

## XXVII.—NOTES ON IRISH SPONGES, PART I.—A LIST OF THE SPECIES.

By EDWARD PERCEVAL WRIGHT, M. D., F. L. S., Professor of Zoology, Trinity College, Dublin.

[Read February 24, 1868.]

IN June, 1858, when engaged with Professor J. Reay Greene of Cork in investigating the marine zoology of the south and south-west coasts of Ireland, my attention was attracted by the large number of sponges met with while dredging in the bays of Castletownsend, Crookhaven, and Bantry. The only work at that time which described the species of British sponges was that by the late Dr. Johnson; but the zoologist was led to expect the publication each year of a work on sponges by Dr. Bowerbank; which, naming the species, from more fixed and better marked characters than those of colour and external form, would greatly facilitate the study of this order. While thus waiting, no opportunity was neglected of studying the characters of our Irish Sponges, and a series of dredgings was made in Bantry, and Ventry Bays, along the coast at Connemara—the rich collecting ground of M'Calla and Dr. Farran—and around the Arran Islands: during which I became more and more persuaded of the extreme uncertainty, nay, in some cases, impossibility, of naming the species, even from fresh specimens, without an examination by means of, often, very high powers of the microscope. During 1862 Professor Oscar Schmidt's work on the Sponges of the Adriatic Sea was published. This contains very many of our Irish sponges—very often not only the same genera, but the same species. During 1865 and 1866, with the exception of dredging excursions to Malahide, a fertile field in spring time for marine sponges, annelids, and nudibranchiate mollusca, I did little more than read up the now rapidly increasing literature of the subject. Just as I was leaving for a short trip to the Indian Ocean Dr. Bowerbank's monograph made its appearance, and on my return I resolved to work up the species of sponges met with in this country. There are in my own collection many species not yet investigated, and several probably new; but previously to describing these I have thought it advisable to examine the collections of Irish sponges in the Museums of the Royal Dublin Society, Trinity College, and Belfast, and determining when possible, by my own examination of the specimens, what species were to be met with in these collections. The series of specimens in the first named museum was apparently almost altogether collected by M'Calla, though I doubt not but that the majority of these species were named by Prof. Scouler. In some cases, either from the falling off and accidental misplacement of labels, and in others because certain characteristics of the species were not at the time properly known, I have found mistakes in the nomenclature, but these were of small consequence, and detracted in no way from the value of this collection. The few specimens in the College museum were unnamed, but had the localities generally affixed,

Those in the Belfast museum had either been submitted to Dr. Johnson or to Dr. Bowerbank; and in quoting such species I have referred to them as such; again, several species have been named for the first time by Dr. Bowerbank from specimens forwarded to him by Professor Dickie, and these I give on the very excellent authority of Dr. Bowerbank. The total number of species thus enumerated amounts to fifty-three, or a little more than one-fourth of those described as British; but I doubt not that the collection still in my possession will enable me, ere long, to double this number; and there is no reason why the number of species of sponges on our coast should be less than that of Great Britain. At present we have representatives of almost all the British genera.

While regarding Dr. Bowerbank's monograph as the text-book for the British sponges, I have still thought it advisable to add here and there a few synonyms. Dr. Bowerbank divides the sponges into three Orders—1. Calcarea, 2. Silicea, and 3. Keratosa. For facility of reference to the monograph on sponges I have followed this arrangement, referring the student to Professor Oscar Schmidt's work, to Dr. J. E. Gray's "Notes on the arrangement of Sponges," and to Professor Wyville Thomson's paper "On Vitreous Sponges," for further information on the subject, as well as for some criticisms on the arrangement of Dr. Bowerbank. The order Corticatae for the Barked sponges appears to me to be a very natural one. So is that of Halisarcinæ for Halisarca, this genus being destitute of spicules, while the Keratosa of Bowerbank, equalling the Spongina of Lieberkühn, will probably rank as an order equivalent to that of Corticatae; but doubtless many classifications will be made and then become obsolete ere a satisfactory one be established for this group of animals.

---

#### BIBLIOGRAPHY OF WORKS REFERRING TO BRITISH SPECIES.

- George Johnston.—A History of British Sponges. Edinburgh, 1842.  
 Oscar Schmidt.—Die Spongien des Adriatischen Meeres. Leipzig, 1862.  
 „ „ Supplement, enthaltend die Histologie und Systematische Ergänzungen. Leipzig, 1864.  
 „ „ Zweites Supplement enthaltend die Vergleichung der Adriatischen und Britischen Spongien Gattungen. Leipzig, 1866.  
 J. S. Bowerbank.—A Monograph of the British Spongiadæ. Vol. I. 1864; Vol. II., 1866. Ray Society.  
 J. E. Gray.—Notes on the Arrangement of Sponges, with the Description of some new Genera. "Proc. Zool. Soc., London." May 9, 1867.  
 Wyville Thomson.—On the "Vitreous Sponges." "Ann. and Mag. of Nat. Hist.," February, 1868.

## SUB CLASS 1.—CALCAREA. Bowerbank.

*Grantia compressa* (Fab.)*Artynes compressa*, Gray. Proc. Zool. Soc. Lond. 1867, p. 555.

On stems of algæ, all round the coast.

*G. ciliata* (Fab.)

Parasitical on Fuci, all round the coast. Of large size in the tidal estuary of the Liffey.

*Leucosolenia botryoides* (Ellis and Solander.)*Grantia lieberkühni* Sdt. Die Spongien, p. 17, and 2nd Supp., p. 8.

Parasitical on Fuci and Hydrozoa, all around the coast.

*L. lacunosa* (Bean.)*Nardosa lacunosa* Sdt. Die Spongien, 2nd Supp., p. 8.

Belfast Lough. G. Hyndman, 1858.

*L. coriacea* (Mont.)

Malahide. Dublin Bay. A. H. Hassall. Killough. W. Thompson

*Leuconia nivea* (Flem.)*Grantia solida* Sdt. Die Spongien, p. 18, 2nd Supp., p. 8.

West coast of Ireland. M'Calla.

*L. fistulosa* (Johnst.)Portaferry. W. T. *Fide* Dr. Johnston.

## SUB CLASS 2.—SILICEA. Bowerbank.

*Pachymatisma johnstonia* Bowerbank.*Halichondria johnstonia* (Bowerbank). 1841.*Pachymatisma johnstonia* Bowerbank. 1842.*Amphitrema M'Callii* Scouler M. S. 1846.\*

This sponge is mentioned by Dr. Bowerbank as found on the south coast of Ireland. Specimens marked *Amphitrema M'Callii* are in the Royal Dublin Society's Museum, from Connemara, and are, without doubt, part of the collection made by Mr. M'Calla in Bertraghboy Bay for Dr. Scouler. Specimens are often found incrusting rocks at low water mark. At present I only know of its occurrence on the western coast of Ireland. Roundstone.

---

\* Two large masses of sponge are in the Royal Dublin Society's collection, marked *Amphitrema M'Callii*. This name was then changed to that of *Raphyrus Griffithii*. One of these is certainly *Pachymatisma Johnstonia*, Bk., which name must stand, as Professor Scouler never published his name for this species. The other specimen is probably *Pupillina Griffithsæ* (Bk.).

*Polymastia mammillaris* (Müll.)

*Suberites appendiculatus* (Bal.) Die Spongien, 2nd Supp., p. 13.

*Pencillaria mammillaris* Gray. Proc. Zool. Soc. Lond. 1867, p. 527.

White House Point, Templeton. Larne Lough, G. H. Bertraghboy Bay.

*Tethea cranium* (Lamarck.)

Dingle Bay. Arran.

*T. lynceurium* (Lamarck.)

*Donatia aurantium* (Nardo). Isis 1833. *Fide* Gray, Proc. Zool. Soc.

Lond. 1867, p. 541.

Connemara, W. M'C. Strangford Lough, W. T.

*Dictyocylindrus howsei* (Bowerbank.)

*Raspailia howsei* Sdt. Die Spongien, 2nd Supp. p. 15.

Strangford Lough. Prof. Dickie.

*D. hispidus* (Montagu).

*Raspailia hispida* Sdt. Die Spongien, 2nd Supp. p. 15.

Roundstone. M'Calla. *Fide* Prof. Scouler. "Annal. and Mag. Nat. Hist.," vol. xvii., p. 176. 1846. Strangford Lough. W. Thompson.

*D. stuposus* (Mont.)

*Vipulina stuposus* Gray. Proc. Zool. Soc. Lond. 1867, p. 545.

Roundstone. M'Calla. *Fide* Chalina cervicornis (Pall.)

*Phakellia ventilabrum* Bowerbank.

*Spongia ventilabrum* Linneus.

*Axinella ventilabrum* Sdt. Die Spongien, 2nd Supp. p. 15.

A large number of specimens of this sponge were taken by Dr. R. Ball on the Nymph Bank (1820).

*Microciona armata* Bowerbank.

*Scopalina armata* Sdt. Die Spongien, 2nd Supp. p. 15.

Belfast Lough. Dr. Dickie.

*M. carnosus* Bowerbank.

Bantry Bay. Rev. A. Merle Norman. Of this species Prof. Oscar Schmidt writes (Zweites Supplement der Spongien des Adriatischen Meeres, p. 15):—"On the contrary, *M. carnosus* Bk. is something quite different. In its habit it approaches *Myxilla rosacea* Sdt.; but the very irregular spicules (Nadelzüge) are enveloped in a horny cement. The morsel given to me by Dr. Bowerbank as *M. carnosus*, proves to be identical with that likewise received from his hand as *Halichondria incrustans*, of the spicula of which I give outlines (Fig. 17);" whence it is probable that *Microciona* Bk. will equal *Scopalina* Sdt.

*Hymeraphia verticillata* Bk.

*Laothoe verticillata* (Gray). Proc. Zool. Soc. Lond. 1867, p. 543.

"This species was brought up from a depth of 100 fathoms by the sounding line, by the officers of H. M. S. Porcupine" (Prof. W. King). Prof. O. Schmidt observes that Dr. Bowerbank's genus *Hymeraphia* is without doubt closely connected to *Microciona*. Perhaps this is less true of the present than of any of the other species of the genus—the presence of verticellately spined spicula, and the primary skeleton spicula being surrounded by a fasciculus of secondary skeleton spicula, are characters, with others, that forbid this species to be placed in Schmidt's genus *Scopalina*.

*Hymeniacidon caruncula* Bk.

Bantry Bay. Rev. A. M. Norman. Schmidt (*l. c.*, p. 19) states this to be a *Reniera* (Nardo).

*H. sanguinea* (Grant).

Dublin Bay; Lambay Island (W. T.); Bertraghboy Bay and Arran (Dr. Bowerbank and self); Connemara and Clew Bay (W. T.) Indeed it is to be met with all round the coast.

*H. viridans* Bk.

Glengariff (Rev. A. Merle Norman); Berehaven.

*H. aurea* (Montagu).

Bantry Bay (Rev. A. Merle Norman).

*H. armatura* Bk.

Strangford Lough (Prof. Dickie).

*H. floreum* Bk.

*Carmia florea* (Gray). Proc. Zool. Soc. Lond. 1867, p. 537.  
Strangford Lough (Prof. Dickie).

*H. suberea* (Mont.)

*Suberites suberea*, Nardo, *vide* Gray. Proc. Zool. Soc. Lond. 1867, p. 523.

*H. carnosa* (Johnst.)

*Tethya carnosa* Scouler. Ann. & Mag. Nat. Hist. 1846, xvii., p. 176.  
*Suberites carnosa* Gray. Proc. Zool. Soc. Lond. 1867, p. 523.

These two latter species are common everywhere in suitable localities around our coast. It is often very difficult to distinguish between them.

*Cliona celata* Grant.

I here record only one species of this genus, though I doubt not but that I have specimens belonging to several others, which I reserve for future study. The genus *Cliona* (Grant) should give place to *Vioa*

(Nardo, 1841); but I am at a loss to know why Schmidt fancies this species has been overlooked by Bowerbank. Dr. Gray has distributed the species of Mr. Hancock among seven genera.\*

### *Halisarca dujardini*.

Will probably be found when attentively looked for all around our coasts. Prof. Dickie has found it on Strangford Lough, and I have taken it at Malahide. There is evidently some mistake about the species of this genus, as Dr. Bowerbank informs me that he meets with spicules in the above species, while Lieberkuhn and Schmidt describe it as aspicious, making it the type of an Order.

### *Halichondria panicea* (Pallas).

Common everywhere. Schmidt says this species should be, without any question, referred to Nardo's genus *Reniera*.

### *H. thompsoni* (Bowerbank).

*Dendoryx thompsoni* (Gray). Proc. Zool. Soc. Lond. 1865, p. 537.

This species is described by Dr. Bowerbank from a specimen taken in Belfast Lough by the late W. Thompson.

### *H. incrustans* (Esper).

*Dendoryx incrustans* (Gray). Proc. Zool. Soc. Lond. 1865, p. 537.

Roundstone Bay (McCalla). Bantry Bay and Malahide, and probably in all suitable localities around the coast. Schmidt does not think that this species should be placed in the genus *Halichondria*.

### *H. dickiei* (Bowerbank).

*Dendoryx dickiei* (Gray). Proc. Zool. Soc. Lond. 1865, p. 537.  
Strangford Lough.

### *H. pattersoni* (Bowerbank).

*Dendoryx pattersonii* (Gray). Proc. Zool. Soc. Lond. 1867, p. 535.

Both these species are from Strangford Lough, where they were found by Prof. Dickie. They appear to be very closely allied to *Hal. incrustans* (Esper).

### *H. hyndmani* (Bowerbank).

*Alebion hyndmani* (Gray). Proc. Zool. Soc. Lond. 1867, p. 534.

Found by the late G. Hyndman in Strangford Lough.

### *H. nigricans* (Bowerbank).

*Iophon nigricans* (Gray). Proc. Zool. Soc. Lond. 1867, p. 534.  
Strangford Lough (Prof. Dickie).

### *H. farinaria* (Bowerbank).

Belfast Bay, on *Pecten opercularis* (W. Thompson).

*Isodictya cinerea* (Grant).

Connemara; (M'Calla), Dublin Bay; (A. H. Hassall); Clew Bay (W. Thompson).

*I. peachii* (Bowerbank).

Bantry Bay; Rev. A. M. Norman.

*I. simulo* (Bowerbank).

Same locality as last.

*I. simulans* (Johnston).

*Adocia similans* (Gray). Proc. Zool. Soc. Lond. 1867, p. 522.

Connemara; (M'Calla), Dublin Bay, A. H. H. I have taken it at Malahide, and probably it will be found all around the coast.

*I. fucorum* (Esper).

Common in all suitable localities, investing *Fuci* and *Sertulariæ*.

*I. gracilis* (Bowerbank).

Larne Lough (Prof. Dickie).

*Spongilla fluviatilis* (Pallas).

*Ephydatia fluviatilis* (Gray). Proc. Zool. Soc. Lond. 1867, p. 550.

To be found apparently in every suitable locality in Ireland. In Dublin very common in the canals, and of too frequent occurrence in the fresh water pipes of the city.

*S. lacustris* (Fleming).

*Spongilla lacustris* (Gray). Proc. Zool. Soc. Lond. 1867, p. 552.

Lower Lake of Killarney. Prof. Allman (1848). Lakes in the counties of Wicklow and Galway not uncommon.

*Desmacidon ægagropila* (Scouler).

*Halispongia ægagropila* Scouler MS. Johnston, "British Sponges," p. 119, Plate XI., Fig. 1.

*Esperia ægagropila* Sdt. Die Spongien 2nd Sup. p. 18.

*Ægagropila varians* (Gray). Proc. Zool. Soc. Lond. 1867, p. 533.

*Desmacidon ægagropila* Bowerbank, "British Sponges," p. 352.

Dr. Bowerbank, in his "Monograph of the British Spongiadæ," appears to have overlooked both the Irish localities for this species, as well as the fact that its specific name was given to it by Prof. Scouler. It was first found in Roundstone Bay by Mr. M'Calla. W. Thompson records it from Derry. Bertraghboy Bay.

*Papillina suberea* Sdt.

*Raphyrus Griffithsiæ* Bowerbank, 1864.

*Halichondria celata*, var. *a* (Johnston).

*Raphyrus celatus* (Gray). Proc. Soc. Lond. 1867, p. 516.

Roundstone Bay (M'Calla). I have taken it at the same locality in 1866. Dr. Gray makes *Halichondria celata*, var. *a* of Dr. Johnston a species under the name of *Raphyrus celatus* (Gray).\*

SUB CLASS 3.—KERATOSA. Bowerbank.

*Spongionella pulchella* (Sowerby).

The type specimen of this sponge was said to have been found on the coast of Ireland. It has been examined and determined by Dr. Bowerbank, Carrickfergus (Templeton).

*Chalina oculata* (Palmer).

Probably everywhere along the coasts.

*C. cervicornis* (Pallas).

Dublin Bay (the late Professor Harvey). I am quite uncertain as to this species. It is said in Thompson's "Natural History of Ireland," vol. iv., p. 480, to have been taken in Belfast Bay by Templeton and Hyndman; Waterford, Miss Ball; Bertraghboy Bay, Dr. Farran and M'Calla. But it is possible these were all specimens of *Dyctyocylindrus stupeosus* (Mont.)

*C. montaguui* (Flem.)

Dublin Bay, and Connemara (M'Calla).

*C. limbata* (Montagu).

Bangor. Dublin Bay, named by Dr. Johnston (*vide* Thompson). Roundstone (M'Calla). Parasitical on Fuci, and met with at Malahide and Bantry Bay.

*C. seriata* (Grant).

Ireland's Eye (Thompson). Tory Island (G. Hyndman).

*Dysidea fragilis* (Montagu).

*Spongelia fragilis* (Nardo).

Around the coast in every suitable locality.

---

\* *Halichondria celata*, var. *a*. massive and wide of Dr. Johnston, is without doubt *Raphyrus griffithsæ* of Bowerbank. There is, therefore, no necessity for Dr. Gray's species. A very singular blunder in connexion with this species will be found in a paper by Mr. W. Andrews on Irish Sponges ("Ann. and Mag. Nat. Hist.," 4th Series, vol. i., April, 1868, p. 307), where, referring to *Halichondria celata*, Johnston; and citing as synonyms *Raphyrus griffithsæ* Bowerbank, and *Cliona celata* Grant, he says:—"No sponge has caused more confusion than this, whether we consider its range in deep and shallow water, its varied distribution of attachment, or the very dissimilar outline of form and structure it not unfrequently assumes—so much so, that *H. celata* of Johnston had been divided into twelve species." Dr. Bowerbank's original mistake, the origin of which he explains so clearly ("British Sponges," vol. ii., p. 215), is here, in spite of all precautions, perpetuated.—[Note added in press, July, 1868, E. P. W.]