

## LIST OF THE DESCRIBED SPECIES OF THE ORDER STYLASTERINA

by

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Moseley (1880, pp. 83-88) published a "List of all the Species of Stylasteridae at present known", remarking that this list is not to be regarded as constituting a revision of the species, but represents an attempt to draw attention to all the species of which an account has been published. This list, which was prepared with the assistance of Dr. F. Brüggemann, of the British Museum, contains sixty species, arranged in twelve genera.

The present list contains about one hundred described species of Stylasterina in addition to those mentioned by Moseley. Here again the genera are arranged according to the apparently natural system, while within each genus the species are placed in alphabetical order, an arbitrary arrangement being indicated because generally too little is known about the relationship of the different forms, even when representing species with well-defined characters.

In the present paper the data are compiled in the manner of lists of synonyms, with notes indicating the geographical distribution or pointing to apparent mistakes. These lists of names are partly based on data that cannot be checked with respect to their reliability; therefore, numerous misidentifications are included. Only evident errors are expressly noted.

When the identity of a described species with an earlier described form has been fully established, the former has been placed in the synonymy of the latter; when definite proof seems to be lacking it is noted in square brackets that a certain author has the opinion that one name is a synonym of another. Undoubtedly future research will show that many of the described species have no definite separate standing, but as long as this has not been proven they must, at least provisionally, keep their original status.

Under each species the distribution is mentioned in a more or less general manner, roughly indicating the area of occurrence, in a wider sense than the data recorded in the notes.

Though attempts were made to consult the entire literature dealing with Stylasterina up to the end of 1956, it stands to reason that many papers containing casual notes on representatives of the group must have escaped notice.

When in a publication the name of a Stylasterine coral repeatedly occurs,

only one page is cited in each instance, the citation not necessarily being the first page on which the name was mentioned, but often indicating the part of the work particularly dealing with the species.

Several authors have commented upon the fact that some species of *Stylaster* and of *Allopora* occupy a more or less intermediate position between these two genera. For this reason Broch (1936) placed *Allopora* as a subgenus in the earlier described genus *Stylaster*, while Fisher (1938) again adhered to the older usage of regarding the two groups as genera, though admitting that some species are difficult to place in one of the two. The majority of the species, however, distinctly show the characters of one of the two genera, so that for convenience' sake they are here kept apart. In a similar manner *Stenohelia* and *Stylantheca* are here treated as separate genera, though Broch (1936) placed *Stenohelia* as a subgenus of *Stylaster*, and Fisher (1938) united *Stylantheca* with *Allopora*.

In the present paper all the described species of the genus *Errina* are arranged in alphabetical order, those of the subgenus *Errina* s.s. not being kept separate from those of the subgenus *Inferiolabiata*. Of some of the species the characters are too little known to determine their place in one of the two subgenera; this holds especially for the species for which the generic name *Lepidopora* was erected.

**Stylaster** Gray, 1831.

Type species, selected by Milne Edwards & Haime, 1850(-1854), *Madrepora rosea* Pallas, 1766.

*Cyclopora* Verrill, 1866, p. 38.

*Deontopora* Hall, 1893, p. 117.

*Eustylaster* Broch, 1914b, p. 7.

*Eu-Stylaster* Broch, 1942, p. 9.

**Stylaster amphiheloides** Kent, 1871<sup>1</sup>.

*Stylaster amphiheloides* Kent, 1871, p. 277; Moseley, 1879, p. 481; Moseley, 1880, p. 86; Hickson & England, 1905, p. 13<sup>2</sup>; Boschma, 1953d, p. 166.

*Stylaster amphiheloides* Moseley, 1877, p. 100.

Distribution. — Cape of Good Hope; East Indian Archipelago. The two regions of occurrence are rather far distant from each other. Hickson & England (1905, p. 13) state: "The Siboga specimens have been compared with the type specimen in the British Museum from the Cape of Good Hope and they prove to be identical".

<sup>1</sup> Type locality. — Cape of Good Hope.

<sup>2</sup> "Siboga", Sta. 97, off Sulu Islands, 564 m; "Siboga", Sta. 150, East of Halmahera, 1089 m; "Siboga", Sta. 156, West of Waigeu, 496 m; "Siboga", Sta. 177, North of Ceram, 1633-1300 m.

**Stylaster antiquus** Sisonda, 1871<sup>1</sup>.

*Stylaster antiquus* Sisonda, 1871, p. 333<sup>2</sup>; Kühn, 1928, p. 103<sup>3</sup>; Boschma, 1951c, p. 36.

Distribution. — Oligocene, North Italy.

<sup>1</sup> Type locality. — Sassello, North Italy, Oligocene.

<sup>2</sup> "Fossile à Sassello (terr. mioc. inf.)". — <sup>3</sup> "Oberitalien, Oligocän".

**Stylaster asper** Kent, 1871<sup>1</sup>.

*Stylaster asper* Kent, 1871, p. 278; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Hickson & England, 1905, p. 7; Broch, 1936, p. 10; Broch, 1942, p. 62<sup>2</sup>; Boschma, 1951a, p. 453; Wells, 1954, p. 475<sup>3</sup>; Boschma, 1956b, p. 148.

*Stylaster (Eu-Stylaster) asper* Broch, 1936, p. 36; Broch, 1942, p. 93.

Distribution. — Mauritius; Marshall Islands. The two localities are widely separated. Without apparent reason Hickson & England (1905, p. 8) arrange the species among those occurring in the Atlantic Ocean, a fact also commented upon by Broch (1936, p. 39). The specific identity of the various specimens is uncertain because of differences in the dimensions of the cyclosystems; in the type specimen (Kent, 1871) they are 1/23 inch (about 1 mm), in the specimens from Mauritius (Broch, 1936) they are 0.42 to 0.7 mm, while in the specimens from Bikini (Wells, 1954) the gastropores are 0.3 mm (cyclosystems twice this size?).

<sup>1</sup> Type locality. — Unrecorded.

<sup>2</sup> Off Tombeau Bay, Mauritius, about 150 and 130 fms. (274 and 238 m); off Port Louis, Mauritius, 60 fms. (110 m). — <sup>3</sup> Bikini Atoll, Marshall Islands, 13-23 and 58-133 fms. (23-42 and 106-243 m).

**Stylaster bellus** (Dana, 1848)<sup>1</sup>.

*Allopora gemmascens*  $\beta$  *bella* Dana, 1848, p. 696.

*Allopora bella* Milne Edwards & Haime, 1850, p. 100; De Pourtalès, 1868, p. 136; Kent, 1871, p. 278; Broch, 1936, p. 71; Boschma, 1953d, p. 178.

*Allopora (Stylaster) bella* Milne Edwards & Haime, 1857, p. 131.

*Cyclopora bella* Verrill, 1866, p. 38; Moseley, 1879, p. 41; Moseley, 1880, p. 86.

*Stylaster bella* Moseley, 1879, p. 481; Moseley, 1880, p. 86; Hickson & England, 1905, p. 15.

*Stylaster bellus* Hickson & England, 1905, p. 11<sup>2</sup>; Broch, 1936, p. 71; Boschma, 1953d, p. 166; Boschma, 1956e, p. F 98.

*Stylaster gemmascens*  $\beta$  *bellus* Broch, 1936, p. 71.

Distribution. — Tuamotu Archipelago; East Indian Archipelago. Hickson

& England (1905, p. 12) remark: "The chief difference between *Cyclopora bella* and the specimens of the Siboga collection is (see VERRILL) that the septa are joined together at their inner edges, to form a ring, in the former, while this is the exception, rather than the rule in the latter (see DANA Pl. LX, fig. 6a). We do not regard this as important, as the fusion of the inner edges of the septa often occurs in old colonies of other species and not in young ones, or at least not in the younger branches of young colonies".

<sup>1</sup> Type locality. — Tuamotu Archipelago (Paumotu Archipelago).

<sup>2</sup> "Siboga", Sta. 95, Sulu Islands, 450 m; "Siboga", Sta. 156, West of Waigeu, 469 m; "Siboga", Sta. 150, East of Halmahera, 1089 m.

**Stylaster bilobatus** Hickson & England, 1905<sup>1</sup>.

*Stylaster bilobatus* Hickson & England, 1905, p. 14<sup>2</sup>; Boschma, 1951a, p. 453; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148.

*Stylaster bilobatus* facies *alba* Hickson & England, 1905, p. 14.

Distribution. — East Indian Archipelago.

<sup>1</sup> Type locality. — Eastern part of East Indian Archipelago.

<sup>2</sup> "Siboga", Sta. 156, West of Waigeu, 469 m; "Siboga", Sta. 251, off Kei Islands, 204 m; "Siboga", Sta. 297, South of West end of Timor, 520 m.

**Stylaster cancellatus** Fisher, 1938<sup>1</sup>.

*Stylaster cancellatus* Fisher, 1938, p. 502; Boschma, 1953d, p. 166.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

**Stylaster crassior** Broch, 1936<sup>1</sup>.

*Stylaster* (*Eu-Stylaster*) *crassior* Broch, 1936, p. 23<sup>2</sup>.

*Stylaster crassior* Broch, 1942, p. 62; Boschma, 1951a, p. 453; Boschma, 1956b, p. 148.

Distribution. — Mauritius.

<sup>1</sup> Type locality. — Mauritius.

<sup>2</sup> Off Tombeau Bay, Mauritius, about 150 fms. (274 m); off Port Louis, Mauritius, about 130 fms. (238 m).

**Stylaster densicaulis** Moseley, 1879<sup>1</sup>.

*Stylaster erubescens* Moseley, 1877, p. 94<sup>2</sup>.

*Stylaster densicaulis* Moseley, 1879, p. 481; Moseley, 1880, p. 87; Hickson, 1892a, p. 499; Delage & Hérouard, 1901, fig. 255; Von Marenzeller, 1904, p. 85; Hickson & England, 1905, p. 12<sup>3</sup>; Dehorne, 1920, p. 18; Broch, 1936, p. 11; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148; Boschma, 1956e, p. F 97.

Distribution. — Off the mouth of the Rio de la Plata; Moluccas and New Guinea region. It is not certain that the specimens from the two widely separated regions belong to the same species, Hickson & England (1905, p. 12) do not state the reason for their specific identification.

<sup>1</sup> Type locality. — “Challenger”, Sta. 320, 37° 17' S., 53° 52' W., off the mouth of the Rio de la Plata, 600 fms. (1097 m).

<sup>2</sup> “The *Stylaster* (obtained off the Rio de la Plata) appears probably to be *S. erubescens* of Pourtales”. — <sup>3</sup> “Siboga”, Sta. 156, West of Waigeu, 469 m; “Siboga”, Sta. 177, North of Ceram, 1633-1300 m.

***Stylaster dentatus*** Broch, 1936 <sup>1</sup>.

*Stylaster dentatus* Broch, 1936, p. 41; Eguchi, 1941, p. 1186; Broch, 1942, p. 74; Broch, 1947, p. 306; Boschma, 1953d, p. 166.

*Stylaster (Eu-Stylaster) dentatus* Broch, 1936, p. 42; Broch, 1947, p. 310.

*Stylaster (Allopora) dentatus* Broch, 1942, p. 98.

Distribution. — Japan.

<sup>1</sup> Type locality. — Okinose, Sagami Bay, Japan, about 60 fms. (110 m).

[*Stylaster divergens* Von Marenzeller, see *Allopora divergens* (Von Marenzeller)].

***Stylaster duchassaingii*** De Pourtalès, 1867 <sup>1</sup>.

*Stylaster elegans* Duchassaing & Michelotti, 1864, p. 68 <sup>2</sup>; De Pourtalès, 1867, p. 115; Duchassaing, 1870, p. 26 <sup>3</sup>; De Pourtalès, 1871, p. 35; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Ritchie, 1911, p. 868; Boschma, 1951a, p. 451; Boschma, 1953c, p. 360; Wells, 1954, p. 476; Boschma, 1956b, p. 150.

*Stylaster duchassaingii* De Pourtalès, 1867, p. 115 <sup>4</sup>; De Pourtalès, 1871, p. 35 <sup>5</sup>; Moseley, 1876b, p. 547; Studer, 1877, p. 634; Moseley, 1879, p. 481 <sup>6</sup>; Moseley, 1880, p. 87; Ritchie, 1911, p. 868 <sup>16</sup>; Boschma, 1951a, p. 451; Boschma, 1953c, p. 360; Boschma, 1953d, p. 166; Boschma, 1956b, p. 147.

*Stylaster eximius* Kent, 1871, p. 278; Hickson & England, 1905, p. 9; Ritchie, 1911, p. 867 <sup>16</sup>; Broch, 1914b, p. 9; Broch, 1936, p. 12; Fisher, 1938, p. 495; Broch, 1942, p. 71; Broch, 1947, p. 306; Boschma, 1951a, p. 451; Boschma, 1953c, p. 359; Boschma, 1953d, p. 169; Wells, 1954, p. 395; Boschma, 1956b, p. 147.

*Stylaster (Eu-Stylaster) eximius* Broch, 1936, p. 18; Broch, 1947, p. 95; Boschma, 1951a, p. 453.

*Stylaster (Stylaster) duchassaingi* Boschma, 1951a, p. 451.

*Stylaster eximius facies altus* Hickson & England, 1905, p. 9 <sup>7</sup>; Hickson & England, 1909, p. 345 <sup>8</sup>; Ritchie, 1911, p. 868; Broch, 1936, p. 20;

Boschma, 1953c, p. 360.

*Stylaster eximius* facies *dentatus* Hickson & England, 1905, p. 10<sup>9</sup>;  
Boschma, 1951a, p. 453; Boschma, 1953c, p. 359.

*Stylaster eximius* facies *irregularis* Hickson & England, 1905, p. 10<sup>10</sup>;  
Boschma, 1953c, p. 359.

*Stylaster eximius* facies *minor* Hickson & England, 1905, p. 11<sup>11</sup>; Broch,  
1935c, p. 60<sup>12</sup>; Fisher, 1938, p. 502; Boschma, 1951a, p. 452; Boschma,  
1953c, p. 359.

*Stylaster* fac. *altus* Hickson & England, 1909, p. 345.

*Stylaster* (*Eu-Stylaster*) *eximius* forma *typica* Broch, 1936, p. 18<sup>13</sup>.

*Stylaster* (*Eu-Stylaster*) *eximius* forma *atlantica* Broch, 1936, p. 20<sup>14</sup>.

*Stylaster* (*Eu-Stylaster*) *eximius* forma *minor* Broch, 1936, p. 22<sup>15</sup>.

*Stylaster eximius minor* Eguchi, 1941, p. 1185.

*Stylaster eximius* forma *typica* Boschma, 1953c, p. 360.

*Stylaster eximius* forma *atlantica* Boschma, 1953c, p. 360.

*Stylaster duchassaingi* facies *altus* Boschma, 1953d, p. 166.

*Stylaster duchassaingi* facies *dentatus* Boschma, 1953d, p. 166.

*Stylaster duchassaingi* facies *irregularis* Boschma, 1953d, p. 166.

*Stylaster duchassaingi* facies *minor* Boschma, 1953d, p. 166.

*Stylaster duchassaingi* forma *typica* Boschma, 1953d, p. 166.

[*Stylaster eximius* Ritchie, see *Allopora incompleta* Tenison-Woods].

Distribution. — West Indies and off Brazil; East Indian Archipelago; Mauritius; Okhotsk Sea; Philippine Islands. The collection of the Siboga Expedition is badly in need of a revision to show whether the specimens identified by Hickson & England (1905) with "*Stylaster eximius*" really belong to the species described after West Indian corals. On the other hand Broch (1936) could compare specimens from the Philippine Islands with a colony from the West Indies, and concluded that these are not specifically distinct. Unfortunately he gave the name "forma *typica*" to the specimens from the Philippine Islands; this name would have been more appropriate for the West Indian form, the coral from the type locality. The differences between the "forma *typica*" and the "forma *atlantica*" are insignificant (Broch, 1936, p. 22). A specimen from the Okhotsk Sea was identified with "*Stylaster eximius* forma *minor*" by Broch. The locality Mauritius (Hickson & England, 1909) is as uncertain as those in the East Indian Archipelago. Ritchie (1911) recorded the species "*Stylaster eximius*" from localities off the coast of New South Wales; the specimens proved to belong to *Allopora incompleta* Tenison-Woods (Boschma, 1956b).

<sup>1</sup> Type locality (restricted). — Guadeloupe.

Virtually De Pourtalès restricted already the type locality of the species by giving the name *Stylaster Duchassaingii* to "the species from Guadeloupe" (note 4).

<sup>2</sup> Guadeloupe and St. Christophe. — <sup>3</sup> about 60 m ("environ 200 pieds de fond"). — <sup>4</sup> "I would propose therefore the name of *St. Duchassaingii* for the species from Guadeloupe". — <sup>5</sup> Near Tortugas in 43 fathoms (78 m). — <sup>6</sup> "Challenger", Sta. 122, off Point Calvo, Brazil, 400 fms. (732 m). — <sup>7</sup> "Siboga", Sta. 164, off West New Guinea, 32 m; "Siboga", Sta. 144, South of Halmahera, 45 m; "Siboga", Sta. 282, off Northeast end of Timor, 27-54 m; "Siboga", Sta. 303, Samau Island, West of Timor, up to 36 m. — <sup>8</sup> "Percy Sladen Trust Exp.", off Mauritius, 100 fms. (183 m). — <sup>9</sup> "Siboga", Sta. 144, South of Halmahera, 45 m; "Siboga", Sta. 274, Northeast of Aru Islands, 57 m; "Siboga", Sta. 310, off Sumbawa, 73 m. — <sup>10</sup> "Siboga", Sta. 310, off Sumbawa, 73 m. — <sup>11</sup> "Siboga", Sta. 70, Strait of Makassar, 50-40 m; "Siboga", Sta. 117, North Celebes, 80 m; "Siboga", Sta. 125, off Sangir Islands, Celebes Sea, 27 m; "Siboga", Sta. 133, off Talaut Islands, up to 36 m; "Siboga", Sta. 144, South of Halmahera, 45 m; "Siboga", Sta. 154, North of Waigeu, 83 m; "Siboga", Sta. 166, between New Guinea and Ceram, 118 m; "Siboga", Sta. 310, off Sumbawa, 73 m; "Siboga", Sta. 315, off Paternoster Islands, Bali Sea, up to 36 m. — <sup>12</sup> "Exploration des Mers de l'URSS", Sta. 214, Okhotsk Sea, 1076 m. — <sup>13</sup> Off Jolo, Philippine Islands, 20-25 fms. (37-46 m). — <sup>14</sup> West Indian region, 18° 25' N., 65° 21' W., 450 fms. (823 m). — <sup>15</sup> Okhotsk Sea, 1076 m. — <sup>16</sup> With discussion on priority of names; Ritchie's specimens belong to *Allopora incompleta* Tenison-Woods, cf. Boschma, 1956b.

***Stylaster echinatus*** Broch, 1936 <sup>1</sup>.

*Stylaster (Eu-Stylaster) echinatus* Broch, 1936, p. 39.

*Stylaster echinatus* Broch, 1936, p. 40; Boschma, 1951a, p. 453; Boschma, 1956b, p. 148.

*Stylaster (Eu-Stylaster) aff. echinatus* Broch, 1936, p. 41 <sup>2</sup>.

*Stylaster aff. echinatus* Boschma, 1951a, p. 453; Boschma, 1956b, p. 148.

Distribution. — Antilles (and Northwest Atlantic ?, cf. note 2).

<sup>1</sup> Type locality. — Antilles.

<sup>2</sup> South of Newfoundland Bank, 43° N., 51° W.

***Stylaster elassotomus*** Fisher, 1938 <sup>1</sup>.

*Stylaster elassotomus* Fisher, 1938, p. 499; Boschma, 1953d, p. 166.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 4781, off Agattu Island, Aleutian Islands, 52° 14' 30" N., 174° 13' E., 482 fms. (881 m).

***Stylaster elegans*** Verrill, 1864 <sup>1</sup>.

*Stylaster elegans* Verrill, 1864, p. 45; De Pourtalès, 1867, p. 115; De Pourtalès, 1868, p. 136; Kent, 1871, p. 278; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Quelch, 1884a, p. 113; Hickson & England, 1905, p. 7; Broch, 1936, p. 36; Boschma, 1951a, p. 451; Boschma, 1953d, p. 166; Wells, 1954, p. 476 <sup>2</sup>.

Broch (1936) lists *Stylaster elegans* Verrill with a ? as a synonym of *Stylaster sanguineus* Valenciennes.

[*Stylaster elegans* Duchassaing & Michelotti, see *Stylaster duchassaingii* De Pourtalès].

Distribution. — Marshall Islands, Gilbert Islands.

<sup>1</sup> Type locality. — Ebon Island, Marshall Islands.

<sup>2</sup> Bikini Atoll, Marshall Islands, 8-23 and 12.5-90 fms. (15-42 and 23-165 m); Eniwetok Atoll, Marshall Islands, 21 fms. (39 m); Jaluit Atoll, Marshall Islands (U.S.N.M., determined by W. K. Fisher); Gilbert Islands (U.S.N.M., determined by W. K. Fisher).

**Stylaster erubescens** De Pourtalès, 1868 <sup>1</sup>.

*Stylaster erubescens* De Pourtalès, 1868, p. 135; De Pourtalès, 1871, p. 34; Kent, 1871, p. 277; Dana, 1872, p. 70; Moseley, 1876a, p. 69; Moseley, 1876c, p. 122; Thomson, 1877, II, p. 267 <sup>2</sup>; Moseley, 1877, p. 95 <sup>6</sup>; Studer, 1877, p. 634; De Pourtalès, 1878, p. 210 <sup>3</sup>; Moseley, 1879, p. 481 <sup>4</sup>; Moseley, 1880, p. 87; Hutton, 1904, p. 318; Hickson & England, 1905, p. 7; Broch, 1914b, p. 15; Broch, 1936, p. 11; Boschma, 1953d, p. 166; Boschma, 1955b, p. 136.

*Stylaster roseus* Broch, 1914b, p. 12 <sup>5</sup>; Broch, 1924, fig. 394; Pax, 1928, p. 33, fig. 17; Broch, 1936, p. 11; Kühn, 1939, fig. 23; Broch, 1942, p. 71; Broch, 1950, p. 37.

*Stylaster (Eu-Stylaster) roseus* Broch, 1936, p. 14; Broch, 1942, p. 92.

According to Broch (1914b) *Stylaster erubescens* De Pourtalès is a synonym of *Stylaster roseus* (Pallas).

Distribution. — West Indies; North Atlantic; off Ascension Island (doubtful record); off the Kermadec Islands (doubtful record, already indicated as doubtful by Moseley, 1879).

<sup>1</sup> Type locality. — Off the Florida Reef, 120-324 fms. (219-592 m).

<sup>2</sup> "Challenger", off Ascension Island (locality not mentioned by Moseley, 1879, 1880).

— <sup>3</sup> "Blake", Sta. 44, 25° 33' N., 84° 35' W., 539 fms. (985 m). — <sup>4</sup> *Stylaster erubescens*(?), "Challenger", Sta. 170, off the Kermadec Islands, 520 fms. (951 m). — <sup>5</sup> North Atlantic. "Ingolf", Sta. 7, 1128 m; "Ingolf", Sta. 15, 620 m; "Ingolf", Sta. 17, 1400 m; "Ingolf", Sta. 52, 789 m; "Ingolf", Sta. 94, 204 m; "Thor", 1904, 392 m; "East Greenland Exp.", off Angmagsalik, 263 m. — <sup>6</sup> Cf. *S. densicaulis*, note 2.

[*Stylaster eximius* Kent, see *Stylaster duchassaingii* De Pourtalès].

**Stylaster filigranus** De Pourtalès, 1871 <sup>1</sup>.

*Stylaster filigranus* De Pourtalès, 1871, p. 35; Studer, 1877, p. 634; De Pourtalès, 1878, p. 210 <sup>2</sup>; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Agassiz, 1888, p. 139; Nutting, 1895, p. 84 <sup>3</sup>; Von Marenzeller, 1904, p. 85; Hickson & England, 1905, p. 7; England, 1926, p. 267 <sup>4</sup>; Broch, 1936, p. 44 <sup>5</sup>; Fisher, 1938, p. 530; Broch, 1942, p. 73; Boschma, 1951a, p. 453; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148.

*Stylaster (Eu-Stylaster) filigranus* Broch, 1936, p. 44; Broch, 1942, p. 96.



Distribution. — West Indies; Loyalty Islands (highly uncertain).

<sup>1</sup> Type locality. — West of Tortugas.

<sup>2</sup> Off Havana, 175 fms. (320 m). — <sup>3</sup> Bahama Expedition. — <sup>4</sup> Sandal Bay, Lifu, Loyalty Islands (erroneous identification). — <sup>5</sup> Demerara; "Albatross", Sta. 2354, off Cozumel Island, 130 fms. (238 m).

**Stylaster flabelliformis** (Lamarck, 1816) <sup>1</sup>.

*Coralium album, lapideum, densum ac compactum; ramis laevibus, teretibus, multum divisis* Seba, 1761, p. 204 <sup>2</sup> (Milne Edwards & Haime, 1857, p. 129).

*Oculina flabelliformis* Lamarck, 1816a, p. 287 <sup>3</sup>; Deslongchamps, 1824, p. 575; De Blainville, 1825, p. 355; De Blainville, 1830, p. 345; Gray, 1831, p. 37; De Blainville, 1834, p. 380; Deshayes & Milne Edwards, 1836, p. 457; Milne Edwards, 1836-1849, Atlas, Pl. 83bis; Milne Edwards & Haime, 1849, p. 69; Milne Edwards & Haime, 1850, p. 95; Boschma, 1955b, p. 136.

*Stylaster flabelliformis* Gray, 1831, p. 37; Milne Edwards & Haime, 1850, p. 97 <sup>4</sup>; Rousseau & Devéria, 1853, Pl. 12 <sup>4</sup>; Milne Edwards & Haime, 1857, p. 129 <sup>4</sup>; Duchassaing & Michelotti, 1864, p. 69; De Pourtalès, 1867, p. 116; Kent, 1870, p. 122; De Pourtalès, 1871, p. 41; Studer, 1877, p. 634 <sup>5</sup>; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Perrier, 1881, p. 302; Filhol, 1885, p. 268; Kirkpatrick, 1890, p. 12 <sup>6</sup>; Kirkpatrick, 1902, fig. 14; Hickson & England, 1905, p. 7; Hickson, 1912b, p. 464; Broch, 1936, p. 11; Dawydoff, 1952, p. 56 <sup>7</sup>; Boschma, 1953d, p. 166; Boschma, 1956c, p. 157; Boschma, 1956d, p. 281.

*Oculina gemmascens* Ehrenberg, 1834, p. 79; Deshayes & Milne Edwards, 1836, p. 457.

*Allopora flabelliformis* Dana, 1848, p. 694 <sup>8</sup>; Milne Edwards & Haime, 1849, p. 69; Dana, 1859, p. 149; Johnson, 1862, p. 197.

*Oculina (Stylaster) flabelliformis* Milne Edwards & Haime, 1850, p. 99.

*Stylaster flagelliformis* Giebel, 1864b, p. 299.

*Stylaster flabelliformis* Filhol, 1885, fig. 86.

*Stylaster flavelliformis* Casto de Elera, 1896, p. 838 <sup>9</sup>.

In the Paris Museum there are, besides the type specimen and some colonies without locality records, large colonies from Réunion (collected by Rousseau) and from Mauritius (collected by Péron & Lesueur).

Distribution. — "East Indian Ocean"; Réunion, Mauritius; China Sea, Philippine Islands, Indochina, Solomon Islands (the last four records somewhat uncertain).

<sup>1</sup> Type locality. — "L'Océan des Indes orientales".

<sup>2</sup> Indes orientales (listed as a synonym by Milne Edwards & Haime, 1857, p. 129; apparently erroneous). — <sup>3</sup> "l'Océan des Indes orientales". — <sup>4</sup> Réunion (l'île de Bourbon), 160 fms. (293 m). — <sup>5</sup> Bougainville, Solomon Islands. — <sup>6</sup> Garvan Reef,

China Sea, 2 fms. (3½ m). — <sup>7</sup> “Dans le domaine maritime Indochinois”. — <sup>8</sup> East Indies. — <sup>9</sup> Cebu, Philippine Islands; Mauritius, Réunion (“Borbon”).

**Stylaster gemmascens** (Esper, 1794) <sup>1</sup>.

Coral (no. 10) Pontoppidan, 1752, p. 258; Pontoppidan, 1753, p. 283; Pontoppidan, 1755, p. 159.

Kridhviid Coral Strøm, 1762, p. 144.

*Madrepora virginea* Gunnerus, 1768, p. 59; Gunnerus, 1770, p. 52; Müller, 1776, p. 252; Gmelin, 1789, p. 3779; Sars, 1835, p. 3<sup>2</sup>; Sundevall, 1847, p. 144; Storm, 1882, p. 25; Dahl, 1899, p. 37; Broch, 1918a, p. 104; Broch, 1918b, p. 9; Boschma, 1953a, p. 32; Boschma, 1953b, p. 302; Boschma, 1955a, p. 25.

*Madrepora gemmascens* Esper, 1794, p. 60<sup>3</sup>; Lamarck, 1816a, p. 287; Deslongchamps, 1824, p. 576; Boschma, 1953a, p. 33; Boschma, 1955a, p. 22.

*Matrepora virginea* Oken, 1815, p. 72.

*Matrepora gemmascens* Oken, 1815, p. 72.

*Oculina virginea* Lamouroux, 1821, p. 63.

*Madrepora norvegica* Fabricius, 1824, p. 75; Fabricius, 1845, p. 52; Boschma, 1953a, p. 33.

*Allopora gemmascens* Dana, 1848, p. 696<sup>4</sup>; Dana, 1859, p. 149; Boschma, 1953a, p. 33; Boschma, 1953d, p. 178; Boschma, 1955a, p. 22.

*Allopora norvegica* Dana, 1848, p. 697<sup>5</sup>; Milne Edwards & Haime, 1850, p. 100; Dana, 1859, p. 149; Boschma, 1953a, p. 33.

*Stylaster gemmascens* Milne Edwards & Haime, 1850, p. 98<sup>6</sup>; Milne Edwards & Haime, 1857, p. 130; Giebel, 1864b, p. 299; Kent, 1871, p. 281; Sars, 1873, p. 115<sup>7</sup>; Duncan, 1873, p. 332<sup>8</sup>; Studer, 1877, p. 634; Storm, 1879, p. 24<sup>9</sup>; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Perrier, 1881, p. 303; Storm, 1882, p. 25<sup>10</sup>; Von Lendenfeld, 1885, p. 615; Von Lendenfeld, 1887, p. 46; Norman, 1893, p. 347<sup>11</sup>; Hickson & England, 1905, p. 13<sup>12</sup>; Thomson, 1910, p. 61<sup>13</sup>; Nordgaard, 1912, p. 7<sup>14</sup>; Arndt, 1913, p. 122<sup>15</sup>; Broch, 1914b, p. 8; Broch, 1918a, p. 104; Broch, 1918b, p. 9; Broch, 1928, p. III b 55<sup>16</sup>; Broch, 1932, p. 84; Dons, 1933, p. 15<sup>17</sup>; Ekman, 1935, p. 171; Broch, 1936, p. 11; Fisher, 1938, p. 500; Dons, 1939, p. 198; Broch, 1942, p. 71; Broch, 1950, p. 37; Boschma, 1953a, p. 32; Boschma, 1953b, p. 302; Boschma, 1953d, p. 166; Boschma, 1955a, p. 22; Boschma, 1955b, p. 137; Boschma, 1956e, p. F 98.

*Madrepora norvegica* Milne Edwards & Haime, 1850, p. 100.

*Allopora (Stylaster) norvegica* Milne Edwards & Haime, 1857, p. 131<sup>18</sup>.

*Stylaster (Eustylaster) gemmascens* Broch, 1914b, p. 11<sup>19</sup>; Broch, 1918b, p. 15; Broch, 1928, p. III b 55; Broch, 1932, p. 85; Dons, 1939, p. 197<sup>20</sup>.

*Stylaster (Eu-Stylaster) gemmascens* Broch, 1942, p. 92.

*Stylaster* cf. *gemmascens* Euguchi, 1941, p. 1176<sup>21</sup>.

[*Oculina gemmascens* Ehrenberg, see *Stylaster flabelliformis* (Lamarck)].

Distribution. — North Atlantic; "East Indian seas" (doubtful record); off Izu Peninsula, Japan (probably erroneous, perhaps *Stylaster gemmascens alaskanus*). Fisher (1938, p. 501) remarks: "There is no precise information on the type specimen [of *Stylaster gemmascens*] said to be in the Berlin Museum. Probably the *Siboga* specimen from off the Sulu Islands is very nearly typical, but Hickson and England (1905, p. 13) give no information on the ampullae". The type specimen of *Stylaster gemmascens* (Esper), in the collection of the Zoological Institute at Erlangen (cf. Boschma, 1955a) closely corresponds with specimens from off the coast of Norway; the specimen of the "Siboga" Expedition to all appearances belongs to a different species, as results from a provisional examination.

<sup>1</sup> Type locality (present designation). — Atlantic coast region of Norway.

The original author (Esper, 1794) cited as locality the East Indian seas; the occurrence of the coral in this region is extremely doubtful.

<sup>2</sup> "Hist og her i Fjordene" (of Norway). — <sup>3</sup> "Es kommt diese Coralle von den ostindischen Meeren, der bestimmtere Aufenthalt aber, ist mir unbekannt". — <sup>4</sup> East Indies. — <sup>5</sup> Norwegian seas. — <sup>6</sup> "Habite la mer des Indes". — <sup>7</sup> Foldenfjord, "fra et meget betydeligt Dyb". — <sup>8</sup> "Lightning" Exp.; "Porcupine" Exp., no. 54 dredging, 530 fms. (969 m) (partly *Stylaster gemmascens*, partly *Allopora norvegica*, partly *Stylaster erubescens*, cf. Broch, 1914b). — <sup>9</sup> Rødbjergsbakken, 150-250 fms. (274-457 m); Tutterøen, 40-50 fms. (73-91 m). — <sup>10</sup> Søndmør and Foldenfjord. — <sup>11</sup> Trondheimfjord. — <sup>12</sup> "Siboga", Sta. 97, off Sulu Islands, 564 m (specifically different from *Stylaster gemmascens*!). — <sup>13</sup> Rockall, 57° 36' N., 13° 41' W. — <sup>14</sup> Hjeltefjord. — <sup>15</sup> Røberg, Trondheimfjord, 200-400 m. — <sup>16</sup> In North Sea rare, in rest of boreal region common. — <sup>17</sup> Trondheimfjord, Vågsford, Malangen. — <sup>18</sup> "Des côtes de Norwège". — <sup>19</sup> North Atlantic, "Ingolf", Sta. 15, 620 m; West coast of Norway: Hjeltefjord, ca. 150 m; Søndmøre; Trondheimfjord, 50-400 m. — <sup>20</sup> Various localities off the coast of Norway, 40-400 m; Hjelmsøy (70° 07' N., 24° 50' E.), on the shore. — <sup>21</sup> Off Izu Peninsula, East side of Nippon, 126 m.

***Stylaster gemmascens alaskanus*** Fisher, 1938<sup>1</sup>.

*Stylaster gemmascens alaskanus* Fisher, 1938, p. 500; Boschma, 1953d, p. 166; Boschma, 1955a, p. 22; Boschma, 1956b, p. 148.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

[*Madrepora gemmascens* Wilkens, 1787, see *Amphelia gemmascens* (in Appendix)].

***Stylaster gracilis*** Milne Edwards & Haime, 1850<sup>1</sup>.

*Stylaster gracilis* Milne Edwards & Haime, 1850, p. 98<sup>2</sup>; Milne Edwards & Haime, 1857, p. 129<sup>2</sup>; Kent, 1871, p. 278; Studer, 1877, p. 634; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 480<sup>3</sup>; Moseley, 1880, p. 86; Von Lendenfeld, 1885, p. 615<sup>4</sup>; Von Lendenfeld, 1887, p. 46; Hickson, 1892a,

p. 497<sup>5</sup>; Hickson, 1900, p. 94; Hutton, 1904, p. 318; Hickson & England, 1905, p. 7; Dehorne, 1920, p. 119; Broch, 1936, p. 11<sup>6</sup>; Eguchi, 1941, p. 1174<sup>7</sup>; Broch, 1942, p. 73; Broch, 1947, p. 312; Boschma, 1951a, p. 453; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148.

*Stylaster (Eu-Stylaster) gracilis* Broch, 1936, p. 26.

*Stylaster (Eustylaster) gracilis* Anonymus, 1949, p. 1667.

Distribution. — Australia; Kermadec Islands; Philippine Islands; Torres Straits; Japan.

<sup>1</sup> Type locality. — Australia.

<sup>2</sup> "Habite l'Australie". — <sup>3</sup> "Challenger", Sta. 170, off Raoul Island, Kermadec Islands, 520 fms. (951 m); off Samboangan, Philippine Islands, 30 and 10 fms. (55 and 18 m). — <sup>4</sup> "Was obtained near the Australian shore". — <sup>5</sup> Torres Straits. — <sup>6</sup> Sagami Bay region, Japan, 90-600 m. — <sup>7</sup> Off East side of Nippon, South of Shihoku and Kiushiu Islands, 73-421 m.

[*Stylaster infundibulifera* (Lamarck), see *Amphelia infundibulifera* (in Appendix)].

***Stylaster laevis*** Studer, 1877<sup>1</sup>.

*Stylaster laevis* Studer, 1877, p. 635; Moseley, 1880, p. 87<sup>2</sup>; Hutton, 1904, p. 318; Hickson & England, 1905, p. 7; Boschma, 1953d, p. 166.

Distribution. — New Zealand region of South Pacific.

<sup>1</sup> Type locality. — "Gazelle", Dredging 58, North of Three Kings Islands, near Northern part of New Zealand, 34° 09' S., 172° 35'. 8 E., 90 fms. (165 m).

<sup>2</sup> *Stylaster laevis*(?), "Challenger", Sta. 171, Western Pacific Ocean, North of the Kermadec Islands, 650 fms. (1189 m).

***Stylaster lonchitis*** Broch, 1947<sup>1</sup>.

*Stylaster (Eu-Stylaster) lonchitis* Broch, 1947, p. 309; Boschma, 1951a, p. 452.

*Stylaster lonchitis* Boschma, 1951a, p. 453; Boschma, 1956b, p. 148.

Distribution. — Pemba Channel, East Africa.

<sup>1</sup> Type locality. — "John Murray Exp.", Sta. 112, Pemba Channel, near Zanzibar, East Africa, 113 m.

***Stylaster microstriatus*** Broch, 1936<sup>1</sup>.

*Stylaster microstriatus* Broch, 1936, p. 10; Eguchi, 1941, p. 1186; Broch, 1942, p. 76; Boschma, 1951a, p. 453; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148; Boschma, 1956e, p. F 99.

*Stylaster (Eu-Stylaster) microstriatus* Broch, 1936, p. 47; Boschma, 1951a, p. 452.

Distribution. — Sagami Bay, Japan.

<sup>1</sup> Type locality. — Okinose, Sagami Bay, Japan, about 60 fms. (110 m).

[*Stylaster milleri* Durham, see *Allopora milleri* (Durham)].

[*Stylaster minimus* Hickson & England, see *Stenohelia minima* (Hickson & England)].

**Stylaster mooraboolensis** (Hall, 1893) <sup>1</sup>.

*Deontopora mooraboolensis* Hall, 1893, p. 117; Kühn, 1928, p. 102 <sup>2</sup>; Kühn, 1939, p. A 31 <sup>3</sup>; Boschma, 1951a, p. 451; Alloiteau, 1952, fig. 5; Boschma, 1953c, p. 355; Boschma, 1953d, p. 170.

*Deontopora* Hall, 1898, p. 175 <sup>4</sup>.

*Stylaster (Stylaster) mooraboolensis* Boschma, 1951a, p. 453; Boschma, 1953c, p. 363.

*Stylaster mooraboolensis* Boschma, 1953c, p. 363; Boschma, 1953d, p. 166; Boschma, 1956e, p. F 99.

Distribution. — Miocene of Victoria, Australia.

<sup>1</sup> Type locality. — Orphanage Reserve, Fyansford, Geelong, Victoria, Grey clays, Miocene (Hall, l.c.: "Eocene deposits").

<sup>2</sup> "Victoria. Miocän". — <sup>3</sup> "Miozän von Victoria". — <sup>4</sup> Eocene: Orphanage Hill, Fyansford; Filter Quarries, Batesford; Cape Otway; Muddy Creek. Miocene: Grange Burn (Forsyth's), near Hamilton.

**Stylaster multiplex** Hickson & England, 1905 <sup>1</sup>.

*Stylaster multiplex* Hickson & England, 1905, p. 15 <sup>2</sup>; Broch, 1936, p. 25; Boschma, 1953d, p. 166.

Distribution. — East Indian Archipelago.

<sup>1</sup> Type locality. — East Indian Archipelago.

<sup>2</sup> "Siboga", Sta. 94, Sulu Islands, 450 m; "Siboga", Sta. 177(?), North of Ceram, 1633-1300 m.

[*Stylaster obliquus* Studer, see *Stenohelia obliqua* (Studer)].

[*Stylaster priscus* Reuss, see *Allopora prisca* (Reuss)].

**Stylaster profundiporus** Broch, 1936 <sup>1</sup>.

*Stylaster profundiporus* Broch, 1936, p. 14; Fisher, 1938, p. 500; Broch, 1942, p. 74; Boschma, 1953d, p. 166.

*Stylaster (Eu-Stylaster) profundiporus* Broch, 1936, p. 29.

*Stylaster (En-Stylaster) profundiporus* Broch, 1942, p. 98.

*Stylaster (Eu-Stylaster) profundiporus* forma *typica* Broch, 1936, p. 29 <sup>2</sup>.

*Stylaster (Eu-Stylaster) profundiporus* forma *crassicaulis* Broch, 1936, p. 31 <sup>3</sup>.

*Stylaster profundiporus crassicaulis* Eguchi, 1941, p. 1175 <sup>4</sup>.

*Stylaster profundiporus typica* Eguchi, 1941, p. 1176 <sup>5</sup>.

*Stylaster profundiporus* forma *typica* Boschma, 1953d, p. 166.

*Stylaster profundiporus* forma *crassicaulis* Boschma, 1953d, p. 166.

Distribution. — Japan.

<sup>1</sup> Type locality. — Sagami Bay, Japan, 60-90 fms. (110-165 m).

<sup>2</sup> Okinose, Sagami Bay, 60 fms. (110 m); Sagami, 90 fms. (165 m). — <sup>3</sup> Okinose, Sagami Bay, 200 fms. (366 m). — <sup>4</sup> Off Bōsyū, East side of Nippon, 105 m; off Izu

Peninsula, East side of Nippon, 80-145 m; Kurose, Pacific, South of Nippon, 198 m; South of Shihoku Island, 212 m. — <sup>5</sup> Sagami Bay, 82 m.

**Stylaster pulcher** Quelch, 1884 <sup>1</sup>.

*Stylaster pulcher* Quelch, 1884a, p. 112; Kirkpatrick, 1890, p. 12 <sup>2</sup>; Hickson & England, 1905, p. 8; Dawydoff, 1952, p. 56 <sup>3</sup>; Boschma, 1953d, p. 166.

Distribution. — Japan; China Sea; Indochina.

<sup>1</sup> Type locality. — Enoshima Island, Japan.

<sup>2</sup> Garvan Reef, China Sea, 2 fms. (3½ m). — <sup>3</sup> "Dans le domaine maritime Indochinois".

**Stylaster punctatus** De Pourtalès, 1871 <sup>1</sup>.

*Stylaster punctatus* De Pourtalès, 1871, p. 36 <sup>2</sup>; De Pourtalès in Agassiz & De Pourtalès, 1874, p. 43 <sup>3</sup>; Studer, 1877, p. 634; De Pourtalès, 1878, p. 210 <sup>4</sup>; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Hickson & England, 1905, p. 7; Broch, 1936, p. 42.

Distribution. — West Indies.

<sup>1</sup> Type locality. — Florida Strait, 9-315 fms. (16½-576 m).

<sup>2</sup> Off Orange Key, 9 fms. (16½ m); off Double-Headed Shot Key, 315 fms. (576 m) ("a very unusual range"). — <sup>3</sup> Straits of Florida (typical specimen); off Barbados, 100 fms. (183 m) (a slender variety). — <sup>4</sup> Off Havana, 80 fms. (146 m); "Blake", Sta. 45, 25° 33' N., 84° 21' W., 101 fms. (185 m).

**Stylaster ramosus** Broch, 1947 <sup>1</sup>.

*Stylaster (Eu-Stylaster) ramosus* Broch, 1947, p. 306 <sup>2</sup>.

*Stylaster ramosus* Boschma, 1951a, p. 453.

Distribution. — Pemba Channel, East Africa.

<sup>1</sup> Type locality. — Pemba Channel, near Zanzibar, East Africa, 73-165 m.

<sup>2</sup> "John Murray Exp.", Sta. 111, Pemba Channel, 73-165 m; "John Murray Exp.", Sta. 112, Pemba Channel, 113 m.

**Stylaster roseus** (Pallas, 1766) <sup>1</sup>.

*Madrepora rosea* Pallas, 1766, p. 312 <sup>2</sup>; Boddaert, 1768, p. 386; Houttuyn, 1772, p. 170; Müller, 1775, p. 706; Ellis & Solander, 1786, p. 155; Wilkens, 1787, II, p. 75; Meuschen, 1787, p. 502; Gmelin, 1789, p. 3779; Esper, 1794, p. 16 <sup>3</sup>; Boddaert, 1798, p. 386; Bosc, 1802, p. 280; Nardo, 1844, p. 69; Milne Edwards & Haime, 1850, p. 95; Hickson, 1892a, p. 498; Boschma, 1955a, p. 27; Boschma, 1955b, p. 134; Boschma, 1956e, p. F 99.

*Millepora rosea* Esper, 1794, p. 16.

*Matrepora rosea* Oken, 1815, p. 72.

*Oculina rosea* Lamarck, 1816a, p. 287 <sup>4</sup>; Deslongchamps, 1824, p. 576; De Blainville, 1825, p. 355; De Blainville, 1830, p. 345; Gray, 1831, p. 37; Ehrenberg, 1834, p. 79; De Blainville, 1834, p. 381 <sup>5</sup>; Deshayes & Milne

Edwards, 1836, p. 458; Milne Edwards & Haime, 1849, p. 69; Milne Edwards & Haime, 1850, p. 99; Duchassaing, 1850, p. 15; Boschma, 1955b, p. 136.

*Stylaster roseus* Gray, 1831, p. 37; Milne Edwards & Haime, 1850, p. 95<sup>6</sup>; Milne Edwards & Haime, 1857, p. 130<sup>6</sup>; Duchassaing & Michelotti, 1860, p. 62<sup>7</sup>; Duchassaing & Michelotti, 1864, p. 68; De Pourtalès, 1868, p. 136; Duchassaing, 1870, p. 26<sup>8</sup>; De Pourtalès, 1871, p. 83<sup>9</sup>; Sismonda, 1871, p. 333; Troschel, 1871, p. 721; Lindström, 1876, p. 15<sup>10</sup>; Studer, 1877, p. 634; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Perrier, 1881, p. 303<sup>11</sup>; Filhol, 1885, p. 268<sup>12</sup>; Ludwig, 1886, p. 201; Krämer, 1897, p. 104<sup>13</sup>; Kirkpatrick, 1902, p. 53<sup>14</sup>; Krämer, 1903, p. 407<sup>13</sup>; Von Marenzeller, 1904, p. 84; Hickson & England, 1905, p. 7; Grobben, 1917, p. 307; Kühn, 1928, p. 103; Pax, 1928, p. 31<sup>13</sup>; Lameere, 1932, fig. 275; Boone, 1933, p. 31<sup>15</sup>; Kühn, 1939, p. A 30; Boschma, 1951c, p. 36; Boschma, 1953d, p. 166; Boschma, 1955a, p. 27; Boschma, 1955b, p. 134; Boschma, 1956e, p. F 99.

*Millepora rosacea* Nardo, 1845, p. 637.

*Allopora rosea* Dana, 1848, p. 694<sup>16</sup>; Milne Edwards & Haime, 1849, p. 69; Dana, 1859, p. 149.

*Oculina (Stylaster) rosea* Milne Edwards & Haime, 1850, p. 99.

*Stylaster rosea* Milne Edwards & Haime, 1850-1854, p. xxii; Duncan, 1870, p. 289.

*Stylaster roreus* Boschma, 1955a, p. 28.

*Stylaster rossus* Boschma, 1956e, p. F 97.

[According to Broch (1914b) *Stylaster erubescens* De Pourtalès is a synonym of *Stylaster roseus* (Pallas)].

[*Stylaster roseus* Broch, see *Stylaster erubescens* De Pourtalès].

Distribution. — West Indies; Hawaiian Islands (probably erroneous, the record based on *Stylaster sanguineus* Valenciennes?); Samoa (probably erroneous, the record based on *Stylaster sanguineus* Valenciennes?).

<sup>1</sup> Type locality. — Haiti.

<sup>2</sup> "Locus: Mare circa Insulam St. Domingo". — <sup>3</sup> "Sie kommt aus den amerikanischen Meeren". — <sup>4</sup> "Habite l'Océan américain, près de l'île de Saint-Domingue". — <sup>5</sup> "Amérique mérid. et méditerran.". — <sup>6</sup> "Habite l'Océan Américain". — <sup>7</sup> Antilles. — <sup>8</sup> Antilles, "environ 200 pieds de fond" (about 60 m). — <sup>9</sup> On the reef at Cruz del Padre, North coast of Cuba, a couple of feet below low-water mark. — <sup>10</sup> Off Anguilla, 100-150 fms. (183-274 m). — <sup>11</sup> "Des îles Sandwich et de diverses autres régions du Pacifique" (probably *Stylaster sanguineus*!). — <sup>12</sup> "Des îles Sandwich" (probably *Stylaster sanguineus*!). — <sup>13</sup> Samoa (probably *Stylaster sanguineus*!). — <sup>14</sup> From off a cable from the West Indies. — <sup>15</sup> 7 miles S.W. of Alligator Reef, Florida, 150 fms. (274 m) (probably another species; *Stylaster filigranus*?). — <sup>16</sup> West Indies.

**Stylaster rosso-americanus** Brandt, 1872<sup>1</sup>.

*Stylaster rosso-americanus* Brandt, 1872, p. 292; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Dall, 1884, p. 467; Hickson & England, 1905, p. 8; Boschma, 1953d, p. 166.

Distribution. — Off Alaska(?). The species was mentioned by name only, there is no description. Perhaps the name is a synonym of one of the several species of the genus *Allopora* occurring in the region.

<sup>1</sup> Type locality. — Unrecorded, apparently off Alaska.

**Stylaster sanguineus** Valenciennes in Milne Edwards & Haime, 1850<sup>1</sup>.

*Stylaster sanguineus* Milne Edwards & Haime, 1850, p. 96<sup>2</sup>; Milne Edwards & Haime, 1857, p. 130<sup>2</sup>; Schmeltz in Gräffe, 1866, p. 592; De Pourtalès, 1871, p. 83<sup>3</sup>; Kent, 1871, p. 278; Moseley, 1877, p. 98; Studer, 1877, p. 634; Stewart, 1878, p. 42; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Claus, 1880, p. 259; De Pourtalès in Agassiz, 1880, Pl. 3 figs. 18-24<sup>4</sup>; Schmeltz, 1882, p. 10; Von Lendenfeld, 1885, p. 615<sup>5</sup>; Ward, 1892, p. 53<sup>6</sup>; Studer, 1901, p. 398<sup>6</sup>; Delage & Hérouard, 1901, fig. 253; Kirkpatrick, 1902, p. 54; Krämer, 1903, p. 407<sup>6</sup>; Hutton, 1904, p. 318; Hickson & England, 1905, p. 7; Pax, 1928, p. 31<sup>6</sup>; Broch, 1936, p. 11; Fisher, 1938, p. 495<sup>7</sup>; Eguchi, 1941, p. 1178<sup>8</sup>; Wells in Cloud, 1952, p. 55<sup>9</sup>; Boschma, 1953d, p. 166.

*Stylaster roseus* Verrill, 1864, p. 45<sup>10</sup>.

*Stylaster sanguinens* Von Lendenfeld, 1887, p. 46<sup>11</sup>.

*Allopora sanguinea* Kent, 1893, p. 203<sup>12</sup>; Boschma, 1953d, p. 170.

*Stylaster* (*Eu-Stylaster*) *sanguineus* Broch, 1936, p. 33<sup>13</sup>; Broch, 1942, p. 101.

[Broch (1936) lists *Stylaster elegans* Verrill with a ? as a synonym of *Stylaster sanguineus* Valenciennes].

[Broch (1936) lists *Stylaster tenuis* Verrill with ?? as a synonym of *Stylaster sanguineus* Valenciennes].

Distribution. — Australia; New Zealand; Samoa; the Hawaiian plateau; Palao Islands; Gilbert Islands; Fiji Islands; Caroline Islands; Marshall Islands; Florida. The species has been reported from many localities in the Pacific, the occurrence of the species in Florida at first sight appears doubtful, but De Pourtalès (1871, p. 83) states that the specimens from Florida identified with *Stylaster roseus* by Verrill (1864) "cannot be distinguished from a specimen from New Zealand, which agrees with the description and figure of *St. sanguineus* Val., in the Monograph of the Oculinidae by Milne-Edwards and Haime, in *Annales des Sciences Naturelles*". The figures of the corals from Florida (Agassiz, 1880, Pl. 3 figs. 18-24) indeed show a



striking resemblance to specimens of *Stylaster sanguineus* from the Pacific.

<sup>1</sup> Type locality. — Australia.

<sup>2</sup> "Habite l'Australie". — <sup>3</sup> From Florida and from New Zealand. — <sup>4</sup> Florida. — <sup>5</sup> Florida; near Australia and New Zealand. — <sup>6</sup> Samoa. — <sup>7</sup> The only species known to inhabit the Hawaiian plateau. — <sup>8</sup> Palao Islands. — <sup>9</sup> Onotoa Atoll, Gilbert Islands. — <sup>10</sup> Florida. — <sup>11</sup> Australia, New Zealand. — <sup>12</sup> Is usually accredited with an Australian, Barrier district, habitat. — <sup>13</sup> Fiji; Ponape, Caroline Islands, (labelled "*Stylaster elegans* Verrill"); Jaluit, Marshall Islands.

[*Stylaster stellulatus* Stewart, see *Allopora stellulata* (Stewart)].

**Stylaster tenuis** Verrill, 1864<sup>1</sup>.

*Stylaster tenuis* Verrill, 1864, p. 45<sup>2</sup>; De Pourtalès, 1868, p. 136; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Quelch, 1884a, p. 113; Hickson & England, 1905, p. 7; Broch, 1936, p. 36; Boschma, 1953d, p. 166.

Broch (1936) lists *Stylaster tenuis* Verrill with ?? as a synonym of *Stylaster sanguineus* Valenciennes.

Distribution. — Samoa.

<sup>1</sup> Type locality. — Upolu, Samoa.

<sup>2</sup> Upolu, Navigator Islands.

[*Stylaster tiliatus* Hickson & England, see *Stenohelia tiliata* (Hickson & England)].

[*Stylaster umbonatus* Hickson & England, see *Stenohelia umbonata* (Hickson & England)].

**Stylaster verrucosus** Studer, 1877<sup>1</sup>.

*Stylaster verrucosus* Studer, 1877, p. 635; Moseley, 1880, p. 87; Hickson & England, 1905, p. 7; Boschma, 1953d, p. 166.

Distribution. — East of New Zealand.

<sup>1</sup> Type locality. — "Gazelle", Dredging 60, East of New Zealand, 35° 21' S., 175° 40' E., 597 fms. (1092 m).

**Stylaster yabei** Eguchi, 1941<sup>1</sup>.

*Stylaster yabei* Eguchi, 1941, p. 1178<sup>2</sup>; Boschma, 1953d, p. 166.

Distribution. — Pacific Ocean, off Japan.

<sup>1</sup> Type locality. — "Sôyô-maru", Sta. 330, off Asizuri-zaki, 32° 28' 15" N., 133° E., 212 m.

<sup>2</sup> Type-locality and "Sôyô-maru", Sta. 233, Kurose, 32° 21' 30" N., 139° 39' E., 198 m.

**Stylaster yabei minor** Eguchi, 1941<sup>1</sup>.

*Stylaster yabei minor* Eguchi, 1941, p. 1178; Boschma, 1953d, p. 166.

Distribution. — Pacific Ocean, off Japan.

<sup>1</sup> Type locality. — "Sôyô-maru", Sta. 233, Kurose, 32° 21' 30" N., 139° 39' E., 198 m.

**Stylaster** sp. Tornquist, 1905, p. 332<sup>1</sup>.

<sup>1</sup> Eocene, West coast of Madagascar: "Ein einziges Bruchstück der fossil seltenen Gattung *Stylaster* genügt nicht zur näheren Bestimmung."

**Stylaster** Gardiner, 1931, p. 91<sup>1</sup>; Gardiner, 1936, p. 412<sup>2</sup>.

<sup>1</sup> "Here, too [on the outer slopes of reefs] usually off reefs at depths greater than 50 fathoms, may frequently be found the cylindrical limestone stems of *Stylaster*, an ally of *Millepora* and a possible builder up of banks in deep waters." (generic identification highly uncertain!).

<sup>2</sup> Salomon Atoll, Chagos Archipelago, seaward slopes (Hickson & England, 1909, do not record a species of *Stylaster* from this locality; they list a coral from Salomon Atoll as *Allopora* sp.?).

**Allopora** Ehrenberg, 1834.

Type species, by monotypy, *Allopora oculina* Ehrenberg, 1834 (= *Millepora norvegica* Gunnerus, 1768).

(p.p.) *Dendracis* Römer, 1863, p. 243.

*Cryptaxis* Reuss, 1865, p. 620.

*Aulopora* Thomson, 1910, p. 61.

*Cryptaxiella* Kühn, 1939, p. A31.

**Allopora bithalamus** (Broch, 1936)<sup>1</sup>.

*Stylaster (Allopora) bithalamus* Broch, 1936, p. 74.

*Stylaster bithalamus* Broch, 1936, p. 75.

Distribution. — South Africa.

<sup>1</sup> Type locality. — Table Bay, South Africa, 33° 57' S., 18° 15' E., 51 fms. (93 m).

**Allopora bocki** (Broch, 1936)<sup>1</sup>.

*Stylaster (Allopora) bocki* Broch, 1936, p. 70.

*Stylaster bocki* Broch, 1936, p. 71; Broch, 1942, p. 74.

*Allopora bocki* Boschma, 1953d, p. 166.

Distribution. — Gilbert Islands.

<sup>1</sup> Type locality. — Aranuka, Gilbert Islands.

**Allopora boreopacifica** (Broch, 1932)<sup>1</sup>.

*Stylaster boreopacificus* Broch, 1932, p. 82; Broch, 1935c, p. 60; Broch, 1936, p. 52; Broch, 1942, p. 6.

*Stylaster (Allopora) boreopacificus* Broch, 1932, p. 84<sup>2</sup>; Broch, 1935c, p. 59; Broch, 1936, p. 56; Broch, 1942, p. 6.

*Allopora boreopacifica* Fisher, 1938, p. 519<sup>3</sup>; Eguchi, 1941, p. 1180<sup>4</sup>; Boschma, 1953d, p. 166.

*Stylaster (Allopora) boreopacificus* forma *typica* Broch, 1936, p. 56<sup>5</sup>.

*Stylaster (Allopora) boreopacificus* forma *incrassata* Broch, 1936, p. 61<sup>6</sup>.

*Allopora boreopacifica* forma *typica* Fisher, 1938, p. 508; Boschma, 1953d, p. 166; Boschma, 1956b, p. 148.

*Allopora boreopacifica* forma *incrassata* Boschma, 1953d, p. 166.

*Allopora incrassata* Eguchi, 1941, p. 1181<sup>7</sup>.

*Stylaster* sp. aff. *boreopacificus* Broch, 1936, p. 63<sup>8</sup>.

*Allopora* aff. *incrassata* Eguchi, 1941, p. 1187<sup>9</sup>.

*Allopora* aff. *boreopacifica* Boschma, 1953d, p. 166.

Distribution. — Okhotsk Sea, Sea of Japan, Pacific off Japan; Alaska (doubtful record).

<sup>1</sup> Type locality. — St. Olga Bay, Northeast of Vladivostok, mouth of Gulf of Tartary, Sea of Japan, 100 m.

<sup>2</sup> "Exploration des Mers de l'URSS", Sta. 364/31, St. Olga Bay, 100 m. — <sup>3</sup> Type locality and: "Albatross", Sta. 5016, Okhotsk Sea, off South end of Sakhalin Island, 64 fms. (117 m); "Albatross", Sta. 5017, Okhotsk Sea, 46° 43' 30" N., 143° 45' E., 64 fms. (117 m). — <sup>4</sup> Off Noto Peninsula, West side of Nippon, 260 m; off Wakase Bay, West side of Nippon, 199 m. — <sup>5</sup> St. Olga Bay, 100 m. — <sup>6</sup> Okinose, Sagami Bay, 60 fms. (110 m). — <sup>7</sup> South of Shihoku Island, Japan, 212 m. — <sup>8</sup> 22 miles S. to W. of Foster Island, Alaska, 16 fms. (?) (29 m) (perhaps *Allopora campyleca paragea* Fisher?). — <sup>9</sup> Seno-Umi, off East side of Nippon, 73 m.

***Allopora brochi*** Fisher, 1938<sup>1</sup>.

*Allopora brochi* Fisher, 1938, p. 517; Boschma, 1953d, p. 166.

Distribution. — Bering Sea.

<sup>1</sup> Type locality. — "Albatross", Sta. 4777, Petrel Bank, Bering Sea, 52° 11' N., 179° 49' E., 52-43 fms. (95-79 m).

***Allopora californica*** Verrill, 1866<sup>1</sup>.

*Allopora californica* Verrill, 1866, p. 37<sup>2</sup>; De Pourtalès, 1868, p. 136; Verrill, 1870, p. 516<sup>3</sup>; Verrill, 1871, p. 563; Moseley, 1879, p. 480; Moseley, 1880, p. 85; Quelch, 1884a, p. 112; Dall, 1884, p. 468; Hickson, 1915, p. 545; Ricketts, 1929, p. 18; Fisher, 1931, p. 392; Broch, 1936, p. 54; Fisher, 1938, p. 524<sup>4</sup>; Durham, 1947, p. 42; Boschma, 1953d, p. 166; Abbott, 1954, p. 182; Boschma, 1956c, p. 156.

Distribution. — Pacific Ocean off California; Gulf of California (doubtful record).

<sup>1</sup> Type locality. — "California".

<sup>2</sup> California, in deep water. — <sup>3</sup> "California. Probably from the Gulf of California in deep water." — <sup>4</sup> The type, "California"; Monterey Bay; Carmel Bay; "Albatross", Sta. 3158, North of Farallone Islands, California, 29 fms. (53 m); "Albatross", Sta. 3159, North of Farallone Islands, California, 27 fms. (49 m).

***Allopora campyleca*** Fisher, 1938<sup>1</sup>.

*Allopora campyleca* Fisher, 1938, p. 505<sup>2</sup>; Boschma, 1953d, p. 166.

*Stylaster campylecus* Broch, 1942, p. 6.

*Stylaster (Allopora) campylecus* Broch, 1942, p. 6.

*Stylaster campyleca* Broch, 1942, p. 101.

*Stylaster (Allopora) campyleca* Broch, 1942, p. 101.

Distribution. — Aleutian Islands, Bering Sea, Alaska.

<sup>1</sup> Type locality. — “Albatross”, Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

<sup>2</sup> In addition to the type: “Albatross”, Sta. 2852, Shumagin Islands, 58 fms. (106 m); “Albatross”, Sta. 2858, Gulf of Alaska, 230 fms. (421 m); “Albatross”, Sta. 3599, Bering Sea, North of Rat Island, 55 fms. (100 m); “Albatross”, Sta. 4230, Behm Canal, Alaska, 240-108 fms. (439-197 m); “Albatross”, Sta. 4302, off Shakan, Summer Strait, Southeast Alaska, 212-169 fms. (388-299 m).

***Allopora campyleca paragea*** Fisher, 1938<sup>1</sup>.

*Allopora campyleca paragea* Fisher, 1938, p. 507<sup>2</sup>; Boschma, 1953d, p. 166.

p.p. *Stylaster (Allopora) boreopacificus* forma *typica* Broch, 1936, p. 56<sup>3</sup>.

Distribution. — Alaska.

<sup>1</sup> Type locality. — Near Juneau, Alaska (Tenakee Springs).

<sup>2</sup> In addition to the type: “Albatross”, Sta. 4245, Kasaan Bay, Prince of Wales Island, Southeast Alaska, 95-98 fms. (174-179 m); Sitka, Alaska; Yakutat Bay, Alaska, 83 fms. (152 m); Alaska. — <sup>3</sup> Yakutat Bay, Alaska, 500 feet (152 m); Alaska.

***Allopora campyleca tylota*** Fisher, 1938<sup>1</sup>.

*Allopora campyleca tylota* Fisher, 1938, p. 509; Boschma, 1953d, p. 166.

*Allopora tylota* Fisher, 1938, p. 499.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — “Albatross”, Sta. 4781, off Agattu Island, Aleutian Islands, 52° 14' 30" N., 174° 13' E., 482 fms. (881 m).

***Allopora campyleca trachystoma*** Fisher, 1938<sup>1</sup>.

*Allopora campyleca trachystoma* Fisher, 1938, p. 510; Boschma, 1953d, p. 166.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — “Albatross”, Sta. 4784, off East Cape, Attu Island, Aleutian Islands, 52° 55' 40" N., 173° 26' E., 135 fms. (247 m).

***Allopora carinata*** (Broch, 1936)<sup>1</sup>.

*Stylaster carinatus* Broch, 1936, p. 10; Broch, 1942, p. 74.

*Stylaster (Allopora) carinatus* Broch, 1936, p. 54; Boschma, 1951a, p. 453.

*Allopora carinatus* Eguchi, 1941, p. 1179<sup>2</sup>.

*Allopora carinata* Boschma, 1953d, p. 166; Boschma, 1956b, p. 148.

Distribution. — Japan.

<sup>1</sup> Type locality. — Okinose, Sagami Bay, 60 fms. (110 m).

<sup>2</sup> Off Izu Peninsula, East side of Nippon, 155 m; off Wagu, Mie-ken; South of Shihoku Island, 212 m.

**Allopora compressa** (Römer, 1863) <sup>1</sup>.

*Dendracis pygmaea* Römer, 1863, p. 243 <sup>2</sup>; Giebel, 1864a, p. 266; Reuss, 1865, p. 621; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Boschma, 1951a, p. 454.

*Dendracis multipora* Römer, 1863, p. 243 <sup>2</sup>; Giebel, 1864a, p. 266; Reuss, 1865, p. 621; Boschma, 1951a, p. 454.

*Dendracis compressa* Römer, 1863, p. 244 <sup>2</sup>; Giebel, 1864a, p. 266; Reuss, 1865, p. 621; Boschma, 1951a, p. 454.

*Dendracis tuberculosa* Römer, 1863, p. 244 <sup>2</sup>; Giebel, 1864a, p. 266; Reuss, 1865, p. 621; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Boschma, 1951a, p. 454.

*Cryptaxis alloporoides* Reuss, 1865, p. 620; Kühn, 1928, p. 102 <sup>3</sup>; Boschma, 1951a, p. 454.

*Allopora pygmaea* Moseley, 1879, p. 480; Moseley, 1880, p. 86; Boschma, 1951a, p. 454.

*Allopora tuberculosa* Moseley, 1879, p. 480; Moseley, 1880, p. 86; Boschma, 1951a, p. 454.

*Cryptaxiella alloporoides* Kühn, 1939, p. A31 <sup>4</sup>; Boschma, 1951a, p. 455.

*Cryptaxis compressa* Boschma, 1951a, p. 454.

*Stylaster (Allopora) compressus* Boschma, 1951a, p. 455.

*Allopora compressa* Boschma, 1951a, p. 455.

Distribution. — Oligocene, Central Germany.

<sup>1</sup> Type locality. — Lattorf, Central Germany, Lower Oligocene.

<sup>2</sup> "Im unteren Oligocän bei Lattorf." — <sup>3</sup> "Mitteldeutschland, Cassel, Luithorst, Lattorf; Oligocän". — <sup>4</sup> "Oligozän von Cassel (nach Reuss)".

**Allopora divergens** (Von Marenzeller, 1904) <sup>1</sup>.

*Stylaster divergens* Von Marenzeller, 1904, p. 83; Broch, 1914b, p. 7.

*Allopora divergens* Boschma, 1953d, p. 166.

Distribution. — Galapagos Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3405, off the Galapagos Islands, 00° 57' N., 89° 38' W., 100 m.

**Allopora explanata** Kent, 1871 <sup>1</sup>.

*Allopora explanata* Kent, 1871, p. 280; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Boschma, 1951a, p. 455; Boschma, 1956c, p. 155.

According to Moseley (1880) and Broch (1936) *Allopora explanata* Kent is a synonym of *Allopora nobilis* Kent.

Distribution. — Unknown.

<sup>1</sup> Type locality. — Unrecorded.

**Allopora granulosa** (Milne Edwards & Haime, 1850) <sup>1</sup>.

*Stylaster granulatus* Milne Edwards & Haime, 1850, p. 97 <sup>2</sup>; Milne Edwards & Haime, 1857, p. 131 <sup>2</sup>; Studer, 1877, p. 634; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 481; Moseley, 1880, p. 86; Von Marenzeller, 1904, p. 84; Hickson & England, 1905, p. 7; Broch, 1936, p. 10; Broch, 1942, p. 106; Boschma, 1953d, p. 176.

*Stylaster granulata* Moseley, 1879, p. 450 <sup>3</sup>; Moseley, 1880, p. 58 <sup>3</sup>.

*Stylaster granularis* Krämer, 1897, p. 104 <sup>4</sup>; Krämer, 1903, p. 407 <sup>4</sup>; Pax, 1928, p. 31 <sup>4</sup>; Boschma, 1953d, p. 178.

*Stylaster (Allopora) granulatus* Broch, 1936, p. 76; Broch, 1942, p. 97.

*Allopora granulatus* Boschma, 1953d, p. 166.

Distribution. — Australia (indistinct data); off Ascension Island, South Atlantic (uncertain, identification probably erroneous); Samoa (unreliable data).

<sup>1</sup> Type locality. — Australia.

<sup>2</sup> "Habite l'Australie". — <sup>3</sup> Dredged off Ascension Island, in 420 fathoms (768 m) (Moseley, 1880, p. 58, footnote; not listed on p. 81 of the cited paper). — <sup>4</sup> Samoa (identification uncertain).

**Allopora incompleta** Tenison-Woods, 1883 <sup>1</sup>.

*Allopora incompleta* Tenison-Woods, 1883, p. 207; Boschma, 1956b, p. 144 <sup>5</sup>.

*Stylaster sanguineus* Waite, 1899, p. 8 <sup>2</sup>; Hedley, 1903, p. 342 <sup>3</sup>; Boschma, 1956b, p. 149.

*Stylaster eximius* Ritchie, 1911, p. 867 <sup>4</sup>; Boschma, 1956b, p. 149.

*Stylaster incompletus* Boschma, 1953d, p. 166; Boschma, 1956b, p. 147.

Distribution. — Off the coasts of New South Wales and Queensland.

<sup>1</sup> Type locality. — Port Stephens, New South Wales, 30 fms. (55 m).

<sup>2</sup> Off Bird Island, New South Wales, 25 fms. (46 m). — <sup>3</sup> Off Wollongong, off Coogee, New South Wales. — <sup>4</sup> "Thetis", Sta. 44, off Coogee, 49-50 fms. (90-91 m); "Thetis", Sta. 47, off Bulgo, 63-57 fms. (115-104 m); "Thetis", Sta. 48, off Wollongong, 55-56 fms. (100-102 m). — <sup>5</sup> Port Stephens; Broughton Island off Port Stephens; Port Denison, Queensland; "Thetis", Sta. 44; "Thetis", Sta. 48.

[*Allopora infundibulifera* (Lamarck), see *Amphelia infundibulifera* (in Appendix)].

**Allopora milleri** (Durham, 1942) <sup>1</sup>.

*Stylaster milleri* Durham, 1942, p. 102; Boschma, 1951c, p. 38; Boschma, 1953d, p. 170.

*Stylaster (Allopora) milleri* Boschma, 1951c, p. 38.

*Allopora milleri* Boschma, 1953d, p. 170.

Distribution. — Lower Oligocene, Washington.

<sup>1</sup> Type locality. — Quimper Sandstone, Washington, Lower Oligocene.

**Allopora miniata** De Pourtalès, 1868<sup>1</sup>.

*Allopora miniata* De Pourtalès, 1868, p. 136; Duncan, 1870, p. 295; De Pourtalès, 1871, p. 37<sup>2</sup>; Kent, 1871, p. 279; Moseley, 1876a, p. 69; Moseley, 1876c, p. 122; Studer, 1877, p. 636; Moseley, 1879, p. 480; Moseley, 1880, p. 85; Quelch, 1884a, p. 112; Broch, 1936, p. 11<sup>3</sup>; Boschma, 1953d, p. 166.

*Allopora miniacea* De Pourtalès, 1871, Description of Plates; De Pourtalès, 1878, p. 197; Agassiz, 1888, p. 141; Moseley, 1892, p. 461.

*Allopora mineacea* Moseley, 1877, p. 100.

According to Broch (1936) *Allopora miniata* De Pourtalès is a synonym of *Allopora norvegica* (Gunnerus).

Distribution. — West Indies and adjoining region of Atlantic.

<sup>1</sup> Type locality. — Off the Florida Reef, 100-324 fms. (183-592 m).

<sup>2</sup> Off Tennessee Reef, 124 fms.; off Coffin's Patches, 195 fms. (356 m). — <sup>3</sup> U.S. Coast Survey, Gulf Stream Exploration, 100-324 fms. (183-592 m).

**Allopora moseleyana** Fisher, 1938<sup>1</sup>.

*Allopora moseleyana* Fisher, 1938, p. 512<sup>2</sup>; Boschma, 1953d, p. 166.

*Allopora moseleyana* forma *leptostyla* Fisher, 1938, p. 514<sup>3</sup>; Boschma, 1953d, p. 166.

Distribution. — Bering Sea, Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 4781, Bering Sea near Agattu Island, 52° 14' 30" N., 174° 13' E., 482 fms. (881 m).

<sup>2</sup> Also from "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 283 fms. (518 m).

<sup>3</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

**Allopora moseleyi** Dall, 1884<sup>1</sup>.

*Allopora moseleyi* Dall, 1884, p. 469<sup>2</sup>; Hickson, 1915, p. 557; Fisher, 1931, p. 391; Boschma, 1953d, p. 166.

According to Fisher (1938) *Allopora moseleyi* Dall is a synonym of *Allopora verrillii* Dall.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — Kyska Harbour, Kyska Island, Aleutian Islands.

<sup>2</sup> One specimen on the beach growing in a cavity between the layers of a mass of Nullipore.

**Allopora nobilis** Kent, 1871<sup>1</sup>.

*Allopora nobilis* Kent, 1871, p. 279<sup>2</sup>; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Quelch, 1884a, p. 112; Moseley, 1892, p. 460; Hickson, 1900, p. 93<sup>3</sup>; Hickson, 1906, p. 287; Hickson & England, 1909, p. 346; Hickson, 1915, p. 545; Hickson, 1924, p. 154; Broch, 1936, p. 11; Boschma, 1956c, p. 154.

*Stylaster (Allopora) nobilis* England, 1926, p. 266<sup>4</sup>; Broch, 1936, p. 63<sup>5</sup>; Broch, 1942, p. 73.

*Stylaster nobilis* Broch, 1936, p. 65; Broch, 1942, p. 74.

*Allopora profunda* Boschma, 1956c, p. 154.

[According to Moseley (1880) and Broch (1936) *Allopora explanata* Kent is a synonym of *Allopora nobilis* Kent].

[With a ? Moseley (1880) lists *Allopora venusta* Verrill as a synonym of *Allopora nobilis* Kent].

Distribution. — South Africa.

<sup>1</sup> Type locality (present designation). — False Bay, South Africa, 30 fms. (55 m).

<sup>2</sup> Hab. unrecorded. — <sup>3</sup> False Bay at a depth of 30 fathoms (55 m). — <sup>4</sup> From the Cape of Good Hope. — <sup>5</sup> 15 miles SW. to W. of Cape Infanta, South Africa, 48 fms. (88 m).

***Allopora norvegica*** (Gunnerus, 1768)<sup>1</sup>.

*Millepora aspera* Linnaeus, 1767, p. 1282; Gunnerus, 1768, p. 67; Gunnerus, 1770, p. 59; Houttuyn, 1772, p. 184; Müller, 1776, p. 252; Linck, 1783, p. 211; Wilkens, 1787, I, p. 342; Gmelin, 1789, p. 3783; Bosc, 1802, p. 288.

*Millepora norvegica* Gunnerus, 1768, p. 64<sup>2</sup>; Gunnerus, 1770, p. 57; Broch, 1918a, p. 104; Boschma, 1953a, p. 32; Boschma, 1953b, p. 311; Boschma, 1956e, p. F 99.

*Madrepora aspera* Müller, 1775, p. 715; Dahl, 1900, p. 55; Broch, 1918a, p. 107; Broch, 1918b, p. 12; Boschma, 1953b, p. 302.

*Allopora oculina* Ehrenberg, 1834, p. 147; Dana, 1848, p. 697; Milne Edwards & Haime, 1850, p. 99<sup>3</sup>; Milne Edwards & Haime, 1857, p. 132; Dana, 1859, p. 149; Verrill, 1866, p. 38; De Pourtalès, 1867, p. 117; Duncan, 1870, p. 289<sup>4</sup>; Sars, 1873, p. 115; Thomson, 1874, p. 169<sup>5</sup>; Moseley, 1876a, p. 63; Moseley, 1876c, p. 115; Moseley, 1877, p. 98; Studer, 1877, p. 636<sup>6</sup>; Moseley, 1879, p. 480; Moseley, 1880, p. 85; Claus, 1880, p. 259; Perrier, 1881, p. 303; Storm, 1882, p. 26; Perrier, 1886, fig. 168; Hickson, 1890, p. 595<sup>7</sup>; Hickson, 1900, p. 94; Delage & Hérourard, 1901, fig. 258; Von Marenzeller, 1904, p. 84; Hickson & England, 1909, p. 346; Broch, 1914b, p. 18; Hickson, 1915, p. 545; Broch, 1936, p. 11; Boschma, 1953a, p. 32; Boschma, 1956c, p. 156<sup>6</sup>; Boschma, 1956e, p. F 99.

*Allopora oculata* Kent, 1871, p. 279.

*Allopora norvegica* Sars, 1873, p. 115<sup>8</sup>; Storm, 1882, p. 26<sup>9</sup>; Hickson, 1890, p. 595<sup>10</sup>; Broch, 1914b, p. 19; Hickson, 1915, p. 545; Fisher, 1938, p. 513; Boschma, 1953a, p. 32; Boschma, 1953b, p. 311; Boschma, 1953d, p. 166; Boschma, 1955b, p. 137; Boschma, 1956c, p. 156; Boschma, 1956e, p. F 100.



*Allopora norvegica* Moseley, 1879, p. 426; Moseley, 1880, p. 33.

*Allopora (Millepora) norvegica* Storm, 1879, p. 24.

*S. Allopora norvegica* Norman, 1893, p. 349<sup>11</sup>.

*Madrepora norvegica* Von Marenzeller, 1904, p. 84.

*Allopora* Appellöf, 1912, p. 508<sup>19</sup>.

*Stylaster (Allopora) norvegicus* Broch, 1914b, p. 12; Hickson, 1915, p. 544<sup>12</sup>; England, 1926, p. 281; Broch, 1928, p. III b 55; Broch, 1932, p. 84; Broch, 1935a, p. 44; Broch, 1935c, p. 59; Broch, 1936, p. 49; Broch, 1937, p. 14; Dons, 1939, p. 197<sup>13</sup>; Broch, 1942, p. 66.

*Stylaster (Allopora) norvegica* Broch, 1914b, p. 13; Broch, 1918a, p. 105; Broch, 1918b, p. 11.

*Stylaster norvegicus* Broch, 1914b, p. 15<sup>14</sup>; Broch, 1928, p. III b 55; Broch, 1932, p. 85; Clemens, 1933, p. 15<sup>15</sup>; Broch, 1935c, p. 60<sup>16</sup>; Broch, 1936, p. 12; Dons, 1939, p. 198; Kühn, 1939, fig. 35; Broch, 1942, p. 71; Boschma, 1953a, p. 32; Boschma, 1953b, p. 311.

*Stylaster norvegica* Broch, 1918a, p. 108; Broch, 1918b, p. 15; Broch, 1928, p. III b 55<sup>17</sup>; Ekman, 1935, p. 171; Broch, 1936, p. 11.

*Millepora norvegica* Broch, 1918b, p. 10.

*Stylaster (Allopora) norvegiens* Broch, 1932, p. 82.

*Stylaster (Allopora) norvegicus* Broch, 1932, p. 85.

*Millepora norvegica* Boschma, 1953b, p. 312.

*Stylaster (Allopora) norvegicus* forma *atlantica* Broch, 1936, p. 49<sup>18</sup>.

[According to Broch (1936) *Allopora miniata* De Pourtalès is a synonym of *Allopora norvegica* (Gunnerus)].

[*Allopora norvegica* Dana, see *Stylaster gemmascens* (Esper)].

Distribution. — Off the coast of Norway and other localities in North Atlantic Ocean; off Capetown (record uncertain); off Canadian Pacific coast (data uncertain, possibly *Allopora norvegica pacifica*).

<sup>1</sup> Type locality. — Nordmør, Atlantic coast region of Norway.

<sup>2</sup> "Fra Nordmør". — <sup>3</sup> "Patrie inconnue". — <sup>4</sup> "Porcupine", Sta. 54, N. of Scotland, 59° 56' N., 06° 27' W., 363 fms. (664 m) (partly *Allopora norvegica*, partly *Stylaster gemmascens*, partly *Stylaster erubescens*, cf. Broch, 1914b). — <sup>5</sup> "Porcupine", at depths a little over 300 fathoms (*Stylaster gemmascens* or *Stylaster erubescens*?). — <sup>6</sup> "Gazelle", off Capetown, 33° 59' S., 17° 52' E., 50 fms. (91 m) (identification uncertain). — <sup>7</sup> Dredged in the Hardanger Fiord. — <sup>8</sup> Storeggen, 80-100 fms. (146-183 m); Mebotten, 50-60 fms. (91-110 m) — <sup>9</sup> Søndmør and Trondheimfjord, 200 fms. (366 m). — <sup>10</sup> From the "Triton" collection. — <sup>11</sup> Trondheimfjord. — <sup>12</sup> Swiftsure Shoal, off Barkley Sound, West coast of Vancouver Island, British Columbia (identification uncertain). — <sup>13</sup> Various localities off the coast of Norway, 40-400 m. — <sup>14</sup> North Atlantic Ocean: "Ingolf", Sta. 15, 620 m; "Ingolf", Sta. 17, 1400 m; "Ingolf", Sta. 52, 790 m; "Ingolf", Sta. 55, 594 m; "Thor", 1904, 392 m; Hardanger Fjord; Storeggen (at Aalesund); Trondheimfjord, 100-400 m. — <sup>15</sup> Canadian Pacific coast (identification uncertain). — <sup>16</sup> "Exploration des Mers de l'URSS", Sta. 248, 56° 10' N.,

143° 15' E., 182 m (*Allopora norvegica pacifica*). — <sup>17</sup> North Sea very rare, occurs in other parts of boreal and lusitanian-mediterranean region. — <sup>18</sup> Off Ålesund; N.W. of Storeggen, West Norway, 70-200 m; Skarnsund, Trondheimfjord, about 200 m; U.S. Coast Survey, Gulf Stream Exploration, 100-324 fms. (183-592 m) (labelled *Allopora miniata* Pourt.). — <sup>19</sup> "Corals, too, are found locally on the edges [of the boreal plateaus] just as much as in the fjords, and the species are the same" (footnote: "The dredge brought up branches of ... *Allopora*, ...").

***Allopora norvegica pacifica*** (Broch, 1936) <sup>1</sup>.

*Stylaster (Allopora) norvegicus* forma *pacifica* Broch, 1936, p. 52.

*Allopora norvegica pacifica* Fisher, 1938, p. 522 <sup>2</sup>; Eguchi, 1941, p. 1182 <sup>3</sup>;  
Boschma, 1953d, p. 166.

*Allopora pacifica* Fisher, 1938, p. 532.

*Stylaster norvegicus* forma *pacifica* Broch, 1942, p. 6.

Distribution. — Okhotsk Sea, Sea of Japan.

<sup>1</sup> Type locality. — Okhotsk Sea, 56° 10' N., 143° 15' E., 182 m.

<sup>2</sup> In addition to type locality: "Albatross", Sta. 5016, Okhotsk Sea, off South end of Sakhalin Island, 64 fms. (117 m); "Albatross", Sta. 5017, Okhotsk Sea, 46° 43' 30" N., 143° 45' E., 64 fms. (117 m). — <sup>3</sup> Yamato Bank, Sea of Japan, 39° 08' 45" N., 134° 20' E., 305 m.

***Allopora ochracea*** Quelch, 1884 <sup>1</sup>.

*Allopora ochracea* Quelch, 1884a, p. 111; Boschma, 1956c, p. 156.

Distribution. — Unknown.

<sup>1</sup> Type locality. — Unrecorded.

***Allopora papillosa*** Dall, 1884 <sup>1</sup>.

*Allopora papillosa* Dall, 1884, p. 470; Hickson, 1915, p. 557; Fisher, 1931, p. 391; Fisher, 1938, p. 527; Boschma, 1953d, p. 166.

<sup>1</sup> Type locality. — Coal Harbour, Unga, Shumagin Islands, Alaska, 6 fms. (11 m).

***Allopora petrograpta*** Fisher, 1938 <sup>1</sup>.

*Allopora petrograpta* Fisher, 1938, p. 530; Ricketts & Calvin, 1948, p. 295; Boschma, 1953d, p. 166.

Distribution. — Alaska.

<sup>1</sup> Type locality. — Kyack Island, mouth of Sitka harbour, Alaska.

***Allopora polymorpha*** (Broch, 1936) <sup>1</sup>.

*Stylaster (Allopora)* sp. Broch, 1936, p. 79.

*Stylaster (Allopora) polymorphus* Broch, 1936, p. 81.

*Allopora polymorpha* Boschma, 1956b, p. 148.

The description (Broch, 1936, pp. 79-81) is headed "*Stylaster (Allopora)* sp."; the name *Stylaster (Allopora) polymorphus* is mentioned with some

restriction on p. 81 of the cited paper; in the explanation of Pl. XII fig. 36 the name is given as *Stylaster (Allopora)* sp. (*polymorphus*).

Distribution. — Unknown.

<sup>1</sup> Type locality. — Unrecorded.

***Allopora polyorchis*** Fisher, 1938<sup>1</sup>.

*Allopora polyorchis* Fisher, 1938, p. 503; Boschma, 1953d, p. 166.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

[*Allopora porphyra* (Fisher), see *Stylantheca porphyra* Fisher].

***Allopora prisca*** (Reuss, 1872)<sup>1</sup>.

*Stylaster prisca* Reuss, 1872, p. 249; Boschma, 1951c, p. 36.

Distribution. — Miocene, Moravia.

<sup>1</sup> Type locality. — Porztech near Nikolsburg, Moravia, Miocene.

***Allopora profunda*** Moseley, 1879<sup>1</sup>.

*Allopora profunda* Moseley, 1879, p. 480; Moseley, 1880, p. 86; Perrier, 1881, fig. 64; Perrier, 1886, fig. 170; Moseley, 1892, p. 461; Von Marenzeller, 1904, p. 85; Hutton, 1904, p. 318<sup>2</sup>; Dehorne, 1920, p. 129; Broch, 1936, p. 11; Fisher, 1938, p. 513; Boschma, 1951a, p. 457; Boschma, 1953d, p. 171; Boschma, 1956c, p. 154.

*Allopora profunda* Delage & Hérouard, 1901, fig. 257.

*Stylaster profundus* Hickson & England, 1905, p. 8.

*Stylaster (Allopora) profundus* Boschma, 1951a, p. 457.

Distribution. — Off the mouth of the Rio de la Plata.

<sup>1</sup> Type locality. — "Challenger", Sta. 320, 37° 17' S., 53° 52' W., off the mouth of the Rio de la Plata, 600 fms. (1097 m).

<sup>2</sup> Error for *Stenohelia profunda*.

***Allopora rosacea*** Greeff, 1886<sup>1</sup>.

*Allopora rosacea* Greeff, 1886, p. 20; Broch, 1914a, p. 38<sup>2</sup>; Broch, 1914b, p. 7.

Distribution. — Guinea, West Africa.

<sup>1</sup> Type locality. — Between the islands Rolas and S. Thomé, Guinea, West Africa, about 20 fms. (36 m).

<sup>2</sup> Materials from type locality.

***Allopora scabiosa*** (Broch, 1935)<sup>1</sup>.

*Stylaster scabiosa* Broch, 1935c, p. 60; Broch, 1936, p. 11; Broch, 1942, p. 73.

*Stylaster (Allopora) scabiosa* Broch, 1936, p. 72.

*Allopora scabiosa* Fisher, 1938, p. 515; Boschma, 1953d, p. 166.

*Allopora* cf. *scabiosa* Eguchi, 1941, p. 1183.

Distribution. — Okhotsk Sea.

<sup>1</sup> Type locality. — "Exploration des Mers de l'URSS", Sta. 250, Okhotsk Sea, 54° 53' N., 144° 00' E., 505 m.

***Allopora solida*** (Broch, 1935) <sup>1</sup>.

*Stylaster solidus* Broch, 1935c, p. 60; Broch, 1936, p. 52; Broch, 1942, p. 101.

*Stylaster (Allopora) solidus* Broch, 1936, p. 68; Broch, 1942, p. 101; Boschma, 1951a, p. 455.

*Allopora solida* Fisher, 1938, p. 516; Boschma, 1953d, p. 166.

Distribution. — Okhotsk Sea.

<sup>1</sup> Type locality. — "Exploration des Mers de l'URSS", Sta. 249, Okhotsk Sea, 56° 24' N., 143° 18' E., 100 m.

***Allopora stejneri*** Fisher, 1938 <sup>1</sup>.

*Allopora stejneri* Fisher, 1938, p. 518; Boschma, 1953d, p. 166.

Distribution. — Bering Sea.

<sup>1</sup> Type locality. — "Albatross", Sta. 4777, Petrel Bank, Bering Sea, 52° 11' N., 179° 49' E., 52-43 fms. (95-79 m).

***Allopora stellulata*** (Stewart, 1878) <sup>1</sup>.

*Stylaster stellulatus* Stewart, 1878, p. 41 <sup>2</sup>; Moseley, 1880, p. 88 <sup>3</sup>; Quelch, 1884a, p. 114 <sup>4</sup>; Hickson & England, 1905, p. 7; Boschma, 1951c, p. 39; Boschma, 1953d, p. 171.

*Allopora stellulata* Boschma, 1953d, p. 166.

Distribution. — Society Islands; Tuamotu Islands (?).

<sup>1</sup> Type locality. — Society Islands.

<sup>2</sup> Obtained in Tahiti, collected on a small island in the vicinity. — <sup>3</sup> "From the neighbourhood of Tahiti. I received a specimen of the same at Tahiti said to have come from the Paumotu Islands." — <sup>4</sup> "A species which has hitherto been recorded only from the Society and Paumotu Islands."

***Allopora subviolacea*** Kent <sup>1</sup>.

Akori Dapper, 1668, p. 499 <sup>2</sup>; Rumphius, 1750, p. 239; Pallas, 1766, p. 257 <sup>3</sup>; Wilkens, 1787, I, p. 327; Greeff, 1886, p. 11; Bauer, 1896, p. 699; Broch, 1914a, p. 38; Pax, 1928, p. 30; Bauer, 1932, p. 769.

Agrie, Acorri Bosman, 1704, p. 115; Bosman, 1709, p. 114.

Akogria Rumphius, 1750, p. 239; Pallas, 1766, p. 257; Wilkens, 1787, I, p. 327.

*Allopora subviolacea* Kent, 1871, p. 280; Moseley, 1877, p. 100 <sup>4</sup>; Moseley, 1879, p. 480; Moseley, 1880, p. 86; Greeff, 1886, p. 11 <sup>5</sup>; Bauer, 1896,

p. 699; Broch, 1914a, p. 40<sup>5</sup>; Pax, 1928, p. 30; Monod, 1928, p. 175<sup>6</sup>; Bauer, 1932, p. 769; Broch, 1936, p. 67; Mauny, 1949, p. 34; Boschma, 1953d, p. 166.

*Stylaster (Allopora) subviolaceus* Broch, 1936, p. 66<sup>7</sup>.

*Stylaster subviolaceus* Broch, 1936, p. 66.

*Allopora* cf. *subviolacea* Eguchi, 1941, p. 1183<sup>8</sup>.

Broch (1936) lists *Allopora subviolacea* Broch, 1914a (*A. subviolacea* Greeff, 1886) with a ? as a synonym of *Allopora subviolacea* Kent.

Distribution. — South Africa (colony showing a great similarity to the type specimen from unknown locality, cf. Broch, 1936, p. 67); Guinea, West Africa (with characters differing in some respects from those of the type specimen and of the colony from South Africa, cf. Broch, l.c.); Japan (identification apparently erroneous).

<sup>1</sup> Type locality. — Unrecorded.

<sup>2</sup> A bluish coral growing in the water in the kingdom of Benin (region of the Niger delta). — <sup>3</sup> "In regno Benyn" (the coral tentatively placed as a synonym of *Millepora coerulea* Pallas = *Heliopora coerulea* (Pallas)). — <sup>4</sup> Error for *Allopora explanata* Kent. — <sup>5</sup> Island Rolas near S. Thomé, Guinea, West Africa. — <sup>6</sup> "Au Cameroun". — <sup>7</sup> 15 miles SW. to W. of Cape Infanta, South Africa, 48 fms. (88 m). — <sup>8</sup> Off Izu Peninsula, East side of Nippon, 27 m.

#### ***Allopora venusta* Verrill, 1870<sup>1</sup>.**

*Allopora venusta* Verrill, 1870, p. 517; Verrill, 1871, p. 560; Moseley, 1879, p. 480; Moseley, 1880, p. 85; Dall, 1884, p. 468; Quelch, 1884a, p. 112; Whiteaves, 1887, p. 115<sup>2</sup>; Hickson, 1900, p. 93; Fisher, 1931, p. 393<sup>3</sup>; Broch, 1936, p. 65; Fisher, 1938, p. 526<sup>4</sup>; Boschma, 1953d, p. 166; Boschma, 1956c, p. 156.

With a ? Moseley (1880) lists *Allopora venusta* Verrill as a synonym of *Allopora nobilis* Kent.

Distribution. — West coast region of North America.

<sup>1</sup> Type locality. — Neah Bay, near Cape Flattery, Washington.

<sup>2</sup> Queen Charlotte Sound, British Columbia. — <sup>3</sup> In addition to type locality: off Cape Flattery, 27-40 fms. (49-73 m); Farallone Islands, California, 29 fms. (53 m); Monterey Bay, California, 30 fms. (55 m). — <sup>4</sup> Also from: "Albatross", Sta. 2873, 2874, and 2875, all off Cape Flattery, 27-40 fms. (49-73 m); "Albatross", Sta. 2888 and 3050, off Oregon, 41-46 fms. (75-84 m); "Albatross", Sta. 3158, North of Farallone Islands, California, 29 fms. (53 m).

#### ***Allopora verrillii* Dall, 1884<sup>1</sup>.**

*Allopora verrillii* Dall, 1884, p. 468<sup>2</sup>; Hickson, 1915, p. 557; Fisher, 1931, p. 391; Broch, 1932, p. 84; Fisher, 1938, p. 521<sup>3</sup>; Boschma, 1951a, p. 455; Boschma, 1953d, p. 166; Boschma, 1956e, p. F 100.

*Stylaster (Allopora) norvegicus* forma *pacifica* Broch, 1936, p. 52<sup>4</sup>.

*Stylaster (Allopora) verrillii* Broch, 1942, p. 6.

[According to Fisher (1938) *Allopora moseleyi* Dall is a synonym of *Allopora verrillii* Dall].

Distribution. — Aleutian Islands, Bering Sea; off British Columbia and Washington.

<sup>1</sup> Type locality. — Chika Islands, Akutan Pass, Aleutian Islands (near Unalaska).

<sup>2</sup> Thrown upon beach of Chika Islands, Akutan Pass, Aleutian Islands, near Unalaska. — <sup>3</sup> In addition to type locality: "Albatross", Sta. 4777, Petrel Bank, Bering Sea, 52-43 fms. (95-79 m); Sucia Islands (vicinity of San Juan Islands), Washington. — <sup>4</sup> Off Snake Island, Strait of Georgia, British Columbia, about 60 fms. (110 m) (cf. Fisher, 1938, p. 521).

**Allopora** sp.? Hickson & England, 1909, p. 346<sup>1</sup>.

<sup>1</sup> Off Salomon Atoll, Chagos Archipelago, 60-120 fms. (110-220 m), a specimen too imperfect to describe. "The occurrence of the genus in this locality is of some interest, as it has not hitherto been recorded in the Indian Ocean, although *A. nobilis* and *A. oculina* (sp.?) have been described from the neighbourhood of the Cape of Good Hope. It is also noteworthy that the rich collection of Stylasterina made by the 'Siboga' Expedition in the Malay Archipelago contained no specimens of the genus."

**Allopora** Agassiz, 1903, pp. 29/30<sup>1</sup>.

<sup>1</sup> Tuamotu Islands: "Plexaura was found on a shallow reef flat in the lagoon of Makema, where *Allopora* is quite common in from 12 to 13 fathoms." (22 to 24 m). "On pearl shells said by the natives to be six years old we found growing stems of a species of Madrepora and one of *Allopora*, each fully eight inches in length." The large size indicates that the last mentioned coral perhaps was a *Stylaster*.

**Stenohelia** Kent, 1870.

Type species, selected by Broch, 1936, *Allopora maderensis* Johnson, 1862.

(p.p.) *Allopora* Johnson, 1862, p. 196.

(p.p.) *Stylaster* De Pourtalès, 1867, p. 115.

(p.p.) *Cryptohelia* Lindström, 1876, p. 14.

**Stenohelia challengerii** (Boschma, 1951)<sup>1</sup>.

*Stenohelia profunda* Moseley, 1879, p. 503<sup>2</sup>; Moseley, 1880, p. 88; Delage & Hérouard, 1901, fig. 259; Von Marenzeller, 1904, p. 86<sup>3</sup>; Hickson & England, 1905, p. 17; Broch, 1936, p. 9; Boschma, 1951a, p. 457; Boschma, 1953d, p. 166; Boschma, 1956e, p. F 100.

*Stylaster* (*Stenohelia*) *profunda* Hickson & England, 1905, p. 8.

*Stylaster* (*Stenohelia*) *profundus* Hickson & England, 1905, p. 15.

*Stylaster* (*Stenohelia*) *macrogaster* Broch, 1947, p. 312<sup>4</sup>.

*Stylaster* (*Stenohelia*) *challengerii* Boschma, 1951a, p. 456.

*Stylaster challengerii* Boschma, 1953d, p. 171.

Moseley (1879) described the species *Allopora profunda* and *Stenohelia profunda*. Hickson & England (1905, p. 8) listed the two species as *Stylaster profundus* and *Stylaster* (*Stenohelia*) *profunda*, the last name thereby

becoming a secondary homonym of the first. Broch (1936) regards *Allopora* and *Stenohelia* as subgenera of *Stylaster*, which again makes *Stenohelia profunda* a secondary homonym of *Allopora profunda*. As a new name for *Stenohelia profunda* I proposed (Boschma, 1951a) the name *Stylaster (Stenohelia) challengeri*, which has to be changed into *Stenohelia challengeri* if *Stenohelia* is considered a separate genus.

Distribution. — West Indies; Kermadec Islands in South Pacific; Galapagos Islands (probably incorrect).

<sup>1</sup> Type locality (restricted). — “Challenger”, Sta. 23, off St. Thomas, West Indies, 450 fms. (823 m).

“Challenger”, Sta. 23 is chosen as the restricted type locality because the figured specimens (Moseley, 1880, Pl. XII figs. 1-4) are from this locality.

<sup>2</sup> “Challenger”, Sta. 23, off St. Thomas, West Indies, 450 fms. (823 m); “Challenger”, Sta. 191, off the Kermadec Islands, 28° 33' S., 197° 50' W., 600 fms. (1097 m). — <sup>3</sup> “Albatross”, Sta. 3404, off the Galapagos Islands, 01° 03' S., 89° 28' W., 724 m (identification probably incorrect). — <sup>4</sup> Error for *Stylaster (Stenohelia) profunda* sensu Von Marenzeller, cf. note 3.

***Stenohelia complanata*** (De Pourtalès, 1867) <sup>1</sup>.

*Stylaster complanatus* De Pourtalès, 1867, p. 115; De Pourtalès, 1868, p. 136; De Pourtalès, 1871, p. 36 <sup>2</sup>; Thomson, 1873, p. 246; Moseley, 1876b, p. 547; Moseley, 1877, p. 100; Studer, 1877, p. 634; Thomson, 1877, I, p. 254; De Pourtalès, 1878, p. 210 <sup>3</sup>; Moseley, 1879, p. 481; Moseley, 1880, p. 87; Hickson & England, 1905, p. 7; Hickson, 1912b, p. 461; Broch, 1936, p. 11; Boschma, 1953c, p. 360.

*Stenohelia complanata* Kent, 1870, p. 123; Moseley, 1879, p. 481; Moseley, 1880, p. 87.

*Stylaster (Stenohelia) complanatus* Broch, 1936, p. 81 <sup>4</sup>; Broch, 1942, p. 101.

[According to Broch (1936) *Stenohelia virginis* (Lindström) is a synonym of *Stenohelia complanata* (De Pourtalès); he lists *S. virginis* Hickson & England with a ? as a synonym of *S. complanata*].

Distribution. — West Indies.

<sup>1</sup> Type locality. — Off Havana, 270 fms. (493 m).

<sup>2</sup> In 270 fathoms off Havana. — <sup>3</sup> “Blake”, Sta. 5, off Havana, 100 fms. (183 m); off Havana, 154, 175, 292, 245-458 fms. (282, 320, 533, 448-838 m). — <sup>4</sup> “Albatross”, Sta. 2354, 30 miles NE. of Cozumel Island, 130 fms. (238 m).

***Stenohelia maderensis*** (Johnson, 1862) <sup>1</sup>.

*Allopora maderensis* Johnson, 1862, p. 196 <sup>2</sup>; De Pourtalès, 1867, p. 115; Kent, 1870, p. 122; Broch, 1936, p. 8; Boschma, 1951a, p. 456; Boschma, 1956e, p. F 100.

*Stenohelia maderensis* Kent, 1870, p. 121; Kent, 1871, p. 277 <sup>3</sup>.

*Allopora madeirensis* De Pourtalès, 1871, p. 33; Studer, 1877, p. 633<sup>4</sup>; Moseley, 1879, p. 481; Moseley, 1880, p. 90.

*Stylaster madeirensis* Moseley, 1879, p. 481; Moseley, 1880, p. 88; Perrier, 1881, p. 303; Hickson & England, 1905, p. 8.

*Stenohelia madeirensis* Moseley, 1879, p. 481; Moseley, 1880, p. 88; Greeff, 1886, p. 21<sup>5</sup>; Broch, 1914a, p. 38.

*Stenohelia madiereensis* Hickson & England, 1905, p. 17.

Distribution. — Madeira, Cape Verde Islands.

<sup>1</sup> Type locality. — Madeira.

<sup>2</sup> The specimen was brought up by a long fishing-line on the coast of Madeira. —

<sup>3</sup> In addition to the type, specimens from Cape Verde Islands. — <sup>4</sup> Madeira, 50-70 fms. (91-128 m). — <sup>5</sup> "Von der Capverdischen Insel S. Thiago".

***Stenohelia minima*** (Hickson & England, 1905)<sup>1</sup>.

*Stylaster minimus* Hickson & England, 1905, p. 15; Hickson & England, 1909, p. 346<sup>2</sup>; Boschma, 1953d, p. 171.

*Stenohelia minima* Boschma, 1953d, p. 166.

Distribution. — Moluccas and Mauritius, two rather widely separated localities.

<sup>1</sup> Type locality. — "Siboga", Sta. 150, Jilolo Passage, East of Halmahera, 00° 06' N., 129° 07'.2 E., 1089 m.

<sup>2</sup> "Percy Sladen Trust Exp.", A 1, Mauritius, 100-200 fms. (183-366 m).

***Stenohelia obliqua*** (Studer, 1877)<sup>1</sup>.

*Stylaster obliquus* Studer, 1877, p. 635; Moseley, 1880, p. 88; Quelch, 1884a, p. 113; Hickson & England, 1905, p. 7; Boschma, 1953d, p. 166.

Distribution. — New Zealand.

<sup>1</sup> Type locality. — "Gazelle", Dredging 58, North of Three Kings Islands, near Northern part of New Zealand, 34° 09' S., 172° 35'.8 E., 90 fms. (165 m).

[*Stenohelia profunda* Moseley, see *Stenohelia challengerii* (Boschma)].

***Stenohelia tiliata*** (Hickson & England, 1905)<sup>1</sup>.

*Stylaster tiliatus* Hickson & England, 1905, p. 15; Hickson, 1912b, p. 461<sup>2</sup>; Boschma, 1953d, p. 171.

*Stenohelia tiliata* Boschma, 1953d, p. 166.

Distribution. — Off Sulu Islands; off Cape Verde Islands (based on uncertain identification). It is highly improbable that the species occurs in two so widely separated localities.

<sup>1</sup> Type locality. — "Siboga", Sta. 105, off Sulu Islands, 06° 08' N., 121° 19' E., 275 m.

<sup>2</sup> "Talisman", off La Praya, Cape Verde Islands, 295 (275) m; "Talisman", off the Cape Verde Islands, 275 (265)-150 m.



**Stenohelia umbonata** (Hickson & England, 1905) <sup>1</sup>.

*Stylaster umbonatus* Hickson & England, 1905, p. 16; Boschma, 1953d, p. 171.

*Stenohelia umbonata* Boschma, 1953d, p. 166.

Distribution. — North Celebes.

<sup>1</sup> Type locality. — "Siboga", Sta. 119, off Manado, North Celebes, 01° 33'5" N., 124° 41' E., 1901 m.

**Stenohelia virginis** (Lindström, 1876) <sup>1</sup>.

*Cryptohelia virginis* Lindström, 1876, p. 14; Moseley, 1880, p. 87; Broch, 1936, p. 12; Boschma, 1951c, p. 45; Boschma, 1953d, p. 171.

*Stylaster virginis* Moseley, 1880, p. 87; Hickson & England, 1905, p. 13 <sup>2</sup>.

*Stenohelia virginis* Boschma, 1953d, p. 166.

According to Broch (1936) *Stenohelia virginis* (Lindström) is a synonym of *Stenohelia complanata* (De Pourtalès); he lists *S. virginis* Hickson & England with a ? as a synonym of *S. complanata*.

Distribution. — West Indies; off North Celebes. The last mentioned record is uncertain; besides stating that the specimen from off North Celebes "has very much the same characters as those described and figured by Lindström for his species *Cryptohelia virginis* from the West Indies", Hickson & England (1905, pp. 13/14) do not refer to specific characters of the East Indian specimen.

<sup>1</sup> Type locality. — Off Salt Island, West Indies, 200-320 fms. (366-585 m).

<sup>2</sup> "Siboga", Sta. 156, West of Waigeu, 469 m.

**Stylantheca** Fisher, 1931.

Type species, by monotypy, *Stylantheca porphyra* Fisher, 1931.

(p.p.) *Allopora* Fisher, 1938, p. 528.

(p.p.) *Stylaster* Broch, 1942, p. 71.

**Stylantheca porphyra** Fisher, 1931 <sup>1</sup>.

*Stylantheca porphyra* Fisher, 1931, p. 395; Boschma, 1951c, p. 39; Boschma, 1953d, p. 166; Boschma, 1956e, p. F 100.

*Allopora porphyra* Fisher, 1938, p. 528 <sup>2</sup>; Ricketts & Calvin, 1948, p. 295; Boschma, 1951c, p. 39; Ricketts & Calvin, 1952, p. 67; Boschma, 1953d, p. 171; Light, Smith, et al., 1954, p. 23.

*Stylaster porphyra* Broch, 1942, p. 71.

*Stylaster porphyrus* Broch, 1942, p. 102.

*Stylaster (Allopora) porphyrus* Broch, 1942, p. 102.

*Stylaster (Stylantheca) porphyra* Boschma, 1951c, p. 39.

Distribution. — California.

<sup>1</sup> Type locality. — Pescadero Point, Carmel Bay, California, 36° 33' 30" N.

<sup>2</sup> In grotto exposed at lowest tides.

**Crypthelia** Milne Edwards & Haime, 1849.

Type species, by monotypy, *Crypthelia pudica* Milne Edwards & Haime, 1849.

*Endhelia* Milne Edwards & Haime, 1849, p. 69.

*Cryptelia* Milne Edwards & Haime, 1850, p. 93.

*Cryptohelia* Milne Edwards & Haime, 1857, p. 127.

*Endohelia* Milne Edwards & Haime, 1857, p. 128.

*Eudobelia* Von Lendenfeld, 1885, p. 237.

*Crytophelia* Von Lendenfeld, 1887, p. 47.

*Cryptheila* Eguchi, 1941, p. 1185.

*Cryptchelia* Dawydoff, 1952, p. 56.

**Crypthelia affinis** Moseley, 1879<sup>1</sup>.

*Crypthelia affinis* Moseley, 1879, Pl. 42<sup>2</sup>; Moseley, 1880, Pl. 9; Boschma, 1951a, p. 456.

*Crypthelia pudica* Filhol, 1885, Pl. I<sup>3</sup>; Perrier, 1886, fig. 171.

*Crypthelia moseleyi* Hickson & England, 1905, p. 20; Fisher, 1938, p. 534; Boschma, 1951a, p. 456.

*Crypthelia moseleyi* Broch, 1936, p. 94; Boschma, 1953d, p. 171.

*Cryptheia affinis* Boschma, 1951a, p. 455; Boschma, 1953d, p. 171; Boschma, 1956e, p. F 100.

Distribution. — Canary Islands and adjoining region of the Atlantic Ocean West of Africa; West Indies. Perhaps the specimens from the West Indies belong to the species *Crypthelia peircei* De Pourtalès, while it remains possible that all the specimens referred to *Cr. affinis* in reality are *Cr. peircei*.

<sup>1</sup> Type locality (restricted). — “Challenger”, Sta. 3, South of the Canary Islands, 25° 45' N., 20° 12' W., 1525 fms. (2789 m).

“Challenger”, Sta. 3 is chosen as the restricted type locality because the figured specimen (Moseley, 1880, Pl. XII fig. 7) is from this locality. In the description Moseley (l.c., p. 71) remarks “The specimens, the anatomy of which is here described, were dredged off the mouth of the La Plata”, an evident lapsus, for this locality is not mentioned in the list on p. 83.

<sup>2</sup> In addition to the type locality: “Challenger”, Sta. 24, off Sombrero, West Indies (Leeward Islands), 390 fms. (713 m). — <sup>3</sup> “Pris pendant l'expédition du Talisman par 800 mètres de profondeur” (identified with *C. pudica*).

**Crypthelia balia** Hickson & England, 1905<sup>1</sup>.

*Crypthelia balia* Hickson & England, 1905, p. 23.

*Crypthelia balia* Boschma, 1951c, p. 45; Boschma, 1953d, p. 166.

Hickson & England (1905, p. 23) remark under *Crypthelia balia*: “? syn. *Endohelia japonica* Milne Edwards and Haime”.

Distribution. — North of Ceram.

<sup>1</sup> Type locality. — “Siboga”, Sta. 177, North of Ceram, 02° 24'. 5 S., 129° 38'. 5 E., 1633-1300 m.

**Crypthelia clausa** Broch, 1947<sup>1</sup>.*Crypthelia clausa* Broch, 1947, p. 313.

Distribution. — Maldive Islands.

<sup>1</sup> Type locality. — "John Murray Exp.", Sta. 152, Maldive Islands, 609-915 m.**Crypthelia gigantea** Fisher, 1938<sup>1</sup>.*Crypthelia gigantea* Fisher, 1938, p. 535.*Crypthelia gigantea* Boschma, 1953d, p. 166.

Distribution. — Galapagos Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 2818, Galapagos Islands, 00° 08' S., 90° 06' W., 392 fms. (717 m).**Crypthelia japonica** (Milne Edwards & Haime, 1849)<sup>1</sup>.*Endohelia japonica* Milne Edwards & Haime, 1849, p. 69; Milne Edwards & Haime, 1850, p. 94<sup>2</sup>; Milne Edwards & Haime, 1850-1854, p. xxii; Boschma, 1951c, p. 42.*Endohelia japonica* Milne Edwards & Haime, 1857, p. 128<sup>2</sup>; Moseley, 1879, p. 482; Moseley, 1880, p. 88; Hickson & England, 1905, p. 24; Broch, 1936, p. 94; Boschma, 1951c, p. 43.*Crypthelia japonica* Hickson & England, 1905, p. 20; Fisher, 1938, p. 535<sup>3</sup>; Boschma, 1951c, p. 43.*Crypthelia japonica* Eguchi, 1941, p. 1188<sup>4</sup>; Boschma, 1951c, p. 42; Boschma, 1953d, p. 166.*Cryptheila japonica* Eguchi, 1941, p. 1185.According to Moseley (1880) *Endohelia japonica* Milne Edwards & Haime is a synonym of *Crypthelia pudica* Milne Edwards & Haime. Broch (1936) lists *E. japonica* with a ? as a synonym of *C. pudica*.[Hickson & England (1905, p. 23) remark under *Crypthelia balia*: "? syn. *Endohelia japonica* Milne Edwards and Haime"].

Distribution. — The region South of the main islands of Japan.

<sup>1</sup> Type locality (restricted). — "Albatross", Sta. 4890, 10 to 12 miles Southwest of Goto Islands, Eastern Sea, 32° 26' 30" N., 128° 36' 30" E., 135 fms. (247 m).

The specimens from definitely indicated localities (notes 1, 3, and 4) are all from the region South of the main islands of Japan, so that the choice of the restricted type locality appears justified.

<sup>2</sup> "Habite la mer du Japon". — <sup>3</sup> "Albatross", Sta. 4890 (cf. Type locality); "Albatross", Sta. 4924, in Colnett, or Vincennes, Strait, 30° 05' N., 130° 21' 20" E., 159 fms. (291 m). — <sup>4</sup> "Sôyô-maru", Sta. 414, off Yakusima, Kagosima-ken (Colnett, or Vincennes, Strait), 30° 33' 30" N., 130° 19' E., 515 m.[*Crypthelia moseleyi* Hickson & England, see *Crypthelia affinis* Moseley].**Crypthelia pachypoma** Hickson & England, 1905<sup>1</sup>.*Crypthelia pachypoma* Hickson & England, 1905, p. 22; England, 1926, p. 281.

*Crypthelia pachypoma* Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — Moluccas and Galapagos Islands, two localities in widely separated parts of the Pacific Ocean.

<sup>1</sup> Type locality. — "Siboga", Sta. 150(?), Jilolo Passage, East of Halmahera, 00° 06' N., 129° 07' 2 E., 1089 m.

In U. S. N. M.: "Albatross", Sta. 2818, Galapagos Islands, 00° 08' S., 90° 06' W., 392 fms. (717 m) (determined by W. K. Fisher).

***Crypthelia peircei*** De Pourtalès, 1867<sup>1</sup>.

*Crypthelia peircei* De Pourtalès, 1867, p. 115<sup>2</sup>; Boschma, 1951c, p. 45.

*Cryptohelia peircei* De Pourtalès, 1871, p. 37<sup>3</sup>; Studer, 1877, p. 634; Moseley, 1879, p. 482; Moseley, 1880, p. 88; Agassiz, 1888, p. 139.

*Cryptohelia peircii* De Pourtalès, 1871, Description of the Plates; De Pourtalès, 1878, p. 211<sup>4</sup>.

*Cryptohelia piercii* Moseley, 1876b, p. 557.

*Cryptohelia piercei* Hickson & England, 1905, p. 20; Thomson, 1877, I, p. 272.

With a ? Moseley (1880) lists *Crypthelia peircei* De Pourtalès as a synonym of *Crypthelia pudica* Milne Edwards & Haime.

Distribution. — West Indies and adjoining region of the Atlantic Ocean.

<sup>1</sup> Type locality (restricted). — Off Havana, 270 fms. (493 m).

<sup>2</sup> Off Havana in 270 fathoms; off Georgia, Atlantic Ocean, 31° 32' N., 78° 20' W., 600 fms. (1097 m). — <sup>3</sup> Off Havana, 270 fms.; off Sombrero Lighthouse (South of Florida), 262 fms. (479 m); off Bahia Honda, 324 fms. (593 m); 31° 32' N., 78° 20' W., 600 fms. (1097 m). — <sup>4</sup> "Blake", Sta. 5, off Havana, 100 fms. (183 m); "Blake", Sta. 44, 25° 33' N., 84° 35' W., 539 fms. (986 m).

***Crypthelia platypoma*** Hickson & England, 1905<sup>1</sup>.

*Cryptohelia platypoma* Hickson & England, 1905, p. 23.

*Crypthelia platypoma* Boschma, 1953d, p. 167.

Distribution. — West of Waigeu.

<sup>1</sup> Type locality. — "Siboga", Sta. 156, West of Waigeu, 00° 29' 2 S., 130° 05' 3 E., 469 m.

***Crypthelia pudica*** Milne Edwards & Haime, 1849<sup>1</sup>.

*Crypthelia pudica* Milne Edwards & Haime, 1849, p. 69<sup>2</sup>; Milne Edwards & Haime, 1850, p. 93<sup>3</sup>; Milne Edwards & Haime, 1850-1854, p. xxi; Broch, 1936, p. 95<sup>4</sup>; Broch, 1947, p. 312; Boschma, 1951a, p. 455; Boschma, 1951c, p. 43; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

*Cryptelia pudica* Milne Edwards & Haime, 1850, p. 93.

*Cryptohelia pudica* Milne Edwards & Haime, 1857, p. 127<sup>5</sup>; Moseley, 1876b, p. 548<sup>6</sup>; Moseley, 1876c, p. 94; Studer, 1877, p. 633<sup>7</sup>; Thomson, 1877, I, p. 271; Pagenstecher, 1879, p. 56; Moseley, 1879, p. 482<sup>8</sup>; Moseley,

1880, p. 88<sup>8</sup>; Perrier, 1881, fig. 65; Von Lendenfeld, 1885, p. 616; Alcock, 1899, p. 11<sup>9</sup>; Delage & Hérourard, 1901, fig. 262; Kirkpatrick, 1902, p. 54; Hutton, 1904, p. 318; Von Marenzeller, 1904, p. 86<sup>10</sup>; Hickson & England, 1905, p. 21<sup>11</sup>; Dehorne, 1920, p. 129; Fisher, 1938, p. 535<sup>12</sup>; Boschma, 1951a, p. 455; Boschma, 1951c, p. 43.

*Crypthelia pudica* Von Lendenfeld, 1887, p. 47<sup>13</sup>.

Broch (1936) lists *Crypthelia pudica* Moseley with a ? as a synonym of *Crypthelia pudica* Milne Edwards & Haime.

[According to Moseley (1880) *Endohelia japonica* Milne Edwards & Haime (*Crypthelia japonica*) is a synonym of *Crypthelia pudica* Milne Edwards & Haime. Broch (1936) lists *E. japonica* with a ? as a synonym of *C. pudica*].

[With a ? Moseley (1880) lists *Crypthelia peircei* De Pourtalès as a synonym of *Crypthelia pudica* Milne Edwards & Haime].

Distribution. — The records for the species as it is restricted in the present paper (not including *Crypthelia affinis* Moseley) are: Philippine Islands; New Guinea (data uncertain, perhaps a slip of the pen for Philippine Islands); Marion Islands in the South Indian Ocean (cf. note 6, there are no later data concerning this locality); New Zealand region and other parts of the South Pacific Ocean; off Japan (perhaps *Crypthelia japonica* (Milne Edwards & Haime)); Indian seas (uncertain, without indication of specific characters); Pacific, off Central America (uncertain, record of name and locality only); East Indian Archipelago.

<sup>1</sup> Type locality. — Philippine Islands.

Moseley (1880, p. 88) writes: "*Crypthelia pudica*, M.-Edw. and H. Ann. des Sci. Nat., 3 ser., t. xiii. p. 3, pl. iii. fig. 1, 1850, New Guinea"; the French authors gave in 1850 as locality "les Philippines" (note 3), while in 1857 the locality was noted as "la Nouvelle-Guinée" (note 5). The first record is here chosen as the type locality.

<sup>2</sup> "De la collect. Stokes". — <sup>3</sup> "Cette très remarquable espèce habite les Philippines, d'où elle a été rapportée par M. Cuming. Le seul exemplaire connu fait partie de la précieuse collection de M. Ch. Stokes". — <sup>4</sup> 7 miles South of Olutanga, Philippine Islands, about 300 fms. (549 m). — <sup>5</sup> "Habite la Nouvelle-Guinée". — <sup>6</sup> *Crypthelia pudica* occurs off the Canary Islands, off the West Indies, off Bahia, in the south-west Pacific, and off the Marion Islands in the South-Indian Ocean (l.c., p. 566). In the present paper the Atlantic specimens are listed under *C. affinis*; the locality "Bahia" probably is a lapsus for "Bahia Honda", one of the localities of *C. peircei*. — <sup>7</sup> "Gazelle", Dredging 60, East of New Zealand, 35° 21' S., 175° 40' E., 597 fms. (1092 m); "Gazelle", Dredging 62, South Pacific, 14° 52'.4 S., 175° 32'.7 W., 904 fms. (1653 m). — <sup>8</sup> "Challenger", Sta. 171, North of the Kermadec Islands, 28° 33' S., 197° 50' W., 600 fms. (1097 m); "Challenger", Sta. 236, between Vries Island, Oosima, and Cape Sagami, Japan, 34° 58' N., 139° 30' E., 775 fms. (1417 m); the specimens from the last mentioned locality perhaps belong to *Crypthelia japonica* ("Challenger", Sta. 3, South of Canary Islands, and "Challenger", Sta. 24, off Sombrero, West Indies, listed in the present paper under *Crypthelia affinis*). — <sup>9</sup> Indian seas, 210 fms. (368 m). — <sup>10</sup> "Albatross", Sta. 3358, Pacific, off Central America, 06° 30' N., 81° 44' W., 1043 m. —

<sup>11</sup> "Siboga", Sta. 177, North of Ceram, 1633-1300 m; "Siboga", Sta. 150(?), East of Halmahera, 1089 m. — <sup>12</sup> "Albatross", Sta. 5423, Sulu Sea, 508 fms. (929 m). — <sup>13</sup> New Guinea.

**Crypthelia ramosa** Hickson & England, 1905 <sup>1</sup>.

*Crypthelia ramosa* Hickson & England, 1905, p. 21; Hickson, 1906, fig. 136; Hickson & England, 1909, p. 351 <sup>2</sup>.

*Crypthelia ramosa* Boschma, 1953d, p. 167.

Distribution. — Off North Celebes; Chagos Archipelago, Western Indian Ocean; the two localities are widely separated.

<sup>1</sup> Type locality. — "Siboga", Sta. 122, off North Celebes, 01° 58'.5 N., 125° 00'.5 E., 1264-1165 m.

<sup>2</sup> "Percy Sladen Trust Exp.", off Salomon Atoll, Chagos Archipelago, 120-150 fms. (219-274 m).

**Crypthelia stenopoma** Hickson & England, 1905 <sup>1</sup>.

*Crypthelia stenopoma* Hickson & England, 1905, p. 24 <sup>2</sup>; Hickson & England, 1909, p. 352.

*Crypthelia stenopoma* Broch, 1947, p. 311 <sup>3</sup>; Boschma, 1951c, p. 45; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — East Indian Archipelago; Maldive Islands; Galapagos Islands; the three localities are widely separated.

<sup>1</sup> Type locality. — Eastern part of East Indian Archipelago.

<sup>2</sup> "Siboga", Sta. 177, North of Ceram, 1633-1300 m; "Siboga", Sta. 226, between Lucipara and Schildpad Islands, Banda Sea, 1595 m. — <sup>3</sup> "John Murray Exp.", Sta. 157, Maldive Islands, 229 m; "John Murray Exp.", Sta. 152, Maldive Islands, 609-915 m.

In U.S.N.M.: "Albatross", Sta. 2818, Galapagos Islands, 00° 08' S., 90° 06' W., 392 fms. (717 m) (determined by W. K. Fisher).

**Crypthelia trophostega** Fisher, 1938 <sup>1</sup>.

*Crypthelia trophostega* Fisher, 1938, p. 533; Boschma, 1951c, p. 43.

*Crypthelia trophostega* Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

**Conopora** Moseley, 1879.

Type species, by monotypy, *Conopora tenuis* Moseley, 1879.

**Conopora arborescens** Nielsen, 1919 <sup>1</sup>.

*Conopora arborescens* Nielsen, 1919, p. 23; Kühn, 1928, p. 91; Kühn, 1939, fig. 38; Boschma, 1951c, p. 41; Alloiteau, 1952, fig. 5.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.

**Conopora dura** Hickson & England, 1909<sup>1</sup>.

*Conopora dura* Hickson & England, 1909, p. 351; Broch, 1936, p. 85; Broch, 1950, p. 43; Boschma, 1951c, p. 41.

Distribution. — Western Indian Ocean.

<sup>1</sup> Type locality. — "Percy Sladen Trust Exp.", D 8, Providence Island, between Madagascar and Seychelles, 125 fms. (228 m).

**Conopora major** Hickson & England, 1905<sup>1</sup>.

*Conopora major* Hickson & England, 1905, p. 25<sup>2</sup>; Broch, 1936, p. 91<sup>3</sup>; Broch, 1942, p. 62; Broch, 1947, p. 313; Broch, 1950, p. 42; Boschma, 1951c, p. 41; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — East Indian Archipelago; Mauritius.

<sup>1</sup> Type locality. — East Indian Archipelago.

<sup>2</sup> "Siboga", Sta. 251, off Kur Island, Kei Islands, 204 m; "Siboga", Sta. 119, off Menado, North Celebes, 1901 m. — <sup>3</sup> Off Tombeau Bay, Mauritius, about 150 fms. (274 m).

**Conopora pauciseptata** Broch, 1950<sup>1</sup>.

*Conopora pauciseptata* Broch, 1950, p. 41; Boschma, 1951c, p. 42; Boschma, 1956e, p. F 100.

Distribution. — Antarctic.

<sup>1</sup> Type locality. — "Discovery", Sta. 2493, Antarctic, 42° 03'.9 S., 00° 03'.5 E., 472 m.

**Conopora tenuis** Moseley, 1879<sup>1</sup>.

*Conopora tenuis* Moseley, 1879, p. 503; Moseley, 1880, p. 88; Alcock, 1899, p. 19<sup>2</sup>; Delage & Hérouard, 1901, fig. 266; Hutton, 1904, p. 318; Hickson & England, 1905, p. 25<sup>3</sup>; Hickson & England, 1909, p. 351<sup>4</sup>; Dehorne, 1920, p. 129; England, 1926, p. 282; Broch, 1936, p. 88<sup>5</sup>; Kühn, 1939, p. A 31; Eguchi, 1941, p. 1186; Broch, 1942, p. 62; Broch, 1947, p. 313; Broch, 1950, p. 42; Boschma, 1951c, p. 41; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — Kermadec Islands; Indian seas; New Guinea region; Western Indian Ocean; Japan.

<sup>1</sup> Type locality. — "Challenger", Sta. 170, off Raoul Island, Kermadec Islands, 29° 55' S., 178° 14' W., 520 fms. (951 m).

<sup>2</sup> Indian seas, in deep water. — <sup>3</sup> "Siboga", Sta. 156, West of Waigeu, 469 m. — <sup>4</sup> "Percy Sladen Trust Exp.", Salomon Atoll, Chagos Archipelago, 120-150 fms. (219-274 m); "Percy Sladen Trust Exp.", D 7, Providence Island, between Madagascar and Seychelles, 75 fms. (137 m). — <sup>5</sup> Okinose, Sagami Bay, Japan, about 60 fms. (110 m); off Tombeau Bay, Mauritius, about 130 fms. (238 m).

**Astya** Stechow, 1921 (pro *Astylus* Moseley, 1879).

Type species, by monotypy, *Astylus subviridis* Moseley, 1879.

*Astylus* Moseley, 1879, p. 481.

**Astya crassa** (Nielsen, 1919) <sup>1</sup>.*Astylus crassus* Nielsen, 1919, p. 22.*Astya crassa* Kühn, 1928, p. 91; Kühn, 1939, fig. 36; Alloiteau, 1952, fig. 5.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.**Astya subviridis** (Moseley, 1879) <sup>1</sup>.*Astylus subviridis* Moseley, 1879, p. 481; Moseley, 1880, p. 88; Moseley, 1892, fig. 43; Delage & Hérouard, 1901, fig. 261; Dehorne, 1920, p. 129; Boschma, 1956e, p. F 100.*Astya subviridis* Stechow, 1921, p. 253; Kühn, 1939, p. A 30; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

Distribution. — Philippine Islands.

<sup>1</sup> Type locality. — "Challenger", Sta. 214, off the Meangis Islands, Southeast of Mindanao, Philippine Islands, 500 fms. (914 m).**Congregopora** Nielsen, 1919.Type species, by monotypy, *Congregopora nasiformis* Nielsen, 1919.**Congregopora nasiformis** Nielsen, 1919 <sup>1</sup>.*Congregopora nasiformis* Nielsen, 1919, p. 21; Kühn, 1928, p. 91; Kühn, 1939, p. A 30; Boschma, 1951c, p. 40; Alloiteau, 1952, fig. 5; Boschma, 1956e, p. F 100.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.**Distichopora** Lamarck, 1816.Type species, by monotypy, *Millepora violacea* Pallas, 1766.*Distichopora* Verrill, 1870, p. 515.*Distichophora* Tenison-Woods, 1879b, p. 58; Knauer, 1887, p. 216.*Dystichopora* Dawydoff, 1952, p. 56.**Distichopora allnutti** Wright, 1882 <sup>1</sup>.*Distichopora allnutti* Wright, 1882, p. 76; Quelch, 1884a, p. 116; Wright, 1884, p. 218; Boschma, 1951b, p. 462; Boschma, 1953d, p. 167.[According to Quelch (1884a), *Distichopora allnutti* Wright is a synonym of *Distichopora nitida* Verrill].

Distribution. — Gilbert Islands (?).

<sup>1</sup> Type locality. — Gilbert Islands (?).**Distichopora antiqua** DeFrance, 1826 <sup>1</sup>.*Distichopora antiqua* DeFrance, 1826, p. 394; Michelin, 1845, p. 168 ?;



D'Orbigny, 1850, p. 405; Pictet, 1857, p. 466; Milne Edwards, 1860, p. 451; Römer, 1863, p. 244; Moseley, 1877, p. 100; Tenison-Woods, 1879b, p. 63; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Kühn, 1928, p. 103<sup>3</sup>; Kühn, 1939, fig. 41<sup>4</sup>.

Distribution. — Eocene of Paris Basin.

<sup>1</sup> Type locality. — Valmondois, département de Seine-et-Oise, Eocene.

<sup>2</sup> Chaumont (Oise); Valmondois (Seine-et-Oise). — <sup>3</sup> "Pariser Becken, Eocän". — <sup>4</sup> "Eozän des Pariser Beckens".

**Distichopora barbadensis** De Pourtalès, 1874<sup>1</sup>.

*Distichopora barbadensis* De Pourtalès in Agassiz & De Pourtalès, 1874, p. 43; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Fisher, 1938, p. 545.

*Distichopora barbadiensis* Wright, 1882, p. 74; Quelch, 1884b, p. 267.

Distribution. — West Indies.

<sup>1</sup> Type locality. — Off Barbados, 100 fms. (183 m).

**Distichopora borealis** Fisher, 1938<sup>1</sup>.

*Distichopora borealis* Fisher, 1938, p. 543<sup>2</sup>; Broch, 1942, p. 20; Boschma, 1953d, p. 167.

*Distichopora borealis* forma *japonica* Broch, 1942, p. 20<sup>3</sup>; Boschma, 1953d, p. 167.

Distribution. — Aleutian Islands; Japan.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

<sup>2</sup> Also from "Albatross", Sta. 4781, off Agattu Island, Aleutian Islands, 482 fms. (881 m). — <sup>3</sup> Okinose, Sagami Bay, Japan, 60 fms. (110 m).

**Distichopora brasseyae** Wright, 1882<sup>1</sup>.

*Distichopora brasseyi* Wright, 1882, p. 75; Quelch, 1884a, p. 116; Wright, 1884, p. 218; Boschma, 1951b, p. 462.

*Distichopora brasseyae* Boschma, 1951b, p. 459<sup>2</sup>; Boschma, 1953d, p. 167. [According to Quelch (1884a), *Distichopora brasseyae* Wright is a synonym of *Distichopora nitida* Verrill].

Distribution. — Gilbert Islands.

<sup>1</sup> Type locality. — Gilbert Islands.

<sup>2</sup> Kingsmill Islands (Gilbert Islands).

**Distichopora breviserialis** Quelch, 1884<sup>1</sup>.

*Distichopora breviserialis* Quelch, 1884a, p. 113; Quelch, 1885, p. 18.

Distribution. — Unknown.

<sup>1</sup> Type locality. — Unrecorded.

**Distichopora cervina** De Pourtalès, 1871<sup>1</sup>.

*Distichopora cervina* De Pourtalès, 1871, p. 39<sup>2</sup>; De Pourtalès in Agassiz & De Pourtalès, 1874, p. 43; De Pourtalès, 1878, p. 211; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Quelch, 1884b, p. 267; Fisher, 1938, p. 545.

Distribution. — West Indies.

<sup>1</sup> Type locality. — St. Thomas, West Indies.

<sup>2</sup> From St. Thomas, through Mr. Duchassaing.

**Distichopora cinnabarina** Nardo, 1844<sup>1</sup>.

*Distichopora cinabarina* Nardo, 1844, p. 67<sup>2</sup>.

*Distichopora cinnabarina* Nardo, 1845, p. 637<sup>3</sup>.

Distribution. — Red Sea (?).

<sup>1</sup> Type locality. — Red Sea (?).

<sup>2</sup> "Per quanto giunse a sua cognizione proviene dal Mare Rosso e non fu da altri fatta conoscere". — <sup>3</sup> "Wahrscheinlich aus dem rothen Meer".

**Distichopora coccinea** Gray, 1860<sup>1</sup>.

*Lithodendrum saccharaceum rubrum* Rumphius, 1750, p. 243<sup>2</sup>; Henschel, 1833, p. 199; Tenison-Woods, 1879b, p. 50; Hickson, 1892a, p. 502; Boschma, 1956a, p. 140.

*Distichopora coccinea* Gray, 1860, p. 244<sup>3</sup>; Verrill, 1864, p. 46<sup>4</sup>; Schmeltz, 1875, p. 21<sup>5</sup>; Tenison-Woods, 1879a, p. 301; Tenison-Woods, 1879b, p. 62<sup>6</sup>; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Schmeltz, 1882, p. 9; Wright, 1882, p. 76<sup>7</sup>; Quelch, 1884a, p. 117; Von Lendenfeld, 1885, p. 614<sup>8</sup>; Quelch, 1885, p. 17; Von Lendenfeld, 1887, p. 46<sup>9</sup>; Moseley, 1892, p. 461; Ward, 1892, p. 53<sup>10</sup>; Hickson, 1892a, p. 502; Kent, 1893, p. 105<sup>11</sup>; Hall, 1898, p. 179; Fowler, 1900, fig. 43; Delage & Hérouard, 1901, fig. 249; Kirkpatrick, 1902, p. 54; Von Martens, 1902, p. 135<sup>12</sup>; Grobben, 1917, p. 307; Dehorne, 1920, p. 129; Pax, 1928, p. 31<sup>15</sup>; Fisher, 1938, p. 544; Broch, 1942, p. 10; Boschma, 1951b, p. 459; Boschma, 1953d, p. 167; Wells, 1954, p. 476; Boschma, 1956a, p. 140.

*Lithodendrum saccharatum rubrum* Von Martens, 1902, p. 135.

*Distichopora violacea* forma *coccinea* Fisher, 1938, p. 543<sup>13</sup>.

*Distichopora violacea* var. *coccinea* Broch, 1942, p. 13.

*Distichopora violacea* forma *cornuta* Broch, 1942, p. 13<sup>14</sup>; Boschma, 1953d, p. 167.

According to Fisher (1938), Broch (1942), and Wells (1954) *Distichopora coccinea* Gray is a synonym of *Distichopora violacea* (Pallas).

Distribution. — New Caledonia, East Indian Archipelago, Australia, Marshall Islands, Gilbert Islands, Samoa, Tahiti.

<sup>1</sup> Type locality. — Off New Caledonia.

<sup>2</sup> On the Northwest and the North coast of Ceram, also in the Banda Islands. Pallas (1766, p. 258) cites the coral of Rumphius as a synonym of *Millepora violacea*. — <sup>3</sup> Hab. Pacific Ocean, near New Caledonia, in deep water. — <sup>4</sup> Australia? — <sup>5</sup> Marshall Islands. — <sup>6</sup> East coast of Australia and Pacific. — <sup>7</sup> From the Marshall group. — <sup>8</sup> On the North-east coast of Australia. — <sup>9</sup> North coast of Australia. — <sup>10</sup> Kingsmill Islands (Gilbert Islands). — <sup>11</sup> North West Island, Great Barrier Reef. — <sup>12</sup> Samoa Islands and Jaluit (Marshall Islands). — <sup>13</sup> Tahiti. — <sup>14</sup> Aranuka, Gilbert Islands, entrance of reef. — <sup>15</sup> Samoa.

**Distichopora conferta** Quelch, 1885<sup>1</sup>.

*Distichopora conferta* Quelch, 1885, p. 5; Boschma, 1953d, p. 167.

Distribution. — Cook Islands.

<sup>1</sup> Type locality. — Rarotonga, Cook Islands.

**Distichopora contorta** De Pourtalès, 1878<sup>1</sup>.

*Distichopora contorta* De Pourtalès, 1878, p. 210; Moseley, 1880, p. 85; Wright, 1882, p. 74; Quelch, 1884b, p. 267; Nutting, 1895, p. 84<sup>2</sup>; Hickson & England, 1909, p. 349; Fisher, 1938, p. 545.

Distribution. — West Indies.

<sup>1</sup> Type locality. — "Blake", Sta. 14, off Havana, 175 fms. (320 m).

<sup>2</sup> Bahama Expedition.

**Distichopora fisheri** Broch, 1942<sup>1</sup>.

*Distichopora fisheri* Broch, 1942, p. 14<sup>2</sup>; Boschma, 1953d, p. 167; Wells, 1954, p. 476.

*Distichopora fisheri* form  $\alpha$  Wells, 1954, p. 476<sup>3</sup>.

*Distichopora fisheri* form  $\beta$  Wells, 1954, p. 476<sup>4</sup>.

Distribution. — Fiji Islands, West coast of Sumatra, Marshall Islands.

<sup>1</sup> Type locality. — Namuka, Viti Levu, Fiji Islands, barrier reef. The colony from the Fiji Islands is indicated as the type specimen by Broch (1942, explanation of Pl. II fig. 3).

<sup>2</sup> Namuka, Viti Levu, Fiji Islands; Pulu Pasu, West coast of Sumatra. — <sup>3</sup> Rongelap Atoll, Marshall Islands: Kabell Island, Piganiyaroyaro Island, Mellu Island (1 m deep). — <sup>4</sup> Eniwetok Atoll, Marshall Islands: Lidilbut Island, Buganegan Island (reef edge); Namuka (cf. note 2); Pulau Peunasoe, off North end of Sumatra (cf. note 2, "Pulu Pasu").

**Distichopora foliacea** De Pourtalès, 1868<sup>1</sup>.

*Distichopora foliacea* De Pourtalès, 1868, p. 137<sup>2</sup>; De Pourtalès, 1871, p. 38<sup>3</sup>; De Pourtalès, 1878, p. 197; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Quelch, 1884b, p. 267; Agassiz, 1888, p. 140; Hickson & England, 1909, p. 349; Fisher, 1938, p. 545; Broch, 1942, p. 22<sup>4</sup>.

Distribution. — West Indies and adjoining region of Atlantic Ocean.

<sup>1</sup> Type locality. — Off Florida Reef, 100-200 fms. (183-366 m).

<sup>2</sup> Dredged between 100 and 200 fathoms (183-366 m) off the Florida reef. — <sup>3</sup> Off Key West, 100, 135, and 154 fms. (183, 247, and 282 m); off the Samboes, 116, 135, and 147 fms. (212, 247, and 269 m); off Tennessee Reef, 124 fms. (227 m); off Sombrero Light, 152, 183, and 262 fms. (278, 335, and 479 m); off Bahia Honda, 176 fms. (322 m); off Coffin's Patches, 195 fms. (357 m). — <sup>4</sup> Gulf Stream Exploration, 100-200 fms. (183-366 m).

***Distichopora gracilis*** Dana, 1848<sup>1</sup>.

*Distichopora gracilis* Dana, 1848, p. 704<sup>2</sup>; Dana, 1859, p. 151; Tenison-Woods, 1879a, p. 303; Tenison-Woods, 1879b, p. 61; Wright, 1884, p. 218; Quelch, 1884b, p. 267; Quelch, 1885, p. 18; Von Lendenfeld, 1885, p. 615; Von Lendenfeld, 1887, p. 46<sup>3</sup>; Fisher, 1938, p. 544<sup>4</sup>; Boschma, 1953d, p. 167; Boschma, 1956a, p. 137<sup>5</sup>.

*Distichopora fragilis* Quelch, 1884a, p. 114; Wright, 1884, p. 218; Quelch, 1884b, p. 267; Boschma, 1956a, p. 137.

Distribution. — Tuamotu Islands; North coast of Australia (apparently erroneous).

<sup>1</sup> Type locality. — Tuamotu Islands.

<sup>2</sup> Paumotu Archipelago. — <sup>3</sup> "North coast of Australia." — <sup>4</sup> From Tuamotu Archipelago. — <sup>5</sup> Passe du Hao, Tuamotu Islands.

***Distichopora granulosa*** Quelch, 1885<sup>1</sup>.

*Distichopora granulosa* Quelch, 1885, p. 14; Boschma, 1953d, p. 167; Wells, 1954, p. 476.

Wells (1954) identifies *Distichopora granulosa* Quelch with *D. coccinea* Gray, which he regards as a synonym of *D. violacea* (Pallas).

Distribution. — Cook Islands (?).

<sup>1</sup> Type locality. — Rarotonga, Cook Islands (?).

***Distichopora irregularis*** Moseley, 1879<sup>1</sup>.

*Distichopora irregularis* Moseley, 1879, p. 502; Moseley, 1880, p. 85; Wright, 1882, p. 74; Kirkpatrick, 1890, p. 12<sup>2</sup>; Hickson, 1892a, p. 502; Delage & Hérouard, 1901, fig. 247; Broch, 1942, p. 24<sup>3</sup>; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 100.

*Dystichopora irregularis* Dawydoff, 1952, p. 56<sup>4</sup>.

[Broch (1942) lists *Distichopora violacea* Hickson, 1893, p.p. with a ? as a synonym of *Distichopora irregularis* Moseley].

[According to Broch (1942) *Sporadopora providentiae* Hickson & England is a synonym of *Distichopora irregularis* Moseley].

Distribution. — Philippine Islands, China Sea, Indochina.

<sup>1</sup> Type locality. — Off Samboangan, Philippine Islands, 10 fms. (18 m).

<sup>2</sup> Garvan Reef, China Sea, 2 fms. (3½ m). — <sup>3</sup> Off Jolo, Philippine Islands, about 25 fms. (46 m). — <sup>4</sup> "Dans le domaine maritime Indochinois".

**Distichopora livida** Tenison-Woods, 1879<sup>1</sup>.

*Distichopora livida* Tenison-Woods, 1879a, p. 301<sup>2</sup>; Tenison-Woods, 1879b, p. 62<sup>3</sup>; Wright, 1884, p. 218; Quelch, 1884a, p. 115; Quelch, 1884b, p. 268; Von Lendenfeld, 1885, p. 615<sup>4</sup>; Von Lendenfeld, 1887, p. 46<sup>5</sup>; Kirkpatrick, 1902, p. 54; Boschma, 1953d, p. 167.

Distribution. — Solomon Islands, Tongareva, Marshall Islands, New Hebrides, New Guinea, Australia.

<sup>1</sup> Type locality (restricted). — Solomon Islands.

<sup>2</sup> According to second hand information, in general vague and indefinite: Solomon Islands; Penrhyn Island (Tongareva, 09° 12' S., 154° 35' W.); Marshall Islands. — <sup>3</sup> Solomon Islands; New Hebrides; New Guinea. — <sup>4</sup> Was obtained from several places in the North of Australia. — <sup>5</sup> North coast of Australia.

**Distichopora milesii** Quelch, 1884<sup>1</sup>.

*Distichopora milesii* Quelch, 1884a, p. 114<sup>2</sup>; Quelch, 1885, p. 16; Boschma, 1953d, p. 172.

Distribution. — Exact locality unknown, probably from the region of the Society and Tuamotu Islands.

<sup>1</sup> Type locality. — Pacific.

<sup>2</sup> "Hab. South Sea Islands. The exact locality is unknown; but as the specimen was growing on the same piece of rock as a very fine *Stylaster stellulatus* (Stewart), a species which has hitherto been recorded only from the Society and Paumotu Islands, it is probable that it was obtained in this region".

**Distichopora nitida** Verrill, 1864<sup>1</sup>.

*Distichopora nitida* Verrill, 1864, p. 46; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Wright, 1884, p. 218; Quelch, 1884a, p. 115; Quelch, 1884b, p. 267; Quelch, 1885, p. 18; Ward, 1892, p. 53<sup>2</sup>; Fisher, 1938, p. 544; Boschma, 1951b, p. 459; Boschma, 1953d, p. 167; Wells, 1954, p. 476; Boschma, 1956a, p. 140.

According to Fisher (1938), Broch (1942), and Wells (1954) *Distichopora nitida* Verrill is a synonym of *Distichopora violacea* (Pallas).

[According to Quelch (1884a), *Distichopora allnutti* Wright and *Distichopora brasseyae* Wright are synonyms of *Distichopora nitida* Verrill].

Distribution. — Marshall Islands, Gilbert Islands.

<sup>1</sup> Type locality. — Ebon Island, Marshall Islands.

<sup>2</sup> Kingsmill Islands (Gilbert Islands).

**Distichopora ochracea** Quelch, 1885<sup>1</sup>.

*Distichopora ochracea* Quelch, 1885, p. 19; Boschma, 1953d, p. 167.

Distribution. — Solomon Islands.

<sup>1</sup> Type locality. — Solomon Islands, 14 fms. (26 m).

**Distichopora profunda** Hickson & England, 1909<sup>1</sup>.*Distichopora profunda* Hickson & England, 1909, p. 348.

Distribution. — Western Indian Ocean.

<sup>1</sup> Type locality. — "Percy Sladen Trust Exp.", off Salomon Atoll, Chagos Archipelago, 120-150 fms. (187-274 m).**Distichopora purpurea** Ltk. (?)<sup>1</sup>.*Distichopora purpurea* Schmeltz, 1875, p. 21<sup>2</sup>; Boschma, 1953d, p. 167.

Distribution. — Marshall Islands.

<sup>1</sup> Type locality. — Marshall Islands(?).<sup>2</sup> Marshall Islands.**Distichopora rosea** Kent, 1871<sup>1</sup>.*Distichopora rosea* Kent, 1871, p. 281<sup>2</sup>; Tenison-Woods, 1879a, p. 303; Tenison-Woods, 1879b, p. 61; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Quelch, 1884a, p. 114; Quelch, 1885, p. 17; Von Lendenfeld, 1885, p. 614; Von Lendenfeld, 1887, p. 46; Hickson, 1892a, p. 502; Fisher, 1938, p. 544<sup>3</sup>; Boschma, 1953d, p. 167; Boschma, 1956a, p. 138.

Distribution. — Australia.

<sup>1</sup> Type locality. — East coast of Australia.<sup>2</sup> East coast of Australia. — <sup>3</sup> From the East coast of Australia.**Distichopora serpens** Broch, 1942<sup>1</sup>.*Distichopora serpens* Broch, 1942, p. 16; Boschma, 1953d, p. 167; Boschma, 1956a, p. 142; Boschma, 1956e, p. F 100.

Distribution. — Philippine Islands.

<sup>1</sup> Type locality. — San Bernardino Strait, Philippine Islands, 12° 77' N., 124° 03' E., 50-100 fms. (91-183 m).**Distichopora sulcata** De Pourtalès, 1867<sup>1</sup>.*Distichopora sulcata* De Pourtalès, 1867, p. 117<sup>2</sup>; De Pourtalès, 1868, p. 137; De Pourtalès, 1871, p. 38<sup>3</sup>; De Pourtalès, 1878, p. 210<sup>4</sup>; Tenison-Woods, 1879b, p. 56; Moseley, 1879, p. 482; Moseley, 1880, p. 85; Wright, 1882, p. 74; Nutting, 1895, p. 85<sup>5</sup>; Hickson & England, 1909, p. 349; Fisher, 1938, p. 545; Broch, 1942, p. 18<sup>6</sup>.

Distribution. — West Indies and adjoining region of Atlantic Ocean.

<sup>1</sup> Type locality (restricted). — Off Havana, 270 fathoms (493 m).<sup>2</sup> "Off Havana in 270 fathoms. Also in the shape of worn fragments in a specimen brought up by the lead from 600 fathoms in lat. 31° 32' N. and long. 78° 20' W., which is near the outer edge of the Gulf Stream off the coast of Georgia". — <sup>3</sup> Off Havana, 270 fms. (493 m); coast of Cuba; 31° 32' N., 78° 20' W., 600 fms. (1097 m). — <sup>4</sup> Off Havana, 80 fms. (146 m). — <sup>5</sup> Bahama Expedition. — <sup>6</sup> "Albatross", 30 miles North-east of Cozumel Island, 130 fms. (238 m).

**Distichopora violacea** (Pallas, 1766) <sup>1</sup>.

*Millepora violacea* Pallas, 1766, p. 258 <sup>2</sup>; Boddaert, 1768, p. 321 <sup>3</sup>; Ellis & Solander, 1786, p. 140 <sup>4</sup>; Wilkens, 1787, I, p. 328 <sup>5</sup>; Gmelin, 1789, p. 3785 <sup>6</sup>; Herbst, 1789, p. 60; Boddaert, 1798, p. 321; Bosc, 1802, p. 289 <sup>7</sup>; Oken, 1815, p. 62; Cuvier, 1830, p. 316; Cuvier, 1836, p. 386; Milne Edwards, 1836-1849, p. 141; Nardo, 1845, p. 637; Milne Edwards, 1860, p. 450; Tenison-Woods, 1879b, p. 50; Hickson & England, 1909, p. 346; Hickson, 1924, p. 152; Kühn, 1939, p. A 31; Boschma, 1956a, p. 140; Boschma, 1956e, p. F 100.

*Distichopora violacea* Lamarck, 1816a, p. 198 <sup>8</sup>; Lamarck, 1816b, Pl. 481 fig. 1a, b; Schweigger, 1819, Pl. VI fig. 61; Schweigger, 1820, p. 413; Lamouroux, 1821, p. 46 <sup>9</sup>; Deslongschamps, 1824, p. 256 <sup>10</sup>; Defrance, 1826, p. 394 <sup>11</sup>; De Blainville, 1830, p. 381; Henschel, 1833, p. 199; De Blainville, 1834, p. 416 <sup>12</sup>; Deshayes & Milne Edwards, 1836, p. 305; Milne Edwards, 1836-1849, Atlas, Pl. 85; Nardo, 1844, p. 68; Dana, 1848, p. 703 <sup>13</sup>; Milne Edwards & Haime, 1850-1854, p. lix; Dana, 1859, p. 151; Gray, 1860, p. 245; Milne Edwards, 1860, p. 451; Schmeltz in Gräffe, 1866, p. 592 <sup>14</sup>; Schmeltz, 1875, p. 21 <sup>14</sup>; Tenison-Woods, 1879a, p. 303; Tenison-Woods, 1879b, p. 61 <sup>15</sup>; Klunzinger, 1879, p. 89 <sup>16</sup>; Moseley, 1879, p. 482; Moseley, 1880, p. 84; Wright, 1882, p. 73 <sup>17</sup>; Quelch, 1885, p. 16; Von Lendenfeld, 1885, p. 614 <sup>18</sup>; Ludwig, 1886, p. 1021; Von Lendenfeld, 1887, p. 46 <sup>19</sup>; Kirkpatrick, 1890, p. 12 <sup>20</sup>; Hickson, 1892a, p. 501 <sup>21</sup>; Ortmann, 1892, p. 668 <sup>22</sup>; Ward, 1892, p. 53 <sup>23</sup>; Hickson, 1893, p. 129 <sup>24</sup>; Von Martens, 1902, p. 135; Kirkpatrick, 1902, p. 54; Hickson & England, 1905, p. 19; Hickson in Hickson & England, 1909, p. 346 <sup>25</sup>; England, 1926, p. 267 <sup>26</sup>; Hoffmeister, 1929, p. 365 <sup>27</sup>; Fisher, 1938, p. 544 <sup>28</sup>; Broch, 1942, p. 9; Broch, 1950, p. 40; Boschma, 1951b, p. 459; Tokioka, 1953, p. 130 <sup>29</sup>; Boschma, 1953d, p. 167; Wells, 1954, p. 476 <sup>30</sup>; Boschma, 1956a, p. 139; Boschma, 1956e, p. F 100.

*Madrepora violacea* Nardo, 1844, p. 68; Milne Edwards, 1860, p. 451; Fisher, 1938, p. 543; Broch, 1942, p. 9.

*Distichophora violacea* Tenison-Woods, 1879b, p. 58; Knauer, 1887, p. 216.

*Stylaster violaceus* Ortmann, 1892, p. 636.

*Distichopora (Millepora) violacea* Kühn, 1928, p. 103.

*Madreporaria violacea* Broch, 1942, p. 7.

*Dystichopora violacea* Dawydoff, 1952, p. 56 <sup>31</sup>.

*Distichopora violacea* forma *typica* Broch, 1942, p. 9 <sup>32</sup>; Boschma, 1953d, p. 167.

*Distichopora* Hickson, 1889, p. 52 <sup>33</sup>; Crossland, 1928, p. 581 <sup>34</sup>; Gardner, 1936, p. 412 <sup>35</sup>.

Broch (1942) lists *Distichopora violacea* Hickson, 1893, p.p. with a ? as a synonym of *Distichopora irregularis* Moseley.

[According to Fisher (1938), Broch (1942), and Wells (1954) *Distichopora coccinea* Gray and *Distichopora nitida* Verrill are synonyms of *Distichopora violacea* (Pallas)].

[Wells (1954) identifies *Distichopora granulosa* Quelch with *D. coccinea* Gray, which he regards as a synonym of *D. violacea* (Pallas)].

Distribution. — The species is stated to occur in numerous localities of the Pacific area, as far North as Johnston Island and the Tokara Islands; it has been recorded from the Western Indian Ocean, from Dar-es-Salaam, and from the Red Sea. It is not certain that all the corals identified with the name *Distichopora violacea* are representatives of one single species.

<sup>1</sup> Type locality. — Indo-Pacific.

<sup>2</sup> Locus: Mare Indicum. — <sup>3</sup> "Het groeit in de Kroos-zee" ("It grows in the Sargasso Sea", erroneous translation of "Mare Indicum"). — <sup>4</sup> Fished up about the islands in the South Sea. — <sup>5</sup> "Aus Ostindien". — <sup>6</sup> "In mari indico & australi". — <sup>7</sup> "Dans la mer des Indes". — <sup>8</sup> "Habite l'Océan des Grandes-Indes et Austral." — <sup>9</sup> "Midi de l'Islande, Ellis; Océan des Indes et austral, Pallas et de Lamarck" (erroneous translation of Ellis & Solander's "the islands in the South Sea"). — <sup>10</sup> "Il habite la mer des Indes, les côtes de l'Australie; il n'est pas rare à l'île de Timor". — <sup>11</sup> "D'après Ellis ... au Midi de l'Islande, ... d'après Pallas et de Lamarck, ... dans l'Océan des grandes Indes" (cf. note 9). — <sup>12</sup> "Mers Rouge et de l'Inde". — <sup>13</sup> Paumotu (Tuamotu) Archipelago. — <sup>14</sup> Fiji Islands. — <sup>15</sup> Timor; Aneityum, New Hebrides; New Guinea; N. E. Australia. — <sup>16</sup> Koseir, Red Sea. "Neu für das Rothe Meer, kommt aber sonst überall in den ostindischen und australischen Meeren vor". — <sup>17</sup> From Fiji and its vicinity. — <sup>18</sup> Dredged North of Australia in several places. — <sup>19</sup> North coast of Australia. — <sup>20</sup> Garvan Reef, China Sea, 2 fms. (3½ m). — <sup>21</sup> Torres Straits; Limbé Island, North Celebes. — <sup>22</sup> Upanga reef, Dar-es-Salaam, East Africa; Ovalau, Fiji Islands. — <sup>23</sup> Ebai Isles (? Ebeye Island, Kwajalein Atoll, Marshall Islands). — <sup>24</sup> Torres Straits. — <sup>25</sup> "Percy Sladen Trust Exp.": Coetivy, Seychelles; Praslin Reef, Seychelles; Egmont, Chagos Archipelago; Farquhar Atoll, between Madagascar and Seychelles; all from shallow water. — <sup>26</sup> "From a collection of Professor J. Stanley Gardiner from Coetivy I., Seychelle Islands" (cf. note 25). — <sup>27</sup> "In crevices and underneath overhanging corals, abundant on the inner (sheltered) slope of barrier reef off Papeete" (Tahiti). — <sup>28</sup> (l.c., p. 495): "Probably *Distichopora violacea* also occurs [on the Hawaiian plateau], although I can find no record" (cf. note 30, Johnston Island). — <sup>29</sup> Takarazima, Tokara Islands, South of Kyûsyû, Japan. — <sup>30</sup> Marshall Islands: Bikini Atoll, depth 2 m, depth 12.5-15 fms. (20-27 m); Rongelap Atoll; Jaluit Atoll; Likiep Atoll. Johnston Island (U.S.N.M.); further notes on localities mentioned by previous authors, *D. nitida* Verrill and *D. coccinea* Gray regarded as synonyms of *D. violacea* (Pallas). — <sup>31</sup> "Dans le domaine maritime Indochinois". — <sup>32</sup> Jaluit, Marshall Islands; San Bernardino Strait, Philippine Islands, 12° 27' N., 134° 03' E., 50-100 fms. (91-183 m); Gilbert Islands; Eimeo, Tahiti, 3 feet (about 1 m) (*D. nitida* Verrill regarded as a synonym of *D. violacea* forma *typica*). — <sup>33</sup> In small shallow pools, Talisse Island, off North Celebes, "a few small specimens of the purple *Distichopora*" (probably *Distichopora violacea* (Pallas)). — <sup>34</sup> Tahiti, in hollows of the reef-edge "the beautiful violet Hydrocoralline *Distichopora*" (probably *Distichopora violacea* (Pallas)). — <sup>35</sup> Salomon Atoll, Chagos Archipelago, seaward slopes (Hickson in Hickson & England, 1909, records *Distichopora violacea* (Pallas) from Egmont, Chagos Archipelago).



Additional data concerning the occurrence of *Distichopora* (and other Stylasterina) on the Hawaiian plateau (cf. notes 28 and 30):

Perrier (1881, p. 303): ... "le *Distichopore* violet est d'une teinte vineuse, il nous arrive des îles Fidji, des îles Sandwich et de plusieurs autres archipels du Pacifique".

Hickson in Hickson & England (1909, pp. 346/347) expresses the view that all the shallow-water specimens of *Distichopora* he had examined from Torres Straits, the Malay Archipelago, the coasts of Fiji, and from other islands of the S. Pacific and of the Indian Ocean belong to the one species, *Distichopora violacea*, and adds: "I have not yet examined with sufficient care the beautiful rose-coloured *Distichoporas* from Hawaii nor any specimen from the West Indies, and I am therefore not prepared to say that they also belong to the same widespread species".

Edmondson (1928, p. 6): "On Hawaiian reefs few alcyonarians and no hydroid corals such as *Millepora* and *Stylaster* have been reported although they exist at Johnston Island".

Edmondson (1946, p. 27): "No hydroid corals are known to occur in Hawaiian shallow waters. The locality nearest to Hawaii where they have been observed is Johnston Island, 750 miles southwest of Oahu".

Cf. *Stylaster roseus*, notes 11 and 12, *Stylaster sanguineus*, note 7.

Finally, attention must be drawn to a remark by Moseley (1877, p. 101): "Immense quantities of a large flabellate red *Distichopora*, brought from the Marquesas group, are sold to tourists at Honolulu. The corals are said to come from deep water". In certain cases this may have led to confusion of data of museum specimens.

### **Errina** Gray, 1835.

Type species, by monotypy, *Millepora aspera* Linnaeus, 1767.

(p.p.) *Heliopora* De Pourtalès, 1867, p. 118.

(p.p.) *Pliobothrus* De Pourtalès, 1868, p. 141.

*Lepidopora* De Pourtalès, 1871, p. 40.

*Lepidohelia* De Pourtalès, 1871, p. 41.

(p.p.) *Porella* Gray, 1872a, p. 482.

*Acanthopora* Moseley, 1877, p. 93.

*Labiopora* Moseley, 1879, p. 480.

*Spinipora* Moseley, 1879, p. 480.

*Spinopora* Moseley, 1879, p. 426.

*Erina* Hickson, 1912a, p. 881.

*Errian* Hickson, 1912b, p. 463.

*Borella* Kühn, 1939, p. A 31.

*Eu-Errina* Broch, 1942, p. 38.

*Labiata* Broch, 1942, p. 38.

*Inferiolabiata* Broch, 1951, p. 125.

**Errina amoena** Boschma, 1956d<sup>1</sup>.

*Errina amoena* Boschma, 1956d, p. 281.

Distribution. — China Sea.

<sup>1</sup> Type locality. — China Sea.

**Errina antarctica** (Gray, 1872)<sup>1</sup>.

*Porella antarctica* Gray, 1872a, p. 482; Gray, 1872b, p. 746; Moseley, 1879, p. 480; Moseley, 1880, p. 85; Hickson, 1912a, p. 881; Hickson, 1912b, p. 462<sup>2</sup>; Broch, 1942, p. 37; Boschma, 1953b, p. 310.

*Labiopora antarctica* Moseley, 1879, p. 480; Moseley, 1880, p. 85; Ridley, 1881, p. 105<sup>3</sup>; Shipley, 1901, p. 8; Von Marenzeller, 1903, p. 5; Hickson, 1912a, p. 894; Boschma, 1953d, p. 178; Boschma, 1954, p. 147.

*Errina (Labiopora) antarctica* Hickson, 1912a, p. 887; Hickson, 1912b, p. 462.

*Errina antarctica* Hickson, 1912a, p. 894; Broch, 1942, p. 38; Broch, 1950, p. 35; Broch, 1951, p. 126; Boschma, 1953d, p. 167; Boschma, 1956d, p. 288.

*Labiopora (Porella) antarctica* Kühn, 1928, p. 92.

*Borella antarctica* Kühn, 1939, p. A 31.

*Errina (Eu-Errina) antarctica* Broch, 1942, p. 42; Broch, 1950, p. 35<sup>4</sup>.

*Errina (Errina) antarctica* Boschma, 1956e, p. F 102.

*Errina (Eu-Errina) antarctica* forma *typica* Broch, 1942, p. 42<sup>5</sup>.

*Errina (Eu-Errina) antarctica* forma *kerquelenensis* Broch, 1942, p. 44<sup>6</sup>.

*Errina antarctica* forma *kerquelenensis* Broch, 1950, p. 36.

[According to Broch (1950) *Errina gracilis* Von Marenzeller is a synonym of *Errina antarctica* (Gray)].

Distribution. — Antarctic region.

<sup>1</sup> Type locality. — Burdwood Bank, off Falkland Islands, 54° 27' S., 59° 40' W., 45 fms. (82 m).

<sup>2</sup> Cape Horn. — <sup>3</sup> Trinidad Channel, S. W. Chili, 30 fms. (55 m). — <sup>4</sup> "Discovery", Sta. 652, Burdwood Bank, off Falkland Islands, 169-171 m; "Discovery", Sta. 1948, 60° 49'.4 S., 52° 40' W., 490-610 m; "Discovery", Sta. 2200, between Young and Sturge Islands, Balleny Group, 532-512 m; "Discovery", Sta. 2215, off Antipodes Islands, 163-210 m; "Discovery", Sta. 2290, off Falkland Islands, 137-133 m. — <sup>5</sup> Cape Horn. — <sup>6</sup> Heard Island, South of Kerguelen Island, about 53° S., 73° E.

**Errina aspera** (Linnaeus, 1767)<sup>1</sup>.

*Madrepora dense surculosa surculis palmatim dispositis plerumque crispulis, seu verrucose irsutis* Gualtieri, 1742, reverse of Pl. 55; Boschma, 1953b, p. 305.

*Millepora aspera* Linnaeus, 1767, p. 1282<sup>2</sup>; Houttuyn, 1772, p. 184; Linck, 1783, p. 211; Ellis & Solander, 1786, p. 135; Wilkens, 1787, I, p. 342; Gmelin, 1789, p. 3783<sup>3</sup>; Herbst, 1789, p. 57<sup>4</sup>; Esper, 1795, p. 106<sup>5</sup>; Bosc, 1802, p. 288<sup>6</sup>; Lamarck, 1816a, p. 201<sup>7</sup>; Lamouroux, 1821, p. 48; De Serres, 1822, p. 81; De Blainville, 1824, p. 81<sup>8</sup>; Risso, 1826, p. 347<sup>9</sup>; Cuvier, 1830, p. 316; Cuvier, 1836, p. 387; Deshayes & Milne Edwards, 1836, p. 308; Milne Edwards, 1836-1849, p. 141; Gray, 1835, p. 85; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Fol, 1885, p. 668; Dahl, 1899, p. 37; Von Marenzeller, 1903, p. 5; Hickson, 1912a, p. 879; Hickson, 1912b, p. 462; Broch, 1918b, p. 13; Broch, 1942, p. 37; Boschma, 1953a, p. 32; Boschma, 1953b, p. 301; Boschma, 1954, p. 145; Boschma, 1956e, p. F 100.

*Madrepora aspera* Müller, 1775, p. 715; Deshayes & Milne Edwards, 1836, p. 308.

*Errina aspera* Gray, 1835, p. 85; Dana, 1848, p. 571<sup>10</sup>; Dana, 1859, p. 111; De Pourtalès, 1871, p. 40<sup>11</sup>; Kent, 1871, p. 282; Verrill in Dana, 1872, p. 387; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Fol, 1885, p. 669<sup>12</sup>; Carus, 1885, Addenda<sup>13</sup>; Von Marenzeller, 1903, p. 5; Hickson & England, 1905, p. 18; Hickson, 1912a, p. 881; Hickson, 1912b, p. 463<sup>14</sup>; Broch, 1942, p. 38; Broch, 1951, p. 125; Boschma, 1953a, p. 33; Boschma, 1953b, p. 301; Boschma, 1954, p. 143; Boschma, 1956d, p. 282.

*Errina (Labiopora) aspera* Hickson, 1912a, p. 888; Hickson, 1912b, p. 462; Hickson, 1924, fig. 73.

*Errina (Eu-Errina) aspera* Broch, 1942, p. 40<sup>15</sup>; Broch, 1951, p. 126. [*Errina aspera* Verrill, 1864, see *Errina dabneyi* De Pourtalès].

Distribution. — Mediterranean Sea. The record "Norwegian Sea" is based on a misunderstanding of Linnaeus (1767) of the characters of the coral described by Gunnerus (1768) as *Millepora norvegica*, which was regarded by Linnaeus as identical with his *Millepora aspera* but in reality belongs to the genus *Allopora* (cf. Broch, 1918a, b; Boschma, 1953b). The specimens from the Cape Verde Islands and from the West Indies (notes 14 and 15) probably belongs to species differing from *Errina aspera*.

<sup>1</sup> Type locality (restricted). — Mediterranean Sea.

<sup>2</sup> "Habitat in M. Mediterraneo, Norvegico". — <sup>3</sup> "In mare mediterraneo, norvegico". — <sup>4</sup> "Im mittelländischen Meer". — <sup>5</sup> "Von den Norwegischen Meeren". — <sup>6</sup> "Dans les mers d'Europe". — <sup>7</sup> "Habite la mer Méditerranée". — <sup>8</sup> "Mer Méditerranée". — <sup>9</sup> "Regions coralligènes" (apparently environs of Nice). — <sup>10</sup> Mediterranean Sea. — <sup>11</sup> Specimen in British Museum (Natural History). — <sup>12</sup> Messina. — <sup>13</sup> "Mediterraneum (Esper), Nizza (Risso), Messina (Fol)". — <sup>14</sup> "Talisman" Exp., off Cape Verde, 633 and 598 m (identification uncertain). — <sup>15</sup> West Indies (identification uncertain).

**Errina atlantica** Hickson, 1912<sup>1</sup>.*Errina atlantica* Hickson, 1912b, p. 464<sup>2</sup>.

Distribution. — Azores.

<sup>1</sup> Type locality. — Azores.<sup>2</sup> Azores, 998-900 m; South of Fayal, Azores, 358 m.**Errina capensis** Hickson, 1912<sup>1</sup>.*Errina capensis* Hickson, 1912a, p. 894; Broch, 1942, p. 38.*Errina (Labiopora) capensis* Hickson, 1912a, p. 886<sup>2</sup>.*Errina (Eu-Errina) capensis* Broch, 1942, p. 53<sup>3</sup>.*Errina (Labiata) capensis* Broch, 1942, p. 91.

Distribution. — Cape of Good Hope.

<sup>1</sup> Type locality. — Cape of Good Hope, 30 fms. (55 m).<sup>2</sup> (p. 887): "the Cape specimen"; (p. 890): Cape of Good Hope, 30 fathoms (55 m). — <sup>3</sup> Cape of Good Hope.**Errina carinata** (De Pourtalès, 1867)<sup>1</sup>.*Heliopora carinata* De Pourtalès, 1867, p. 118; De Pourtalès, 1868, p. 141; Boschma, 1954, p. 146.*Pliobothrus carinatus* De Pourtalès, 1868, p. 141.*Errina carinata* De Pourtalès, 1871, p. 39<sup>2</sup>; De Pourtalès, 1878, p. 211<sup>3</sup>; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson & England 1905, p. 18; Hickson, 1912a, p. 878; Broch, 1942, p. 39; Boschma, 1954, p. 148.

Distribution. — West Indies.

<sup>1</sup> Type locality. — Off Havana, 270 fms. (493 m).<sup>2</sup> Off Havana in 270 fathoms (493 m). — <sup>3</sup> "Blake", Sta. 5, off Havana, 80-100 fms. (146-183 m); off Havana, 292 fms. (534 m).**Errina cervicornis** Broch, 1942<sup>1</sup>.*Errina cervicornis* Broch, 1942, p. 34; Broch, 1946, p. 29; Boschma, 1953d, p. 167.*Errina (Labiata) cervicornis* Broch, 1942, p. 57.

Distribution. — New Zealand.

<sup>1</sup> Type locality. — 2 miles East of North Cape, New Zealand, 55 fms. (100 m).**Errina cochleata** De Pourtalès, 1867<sup>1</sup>.*Errina cochleata* De Pourtalès, 1867, p. 116; De Pourtalès, 1868, p. 137<sup>2</sup>; Kent, 1871, p. 282; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson & England, 1905, p. 18; Hickson, 1912a, p. 880; Broch, 1942, p. 38; Boschma, 1954, p. 146; Boschma, 1956d, p. 286.*Stylaster cochleatus* De Pourtalès, 1867, p. 116.*Lepidopora cochleata* De Pourtalès, 1871, p. 40<sup>3</sup>; De Pourtalès, 1878,

p. 211<sup>4</sup>; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson, 1912a, p. 893; Boschma, 1956d, p. 287.

Distribution. — West Indies.

<sup>1</sup> Type locality. — Off Havana, 270 fms. (493 m).

<sup>2</sup> Off Sombrero Lighthouse, 183 fms. (334 m). — <sup>3</sup> Off Havana, 270 fms. (493 m). — <sup>4</sup> Off Havana, 154 fms. (282 m); "Blake", Sta. 16, off Havana, 292 fms. (534 m).

**Errina dabneyi** (De Pourtalès, 1871)<sup>1</sup>.

*Errina aspera* Verrill, 1864, p. 46<sup>2</sup>; De Pourtalès, 1867, p. 116<sup>3</sup>.

*Lepidopora dabneyi* De Pourtalès, 1871, p. 41<sup>4</sup>; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson, 1912a, p. 893; Hickson, 1912b, p. 463; Boschma, 1953b, p. 313; Boschma, 1954, p. 147; Boschma, 1956d, p. 287.

*Errina dabneyi* Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson, 1912a, p. 880; Hickson, 1912b, p. 463<sup>5</sup>; Broch, 1942, p. 38; Boschma, 1953b, p. 313; Boschma, 1956d, p. 286.

*Errina dabneyae* Boschma, 1953b, p. 313.

Distribution. — Azores.

<sup>1</sup> Type locality. — Fayal, Azores.

<sup>2</sup> Fayal, Azores. — <sup>3</sup> From Fayal. — <sup>4</sup> From Fayal, Azores. — <sup>5</sup> In the Azores, 56 m; Fayal, 560 m; Sargasses, 560 m (identification uncertain).

**Errina echinata** (Moseley, 1879)<sup>1</sup>.

*Spinipora echinata* Moseley, 1879, p. 480; Moseley, 1880, p. 85; Perrier, 1881, fig. 63; Perrier, 1886, fig. 169; Delage & Hérouard, 1901, fig. 251; Hickson & England, 1905, p. 26; Hickson & England, 1909, p. 352<sup>2</sup>; Hickson, 1912a, p. 893; Dehorne, 1920, p. 129; Kühn, 1939, p. A 33; Broch, 1942, p. 90; Boschma, 1954, p. 147.

*Errina echinata* Hickson, 1912a, p. 880; Broch, 1942, p. 39; Broch, 1951, p. 125.

*Errina (Spinipora) echinata* Hickson, 1912a, p. 881.

*Errina (Inferiolabiata) echinata* Boschma, 1956e, p. F 102.

Distribution. — Off the mouth of the Rio de la Plata; Western Indian Ocean. The two localities are widely separated; some additional data on the corals from the last mentioned localities are needed for a corroboration of the identification.

<sup>1</sup> Type locality. — "Challenger", Sta. 320, 37° 17' S., 53° 52' W., off the mouth of the Rio de la Plata, 600 fms. (1097 m).

<sup>2</sup> "Percy Sladen Trust Exp.", D 4, Providence Island, between Madagascar and Seychelles, 75 fms. (137 m).

**Errina fissurata** Gray, 1872<sup>1</sup>.

*Errina fissurata* Gray, 1872b, p. 745<sup>2</sup>; Moseley, 1879, p. 479; Moseley,

1880, p. 84<sup>3</sup>; Ridley, 1881, p. 107; Shipley, 1901, p. 8; Hickson & England, 1905, p. 18; Hickson, 1912a, p. 878; Murray, 1918, p. 449; Broch, 1942, p. 38.

Distribution. — Antarctic.

<sup>1</sup> Type locality. — Antarctic.

<sup>2</sup> "In the southern part of the South Seas". — <sup>3</sup> Antarctic Ocean.

**Errina glabra** De Pourtalès, 1867<sup>1</sup>.

*Errina glabra* De Pourtalès, 1867, p. 117; Kent, 1871, p. 282; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson & England, 1905, p. 18; Hickson, 1906, p. 286; Hickson, 1912a, p. 878; Broch, 1942, p. 38; Boschma, 1954, p. 146; Boschma, 1956d, p. 286.

*Lepidopora glabra* De Pourtalès, 1871, p. 40<sup>2</sup>; De Pourtalès, 1878, p. 211<sup>3</sup>; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson, 1912a, p. 893; Hickson, 1912b, p. 464; Boschma, 1956d, p. 287.

*Lepidohelia glabra* De Pourtalès, 1871, p. 41.

*Errina (Inferiolabiata) glabra* Boschma, 1956e, p. F 102.

Distribution. — West Indies and adjoining region of Atlantic Ocean.

<sup>1</sup> Type locality. — Atlantic Ocean, off the coast of Georgia, 31° 32' N., 78° 20' W., 600 fms. (1097 m).

<sup>2</sup> Off Havana, 270 fms. (493 m). — <sup>3</sup> "Blake", Sta. 5, off Havana, 100-154 fms. (183-282 m); off Havana, 158 and 243-458 fms. (289 and 444-838 m).

**Errina gracilis** Von Marenzeller, 1903<sup>1</sup>.

*Errina gracilis* Von Marenzeller, 1903, p. 4<sup>2</sup>; Von Marenzeller, 1904, p. 82; Hickson, 1912a, p. 878; Broch, 1942, p. 38; Broch, 1950, p. 36.

*Errina (Labiopora) gracilis* Hickson, 1912a, p. 889.

According to Broch (1950) *Errina gracilis* Von Marenzeller is a synonym of *Errina antarctica* (Gray).

Distribution. — Antarctic.

<sup>1</sup> Type locality. — Southeast of Peter I Island, Antarctic.

<sup>2</sup> 71° 14' S., 89° 14' W., 450 m; 71° 18' S., 88° 02' W., 450 m; 71° 15' S., 87° 39' W., 100 m; 71° 19' S., 87° 37' W., 435 m (depths from Broch, 1950, p. 45).

**Errina horrida** Hickson & England, 1905<sup>1</sup>.

*Errina horrida* Hickson & England, 1905, p. 19; Hickson, 1912a, p. 878; Hickson, 1912b, p. 463; Broch, 1942, p. 39; Boschma, 1953d, p. 167; Boschma, 1954, p. 148.

Distribution. — East Indian Archipelago.

<sup>1</sup> Type locality. — "Siboga", Sta. 150, 00° 6' N., 129° 7' 2" E., Jilolo Passage, East of Halmahera, 1089 m.

**Errina irregularis** (Nielsen, 1919) <sup>1</sup>.

*Spinipora irregularis* Nielsen, 1919, p. 19; Kühn, 1928, p. 92; Kühn, 1939, fig. 45.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.

**Errina labiata** Moseley, 1879 <sup>1</sup>.

*Errina labiata* Moseley, 1879, p. 480 <sup>2</sup>; Moseley, 1880, p. 84; Moseley, 1892, p. 459; Hickson, 1892b, p. 238; Von Marenzeller, 1903, p. 5; Von Marenzeller, 1904, p. 82; Hickson & England, 1905, p. 18; Hickson, 1912a, p. 878; Hickson, 1912b, p. 463; Dehorne, 1920, p. 129; Broch, 1942, p. 39; Broch, 1951, p. 125; Boschma, 1954, p. 147; Boschma, 1956e, p. F 102.

*Errina (Inferiolabiata) labiata* Broch, 1951, p. 126; Boschma, 1956e, p. F 102.

Distribution. — South Atlantic Ocean.

<sup>1</sup> Type locality. — South Atlantic Ocean.

<sup>2</sup> "Challenger", Sta. 320, off the mouth of the Rio de la Plata, 600 fms. (1097 m); "Challenger", Sta. 135, off the Tristan da Cunha group, 90-150 fms. (165-274 m).

**Errina lobata** (Nielsen, 1919) <sup>1</sup>.

*Labiopora lobata* Nielsen, 1919, p. 20; Kühn, 1928, p. 92; Kühn, 1939, fig. 42.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian,

**Errina macrogastra** Von Marenzeller, 1904 <sup>1</sup>.

*Errina macrogastra* Von Marenzeller, 1904, p. 81; Hickson, 1912a, p. 878; Broch, 1942, p. 39; Broch, 1947, p. 312; Boschma, 1953d, p. 167.

*Errina macrogaster* Broch, 1942, p. 60.

Distribution. — Galapagos Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3404, off Galapagos Islands, 01° 03' S., 89° 28' W., 724 m.

**Errina moseleyi** (Ridley, 1881) <sup>1</sup>.

*Labiopora moseleyi* Ridley, 1881, p. 106; Von Marenzeller, 1903, p. 5; Von Marenzeller, 1904, p. 82; Hickson, 1912a, p. 877; Boschma, 1953d, p. 178.

*Labiopora moseleyi* Von Marenzeller, 1903, p. 5.

*Errina moseleyi* Von Marenzeller, 1903, p. 6; Broch, 1942, p. 38; Broch, 1950, p. 46; Boschma, 1953d, p. 167.

*Erina (Labiopora) moseleyi* Hickson, 1912a, p. 881.

*Errina (Labiopora) moseleyi* Hickson, 1912a, p. 888.

Distribution. — Southwest Chili.

<sup>1</sup> Type locality. — Port Rosario, S. W. Chili (on the North side of chief island of Madre-de-Dios Archipelago), 2-10 fms. (3½-18 m).

**Errina novae-zelandiae** Hickson, 1912 <sup>1</sup>.

*Errina novae-zelandiae* Hickson, 1912a, p. 877; Boschma, 1953d, p. 167.

*Errina (Labiopora) novae-zelandiae* Hickson, 1912a, p. 890.

*Errina (Labiopora) novae-zealandiae* Hickson, 1912a, p. 890.

*Errina nova-zelandiae* Broch, 1914b, p. 9.

*Errina novae-zealandiae* Broch, 1942, p. 38; Broch, 1950, p. 44.

*Errina (Eu-Errina) novae-zealandiae* Broch, 1942, p. 51.

*Errina (Labiata) novae-zealandiae* Broch, 1942, p. 91.

*Errina (Errina) novaezealandiae* Boschma, 1956e, p. F 102.

*Errina (Labiopora) novae-zelandiae* facies *ramosa* Hickson, 1912a, p. 882 <sup>2</sup>.

*Errina (Labiopora) novae-zelandiae* facies *benhami* Hickson, 1912a, p. 883 <sup>2</sup>.

*Errina (Labiopora) novae-zelandiae* facies *dendyi* Hickson, 1912a, p. 883 <sup>3</sup>.

*Errina (Labiopora) novae-zelandiae* facies *cooki* Hickson, 1912a, p. 884 <sup>4</sup>.

*Errina (Eu-Errina) novae-zealandiae* facies *ramosa* Broch, 1942, p. 53 <sup>2</sup>.

*Errina (Eu-Errina) novae-zealandiae* facies *benhami* Broch, 1942, p. 53.

*Errina (Eu-Errina) novae-zealandiae* facies *dendyi* Broch, 1942, p. 53.

*Errina (Eu-Errina) novae-zealandiae* facies *cooki* Broch, 1942, p. 53 <sup>4</sup>.

*Errina novae-zelandiae* facies *ramosa* Boschma, 1953d, p. 167.

*Errina novae-zelandiae* facies *benhami* Boschma, 1953d, p. 167.

*Errina novae-zelandiae* facies *dendyi* Boschma, 1953d, p. 167.

*Errina novae-zelandiae* facies *cooki* Boschma, 1953d, p. 167.

Distribution. — New Zealand.

<sup>1</sup> Type locality. — New Zealand.

<sup>2</sup> Preservation Inlet, West coast of South Island of New Zealand, about 3 fms. (5½ m). — <sup>3</sup> Milford Sound, West coast of South Island of New Zealand. — <sup>4</sup> Cook Straits, between North and South Island of New Zealand.

**Errina ramosa** Hickson & England, 1905 <sup>1</sup>.

*Errina ramosa* Hickson & England, 1905, p. 18; Hickson, 1906, p. 286; Hickson, 1912a, p. 878; Hickson, 1912b, p. 463; England, 1926, p. 278; Broch, 1942, p. 39; Boschma, 1953d, p. 167; Boschma, 1954, p. 148; Boschma, 1956d, p. 287.

Distribution. — East Indian Archipelago.

<sup>1</sup> Type locality. — "Siboga", Sta. 297, South of West end of Timor, 10° 39' S., 123° 40' E., 520 m.



**Errina rubra** Broch, 1942<sup>1</sup>.

*Errina rubra* Broch, 1942, p. 38; Boschma, 1953d, p. 167.

*Errina (Eu-Errina) rubra* Broch, 1942, p. 46<sup>2</sup>.

Distribution. — New Zealand.

<sup>1</sup> Type locality. — Off New Zealand.

<sup>2</sup> Three Kings Islands, New Zealand, 65 fms. (119 m); 10 miles off Cape Maria van Diemen, New Zealand, 50 fms. (91 m).

**Errina spongiosa** Broch, 1942<sup>1</sup>.

*Errina spongiosa* Broch, 1942, p. 38; Broch, 1950, p. 36.

*Errina (Eu-Errina) spongiosa* Broch, 1942, p. 48.

Distribution. — Antarctic.

<sup>1</sup> Type locality. — Burdwood Bank, South of W. Falkland, 53° 45' S., 61° 10' W., 137-150 m.

**Errina tenuistylus** Broch, 1942<sup>1</sup>.

*Errina tenuistylus* Broch, 1942, p. 39.

*Errina (Labiata) tenuistylus* Broch, 1942, p. 54<sup>2</sup>.

Distribution. — Mauritius.

<sup>1</sup> Type locality. — Mauritius.

<sup>2</sup> Off Tombeau Bay, Mauritius, about 150 fms. (274 m) and about 130 fms. (238 m); off Port Louis, Mauritius, about 130 fms. (238 m).

**Labiopora** Coppinger, 1884, pp. 70/71<sup>1</sup>.

<sup>1</sup> Explorations in the Trinidad Channel (near Tierra del Fuego): "two species of the genus *Labiopora* — one of which Mr. Stuart Ridley of the British Museum has ascertained to be a species new to science —" (the species are *Errina antarctica* (Gray) and *Errina moseleyi* (Ridley), cf. Ridley, 1881).

**Errina** Powell, 1947, p. 9<sup>1</sup>.

<sup>1</sup> "Red Coral (*Errina*). Occurs abundantly in deep water off the coast of Stewart Island and the Chatham Islands ... In New Zealand clumps of *Errina* up to a foot or more in diameter, have been obtained."

**Errinopora** Fisher, 1931.

Type species, by monotypy, *Errina pourtalesii* Dall, 1884.

(p.p.) *Errina* Dall, 1884, p. 470.

*Protoerrina* Broch, 1935c, p. 59.

**Errinopora nanneca** Fisher, 1938<sup>1</sup>.

*Errinopora nanneca* Fisher, 1938, p. 538<sup>2</sup>; Boschma, 1953d, p. 167.

Distribution. — Bering Sea.

<sup>1</sup> Type locality. — "Albatross", Sta. 3599, Bering Sea, 52° 05' N., 177° 40' E., 55 fms. (100 m).

<sup>2</sup> Also from: "Albatross", Sta. 4777, Petrel Bank, Bering Sea, 52-43 fms. (95-78 m).

**Errinopora pourtalesii** (Dall, 1884)<sup>1</sup>.

*Errina pourtalesii* Dall, 1884, p. 470<sup>2</sup>; Hickson & England, 1905, p. 18; Hickson, 1912a, p. 880; Fisher, 1931, p. 391; Broch, 1942, p. 39; Boschma, 1956e, p. F 102.

*Errinopora pourtalesii* Fisher, 1931, p. 397; Fisher, 1938, p. 541<sup>3</sup>; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 104.

Distribution. — California; Gulf of Georgia (Strait of Georgia near Vancouver Island?).

<sup>1</sup> Type locality. — About the Farallone Islands, California, 50-100 fms. (91-183 m).

<sup>2</sup> In 50-100 fathoms (91-183 m) about the Farallone Islands, off the coast of California. — <sup>3</sup> Also from: Point Sur, California, 50-90 fms. (91-165 m); Monterey, California; "Albatross", Sta. 3158, N. of Farallone Islands, 29 fms. (53 m); "Albatross", Sta. 3159, N. of Farallone Islands, 27 fms. (49 m); Gulf of Georgia, A. Agassiz, no other data.

**Errinopora styliifera** (Broch, 1935)<sup>1</sup>.

*Protoerrina styliifera* Broch, 1935c, p. 59<sup>2</sup>; Broch, 1936, p. 101.

*Errinopora styliifera* Fisher, 1938, p. 536<sup>3</sup>; Eguchi, 1941, p. 1185; Broch, 1942, p. 71; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 104.

Distribution. — Okhotsk Sea.

<sup>1</sup> Type locality (restricted by Fisher, 1938). — Okhotsk Sea, 56° 10' N., 143° 15' E., 182 m.

<sup>2</sup> "Exploration des Mers de l'URSS", Sta. 248, 56° 10' N., 143° 15' E., 182 m; "Exploration des Mers de l'URSS", Sta. 27, 54° 36' - 54° 33' N., 143° 48' - 143° 15' E., 165-150 m. — <sup>3</sup> "Albatross", Sta. 5016, Okhotsk Sea, off S. end of Sakhalin Island, 64 fms. (117 m); "Albatross", Sta. 5017, Okhotsk Sea, 64 fms. (117 m).

**Errinopora zarhyncha** Fisher, 1938<sup>1</sup>.

*Errinopora zarhyncha* Fisher, 1938, p. 539; Boschma, 1953d, p. 167.

Distribution. — Aleutian Islands.

<sup>1</sup> Type locality. — "Albatross", Sta. 3480, Amukta Pass, Aleutian Islands, 52° 06' N., 171° 45' W., 283 fms. (518 m).

**Paraërrina** Broch, 1942.

Type species, by monotypy, *Paraërrina decipiens* Broch, 1942.

**Paraërrina decipiens** Broch, 1942<sup>1</sup>.

*Paraërrina decipiens* Broch, 1942, p. 61<sup>2</sup>; Boschma, 1956e, p. F 104.

Distribution. — Mauritius.

<sup>1</sup> Type locality. — Mauritius.

<sup>2</sup> Off Tombeau Bay, Mauritius, about 150 fms. (274 m) and about 130 fms. (238 m); off Port Louis, Mauritius, about 130 fms. (238 m).

**Errinopsis** Broch, 1950.

Type species, by monotypy, *Errinopsis reticulum* Broch, 1950.

**Errinopsis reticulum** Broch, 1950<sup>1</sup>.*Errinopsis reticulum* Broch, 1950, p. 37; Boschma, 1956e, p. F 104.

Distribution. — Antarctic.

<sup>1</sup> Type locality. — "Discovery", Sta. W S 246, South of Falkland Islands, 52° 25' S., 61° 00' W., 208-267 m.**Phalangopora** Kirkpatrick, 1887.Type species, by monotypy, *Phalangopora regularis* Kirkpatrick, 1887.(p.p.) *Pliobothrus* Broch, 1942, p. 33.**Phalangopora regularis** Kirkpatrick, 1887<sup>1</sup>.*Phalangopora regularis* Kirkpatrick, 1887, p. 212; Broch, 1951, p. 126; Boschma, 1953d, p. 167; Boschma, 1956d, p. 287; Boschma, 1956e, p. F 104. *Errina regularis* Hickson & England, 1905, p. 18.*Pliobothrus seriatus* Broch, 1942, p. 33<sup>2</sup>; Broch, 1951, p. 126; Boschma, 1953d, p. 167.

Distribution. — Mauritius.

<sup>1</sup> Type locality. — Mauritius.<sup>2</sup> Off Tombeau Bay, Mauritius, about 150 fms. (274 m); off Port Louis, Mauritius, about 130 fms. (238 m).**Pliobothrus** De Pourtalès, 1868.Type species, selected by Kühn, 1928, *Pliobothrus symmetricus* De Pourtalès, 1868.(p.p.) *Heliopora* De Pourtalès, 1867, p. 117.*Pliobothrus* Moseley, 1876b, p. 565.*Pliobothrus* Von Lendenfeld, 1885, p. 237.**Pliobothrus dispersgens** Nielsen, 1919<sup>1</sup>.*Pliobothrus dispersgens* Nielsen, 1919, p. 18; Kühn, 1928, p. 92; Kühn, 1939, fig. 44.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.**Pliobothrus laevis** Nielsen, 1919<sup>1</sup>.*Pliobothrus laevis* Nielsen, 1919, p. 19; Kühn, 1928, p. 92.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.[*Pliobothrus seriatus* Broch, see *Phalangopora regularis* Kirkpatrick].[*Pliobothrus spinosa* England, see *Steganopora spinosa* Hickson & England].**Pliobothrus symmetricus** De Pourtalès, 1868<sup>1</sup>.*Pliobothrus symmetricus* De Pourtalès, 1868, p. 141; Duncan, 1870, p.

291<sup>2</sup>; De Pourtalès, 1871, p. 57<sup>3</sup>; Duncan, 1873, p. 336<sup>2</sup>; De Pourtalès, 1878, p. 211<sup>4</sup>; Moseley, 1879, p. 479<sup>5</sup>; Moseley, 1880, p. 84; Agassiz, 1888, p. 138; Nutting, 1895, p. 84<sup>6</sup>; Hickson, 1912b, p. 465<sup>7</sup>; Broch, 1914b, p. 3<sup>8</sup>; England, 1926, p. 283; Kühn, 1939, p. A 32; Dons, 1939, p. 196<sup>9</sup>; Broch, 1942, p. 18; Boschma, 1955b, p. 137; Boschma, 1956e, p. F 104.

*Pliobothrus symmetricus* Dehorne, 1920, p. 129.

Distribution. — West Indies; North Atlantic; Azores (uncertain record).

<sup>1</sup> Type locality. — Off the Florida Reef, between 100 and 200 fathoms (183-366 m).

<sup>2</sup> In the cold area of the North Atlantic, in 500-600 fms. (914-1097 m). — <sup>3</sup> Off American Shoal, 98 fms. (179 m); off Alligator Reef, 118 fms. (216 m); off Sand Key, 123 fms. (225 m); off the Samboes, 125 fms. (229 m); off Sand Key, 135, 143, and 154 fms. (247, 262, and 282 m). — <sup>4</sup> "Blake", Sta. 5, 24° 16' N., 82° 13' W., 229 fms. (419 m). — <sup>5</sup> "Challenger", Sta. 23, off Sombrero Island, West Indies, 450 fms. (823 m). — <sup>6</sup> Bahama Expedition. — <sup>7</sup> Azores, 56 m. — <sup>8</sup> "Ingolf", Sta. 55, 63° 33' N., 15° 02' W., 594 m; "Ingolf", Sta. 57, 63° 35' N., 13° 02' W., 658 m. — <sup>9</sup> Off Atlantic coast of Norway: Aktivneset, West of Alesund, 62° 31' N., 04° E., 250-300 m; Koparnes, North of Stad, 62° 15' N., 05° 20' E., 80 m.

***Pliobothrus tubulatus*** (De Pourtalès, 1867)<sup>1</sup>.

*Heliopora tubulata* De Pourtalès, 1867, p. 117; De Pourtalès, 1868, p. 141; Broch, 1942, p. 32; Boschma, 1954, p. 146.

*Pliobothrus tubulatus* De Pourtalès, 1868, p. 141; De Pourtalès, 1871, p. 58; De Pourtalès, 1878, p. 20<sup>2</sup>; Moseley, 1879, p. 479; Moseley, 1880, p. 84; Hickson, 1912b, p. 465; Broch, 1914b, p. 3; Broch, 1942, p. 32; Boschma, 1954, p. 149.

Distribution. — West Indies.

<sup>1</sup> Type locality. — Off Havana, 270 fms. (493 m).

<sup>2</sup> "Blake", Sta. 16, 23° 11' N., 82° 23' W., 292 fms. (534 m).

***Sporadopora*** Moseley, 1879 (pro *Polypora* Moseley, 1877).

Type species, by monotypy, *Polypora dichotoma* Moseley, 1877.

*Polypora* Moseley, 1877, p. 94.

*Sporadipora* Greeff, 1886, p. 19; Gregory, 1898, p. 338; Hyman, 1940, p. 452.

*Sporadophora* Kolosváry, 1954, p. 29.

***Sporadopora dichotoma*** (Moseley, 1877)<sup>1</sup>.

*Polypora dichotoma* Moseley, 1877, p. 94; Moseley, 1879, p. 479; Moseley, 1880, p. 83; Kühn, 1939, p. A 33; Boschma, 1956e, p. F 104.

*Sporadopora dichotoma* Moseley, 1879, p. 479; Moseley, 1880, p. 83; Waagen, 1887, Pl. 121; Hall, 1898, p. 177<sup>2</sup>; Delage & Hérouard, 1901, fig. 238; Hickson & England, 1909, p. 348; Dehorne, 1920, p. 129; Kühn, 1928, p. 103; Lameere, 1932, fig. 274; Broch, 1942, p. 28; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 104.

*Sporadopora dichtoma* Moseley, 1892, p. 461.

*Sporadopora (Polypora) dichotoma* Kühn, 1928, p. 92.

Distribution. — Off the mouth of the Rio de la Plata; Miocene of Victoria, Australia (in all probability a different species).

<sup>1</sup> Type locality. — “Challenger”, Sta. 320, 37° 17' S., 53° 52' W., off the mouth of the Rio de la Plata, 600 fms. (1097 m).

<sup>2</sup> In the Miocene clays of the Grange Burn, Section IID, Allotment I, Parish of South Hamilton (Kühn, 1939, p. A 33: Miozän von Victoria). (Identification uncertain).

***Sporadopora faxensis*** Nielsen, 1919<sup>1</sup>.

*Sporadopora faxensis* Nielsen, 1919, p. 18; Kühn, 1928, p. 92; Kühn, 1939, p. 46.

Distribution. — Danian of Faxe, Denmark.

<sup>1</sup> Type locality. — Faxe, Denmark, Danian.

***Sporadopora marginata*** Tenison-Woods, 1880<sup>1</sup>.

*Sporadopora marginata* Tenison-Woods, 1880, p. 22<sup>2</sup>; Kühn, 1928, p. 103<sup>3</sup>; Boschma, 1953d, p. 167.

Distribution. — Miocene of Chatham Island.

<sup>1</sup> Type locality. — Oamaru or Hutchinson's Quarry Beds, Chatham Island near New Zealand, Miocene.

<sup>2</sup> Stratigraphical distribution: Upper Eocene V B. — <sup>3</sup> “Neu-Seeland-Miocän”.

***Sporadopora mortenseni*** Broch, 1942<sup>1</sup>.

*Sporadopora mortenseni* Broch, 1942, p. 29; Broch, 1946, p. 29; Boschma, 1953d, p. 167; Boschma, 1956e, p. F 104.

Distribution. — New Zealand.

<sup>1</sup> Type locality. — Three Kings Islands, New Zealand, 65 fms. (119 m).

***Sporadopora providentiae*** Hickson & England, 1909<sup>1</sup>.

*Sporadopora providentiae* Hickson & England, 1909, p. 349; Broch, 1942, p. 27; Boschma, 1953d, p. 167.

According to Broch (1942) *Sporadopora providentiae* Hickson & England is a synonym of *Distichopora irregularis* Moseley.

Distribution. — Western Indian Ocean.

<sup>1</sup> Type locality. — “Percy Sladen Trust Exp.”, D 8, Providence Island, between Madagascar and Seychelles, 125 fms. (229 m).

***Sporadopora*** Serène, 1937, p. 11<sup>1</sup>.

<sup>1</sup> Annam. Identification uncertain; according to information received from Dr. R. Serène the specimen is no more in existence.

**Steganopora** Hickson & England, 1905.

Type species, by monotypy, *Steganopora spinosa* Hickson & England, 1905. (p.p.) *Pliobothrus* England, 1926, p. 282.

**Steganopora spinosa** Hickson & England, 1905<sup>1</sup>.

*Steganopora spinosa* Hickson & England, 1905, p. 26; Broch, 1914b, p. 3; Broch, 1942, p. 32; Boschma, 1953d, p. 167; Boschma, 1954, p. 148; Boschma, 1956e, p. F 104.

*Pliobothrus (Steganopora) spinosa* England, 1926, p. 282.

?*Pliobothrus spinosus* [Broch, 1914b, p. 3; Broch, 1942, p. 32]; Boschma, 1956e, p. F 104.

According to Broch (1914b, p. 3; 1942, p. 32) *Steganopora spinosa* Hickson & England is closely related to or even identical with *Pliobothrus tubulatus* (De Pourtalès). This needs confirmation because the one occurs in the East Indian Archipelago, the other in the West Indies.

Distribution. — East Indian Archipelago.

<sup>1</sup> Type locality. — "Siboga", Sta. 150, Jilolo Passage, East of Halmahera, 00° 06' N., 129° 07'.2 E., 1089 m.

#### APPENDIX

Of two species of the genus *Amphelia* Milne Edwards & Haime, 1849, belonging to the order Madreporaria (= Scleractinia), a list of synonyms is here given. The first species, *A. gemmascens*, has never been regarded as a Stylasterine coral, but the name *Madrepora gemmascens* Wilkens, 1787, needs to be suppressed in order to validate the name *Madrepora gemmascens* Esper, 1794, the oldest name for the coral at present known as *Stylaster gemmascens*. The second species, *A. infundibulifera*, for some time was erroneously placed in the genera *Allopora* and *Stylaster*; Kent (1871) was the first to determine the generic status of this coral.

**Amphelia gemmascens** (Wilkens, 1787).

Dopjes-Koraal Houத்துyn, 1772, p. 170.

Knospencorall Müller, 1775, p. 706.

*Madrepora gemmascens* Wilkens, 1787, II, p. 144; Herbst, 1789, p. 52; Gmelin, 1789, p. 3781; Bosc, 1802, p. 281; Boschma, 1953a, p. 34; Boschma, 1955a, p. 29.

*Amphelia gemmascens* Boschma, 1953a, p. 34.

**Amphelia infundibulifera** (Lamarck, 1816).

*Oculina infundibulifera* Lamarck, 1816a, p. 286; Deslongchamps, 1824, p. 575; De Blainville, 1825, p. 355; De Blainville, 1830, p. 345; De Blain-

ville, 1834, p. 380; Deshayes & Milne Edwards, 1836, p. 457; Milne Edwards & Haime, 1850, p. 100; Boschma, 1953a, p. 34.

*Allopora infundibulifera* Dana, 1848, p. 695; Milne Edwards & Haime, 1850, p. 100; Dana, 1859, p. 149; Johnson, 1862, p. 197; Kent, 1870, p. 122.

*Allopora (Stylaster) infundibulifera* Milne Edwards & Haime, 1857, p. 131; Boschma, 1953d, p. 165.

*Amphihelia infundibulifera* Kent, 1871, p. 276.

*Stylaster infundibuliformis* Von Marenzeller, 1904, p. 84.

*Stylaster infundibulifera* Hickson & England, 1905, p. 7.

*Amphelia infundibulifera* Boschma, 1953a, p. 34; Boschma, 1953d, p. 165; Boschma, 1955a, p. 29.

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