

With the Compiler's Compliments.

MUSEUM NORMANIANUM,

OR

A Catalogue of the Invertebrata

OF

Europe, and the Arctic and North Atlantic Oceans,

WHICH ARE CONTAINED IN THE COLLECTION OF THE

REV. CANON A. M. NORMAN,

M.A., D.C.L., F.R.S., F.L.S., &c.



VII. SPONGOZOA.

VIII. RHIZOPODA.



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* This word has been employed in a somewhat different sense ; but I use it as an appropriate name for a section of the Cœlenterata, which embraces as other sections the Actinozoa and Hydrozoa.

PREFATORY NOTES.

The North Atlantic is here regarded as limited by lat. 35° N., or as extending a little to the South of the Strait of Gibraltar on the Eastern and to about Cape Hatteras on the Western side.

All the Sponges of the following lists were found within the area thus embraced, but some of the Foraminifera are from the more tropical parts of the Atlantic, these are indicated by an (*) placed before the number. Most of them may, however, be expected to be found hereafter North of lat. 35° on the Western side of the Atlantic.

The nomenclature of the Sponges is at present in deplorable confusion. To properly synonymize the species of the following lists would require years to be devoted to their examination and study. Moreover, since the value of the present collection consists in the fact that almost all the representatives in it are types or portions of types, and on this account most important for future reference, I have retained throughout the nomenclature of the respective describers, who have named the species.

The British Calcarea, collected by myself, were used both by Dr. Bowerbank and by Prof. Haeckel in the preparation of their works ; and the Siliceous Sponges all passed through the hands of the former, and are for the most part mentioned in his monograph, while a large number of them are, at the present time, unique types. The remaining portion of this collection embraces specimens or sections and mountings of the spicula of types for which I am indebted to almost every author who has written on the Sponge-fauna of the Atlantic and Arctic oceans.

I shall be much obliged to any naturalists who can in the future help to extend the collection in a similar manner, and to whom in return I shall be glad to send specimens or mountings of types. It will be seen that this collection is very rich in Northern Sponges, but there are about one hundred described Mediterranean species absent from it, nor have I those European freshwater forms, which are not found in England.

The freshwater Rhizopoda have all been received from M. Penard, and I have therefore thought it best strictly to follow the nomenclature of his work, "*Etudes sur les Rhizopodes d'eau douce, 1890.*"

The marine Rhizopoda, or Foraminifera, are named in accordance with the great work on the "Challenger" Foraminifera by my late lamented friend, Dr. H. B. Brady. They are partly the product of my own dredgings carried out on almost every part of the coast of our islands, and of excursions during four summers to Norway and Finmark; and partly the results of the examination of material kindly supplied to me from the "Porcupine," "Knight Errant," "Triton," "Valorous," and "Challenger" expeditions. A few species have been added by the kindness of friends, chiefly by the late Dr. H. B. Brady, Mr. Joseph Wright, and the Royal Museum of Stockholm (Dr. Goës).

The Atlantic and Arctic Foraminifera are very fully represented, but I have very few forms from the Mediterranean, in which sea, indeed, they have been little studied, while the species of the North-East American coast have not as yet received any attention.

Letters should be addressed—

BURNMOOR RECTORY,
FENCE HOUSES,
CO. DURHAM.

Catalogues already published :—

- { I.—ECHINODERMATA.
- { II.—PANTOPODA.
- III.—CRUSTACEA.
- { IV.—MOLLUSCA MARINA.
- { V.—BRACHIOPODA.
- VI.—MOLLUSCA TERRESTRIA ET FLUVIATILIA.

June 1, 1892.

MUSEUM NORMANIANUM.

VII.—SPONGOZOA (= PORIFERA).

I.—Order—CALCAREA.

In the following Calcarea the appended letters mean :—

B.—British specimens first determined by Dr. Bowerbank, and secondly used and referred to by Prof. Haeckel in his monograph.

C.—Specimens received from the Copenhagen Museum.

H.—Specimens received from Prof. Haeckel.

Han.—Mounting of Spicules received from Mr. Hanitsch.

N.—Specimens received from the Zoological Station, Naples.

S.—Specimens received from Prof. O. Schmidt.

Fam. I.—Ascones.

Ascetta, Haeckel.

- 1 primordialis, Haeckel *Z.*
- 2 coriacea, Mont. *B.H.*
- 3 clathrus, O. Schmidt *H.N.*
- 4 blanca, Haeckel *N.*

Ascaltis, Haeckel.

- 5 botryooides, Ell. and Sol. *B.*
- 6 cerebrum, Haeckel *H.*

Ascortis, Haeckel.

- 7 lacunosa, Bean. *B.*

Ascandra, Haeckel.

- 8 reticulum, O. Schmidt *S.*
- 9 contorta, Bow. *B.*
- 10 complicata, Mont. *B.*
- 11 botrys, Haeckel *B.*
- 12 variabilis, Haeckel *B.H.*

Fam. II.—Leucones.

Leucaltis, Haeckel.

- 13 pumila, Bow. *B.*
- 14 solida, O. Schmidt *H.N.*

- 15 impressa, Hanitsch *Han.*

Leucandra, Haeckel.

- 16 Egedii, Haeckel *C.*
- 17 Gossei, Bow. *B.*
- 18 crambessa, Haeckel *H.*
- 19 aspera, O. Schmidt *H.N.*
- 20 fistulosa, Johnst. *B.*
- 21 ananas, Mont. *B.*
- 22 nivea, Grant *B.H.*
- 23 Johnstoni, Carter *B.*
- 24 stiligera, Haeckel *C.*

Fam. III.—Sycones.

Sycortis, Haeckel.

- 25 quadrangulata, O. Schmidt *B.*

Sycandra, Haeckel.

- 26 ciliata, O. Fab. *B.H.*
- 27 raphanus, O. Schmidt *H.N.*
- 28 capillosa, O. Schmidt *S.*
- 29 elegans, Bow. = tessellata, Bow. *B.H.N.*
- 30 hystrix, Haeckel *N.*
- 31 utriculus, O. Schmidt *B.*
- 32 villosa, Haeckel *B.*
- 33 arctica, Haeckel *C.*
- 34 glabra, O. Schmidt = ensata, Bow. *B.H.N.*
- 35 compressa, O. Fab. *B.*

Poléjaeff, in his report on the Calcarea of the "Challenger" expedition, would place the whole of the *Ascones* of the preceding list in the genus *Leucosolenia*, Bow.; the whole of the *Leucones* in *Leuconia*, Bow.; *Sycandra compressa* in *Grantia*, Fleming; *Sycandra glabra* in *Ute*, O. Schmidt, and the remaining *Sycandrae* and *Sycortis* in *Sycon*, Risso. R. von Lindenfeld, in his work just published, "Die Spongien der Adria," distributes the Calcarea in twenty-one genera.

II.—BRITISH SPONGES.

(Bowerbank's nomenclature.)

Order—Silicea.

Pachymatisma, Bowerbank.

36 Johnstonia, Bow.

Normania, Bowerbank.

37 crassa, Bow.

Ecionemia, Bowerbank.

38 compressa, Bow.

39 ponderosa, Bow.

Polymastia, Bowerbank.

40 robusta, Bow.

41 brevis, Bow. = Quasillina brevis,
Norman.

42 spinula, Bow.

43 mamillaris, Müll.

44 conigera, Bow.

Ciocalypta, Bowerbank.

45 penicillus, Bow.

Tethya, Lamarck.

46 cranium, Müll.

47 Collingsii, Bow.

48 Schmidtii, Bow.

49 lyncurium, Lin.

50 spinularia, Bow.

Halicnemis, Bow.

51 patera, Bow.

Dictyocylindrus, Bow.

52 stuposus, Mont.

53 ramosus, Mont.

54 radiosus, Bow.

55 Howsei, Bow.

56 hispidus, Mont.

57 aculeatus, Bow.

58 fascicularis, Bow.

59 virgulosus, Bow.

60 pumilus, Bow.

61 rugosus, Bow.

62 rectangulus, Bow.

Phakellia, Bow.

63 robusta, Bow.

64 ventilabrum, Lin.

Microciona, Bow.

65 fictitia, Bow.

66 Kentii, Bow.

67 tumulosa, Bow.

68 simplicissima, Bow.

69 fallax, Bow.

70 armata, Bow.

Microciona, Bow.—continued.

71 ambigua, Bow.

72 plumosa, Mont.

73 atrasanguinea, Bow.

Hymeraphia, Bow.

74 vermiculata, Bow.

75 clavata, Bow.

76 stellifera, Bow.

77 simplex, Bow.

78 coronula, Bow.

Hymedesmia, Bow.

79 occulta, Bow.

80 radiata, Bow.

81 indistincta, Bow.

82 pansa, Bow.

83 pilata, Bow.

84 pulchella, Bow.

85 stellata, Bow.

86 simplicissima, Bow.

87 tenuicula, Bow.

88 zetlandica, Bow.

Hymeniacion, Bow.

89 albescens, Johnst.

90 Thomasi, Bow.

91 coccineus, Bow.

92 perarmatus, Bow.

93 membrana, Bow.

94 firmus, Bow.

95 placentula, Bow.

96 armiger, Bow.

97 Brettii, Bow.

98 fragilis, Bow.

99 reticulatus, Bow.

100 fallaciosus, Bow.

101 tegeticula, Bow.

102 solidus, Bow.

103 perlævis, Mont.

104 crustula, Bow.

105 caruncula, Bow.

106 sanguineus, Grant.

107 mammeatus, Bow.

108 consimilis, Bow.

109 macilentus, Bow.

110 fallax, Bow.

111 virgulosus, Johnst.

112 radiosus, Bow.

113 medius, Bow.

114 virgulatus, Bow.

115 viridans, Bow.

116 aureus, Mont.

Hymeniacion, Bow.—continued.

- 117 callosus, Bow.
 118 plumiger, Bow.
 119 subereus, Mont.
 120 carnosus, Johnst.
 121 gelatinosus, Bow.
 122 ficus, Johnst.
 123 sulphureus, Bean.
 124 celatus, Grant.
 125 claviger, Bow.
 126 tenebrosus, Bow.
 127 paupertas, Bow.
 128 Dujardinii, (Johnst. ?) Bow.

Battersbyia, Bow.

- 129 Bucklandi, Bow.

Halichondria, Fleming.

- 130 caduca, Bow.
 131 inconspicua, Bow.
 132 incerta, Bow.
 133 coalita, Grant.
 134 mutulus, Bow.
 135 cylindracea, Bow.
 136 panicea, Pallas.
 137 angulata, Bow.
 138 edusa, Bow.
 139 ambigua, Bow.
 140 Robertsoni, Bow.
 141 condensa, Bow.
 142 coralloides, Bow.
 143 Thompsoni, Bow.
 144 forceps, Bow.
 145 simplex, Bow.
 146 subdola, Bow.
 147 foliata, Bow.
 148 corrugata, Bow.
 149 falcula, Bow.
 150 flabelligera, Bow.
 151 incrustans, Esper.
 152 candida, Bow.
 153 Dickiei, Bow.
 154 Pattersoni, Bow.
 155 pulchella, Bow.
 156 Ingalli, Bow.
 157 scandens, Bow.
 158 nigricans, Bow.
 159 expansa, Bow.
 160 virgea, Bow.
 161 granulata, Bow.
 162 farinaria, Bow.

Isodictya, Bow.

- 163 cinerea, Grant.
 164 permollis, Bow.
 165 mammeata, Bow.
 166 ramusculus, Bow.
 167 ferula, Bow.
 168 rosea, Bow.
 169 pygmæa, Bow.
 170 obscura, Bow.
 171 indefinita, Bow.
 172 indistincta, Bow.
 173 simplex, Bow.
 174 pocillum, Bow.
 175 luteosa, Bow.
 176 Peachii, Bow.
 177 varians, Bow.
 178 elegans, Bow.
 179 fallax, Bow.
 180 MacAndrewii, Bow.
 181 fistulosa, Bow.
 182 perplexa, Bow.
 183 densa, Bow.
 184 pallida, Bow.
 185 simulans, Johnst.
 186 Ingalli, Bow.
 187 incerta, Bow.
 188 crassa, Bow.
 189 Bowerbanki, Norman.
 190 pauperata, Bow.
 191 clava, Bow.
 192 jugosa, Bow.
 193 palmata, Johnst.
 194 trunca, Bow.
 195 infundibuliformis, Lin.
 196 dissimilis, Bow.
 197 invalida, Bow.
 198 Normani, Bow.
 199 coriacea, Bow.
 200 hispida, Bow.
 201 fucorum, Johnst.
 202 Alderi, Bow.
 203 Edwardii, Bow.
 204 paupera, Bow.
 205 uniformis, Bow.
 206 Clarkii, Bow.
 207 Barleei, Bow.
 208 laciniosa, Bow.
 209 dubia, Bow.
 210 nodosa, Bow.
 211 involuta, Bow.

Isodictya, Bow.—continued.

- 212 pertenuis, Bow.
 213 scitula, Bow.
 214 collina, Bow.
 215 funalis, Bow.
 216 Hyndmanni, Bow.
 217 lurida, Bow.
 218 fimbriata, Bow.
 219 implicita, Bow.
 220 inæqualis, Bow.

Raphiodesma, Bowerbank.

- 221 floreum, Bow.
 222 lingua, Bow.
 223 simplicissimum, Bow.
 224 sordidum, Bow.
 225 fallaciosum, Bow.
 226 intermedium, Bow.

Spongilla, Linné.

- 227 fluviatilis, Pallas.
 228 Parfitti, Carter.
 229 lacustris, Donovan.

Desmacidon, Bowerbank.

- 230 fruticosus, Mont.
 231 Jeffreyssi, Bow.=*Oceanapia* Jeffreyssi,
 Norman.
 232 constrictus, Bow.
 233 pannosus, Bow.
 234 copiosus, Bow.
 235 cavernula, Bow.
 236 similis, Bow.
 237 ægagrophilus, Scouler.

Raphyrus, Bowerbank.

- 238 Griffithsiæ, Bow.

Spongionella, Bowerbank.

- 239 pulchella, Sowerby.

Order—Keratosa.**Chalina, Grant.**

- 240 oculata, Pallas.
 241 Montagui, Fleming.
 242 gracilenta, Bow.
 243 limbata, Montagu.
 244 inornata, Bow.

Ophlitaspongia, Bowerbank.

- 245 papilla, Bow.
 246 seriata, Grant.

Verongia, Bowerbank.

- 247 zetlandica, Bow.

Dysidea, Johnston.

- 248 fragilis, Montagu.
 249 coriacea, Bow.

III.—British Sponges, described by R. Hanitsch in "Third Report Porifera of L.M.B.C. District." (Trans. Biol. Soc. Liverpool, vol. iv, 1890, p. 192).

Seiriola, Hanitsch.

- 250 compacta, Hanitsch.

Raspailia, Nardo.

- 251 rigida, Montagu.

Axinella, O. Schmidt.

- 252 mamillata, Hanitsch.

Halisarca, Johnston.

- 253 rubra, Hanitsch.

IV.—Type Mountings of spicula of Cliona, described by Albany Hancock. (Ann. and Mag. Nat. Hist., ser. 2, vol. iii, 1849, p. 321, and ser. 3, vol. xix, 1867, p. 229.)

Cliona, Grant=Vioa, Nardo.

- (124) celata, Grant.
 254 gorgonoides, Hancock.
 255 Northumbrica, Hancock.
 256 vastifica, Hancock.
 257 corallinoides, Hancock.
 258 gracilis, Hancock.
 259 Howsei, Hancock.
 260 Alderi, Hancock.
 261 lobata, Hancock.
 262 globulifera, Hancock.
 263 canadensis, Hancock.
 264 angulata, Hancock.

V.—Sponges from the "Porcupine" Expedition, specimens or mountings.

Asconema, Kent.

- 265 setubalense, Kent.

Hyalonema, Gray.

- 266 lusitanicum, Bocage.

Pheronema, Leidz.

- 267 Carpenteri, Wyv. Thom.

Aphrocallistes, Gray.

- 268 Bocagei, P. Wright.

Thenea, Gray.

- 269 muricata, Bow.

Pachastrella, O. Schmidt.

- 270 abyssi, O. Schmidt.

- Geodia, Lamarck.**
271 nodastrella, Carter.
- Corallistes, O. Schmidt.**
272 borealis, Carter.
- Arabescula, Carter.**
273 parasitica, Carter.
- Craniella, O. Schmidt.**
(46) cranium, Müll.
- Corticium, O. Schmidt.**
274 abyssi, Carter.
275 parasiticum, Carter.
- Halichondria, Fleming.**
276 abyssi, Carter.
- Isodictya, Bowerbank.**
277 spinispiculum, Carter.
- Microciona, Bowerbank.**
278 planum, Carter.
- Hymenaphia, Bowerbank.**
(74) vermiculata, Bow.
- Cladorhiza, M. Sars.**
279 abyssicola, M. Sars.
280 var. corticocancellata, Carter.
- Chondrocladia, Wyv. Thomson.**
281 virgata, Wyv. Thom.
- Stylocordyle, Wyv. Thomson.**
282 stipitata, Carter.
- Quasillina, Norman.**
(41) brevis, Bow.
- Tentorium, Vosmaer.**
283 semisuburites, O. Schmidt.
- Halisarca, Dujardin.**
284 cruenta, Carpenter.

VI.—Norwegian Sponges, collected by myself, the Tetractinellida named by Sollas. I have also a very large collection of unexamined specimens.

- Craniella, O. Schmidt.**
(46) cranium, Müll.
- Thenia, Gray.**
(269) muricata, Bow.
- Normania, Bow.**
(38) compressa, Bow.
- Dragmastra, Sollas.**
285 Normani, Sollas.
- Stryphnus, Sollas.**
286 rudis, Sollas.
- Pachymatisma, Bow.**
287 Normani, Sollas.

- Geodia, Lamarck.**
288 Barretti, Bow.
- Cydonium, Fleming.**
289 Normani, Sollas.
- Synops, Vosmaer.**
290 MacAndrewii, Bow.
- Isops, Sollas.**
291 phlegraei, Sollas.
- Tethya, Lamarck.**
(49) lyncurium, Linné.
- Polymastia, Bowerbank.**
(43) mamillaris, Müll.
- Trichostemma, M. Sars.**
292 hemisphaericum, M. Sars.
- Tentorium, Vosmaer.**
(283) semisuburites, O. Schmidt.
- Quasillina, Norman.**
(41) brevis, Bow.
- Alectona, Carter.**
293 Milleri, Carter.
- Tragosia, Gray.**
(195) infundibuliformis, Linn.
(207) Barleei, Bow.
- Phakellia, Bowerbank.**
(64) ventilabrum, Linn.
- Axinella, O. Schmidt.**
(61) rugosa, Bow.
- Forcepina, Vosmaer.**
(144) forceps, Bow.
- Hamacantha, Gray.**
(149) falcula, Bow.
- Melananchora, Carter.**
294 elliptica, Carter.
- Esperella, Vosmaer.**
(222) lingua, Bow.
- Desmacidon, Bowerbank.**
295 crux, O. Sch.
- Rhaphidotheca, S. Kent.**
296 Marshall-Hallii, Kent.
- Cladorhiza, M. Sars.**
297 abyssicola, M. Sars.
298 pennatula, O. Sch.
- Hymenaphia, Bowerbank.**
(74) vermiculata, Bow.
- Dysidea, Johnston.**
(248) fragilis, Mont.

VII.—Portions of or mountings of Type Sponges, described by Dr. Vosmaer, from the Dutch Arctic Expeditions of 1878, 1879, 1880, and 1881, in the "Willem Barents."¹

- Stelletta, O. Schmidt.**
299 fortis, Vosm.
- Isops, Sollas.**
300 sphæroides, Vosm.
- Synops, Vosmaer.**
301 pyriformis, Vosm.
- Tetilla, F. E. Schulze.**
302 polyura, O. Schmidt.
- Polymastia, Bowerbank.**
303 capitata, Vosm.
- Weberella, Vosmaer.**
304 bursa, Vosm.
- Tedania, Gray.**
305 suctoria, O. Schmidt.
- Pachychalina, Vosmaer.**
306 caulifera, Vosm.
- Cribrochalina, O. Schmidt.**
307 variabilis, Vosm.
308 var. salpingoides, Vosm.
309 Sluiteri, Vosm.
- Phakellia, Bowerbank.**
310 Bowerbanki, Vosm.
311 arctica, Vosm.
- Artemisina, Vosmaer.**
312 suberitoides, Vosm.
- Forcepina, Vosmaer.**
(144) bulbosa, Carter.
- Myxilla, O. Schmidt.**
313 Barentsi, Vosm.
- Hamacantha, Gray.**
314 papillata, Vosm.
- Gellius, Gray.**
315 vagabundus, O. Sch.
316 arcofer, Vosm.
317 infundibuliformis, Vosm.

VIII.—Sections of Type Sponges, described from the Norwegian North Atlantic Expedition, 1876-8, received from Dr. G. Armauer Hansen.²

¹ Vosmaer, "Die Zool. Ergebnisse der zwei in den Jahren 1878 und 1879 ausgeführten Fahrten des Schoners 'Willem Barents'" (Niederländisches Archiv für Zool. 1881-2), and the "Sponges of the 'Willem Barents' Expedition of 1880 and 1881," 1885.

² G. Armauer Hansen, "Norwegian North Atlantic Expedition, 1876-1878. Spongiadae." Christiania, 1885.

- Stylocordyle, Lovén.**
318 borealis, Lovén.
- Reniera, O. Schmidt.**
319 simplex, Hans.
320 oblonga, Hans.
321 velamentosa, Hans.
322 tubulosa, Hans.
323 membranacea, Hans.
324 nivea, Hans.
325 pallescens, Hans.
(309) infundibuliformis, Hans.
326 complicata, Hans.
327 inflata, Hans.
- Radiella, O. Schmidt.**
(292) sol, O. Sch.
- Rinalda, O. Schmidt.**
328 uberrima, O. Sch.
- Thecophora, O. Schmidt.**
(283) semisuburites, O. Sch.
- Polymastia, Bowerbank.**
(43) penicillus, Mont.
- Suberites, Nardo.**
329 incrustans, Hans.
330 radians, Hans.
331 glabra, Hans.
- Myxilla, O. Schmidt.**
332 exigua, Hans.
333 grisea, Hans.
334 brunnea, Hans.
- Sclerilla, O. Schmidt.**
335 arctica, Hans.
336 dura, Hans.
- Desmacidon, Bowerbank.**
337 clavatum, Hans.
338 nucleus, Hans.
339 giganteum, Hans.
340 arcticum, Hans.
- Esperia, Nardo.**
341 bihamatifera, Carter.
- Cladorhiza, M. Sars.**
(297) abyssicola, M. Sars.
- Geodia, Lamarck.**
342 parva, Hans.
- Tethya, Lamarck.**
(46) cranium, Müll.
343 var. infrequens, Cart.
- Thenea, Gray.**
(269) muricata, Bow.
- Hyalonema, Gray.**
344 arcticum, Hans.

IX.—Sections of Type and other Sponges, described by Herr Konrad Fristedt, from the coast of Sweden, received from the Royal Museum of Stockholm.¹

- Polymastia, Bowerbank.**
 (43) mamillaris, Müller.
Radiella, O. Schmidt.
 (50) spinularia, Bow.
Thecophora, O. Schmidt.
 (283) semisuberites, O. Sch.
Suberites, Nardo.
 345 montalbidus, Carter.
 346 massa, Nardo.
 (123) sulphureus, Bow.
Vosmæria, Fristedt.
 347 crustacea, Fristedt.
Amorphina, O. Schmidt.
 (136) panicea, Pallas.
 (110) fallax, Bow.
Stylopus, Fristedt.
 348 coriaceus, Fristedt.
Desmacella, O. Schmidt.
 349 pumicea, Fristedt.
 350 Peachii, Bow.
 351 var. stellifera, Fristedt.
Hastatus, Vosmaer.
 (71) ambiguus, Bow.
 352 mamillaris, Fristedt.
 (140) Robertsoni, Bow.
 (161) granulatus, Bow.
Esperia, Nardo.
 (144) forceps, Bow.
 (70) armata, Bow.
 (158) nigricans, Bow.
 (222) lingua, Bow.
 353 foliata, Fristedt.
Geodia, Lamarck.
 (288) Barretti, Bow.
Isodictya, Bow.
 (195) infundibuliformis, Lin.
Phakellia, Bowerbank.
 (64) ventilabrum, Lin.
Axinella, O. Schmidt.
 (61) rugosa, Bow.
Raspailia, Nardo.
 354 abyssorum, Carter.

¹ Fristedt, "Bidrag till Kännedomen om de vid Sveriges vestra Kust lefvande Spongizæ" (Kongl. Svenska Vet. Akad. Hand xxi), 1885.

Chalina, Bowerbank.

- (243) limbata, Mont.
 355 pulcherrima, Fristedt.
Dysidea, Johnston.
 (248) fragilis, Mont.

X.—Sections of Type Sponges, described by Herr Konrad Fristedt, from the "Vega" and other Swedish expeditions, received from the Royal Museum of Stockholm.¹

- Hyalonema, Gray.**
 356 roseum, Fristedt.
 357 foliatum, Fristedt.
Halisarca, Dujardin.
 (128?) Dujardini, Johnston.
Chalina, Grant.
 358 vega, Fristedt.
 359 arbuscula, Verrill.
Cribrochalina, O. Schmidt.
 (307) variabilis, Vosm.
Reniera, O. Schmidt.
 360 ventilabrum, Fristedt.
Amorphina, O. Schmidt.
 361 grisea, Fristedt.
Eumastia, O. Schmidt.
 362 sitiens, O. Schm.
Isodictya, Bowerbank.
 363 Dicksonii, Fristedt.
Artemisina, Vosmaer.
 (312) suberitoides, Vosm.
Hymedesmia, Bowerbank.
 364 Johnsoni, Bow.
Hymenaphia, Bowerbank.
 (74) vermiculata, Bow.
 365 var. erecta, Carter.
Polymastia, Bowerbank.
 (41) brevis, Bow.
 366 paupera, Fristedt.
Tethya, Lamarck.
 (46) cranium, Müll.
 (269) muricata, Bow.
 367 siberica, Fristedt.
Gellius, Gray.
 (316) arcophorus, Vosm.
Desmacella, O. Schmidt.
 368 rosea, Fristedt.
Desmacidon, Bowerbank.
 (231) Jeffreysii, Bow.

¹ Fristedt, "Sponges from the Atlantic and Arctic Oceans and the Behring Sea," 1887.

- Hastatus, Vosmaer.**
 369 foliatus, Fristedt.
 370 indistinctus, Fristedt.
Cornulum, Carter.
 371 ascidioides, Fristedt.
 372 textile, Carter.
 373 enteromorphoides, Fristedt.
Esperia, Nardo.
 (222) lingua, Bow.
 374 var. arctica, Fristedt.
 375 villosa, Carter.
 376 helios, Fristedt.
 377 Sophiæ, Fristedt.
Forcepia, Carter.
 378 grœnlandica, Fristedt.
Cribrella, O. Schmidt.
 379 hospitalis, O. Schmidt.
Melananchora, Carter.
 (294) elliptica, Carter.
Cladorhiza, M. Sars.
 (279) abyssicola, M. Sars.
 380 Nordenskiöldii, Fristedt.
 381 cupressiformis, Carter.
Clathria, O. Schmidt.
 382 corallorhizoides, Fristedt.
 383 Loveni, Fristedt.

XI.—Portions of Sponges, described by Dr. von Marenzeller, from the Austrian expedition to Jan Mayen.¹

- Cribrochalina, O. Schmidt.**
 384 ambigua, Marenz.
Esperia, Nardo.
 (232) constricta, Bow.
Suberites, Nardo.
 (345) Lütkeni, O. Sch.
Isodictya, Bowerbank.
 385 tenera, Marenz.²
Tetilla, O. Schmidt.
 386 geniculata, Marenz.

XII.—Sponges received from the Copenhagen Museum, being (a) Greenlandic species, described by O. Schmidt in "Grundzüge einer Spongien-Fauna des atlantischen Gebietes, 1876,"

¹ "Die internationale Polarforschung 1882-3. Die österreichische Polarstation Jan Mayen, iii, Band, 1886."

² This species described by Marenzeller in "Die Cœlenteraten, Echinodermen, und Würmer der österreichisch-ungarischen Nordpol-Expedition" (Densk. Math-natur Classe der Kais. Akad. der Wissen, xxxv), 1877.

and (b) Species from the Kara Sea, described by Dr. Levinsen, in "Dijmphna-Togtets Zoologisk-botaniske Udbytte 1887."

- Craniella, O. Schmidt.**
 387 tetheoides, O. Sch.
Chalinula, O. Schmidt.
 388 ovum, O. Sch.
Suberites.
 389 arciger, O. Sch.
Pachychalina, O. Schmidt.
 390 compressa, O. Sch.
Amorphina, O. Schmidt.
 391 genatrix, O. Sch.
Halichondria, Fleming.
 392 bibula, O. Sch.
 393 assimilis, Lev.
Gellius, Gray.
 394 capillifer, Lev.
Esperella, Vosmaer.
 394* Vosmaeri, Lev.
 395 picea, Lev.
 (381) cupressiformis, Carter.
 396 var. robusta, Lev.
 397 var. lycopodium, Lev.

XIII.—Mediterranean Sponges. (Nomenclature of O. Schmidt.)

The letters affixed to the names indicate that the sponge has been received from one of the following sources:—

M.—Received from the Vienna Museum, Dr. von Marenzeller.

S.—Received from Prof. O. Schmidt.

V.—Received from Dr. Vosmaer.

Z.—Received from the Zoological Station, Naples.

- Halisarca, Dujardin.**
 398 lobularis, O. Sch. S.
 (128?) Dujardinii, Johnst. Z.
Chondrosia, Nardo.
 399 reniformis, O. Sch. Z.
Chondrilla, O. Schmidt.
 400 nucula, O. Sch. S.
Corticium, O. Schmidt.
 401 candelabrum, O. Sch. S.
 402 stelligerum, O. Sch. S.
Osculina, O. Schmidt.
 403 polystomella, O. Sch. Z.
Euspongia, Bronn.
 404 Adriatica, O. Sch. Z.

- Cacospongia, O. Schmidt.**
 405 mollior, O. Sch. S.
 406 scalaris, O. Sch. S.
 407 cavernosa, O. Sch. S.
- Aplysina, Nardo.**
 408 aerophoba, O. Sch. S.
- Aplysilla, F. E. Schulze.**
 409 sulphurea, F. E. Sch. Z.
- Hircinia, Nardo.**
 410 dendroides, O. Sch. S.
 411 variabilis, O. Sch. S.
- Sarcotragus, O. Schmidt.**
 412 spinulosus, O. Sch. S.
 413 muscarum, O. Sch. Z.
- Chalina, Bowerbank.**
 414 digitata, O. Sch. M.
- Siphochalina, O. Schmidt.**
 415 coriacea, O. Sch. Z.
- Chalinula, O. Schmidt.**
 416 fertilis, O. Sch. Z.
- Reniera, O. Schmidt.**
 417 aquæductus, O. Sch. S.
 418 grossa, O. Sch. M.
 419 aurantiaca, O. Sch. M. Z.
 420 cratera, O. Sch. Z.
 421 ambigua, O. Sch. S.
 422 filigrana, O. Sch. S.
 423 nuggiana, O. Sch. S.
 424 digitata, O. Sch. M.
 425 informis, O. Sch. S.
 426 calyx, O. Sch. S.
- Schmidtia, Bals. Crivelli.**
 427 dura, Nardo Z.
- Suberites, Nardo.**
 428 fruticosus, O. Sch. S. Z.
 (119) domuncula, Nardo S.
 429 lobatus, O. Sch. S.
 430 flavus, O. Sch. M.
- Rhizaxinella, Keller.**
 431 pyrifer, Vosmaer Z.
- Papillina, O. Schmidt.**
 (238) suberea, O. Sch. S.
 432 nigricans, O. Sch. S.
- Vioa, Nardo.**
 433 Hancocki, O. Sch.
 (124) celata, Grant S.
- Tethya, Lamarck.**
 (49) lyncurium, Lin. S.
- Tuberella, Keller.**
 434 tethyoides, Keller Z.
- Esperia, Nardo.**
 435 Cantarenii, O. Sch. S.
 436 Bauriana, O. Sch. S.
 437 tunicata, O. Sch. S.
 438 Bowerbanki, O. Sch. S.
 (222) lingua, Bow. Z.
 439 syrinx, O. Sch. S.
 440 Lorenzi, O. Sch. Z.
 441 massa, O. Sch. S.
- Myxilla, O. Schmidt.**
 442 rosacea, O. Sch.
 443 fasciculata, O. Sch. Z.
- Dictyonella, O. Schmidt.**
 444 arcicola, O. Sch. Z.
- Clathria, O. Schmidt.**
 445 coralloides, O. Sch. S.
 446 var. ceratodes, Vosm. V.
 447 var. mollis, Vosm. V.
 448 frondiculata, O. Sch. M.
 449 compressa, O. Sch. S.
 450 oroides, O. Sch. M. Z.
- Raspailia, Nardo.**
 451 viminalis, O. Sch. S. Z.
 452 stelligera, O. Sch. S.
- Raspaigella, O. Schmidt.**
 453 brunnea, O. Sch. M.
- Axinella, O. Schmidt.**
 454 damicornis, O. Sch. S.
 455 foveolata, O. Sch. S.
 456 verrucosa, O. Sch. S.
 polypoides, O. Sch. S. Z.
 457 cinnamonea, O. Sch. Z.
- Acanthella, O. Schmidt.**
 458 acuta, O. Sch. S.
- Thenea, Gray.**
 459 intermedia, Sollas Z.
- Stelletta, O. Schmidt.**
 460 dorsigera, O. Sch. S.
 461 carbonaria, O. Sch. Z.
 462 fibulifera, O. Sch. M.
- Geodia, Lamarck.**
 463 gigas, O. Sch. S.

XIV.—N. E. American Sponges, received from the United States National Museum and from Professor Verrill.

Tethya, Lamarck.

- 464 gravata, Hyatt.
Suberites.
 465 compacta, Verrill.

- Cliona.**
 466 sulphurea, Desor.
Microcionia, Bowerbank.
 467 prolifera, Verrill.
Halichondria.
 (136) panicea, Pallas?

- Cladorhiza.**
 468 grandis, Verrill.
Chalina.
 (240?) oculata, Pallas?
 (359) arbuscula, Verrill.
 And some undetermined species.

VIII.—RHIZOPODA.

I.—FRESHWATER SPECIES.¹

Orders—Lobosa and Reticularia.

- Pelomyxa, Greef.**
 1 palustris, Greef.
Amoeba, Ehrenberg.
 2 proteus, Leidy.
 3 verrucosa, Ehren.
 4 vestita, Penard.
Diffugia, Le Clerc.
 5 pyriformis, Perty.
 6 var. cornuta, Leidy.
 7 var. vas, Leidy.
 8 var. fulva, Penard.
 9 acuminata, Ehren.
 10 amphora, Leidy.
 11 elegans, Penard.
 12 bicornis, Penard.
 13 corona, Wallich.
 14 globulosa, Dujardin.
 15 marsupiformis, Wallich.
 16 avellana, Penard.
 17 lanceolata, Penard.
 18 bacillifera, Penard.
 19 var. inflata, Penard.
 20 lobostoma, Leidy.
 21 arcula, Leidy.
 22 constricta, Ehren.
 23 compressa, Carter.
 24 entochloris, Leidy.
 25 urceolata, Carter.
 26 var. amphora, Leidy.
 27 var. lebes, Penard.
 28 tuberculata, Wallich.
 29 mamillata, Penard.
 30 rubescens, Penard.
 31 elisa, Penard.

Centropyxis, Stein.

- 32 aculeata, Stein.
 33 var. eornis, Leidy.
 34 var. discoides, Penard.

Arcella, Ehrenberg.

- 35 vulgaris, Ehren.
 36 var. angulosa, Leidy.
 37 hemisphaerica, Perty.
 38 catinus, Penard.

Lecquereusia, Schlumberger.

- 39 jurassica, Schlumb.
 40 var. epistoma, Penard.
 41 var. bacillaris, Penard.

Nebela, Leidy.

- 42 collaris, Leidy.
 43 longicollis, Penard.
 44 lageniformis, Penard.
 45 tubulosa, Penard.
 46 flabellulum, Leidy.
 47 carinata, Leidy.
 48 galeata, Penard.
 49 bigibbosa, Penard.
 50 dentistoma, Penard.
 51 bursella, Vajdovsky.
 52 militaris, Penard.
 53 minor, Penard.
 54 tenella, Penard.

Hyalosphenia, Leidy.

- 55 papilio, Leidy.
 56 elegans, Leidy.
 57 punctata, Penard.

Quadrula, Schulze.

- 58 symmetrica, Schulze.
 59 var. irregularis, Penard.
 60 discoides, Penard.

Heleopera, Leidy.

- 61 rosea, Penard.
 62 petricola, Leidy.

¹ The specimens of a few of the following forms are from North America.

Heleopera, Leidy.—continued.

63 sylvatica, Penard.

Cryptodiffugia.

64 oviformis, Penard.

Pseudodiffugia, Schlumberger.

65 hemisphærica, Penard.

Campascus, Leidy.

66 triquetter, Penard.

Cyphoderia, Schlumberger.

67 margaritacea, Schlum.

68 triquetra, Penard.

Assulina, Ehrenberg.

69 seminulum, Leidy.

70 scandinavica, Penard.

71 minor, Penard.

Euglypha, Dujardin.

72 alveolata, Dujardin.

73 ciliata, Leidy.

74 strigosa, Leidy.

75 cristata, Penard.

76 heterospina, Penard.

77 compressa, Carter.

Placocysta, Leidy.

78 spinosa, Leidy.

Sphenoderia, Schlumberger.

79 lenta, Schlum.

80 dentata, Penard.

Trinema, Dujardin.

81 enchelys, Leidy.

82 complanatum, Penard.

83 lineare, Penard.

Corythion, Taránek.

84 dubium, Taránek.

85 pulchellum, Penard.

Pseudochlamys, Claparède & Lachman.

86 patella, Clap. & Lach.

Gromia, Dujardin.

87 Brunneri, Blanc.

88 Schulzei, Norman.¹**II.—MARINE SPECIES.****Order—Reticularia or Foraminifera.***Fam. I.—Miliolidae.***Nubecularia, DeFrance.**

89 lucifuga, DeFrance.

Biloculina, d'Orbigny.

90 sphæra, d'Orb.

91 lucernula, Schwager.

92 bulloides, d'Orb.

93 ringens, Lamk.

94 comata, H. Bra.

*95 irregularis, d'Orb.

96 elongata, d'Orb.

97 depressa, d'Orb.

98 var. murrhyna, Schwager.

99 var. serrata, H. Bra.

100 lævis, DeFr.

Spiroloculina, d'Orbigny.

101 planulata, Lamk.

*102 robusta, H. Bra.

103 excavata, d'Orb.

104 tenuiseptata, H. Bra.

105 acutimargo, H. Bra.

106 limbata, d'Orb.

*107 robusta, H. Bra.

108 canaliculata, d'Orb.

Sigmoilina, Schlumberger.

109 secans, d'Orb.

110 celata, Costa.

111 tenuis, Czjzek.

*112 sigmoidea, H. Bra.

Miliolina, Williamson.

113 seminulum, Lin.

114 badenensis, d'Orb.

115 seminuda, Reuss.

116 oblonga, Mont.

*117 gracilis, d'Orb.

118 venusta, Karrer.

119 Auberiana, d'Orb.

*120 Cuvieriana, d'Orb.

121 trigonula, Lamk.

122 tricarinata, d'Orb.

123 insignis, H. Bra.

124 subrotunda, Mont.

*125 Fichteliana, d'Orb.

126 circularis, Born.

127 bucculenta, H. Bra.

*128 var. placentæformis, H. Bra.

129 bicornis, Walk. and Jac.

130 Boueana, d'Orb.

131 pulchella, d'Orb.

132 Ferussacei, d'Orb.

*133 reticulata, d'Orb.

134 labiosa, d'Orb.

¹ Name for the large marine species figured by Schulze "Jahresbericht der Comm. zur wissenschaft. Unters. der deutschen Meere in Kiel 1872-3." Pl. II, fig. 11, a, b, c, 1875.

Miliolina, Williamson.—continued.

- 135 longirostris, d'Orb.
 136 Brongniartii, d'Orb.
 137 selerotica, d'Orb.
 138 agglutinans, d'Orb.
 139 fusca, H. Bra.
- Articulina, d'Orbigny.**
 *140 sulcata, Reuss.
 *141 sagra, d'Orb.
 *142 funalis, H. Bra.
- Ophthalmidium, Kübler.**
 143 inconstans, H. Bra.
 =carinatum, Balk. and Wrig.
- Planispirina, Sequenza.**
 144 contraria, d'Orb.
 145 communis, Sequenza.
- Cornuspira, Schultze.**
 146 foliacea, Phil.
 147 involvens, Reuss.
 148 carinata, Costa.
 149 striolata, H. Bra.
- Paneroplis, Montfort.**
 150 pertusus, Forsk.
 151 var. planatus, Fich. & Moll.
 152 var. carinatus, d'Orb.
- Orbiculina, Lamarck.**
 153 adunca, Fich. & Moll.
- Orbitolites, Lamarck.**
 154 italica, Costa.
 155 marginalis, Lamk.

Fam. II.—Astrorhizidæ.

- Astrorhiza, Sandahl.**
 156 limicola, Sandahl.
 157 arenaria, Norman.
 158 crassatina, H. Bra.
 159 granulosa, H. Bra.
 160 angulosa, H. Bra.
- Pelosina, H. B. Brady.**
 161 variabilis, H. Bra.
- Dendrophrya, Str. Wright.**
 162 radiata, Str. Wright.
 163 erecta, Str. Wright.
- Storthosphæra, Schulze.**
 164 albida, Schulze.
- Syringamina, H. B. Brady.**
 165 fragilissima, H. Brady.
- Technitella, Norman.**
 166 melo, Norman.
 167 legumen, Norman.

Bathysiphon, M. Sars.

- 168 filiformis, M. Sars.
- Saccamina, M. Sars.**
 169 sphærica, M. Sars.
- Psammosphæra, Schulze.**
 170 fusca, Schulze.
- Jaculella, H. B. Brady.**
 171 acuta, H. Bra.
 172 obtusa, H. Bra.
- Psammatodendron, Norman.**
 173 arborescens, Norman.
 174 ramosum, H. Bra.
- Hyperamina, H. B. Brady.**
 175 elongata, H. Bra.
 176 friabilis, H. Bra.
 177 subnodosa, H. Bra.
 178 vagans, H. Bra.
- Marsipella, Norman.**
 179 elongata, Norman.
 180 cylindrica, H. Bra.
- Rhabdammina, M. Sars.**
 181 abyssorum, M. Sars.
 182 discreta, H. Bra.
 183 linearis, H. Bra.

Aschemonella, H. B. Brady.

- 184 catenata, Norman.
- Rhizammina, H. B. Brady.**
 185 algæformis, H. Bra.
 186 indivisa, H. Bra.
- Botellina, Carpenter.**
 187 labyrinthica, H. Bra.
- Haliphysema, Bowerbank.**
 188 Tumanowiczii, Bow.
 189 ramulosum, Bow.
 190 confertum, Norman.

*Fam. III.—Lituolidæ.***Reophax, Montfort.**

- 191 difflugiformis, H. Bra.
 192 fusiformis, Will.
 193 scorpiurus, Montfort.
 194 pilulifera, H. Bra.
 195 dentaliniformis, H. Bra.
 196 bacillaris, H. Bra.
 197 guttifera, H. Bra.
 198 distans, H. Bra.
 199 adunca, H. Bra.
 200 sabulosa, H. Bra.
 201 cylindrica, H. Bra.
 202 findens, Parker=moniliforme, Siddall.

Reophax, Montfort.—continued.

- 203 rudis, Costa.
 204 Scottii, Chaster.
Haplophragmium, Reuss.
 205 agglutinans, d'Orb.
 206 pseudospirale, Will.
 *207 calcareum, H. Bra.
 208 cassis, Parker.
 209 emaciatum, H. Bra.
 210 latidorsatum, Born.
 211 scitulum, H. Bra.
 212 glomeratum, H. Bra.
 213 canariense, d'Orb.
 214 crassimargo, Norman.¹
 215 nanum, H. Bra.
 216 globigeriniforme, Par. and Jones.
 217 anceps, H. Bra.

Placopsilina, d'Orbigny.

- 218 bulla, d'Orb.
 219 cenomana, d'Orb.
 220 vesicularis, H. Bra.

Haplostiche, Reuss.

- 221 Soldanii, d'Orb.

Thuramina, H. B. Brady.

- 222 papillata, H. Bra.
 223 albicans, H. Bra.

Hippocrepina, Parker.

- 224 indivisa, Parker.

Hormosina, H. B. Brady.

- 225 globulifera, H. Bra.
 226 ovicula, H. Bra.
 227 Carpenteri, H. Bra.
 228 Normani, H. Bra.

Amodiscus, Reuss.

- 229 incertus, d'Orb.
 230 gordialis, Par. and Jones.
 231 charoides, Par. and Jones.
 232 Shoneanus, Siddall.

Trochammina, Parker and Jones.

- 233 squamata, Par. and Jones.
 234 ochracea, Will.
 235 plicata, Terquem.
 236 inflata, Mont.
 var. macrescens, H. Bra.
 238 nitida, H. Bra.
 239 Robertsoni, H. Bra.

Trochammina, Parker and Jones.—contd.

- 240 trullissata, H. Bra.
 *241 coronata, H. Bra.
 *242 conglobata, H. Bra.
 243 ringens, H. Bra.
 244 trullissata, H. Bra.
 245 lituiformis, H. Bra.
 246 pauciloculata, H. Bra.

Webbina, d'Orbigny.

- 247 hemisphærica, Jones, Par. and Bra.
 248 clavata, Par. and Jones.

Cyclammina, H. B. Brady.

- 249 cancellata, H. Bra.

*Fam. IV.—Textulariidae.***Textularia, Defrance.**

- *250 quadrilatera, Schwager.
 251 concava, Karrer.
 252 nussdorfensis, d'Orb.
 253 carinata, d'Orb.
 254 sagittula, Defrance.
 var. fistulosa, H. Bra.
 256 agglutinans, d'Orb.
 257 gramen, d'Orb.
 258 conica, d'Orb.
 259 trochus, d'Orb.
 *260 turris, d'Orb.
 *261 Barrettii, Par. and Jones.
 262 aspera, H. Bra.

Bigenerina, d'Orbigny.

- 263 nodosaria, d'Orb.
 264 digitata, d'Orb.
 265 robusta, H. Bra.

Grammostomum, Reuss.

- 266 capreolus, d'Orb.
 267 pennatula, Batsch.

Pavonaria, d'Orbigny.

- *268 flabelliformis, d'Orb.

Spiroplecta, Ehrenberg.

- 269 biformis, Par. and Jones.

Gaudryina, d'Orbigny.

- 270 pupoides, d'Orb.
 271 baccata, Schwager.
 *272 subrotunda, Schwager.
 273 filiformis, Berth.
 274 siphonella, Reuss.

Verneuilina, d'Orbigny.

- 275 triquetra, Münster.
 276 spinulosa, Reuss.

¹ Nov. nom. for Brady, "Challenger," Pl. xxv, fig. 4. It is a well-marked form which I have found with *H. canariense* in East Finmark and Greenland, each form preserving its distinctive characters.

- 277 *pygmæa*, Egger.
278 *polystropha*, Reuss.
- Valvulina, d'Orbigny.**
279 *conica*, Par. and Jones.
280 *fusca*, Will.
- Clavulina, d'Orb.**
*281 *communis*, d'Orb.
282 *parisiensis*, d'Orb.
283 *cylindrica*, Hantken.
- Bulimina, d'Orbigny.**
284 *elegans*, d'Orb.
285 *pyrula*, d'Orb.
286 var. *spinescens*, H. Bra.
287 *ovata*, d'Orb.
288 *affinis*, d'Orb.
289 *pupoides*, d'Orb.
290 *arctica*, d'Orb.
291 *subteres*, H. Bra.
292 *elegantissima*, d'Orb.
293 *fusiformis*, Will.
*294 *subcylindrica*, H. Bra.
295 *marginata*, d'Orb.
296 *aculeata*, d'Orb.
297 *inflata*, Sequenza.
298 *Buchiana*, d'Orb.
299 *convoluta*, Will.
300 *squamigera*, d'Orb.
- Virgulina, d'Orbigny.**
301 *Schreibersiana*, Czjzek.
302 *subsquamosa*, Egger.
- Bolivina, d'Orbigny.**
303 *punctata*, d'Orb.
304 *dilatata*, Reuss.
*305 *porrecta*, H. Bra.
306 *lævigata*, Will. = *textilaroides*, Reuss.
307 *tortuosa*, H. Bra.
308 *difformis*, Will. = *pygmæa*, H. Bra.
309 *robusta*, H. Bra.
310 *Beyrichi*, Reuss.
311 var. *alata*, Seq.
312 *ænariensis*, Costa.
313 *plicata*, d'Orb.
314 *tegulata*, Reuss.
315 *costata*, d'Orb.
316 *decussata*, H. Bra.
- Cassidulina, d'Orbigny.**
317 *lævigata*, d'Orb.
318 *crassa*, d'Orb.
319 *Bradii*, Norman.
- Fam. V.—Chilostomellidae.*
Chilostomella, Reuss.
320 *ovoidea*, Reuss.
- Fam. VI.—Lagenidae.*
Lagena, Walker and Boys.
321 *globosa*, Mont.
322 var. *apiculata*, Reuss.
323 *lævis*, Mont.
324 *clavata*, d'Orb.
325 *elongata*, Ehrenberg.
326 *gracillima*, Seq.
327 *striata*, d'Orb.
328 *distoma*, Par. and Jones.
329 *gracilis*, Will.
330 *interrupta*, Will.
331 *semistriata*, Will.
332 *semilineata*, Wright.
333 *lineata*, Will.
334 *crenata*, Par. and Jones.
335 *hispida*, Reuss.
336 *aspera*, Reuss.
337 *sulcata*, Walk. and Boys.
338 *costata*, Will.
339 *acuticosta*, Reuss.
340 *Williamsoni*, Alcock.
341 *desmophora*, Rymer Jones.
342 *Hertwigiana*, H. Bra.
343 *striatopunctata*, Par. and Jones.
344 *squamosa*, Mont.
345 *melo*, d'Orb.
346 *hexagona*, Will.
347 *lævigata*, Reuss.
348 var. *carinata*, Reuss.
349 var. *globosa*, Born.
350 var. *pedunculata*, Sequenza.
351 *marginata*, Walk. and Boys.
352 var. *inæquilateralis*, Wright.
353 *monst. trigono-marginata*, Par. and Jones.
354 *monst. trigono-oblonga*, Sequenza.
355 *lucida*, Will.
356 *quadrata*, Will.
357 *fabia*, Balk. and Mill.
358 *bicarinata*, Terquem.
359 *Orbigniana*, Sequenza.
360 *monst. trigono-Orbigniana*, Norman.
- 361 *fimbriata*, H. Bra.
362 *pulchella*, H. Bra.

Lagena, Walker and Boys.—continued.

- 363 lagenoides, Will.
 364 var. tenuistriata, H. Bra.
Glandulina, d'Orbigny.
 365 lævigata, d'Orb.
 366 var. rotundata, Reuss.
 367 var. inflata, Born.
 368 var. gracilis, Reuss.

Nodosaria, Lamarck.

- 369 radricula, Lin.
 370 calomorpha, (Reuss ?) H. Bra.
 371 pyrula, d'Orb.
 372 inflexa, Reuss.
 373 filiformis, d'Orb.
 374 consobrina, d'Orb.
 375 var. emaciata, Reuss.
 376 soluta, Reuss.
 377 Verneuilii, d'Orb.
 378 communis, d'Orb.
 379 capitata, Boll.
 380 Rœmeri, Neugenb.
 381 hispida, d'Orb.
 382 var. sublineata, H. Bra.
 383 comata, Batsch.
 384 scalaris, Batsch.
 385 var. separans, H. Bra.
 386 raphanus, Lin.
 387 obliqua, Lin.
 388 vertebralis, Batsch.
 *389 costulata, Reuss.
 *390 intercellaris, H. Bra.
 391 aciculata, d'Orb.

Lingulina, d'Orbigny.

- 392 carinata, d'Orb.
 393 var. seminuda, Hantken.

Fronicularia, Defrance.

- 394 alata, d'Orb.

Rhabdogonium, Reuss.

- 395 tricarinatum, d'Orb.

Marginulina, d'Orbigny.

- 396 glabra, d'Orb.
 397 costata, Batsch.

Vaginulina, d'Orbigny.

- 398 legumen, Lin.
 399 var. arquata, H. Bra.
 400 spinigera, H. Bra.
 401 linearis, Mont.

Cristallaria, Lamarck.

- 402 tenuis, Born.

Cristallaria, Lamarck.—continued.

- 403 obtusata, Reuss.
 404 var. subalata, H. Bra.
 405 compressa, d'Orb.
 406 reniformis, d'Orb.
 *407 Schloenbachi, Reuss.
 408 crassa, d'Orb.
 409 variabilis, Reuss.
 410 crepidula, Fich. and Moll.
 411 italica, Defrance.
 412 gibba, d'Orb.
 413 rotulata, Lamk.
 414 vortex, Fich. and Moll.
 415 orbicularis, d'Orb.
 416 cultrata, d'Orb.
 417 calcar, Lin.
 418 echinata, d'Orb.
 *419 aculeata, d'Orb.

Amphicoryne, Schlumberger.

- 420 falx, Par. and Jones.

Polymorphina, d'Orbigny.

- 421 lactea, Walk. and Jac.
 422 monst. d'Orbignii, Zbor.
 423 gibba, d'Orb.
 424 var. Humboldtii, Zbor.
 425 lanceolata, Reuss.
 426 compressa, d'Orb.
 427 monst. fistulosa, Will.
 428 Thouini, d'Orb.
 429 oblonga, d'Orb.
 430 rotundata, Born.
 431 myristiformis, Will.
 432 concava, Will.

Uvigerina, d'Orbigny.

- 433 canariensis, d'Orb.
 434 angulosa, Will.
 *435 porrecta, H. Bra.
 436 asperula, Czjzek.
 437 pygmæa, d'Orb.
 438 tenuistriata, Reuss.

Sagrina, d'Orbigny.

- 439 dimorpha, Par. and Jones.
 440 nodosa, Par. and Jones.

Ramulina, Rupert Jones.

- 441 globulifera, H. Bra.

*Fam. VII.—Globigerinidae.***Globigerina, d'Orb.**

- 442 bulloides, d'Orb.
 443 dubia, Egger.

- Globigerina, d'Orb.**—continued.
 444 pachyderma, Ehrenberg.
 445 inflata, d'Orb.
 446 rubra, d'Orb.
 447 conglobata, H. Bra.
 448 sacculifera, H. Bra.
 449 æquilateralis, H. Bra.
- Orbubina, d'Orb.**
 450 universa, d'Orb.
 451 monst. bilobata, d'Orb.
 452 monst. trilobata, d'Orb.
 453 porosa, Terquem.
- Hastigerina, Wyville Thomson.**
 454 pelagica, d'Orb.
- Pullenia, Parker and Jones.**
 455 sphæroides, d'Orb.
 456 quinqueloba, Reuss.
 457 obliqueloculata, Par. and Jones.
- Sphæroidina, d'Orb.**
 458 bulloides, d'Orb.
 459 dehiscens, Par. and Jones.
- Candeina, d'Orbigny.**
 460 nitida, d'Orb.
- Fam. VIII.—Rotaliide.*
- Spirillina, Ehrenberg.**
 461 vivipara, Ehrenberg.
 462 margaritifera, Will.
 463 limbata, H. Bra.
 464 decorata, H. Bra.
- Patellina, Williamson.**
 465 corrugata, Will.
- Cymbalopora, Hagenow.**
 466 Poeyi, d'Orb.
 467 bulloides, d'Orb.
- Discorbina, Parker and Jones.**
 *468 turbo, d'Orb.
 469 globularis, d'Orb.
 470 arctica, Norman (nov. nom.) = obtusa,
 Par. and Jones (non d'Orb.).
 471 rosacea, d'Orb.
 472 orbicularis, Terquem.
 473 parisiensis, d'Orb.
 474 Bertheloti, d'Orb.
 475 Sauleyi, d'Orb.
 476 Wrightii, H. Bra.
- Planorbulina, d'Orbigny.**
 477 mediterraneanensis, d'Orb.
 478 ariminensis, d'Orb.
 479 acervalis, H. Bra.
- Truncatulina, d'Orbigny.**
 480 refulgens, Montf.
 481 lobatula, Walk. and Jac.
 482 variabilis, d'Orb.
 483 Wuellerstorfi, Schwager.
 484 Haidingerii, d'Orb.
 485 Ungeriana, d'Orb.
 486 Robertsoniana, H. Bra.
 487 reticulata, Czjzek.
- Anomalina, d'Orbigny.**
 488 coronata, Par. and Jones.
 489 ariminensis, d'Orb.
- Carpenteria, Gray.**
 *490 monticularis, Carter.
 491 utricularis, Carter.
 492 proteiformis, Goës.
- Rupertia, Wallich.**
 493 stabilis, Wallich.
- Pulvinulina, Parker and Jones.**
 494 repanda, Fich. and Moll.
 495 punctata, d'Orb.
 496 concentrica, Par. and Jones.
 497 auricula, Fich. and Moll.
 498 oblonga, Will.
 499 Menardii, d'Orb.
 500 var. fimbriata, H. Bra.
 501 tumida, H. Bra.
 502 canariensis, d'Orb.
 503 patagonica, d'Orb.
 504 crassa, d'Orb.
 505 Micheliniana, d'Orb.
 506 exigua, H. Bra.
 507 pauperata, Par. and Jones.
 508 Schreibersii, d'Orb.
 509 Karsteni, Reuss.
 510 elegans, d'Orb.
- Rotalia, Lamarck.**
 511 Beccarii, Lin.
 512 Soldanii, d'Orb.
 513 nitida, Will.
 514 orbicularis, d'Orb.
- Gypsina, Carter.**
 515 globulus, Reuss.
 516 vesicularis, Par. and Jones.
 517 inhærens, Schultze.
- Polytrema, Risso.**
 518 miniaceum, Lin.

*Fam. IX.—Nummulinidæ.***Nonionina, d'Orbigny.**

- 519 depressula, Walk. and Jac
 520 umbilicata, Mont.
 521 pompiloides, Fich. and Moll.
 522 orbicularis, H. Bra.
 523 stelligera, d'Orb.
 524 Boueana, D'Orb.
 525 labradorica, Dawson.
 526 scapha, Fich. and Moll.
 527 communis, d'Orb.
 528 pauperata, Balk. and Wri.
 529 turgida, Will.

Polystomella, Lamarck.

- 530 striatopunctata, Fich. and Moll.
 531 subnodosa, Münster.
 532 arctica, Par. and Jones.
 533 crispa, Linné.

Amphistegina, d'Orbigny.

- *534 Lessonii, d'Orb.

Operculina, d'Orb.

- 535 ammonoides, Gron.

Heterostegina, d'Orbigny.

- *536 depressa, d'Orb.