prepared to say where it ought to be placed” (Borg, 1944 : 234).

ENTOPROCTA

Pedicellina hispida Ryland, 1965 [Ryland, 1965b : 200].

Plymouth and Finistère.

Barentsia benedeni (Foettinger, 1886) [Prenant & Bobin, 1956 : 112].

Known from Hull (Ritchie, 1911) and Ostend. Possibly only a form of *B. gracilis* (M. Sars).

Barentsia laxa Kirkpatrick, 1890 [Nielsen, 1964a : 57].

Kattegat and Öresund (Nielsen, 1964a), Bergen fjords (Nielsen, 1964b); Cullercoats (Eggleston & Bull, 1966).

Barentsia mutabilis (Toriumi, 1951) [Ryland, 1961a, as *Pseudopedicellina*].

Two localities in Pembrokeshire. *Pseudopedicellina* Toriumi was considered a synonym of *Barentsia* by Ryland (1965b).

Loxosoma agile Nielsen, 1964 [Nielsen, 1964a : 13].

On *Nicomache trispinata*, Kattegat and Öresund (Nielsen, 1964a), and Bergen fjords (Nielsen, 1964b).

Loxosoma annelidicola (van Beneden & Hesse, 1864) [Prenant & Bobin, 1956 : 34].

On maldanid polychaetes from the French side of the English Channel; also from Holyhead (Ryland & Austin, 1960).

Loxosoma claparedei Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 32].

On *Notomastus latericeus*, from Roscoff.

Loxosoma loricaum Harmer, 1915 [Prenant & Bobin, 1956 : 39].

On *Hermione hystrix*, Roscoff.

Loxosoma loxalina Assheton, 1912 [Prenant & Bobin, 1956 : 36].

In the tube of an unidentified maldanid polychaete, Sound of Mull, Scotland.

Loxosoma monensis Eggleston, 1965.

On unidentified worm tube, Isle of Man.

Loxosoma pectinaricola Franzén, 1962.

On *Pectinaria belgica*, Skagerrak to Öresund (Franzén, 1962; Nielsen, 1964a) and Bergen fjords (Nielsen, 1964b); Cullercoats (Eggleson & Bull, 1966).

Loxosoma rhodinicola Franzén, 1962.

On *Rhodine loveni*, Gullmarfjorden, Sweden. Recorded as *Loxosoma* sp. by McIntyre (1961) on the same host in Loch Nevis and on the Fladen Ground (North Sea, off Aberdeen); also by Nielsen from the Skagerrak and Öresund (1964a) and Bergen fjords (1964b).

Loxosoma saltans Assheton, 1912 [Prenant & Bobin, 1956 : 36].

In tube of the maldanid polychaete *Leiochone clypeata* (= *Clymene ebiensis*), Sound of Sleat, Skye.

Loxosoma significans Nielsen, 1964 [Nielsen, 1964a : 11].

On the maldanid *Asychis significans*, Skagerrak to Öresund (Nielsen, 1964a), and Bergen fjords (Nielsen, 1964b).

Loxosoma singulare Keferstein, 1862 (non Hincks, 1880a) [Prenant & Bobin, 1956 : 29].

On *Notomastus latericeus*, on the French side of the English Channel.

Loxomespilon perezi Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 40].

On *Sthenelais boa*, Roscoff; Plymouth (Marine Biological Association, 1957).

Loxosomella alata (Barrois, 1877) [Prenant & Bobin, 1956 : 57, as *Loxocalyx*].

On sponge *Dysidea*, Barfleur. I follow Nielsen (1964a) in uniting *Loxocalyx* with *Loxosomella*.

Loxosomella antedonis Mortensen, 1911.

Swansea docks (Ryland & Austin, 1960).

Loxosomella aripes Nielsen, 1964 [Nielsen, 1964b : 4].

On *Laonice cirrata*, Bergen.

Loxosomella arvyae Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 81].

On *Phascolion strombi*, Roscoff; Isle of Man (Eggleson, 1965).

Loxosomella atkinsae Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 92].

On *Phascolion strombi*, Concarneau, Roscoff; Isle of Man (Eggleson, 1965); Kattegat (Nielsen, 1964a). Nielsen found that *L. bouxini* was based on the contracted state of *L. atkinsae*.

Loxosomella bouxini Bobin & Prenant, 1953.

See *L. atkinsae*.

Loxosomella brucei Eggleson, 1965.

Attached to the lining of an unidentified worm-tube, Isle of Man.

Loxosomella compressa Nielsen & Ryland, 1961.

On the setae of *Lagisca extenuata*, Bergen; on *L. extenuata* and *Gattyana cirrosa*, Kattegat (Nielsen, 1964a); on the former, Isle of Man (Eggleson, 1965) and on both, Cullercoats (Eggleson & Bull, 1966).

Loxosomella crassicauda (Salensky, 1877) [Prenant & Bobin, 1956 : 70].

Type-species by original designation of *Loxosomella* Mortensen, 1911. Plymouth (Atkins, 1932).

Loxosomella cuenoti Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 94].

On *Phascolion strombi*, Concarneau.

Loxosomella discopoda Nielsen & Ryland, 1961.

On the ophiuroid *Amphilepis norvegica*, Bergen area; Skagerrak (Nielsen, 1964a).

Loxosomella elegans Nielsen, 1964 [Nielsen, 1964a : 18].

In tubes of *Praxillella praetermissa* and *Rhodine gracilior* from the Kattegat; common in the Bergen area, in tubes of *Praxillella* and *Heterodymene robusta* (Nielsen, 1964b).

Loxosomella fagei Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 95].

On *Hermione hystrix*, Roscoff.

Loxosomella fungiformis Bobin & Prenant, 1953 [Prenant & Bobin, 1956 : 87].

On *Phascolion strombi*, Concarneau; Isle of Man (Eggleston, 1965). Doubtfully distinct from *L. atkinsae* Bobin & Prenant, of which it probably represents a highly contracted state.

Loxosomella glandulifera Franzén, 1962.

In tubes of the polychaete *Panthalis oerstedii* from the Kattegat (Franzén, 1962; Nielsen, 1964a).

Loxosomella harmeri (Schultz, 1895) [Nielsen, 1964a : 28].

On *Gattyana cirrosa*, from the Kattegat and Öresund; on *Gattyana* and from *Chaetopterus* tubes, Cullercoats (Eggleston & Bull, 1966).

Loxosomella kefersteinii (Claparède, 1867) [Prenant & Bobin, 1956 : 68].

Swansea docks (Ryland & Austin, 1960).

Loxosomella marsypos Nielsen & Ryland, 1961.

In the tube lining of *Eunice pennata*, Bergen; Kattegat (Nielsen, 1964a); in tubes of *Chaetopterus variopedatus*, Isle of Man (Eggleston, 1965).

Loxosomella murmanica (Nilus, 1909) [Prenant & Bobin, 1956 : 72].

Nielsen (1967) considers that *L. nitschei* Prenant & Bobin (non Vigelius, see next entry) and *L. murmanica*, which both occur on *Phascolion strombi*, are identical. Widely distributed from the English Channel northwards.

Loxosomella nitschei (Vigelius, 1882) [Ryland, 1961b : 35].

Cullercoats (Roper, 1913; Eggleston & Bull, 1966); also Bergen (Ryland, 1961b). On various Polyzoa. This is not *L. nitschei* Arvy & Prenant (1952), Prenant & Bobin (1956) or Nielsen (1964a)—see *L. murmanica* (above).

Loxosomella nordgaardi Ryland, 1961 [Ryland, 1961b : 31].

Described from fjords in the neighbourhood of Bergen; Kattegat (Nielsen, 1964a); Cullercoats (Eggleston & Bull, 1966). On various species of polyzoa.

Loxosomella obesa (Atkins, 1932) [Prenant & Bobin, 1956 : 66].

Described from Plymouth; also recorded from Anglesey; the Isle of Man (Eggleston, 1965); and Bergen (Nielsen, 1964b). On *Aphrodita aculeata*.

Loxosomella ornata Nielsen, 1964 [Nielsen, 1964a : 24].

In the tubes of *Thelepus cincinatus*, from the Skagerrak to the Öresund.

Loxosomella polita Nielsen, 1964 [Nielsen, 1964a : 22].

In tubes of *Petaloproctus tenuis* and *Nicomache lumbricalis* from the Kattegat and Öresund; Bergen (Nielsen, 1964b).

Loxosomella scaura Nielsen, 1964 [Nielsen, 1964a : 47].

On the setae of *Nephtys* spp., Skagerrak and Kattegat.

Loxosomella similis Nielsen, 1964 [Nielsen, 1964a : 20].

In tubes of *Nicomache trispinata* from the Kattegat; Bergen (Nielsen, 1964b).

Loxosomella teissieri (Bobin & Prenant, 1953) [Prenant & Bobin, 1956 : 53, as *Loxocalyx*].

On the sponge *Dysidea fragilis*, Roscoff. I follow Nielsen (1964a) in uniting *Loxocalyx* with *Loxosomella*.

Loxosomella varians Nielsen 1964 [Nielsen, 1964a : 49].

On *Nephtys* spp., Skagerrak to Öresund, very abundant; Bergen (Nielsen, 1964b).

4. SUMMARY

Each species described by Hincks in the "British Marine Polyzoa", together with any varieties, is listed beside its appropriate page number. The name now recommended or generally accepted for each is then given, with author and date of introduction. If Hincks' name embraced more than one species, this is indicated. Where the present nomenclature differs from that of Hincks, brief documentation is given. In addition, 127 species which have been recorded since 1880 in European waters between latitudes 46° and 62° N are listed, together with the references documenting their discovery in the British area and providing an illustrated description. These supplementary records comprise fifty-seven cheilostomes, eighteen ctenostomes, nine cyclostomes and forty-three entoprocts.

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6. ADDENDUM

Maturo & Schopf (1968), in a publication received since the type of the present paper was set, have given details of type material of American Polyzoa described by Verrill & Dawson. The new information about four of these species affects the nomenclature adopted in this list, and is summarized below:

(1) 291 *Hippothoa expansa* Dawson, 1859 [p. 224]. The species described by Hincks differs in a number of ways from Dawson's syntypes, and is to be regarded as a separate species needing a new name.

(2) *Dendrobeania elongata* (Nordgaard, 1906). [Additional species, p. 240.] Nordgaard's species is recognized as being identical with *Bugula decorata* Verrill, so that the correct name is *Dendrobeania decorata* (Verrill, 1879).

(3) *Erymophora gracilis* (Nichols, 1911). [Additional species, p. 240.] This species is recognized as identical with *Bugulella fragilis* Verrill (1879). As *B. fragilis* is the only valid genosyntype, it follows that *Erymophora* Hastings (1943) is a junior synonym of *Bugulella* Verrill. The correct name of the species is *Bugulella fragilis* Verrill, 1879.

(4) *Myriozoella plana* (Dawson, 1859). [Additional species, p. 241.] *Myriozoom crustaceum* Smitt (1868b) differs in several ways from *Lepralia plana* Dawson, and is to be regarded as a distinct species. The correct name for the present species, therefore, is *Myriozoella crustacea* (Smitt, 1868).





Ryland, J S. 1969. "A nomenclatural index to 'A history of the British Marine Polyzoa' by T.Hincks (1880)." *Bulletin of the British Museum (Natural History) Zoology* 17, 207–260. <https://doi.org/10.5962/bhl.part.10340>.

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