

Its powers of life appear considerable, for if placed in a saucer of water after having long been dried, it almost immediately expands and recovers its original form, and its cells imbibe moisture more perfectly than those of Algæ generally do; and far more perfectly and readily than any species of *Codium*, *Vaucheria* or *Bryopsis*. It is thus admirably adapted to the circumstances of intermittent nourishment under which it is developed, and affords a new instance, to the many thousands recorded, of peculiar care exercised in providing for the welfare of even the humblest member of the organized world.

Many interesting additions to our marine flora may be expected from Mr. M'Calla's researches on the west coast of Ireland. In addition to the present new species, he has already found fine specimens of some very rare Algæ, as *Gloiosiphonia capillaris*, *Conferva rectangularis* and others. The last-named plant, originally discovered by Mrs. Griffiths and Mr. Borrer at Torquay, was, so far as I am aware, first found in Ireland by Mr. Reilly of Cork, who gathered a single specimen in Galway Bay some years ago, and at the same time picked up the so-called *Gelidium? rostratum* (*Heringia rostrata*, J. Ag.).

W. H. H.

March 15, 1844.

#### EXPLANATION OF PLATE VI.

- Fig. 1. Patch of *Codium amphibium*, natural size.  
 — 2. A single frond, magnified.  
 — 3. Some of the ramuli of the periphery, magnified.

### XXXVIII.—Descriptions of some new British species of *Rissoa* and *Odostomia*. By JOSHUA ALDER, Esq.

[With a Plate.]

THE genera *Rissoa* and *Odostomia* belong to a group of small mollusks which appear to hold their head-quarters in European seas, and more especially on the shores of our own islands. The number of published British species much exceeds that of any other country\*, yet several still remain undescribed in collections. I have drawn up descriptions of the following from my own cabinet, at the suggestion of my friend Mr. Thompson of Belfast, who has lately ascertained that most of them are inhabitants of the Irish coast.

*Rissoa inconspicua*. Plate VIII. fig. 6 and 7.

*Shell* ovate-conical, shining, transparent, yellowish white, with a few blotches of pale fulvous brown occasionally forming two or

\* M. Deshayes, in the 2nd edition of Lamarck's 'Animaux sans Vertèbres,' has published thirty-four recent species of *Rissoa* (including *Odostomia*). He has not, however, admitted any British species, except such as have been re-described, mostly under different names, by French authors. The number of British species of the two genera is upwards of forty.

three rows of spots on the body whorl. Whorls five or six, not much rounded, terminating in a rather fine point, which is tipped with purple: the upper whorls smooth; the penultimate and half of the last whorls generally marked with numerous very delicate and faint ribs or plicæ, about thirty in number, the bases of which are crossed on the body whorl by a few faint spiral striæ, giving that part a reticulated appearance. The whole of the markings are very delicate and sometimes entirely wanting. Aperture margined with yellowish brown, rather small, straight at the pillar, and slightly angulated at the base beneath it. Outer lip thickened by a rib behind. Inner lip scarcely reflected, with a slight depression behind. Length about one-tenth of an inch; breadth half its length.

**T** *Animal* white, with two long setaceous tentacula, having the eyes at their external base. Head bilobed. Foot slender, produced in front, white, with a black spot in the centre of the posterior part. The sides have two lobe-like appendages, as is usual in *Rissoa*, which are margined with dark purple or black: two other lines of the same colour on each side run parallel to these; the upper one on the side of the back, the lower bordering the foot. The rest of the body is white with some blotches of yellow.

Found on corallines from deep water, Cullercoats, Northumberland.

The shell differs from *R. interrupta* in being smaller, more delicate and glossy, as well as in being striated; from *R. semistriata* in being ribbed; and from *R. punctura* in the less rounded whorls, the more delicate markings, and the transparent and glossy appearance.

One individual only has occurred of the size mentioned. Several smaller specimens were obtained, some of which, having the rib behind the pillar, appear to be full-grown, but are not above half the size, and are shorter and more ovate in the outline. The other characters are the same.

**L** *Rissoa costulata*. Plate VIII. fig. 8 and 9.

*R. costulata*, *Risso*, *L'Europ. Mérid.* iv. p. 119.

*Shell* pale yellowish brown or purplish, ovate-oblong, produced at the apex and tapering to a fine point, with eight whorls; the four upper ones small, flat and smooth, the other four costated and rounded, especially the penultimate one, which generally bulges out beyond the rest. Ribs about ten, strong and prominent, swelling in the centre of the whorls: they seldom reach above half-way down the last whorl, which is covered with slightly undulating spiral striæ, most conspicuous at the base, and continued up the second and third whorls between the ribs: these striæ are variable in strength and sometimes nearly obliterated: the ribs also are occasionally wanting on the last whorl. Aperture small, entire, nearly circular, a little contracted above. Outer

lip slightly expanded, with a large and strong rib at a short distance behind it. Inner lip reflected a little at the base, but not umbilicated. The inner margin of the aperture as well as the tip of the spire are generally of a dark purplish brown or violet-colour. Length  $2\frac{1}{2}$  tenths of an inch; breadth one-tenth.

A variety is marked with zigzag brown lines.

Procured from small sea-weeds collected in Torbay, where it appears to be tolerably abundant.

My specimens agree with a foreign one of *Rissoa costulata*, Risso, named by M. Michaud, and kindly presented to me by W. Thompson, Esq. of Belfast.

*Rissoa rufilabrum*. Plate VIII. fig. 10, 11.

*Alvania rufilabrum*, *Leach, MS. Brit. Mus.*

*Shell* ovate, rather broad and thick, tapering to a pretty acute point, yellowish white or brown, more or less tinged with violet; with seven rather flat whorls; the upper ones smooth, two or three of the lower with about twelve strong ribs. The ribs are frequently only observable on the penultimate and a part of the last whorls, always disappearing before they reach the lip. The whole surface of the last whorl is covered with punctures formed by the crossing of obscure longitudinal and transverse lines. The spaces between the ribs are coarsely striated. Aperture roundish oval, slightly angulated above, generally of a violet or purplish brown colour, and having a very broad white rib behind it. Inner lip slightly reflected on the pillar, without umbilicus. Length scarcely two-tenths of an inch; breadth one-tenth.

Specimens of this interesting species from Brighton have been in my cabinet for several years, and I lately detected one or two among some small shells obligingly sent me from Torquay by Mrs. Griffiths. Dr. Farran of Dublin, to whom I am also indebted for specimens, found it in some abundance at Connemara in the west of Ireland.

This species nearly resembles the *R. violacea* of Desmarest, but is shorter and thicker, and without the spiral band. I have adopted the manuscript name attached to specimens in the British Museum. The same species, unnamed, is also in the museum of the Jardin des Plantes at Paris.

*Rissoa? glabra*. Plate VIII. fig. 1, 2, 3, 4.

*R. glabra*, *Brown, Illust. Conch.* 2nd ed. p. 13.

*Shell* ovate-conical, white, smooth, very glossy and diaphanous, with four or four-and-a-half rounded and well-defined whorls, terminating in a rather obtuse point; the last whorl occupying about two-thirds of the length of the shell. Aperture roundish ovate, entire. Outer lip thin, without rib. Inner lip slightly reflected on the pillar, forming a subumbilicus. Length scarcely a twelfth of an inch; breadth half its length. Operculum horny.

*Animal* yellowish white, with three longitudinal bands of rich brown on the body, and blotches of the same colour on the spiral portion. Tentacula four, of moderate length; the superior pair rather longer and more slender than the lower. Eyes placed very far behind on the back, large and prominent. Foot produced and strongly notched in front, grooved down the centre.

Found on small sea-weeds in pools among the rocks at Dalkey Island near Dublin, and at Cullercoats, Northumberland.

The coloured markings of the animal seen through the shell when alive have the appearance of belonging to the latter, which is however perfectly colourless, and so transparent, that though the eyes of the animal are placed beneath it, the power of vision is scarcely interrupted.

The striking peculiarities of this animal are the two pairs of tentacula and the posterior position of the eyes, in which characters it differs not only from *Rissoa* but from all the allied genera. The lateral appendages of the foot are also absent in this species. These differences are undoubtedly sufficient to constitute a new genus, which I shall content myself with merely indicating at present. The shell has no character to distinguish it from that of *Rissoa*, and affords another instance of the difficulty of determining a genus from the shell alone.

In a notice of this curious little animal communicated to the Natural-History Section of the British Association Meeting at Cork, I described it under the name of *R. albella*. Since then however I have found a shell, described by Capt. Brown in his 'Conchological Illustrations of Great Britain,' which appears to be identical with my species, and have therefore not hesitated to adopt his name.

*Odostomia nitida*. Plate VIII. fig. 5.

*Shell* ovate-conical, smooth, shining, transparent, white, of five much-rounded, well-defined whorls, the last occupying about two-thirds of the length of the shell. Aperture ovate, entire. Outer lip thin. Pillar-lip scarcely reflected, having an umbilicus behind it, and a prominent tooth a little above the centre of the inner margin. Length rather more than one-tenth of an inch; breadth about half its length.

A single specimen from shell-sand at Tynemouth.

This species has very much the contour of a *Rissoa*, and were it not for the distinct tooth, it might very readily be taken for the species last described; it is however larger, a little more elongated, and the whorls, especially the penultimate, are more rounded. The animal is unknown.

Dr. Fleming makes it one of the characters of his genus *Odostomia* to have the "peristome incomplete retrally;" but some of the species he has included in it, as well as the one here described,

have the peristome complete, though not quite so conspicuously so as is usual in *Rissoa*. The animals of the only two species of *Odostomia* which I have had an opportunity of examining in a living state, *O. pallida* and *O. spiralis*, perfectly agree with each other in character, and differ strikingly from *Rissoa* in having the tentacula and foot extremely short and thick, as well as in the absence of lateral appendages. These characters will probably hold good throughout the genus, but more extended observations are desirable. In the mean time, as no figure of the animal of this genus has yet been published, I have added an outline of *O. spiralis* (Plate VIII. fig. 13.) for the sake of comparison with the two animals described above.

*Odostomia cylindrica*. Plate VIII. fig. 14.

*Shell* nearly cylindrical, white, transparent, smooth and glossy, with four or five rounded whorls, rather flattened near the suture. Apex very obtuse. Two or three faint striæ or ridges run across the body whorl on a line with the upper part of the aperture. Aperture ovate, angulated above. Outer lip thin. Pillar-lip a little reflected, with a slight depression behind it, and a small tooth in the centre of the inner margin. Length rather more than a tenth of an inch; breadth one-third of the length.

In shell-sand from Ilfracombe and the Land's End. The sand from the latter place was sent me many years ago by Dr. Turton, but he does not appear to have observed this species. I have also obtained it from sand collected by Mrs. W. Alder at Kilkee, on the west coast of Ireland.

In form it agrees with Mr. Macgillivray's *O. oblonga*, but differs from it in not being ribbed.

A specimen of this shell in the British Museum is named *Turbo nivosus*, but I cannot believe it to be the shell described by Montagu under that name, as he takes no notice of any striæ, and distinctly says that it has no tooth. That Dr. Turton did not know the *Turbo nivosus* is evident from his comparing it to *Turbo Ulvæ* in his 'Conchological Dictionary.'

*Odostomia? obliqua*. Plate VIII. fig. 12.

*Shell* ovate-oblong, white, smooth, rather glossy and transparent, with five very oblique whorls, slightly rounded and divided by a well-defined suture tapering to a point, which is not quite central, the first whorl being a little twisted upwards. The body whorl is very large, occupying more than two-thirds of the whole length of the shell. Aperture oblong-ovate, contracted to a point at the upper angle. Peristome incomplete. Outer lip very thin. Pillar-lip a little reflected, and with a very oblique internal fold only observable in old specimens. Length two-tenths of an inch; breadth one-twelfth. Though apparently smooth, young speci-

mens, when examined with a high magnifier, exhibit very minute spiral striæ.

I have obtained two specimens from shelly sand at Tynemouth, and Mr. Thompson has obligingly transmitted specimens to me for examination sent to him from the west coast of Ireland.

It has very much the general form of a *Limneus*, the fold on the pillar adding to the resemblance. In the absence of any knowledge of the animal, I have placed it provisionally in the genus *Odostomia*, to which, among the marine mollusks, the shell has the nearest affinity; it is probable, however, that it should constitute the type of a new genus. It resembles *Rissoa vitrea* in the oblique position of the whorls, but is less cylindrical, and has the body whorl much larger and more ovate. *R. vitrea*, though described as smooth, is, when in a fresh state, more distinctly striated than this species.

XXXIX.—*Synopsis of the Genera and Species of Zoophytes inhabiting the Fresh Waters of Ireland.* By GEORGE J. ALLMAN, M.B., M.R.C.S.I., M.R.I.A., Demonstrator of Anatomy in Trinity College, Dublin\*.

THE freshwater Zoophytes of Great Britain have hitherto been all included under the four following genera, *Hydra*, *Cristatella*, *Alcyonella*, and *Plumatella*. Of these, *Hydra* has been made to include four British species, *Cristatella* one, *Alcyonella* one, and *Plumatella* has been described as containing three species. Of the above nine species I am of opinion that two must be erased, viz. the *Hydra verrucosa* of Templeton, which appears identical with *Hydra fusca*, and the *Plumatella gelatinosa* of Fleming, which is evidently the same with Blumenbach's *Tubularia Sultana*. To the seven species which now remain I am enabled to add five, of which four do not appear to have been hitherto described, and the other is only to be found noticed in the fauna of the continent.

This addition to the freshwater Zoophytes, by which the number of British species is increased more than two-thirds, requires also the establishment of an additional number of genera. The genus *Plumatella*, which was originally established by Bosc, is now made to include two forms of Zoophytes which I feel convinced it would be better to consider generically distinct. One of these forms is characterized by the tentacular disc being crescentic and the tentacula numerous, about sixty; the other by the disc being circular and the tentacula not so numerous, from twenty to thirty. The former must be retained in the genus *Plumatella*, and it would appear that Bosc had this form alone in

\* Read at the Meeting of the British Association at Cork.



Alder, Joshua. 1844. "XXXVIII.—Descriptions of some new British species of Rissoa and Odostomia." *The Annals and magazine of natural history; zoology, botany, and geology* 13, 323–328. <https://doi.org/10.1080/03745484409442613>.

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