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XXXVI.—On the recent species of *Odostomia*, a genus of *Gastropodous Mollusks* inhabiting the seas of Great Britain and Ireland. By J. G. JEFFREYS, F.R. & L.S.*

THE subject of this paper has originated in a wish expressed by my friend Professor Edward Forbes, that I would exhibit at the meeting my specimens of British *Odostomia* with a view to the elucidation of the species; but I thought it might be more generally interesting to the naturalists who are now assembled that I should prepare and read a few notes explanatory of the specimens to be exhibited.

I propose to give a *catalogue raisonné* of all the species mentioned in the title of this paper, referring to other works where any of the species have been already described, and describing any new or unpublished species. As the admirable work of Professor Edward Forbes and Mr. Hanley on the British shells, which is now in course of publication, will contain figures of all the species, it would be superfluous in me so to illustrate this paper; but the mode in which I propose to illustrate it, by an exhibition of specimens, will probably be more interesting to those members who may take the trouble of examining and comparing them.

The first notice which appears to have been published of any of these shells, if we except the *Turbo lacteus* of Linnæus (Syst. Nat. 1766), is in Walker's (or rather Jacob's) work on the Minute and Rare Shells discovered by Mr. Boys on the sea-shore near Sandwich, and which was published in 1784.

Mr. Adams described and figured several additional species (from the Pembrokeshire coast) in his papers which were published in the 'Transactions' of the Linnæan Society in 1795. The descriptions and figures in these publications are however very indistinct and difficult to make out.

Col. Montagu added many others in his 'Testacea Britannica' and the Supplement of that work, which were published respectively in 1803 and 1808.

Dr. Turton (in his Conchological Dictionary of the British Isles) does not appear to have increased the number or knowledge of the species.

Lamarck did not notice any of these shells in his 'Histoire naturelle des Animaux sans Vertèbres' published in 1822.

Dr. Fleming (to whom, as will be presently shown, we are indebted for his generic discrimination of the shells) added, in his

* Read at the Meeting of the British Association at Swansea in August 1848; and communicated by the author.

‘History of British Animals’ published in 1828, only one species (*Odostomia scalaris*), which he referred to the *Turbo indistinctus* of Montagu.

Philippi, in his excellent work on the Sicilian Mollusca (1836 and 1844), did more than any preceding author with respect to some of the species, which he at first included in the genus *Melania*, but afterwards in *Chemnitzia* and *Eulima*. He does not however seem to have been acquainted with any of the true *Odostomia* except *O. conoidea*, which he referred to the *Auricula conoidea* of Férussac and Recluz, who described the *Odostomia interstincta* (*Turbo interstinctus*, Mont.) under the name of *Rissoa Deshayesiana*. Other continental conchologists do not appear to have observed these shells.

Of late years several additions to the British and Irish species have been made by Messrs. MacGillivray, Thompson, Alder, Hanley and Forbes, as well as by myself in the ‘Annals of Natural History,’ Thorpe’s ‘British Marine Conchology,’ and Mr. Alder’s ‘Catalogue of the Mollusca of Northumberland and Durham.’

To Dr. Fleming is attributable the merit of proposing the genus *Odostomia* for these shells; and although the name has been objected to, as not being formed according to strictly classical rules, the whole nomenclature of natural history requires so much revision as to render any attempt to change established names productive of greater inconvenience than would be occasioned by retaining them.

In the Supplement to the ‘Encyclopædia Britannica’ (published in 1818) under the article “Conchology,” the author, Dr. Fleming, says, “Perhaps a rigorous examination of the Turbines of British writers might justify the formation of one or two new genera; yet we shall content ourselves with noticing those species into which we have formed the genus *Odostomia*, in which the columella is furnished with a tooth. The *Turbo interstincta*, *unidentata*, *plicata*, *Sandvicensis* and *insculpta* of Montagu are of this genus. They have no resemblance in their structure to the Linnæan *Voluta*, although they have been inconsiderately associated with them by the authors of the ‘Descriptive Catalogue.’ The preceding genera are formed of marine shells: those that follow live on the land.”

I have given a full extract from this article with respect to the formation of the genus, because Mr. S. V. Wood, in his very able and interesting treatise, lately published by the Palæontographical Society, on the Univalves of the Crag Mollusca from the middle and upper tertiaries of the East of England (p. 85), states that the name as proposed by Dr. Fleming “appears to have been intended for the reception of a number of land shells with a

denticulated aperture, such as *Pupa*, *Clausilia*, &c., but was subsequently restricted, or rather transferred, by that author in his 'Hist. of Brit. An.' 1828, to a series of submarine shells with an oval aperture and a single plait upon the columella."

The name was also included by Dr. Fleming, in his 'Philosophy of Zoology,' (published in 1822,) among the marine *Turbonida*.

In an 'Enumeration of Marine Shells' found on the Devonshire coast, which was edited by Dr. Turton and published in 1829, the generic name of *Odontostoma* was proposed by him for these shells, the character being thus given: "Shell conic oval; pillar with a single tooth or fold towards the middle; operculum none. Includes *Turbo unidentatus* and others." But this description as regards the absence of an operculum is obviously incorrect.

To show the extent of confusion which prevails in the synonymy of this genus, I may remark that Herrmannsen in his 'Index Generum Malacozoorum' gives no less than nineteen synonyms for the genus *Chemnitzia* of D'Orbigny, which forms a group of the present genus.

Equal confusion seems to prevail as to the synonymy of the British species. The *Turbo unidentatus* of Montagu is a very different shell from the *Turbo unidentatus* of Turton and *Odostomia unidentata* of Fleming; and the shell described in Thorpe's work as the last-named species is again very different from either of the two former. Other specific errors have been occasioned by authors taking their descriptions from imperfect specimens. Having through the kind liberality of many authors on the subject of British Conchology, as well as the possession of the late Dr. Turton's collection, had an opportunity of examining their specimens, I am enabled to clear up most of these errors.

It is in my opinion impossible, without doing considerable violence to the established ideas of the system on which generic differences are founded, to separate *Chemnitzia* or *Eulimella* from this genus. The same character, viz. the shell forming a more or less cylindrical cone, having the peristome incomplete retrally, and leaving the upper part of the pillar exposed, belongs to all the species; and although the tooth or fold on the pillar is characteristic of the typical species, the case of *O. indistincta*, which is scarcely distinguishable from its congener *interstincta* (the latter being destitute of any tooth or fold), shows that this character cannot be relied upon for generic distinction. Typical specimens of *Odostomia plicata* are also closely allied in form as well as in the glossy smoothness of their shells to *O. acicula*, which would otherwise be a *Eulimella*. The *Chemnitzia densecostata* of Philippi, which is described by that author as having

the aperture "superne subplicata," is another case to show the fallacy of this distinction.

There can be no objection however to make them subgenera if it be considered desirable to adopt that mode of classification.

From Mr. Lowe's description (in the Proceedings of the Zoological Society) of the animal of his genus *Parthenia*, which is identical with that of *Chemnitzia*, it would appear not to differ from that of *Odostomia* except in having the tentacula "basi coalita;" but as the position of the eyes is described by that author to be the same, "superne ad basim internam positi," the account of both animals may be consistent with each other.

Mr. Alder, in his Catalogue above-mentioned, says that, according to his observations, "the animal of Forbes's genus *Eulimella* is essentially the same as that of *Chemnitzia*, and that it only differs in the more polished surface of the shell."

Professor Lovén in his 'Index Molluscorum litora Scandinaviæ occidentalia habitantium' (published in 1846) has united all the species noticed by him under the name of *Turbonilla* of Leach; but that name was only published by Risso in his 'Histoire Naturelle de l'Europe Méridionale' in 1826, being eight years subsequent to the publication of Dr. Fleming.

The tooth or fold on the columella or pillar of the shell is, as I have before remarked, one of the distinctive characters of the genus, and in this respect as well as the general form of the shell it bears rather a close analogy to the genus *Pyramidella* of Lamarck.

Another character which appears to be peculiar to this genus (if we perhaps except *Ianthina*), and which is found in almost all the species, is that the two first-formed whorls are *ab ovo* heterostrophe, and subsequently reflected on the next. The figure 29 of Walker (Test. Min. rar.) is a tolerably correct, although a rude, representation of this peculiarity of form in the fry of *Odostomia spiralis*; and in pl. 10. fig. 2. of Mr. Wood's 'Catalogue of the Crag Fossils' it is well delineated with reference to his *Chemnitzia rufa*. Montagu also remarked it in his description of *Odostomia lactea* (*Turbo elegantissimus*, Mont.), as well as Lovén in his description of the shells forming his genus *Turbonilla*.

Although I have examined many hundred specimens of *Odostomia* from almost every part of the kingdom, I have only once met with a reversed shell, and which I referred to the *Turbo laevis* of Walker (fig. 35); but the specimen was unfortunately broken after having been many years in my cabinet. I considered it to be a monstrosity of *Odostomia pallida*.

I do not propose to refer to Nyst (Coq. foss. de Belg.) or any other work on fossil shells except that of Mr. S. V. Wood on the

Crag Mollusca of Great Britain. The difficulty is very great, if indeed it is always possible, to identify fossil with recent shells, the characteristic striæ and other markings of so many species being wholly lost or abraded in a fossil state, and the whole structure of the shell being subject in that condition to such chemical and other changes. For example, the *Chemnitzia curvicostata* of the Crag Mollusca is evidently the *Turbo indistinctus* of Montagu; but the interstitial striæ or punctures in the latter shell were not observable by Mr. Wood.

I have arranged the localities according to the dates of publication or discovery.

The generic character of *Odostomia* may be thus expressed:—

ODOSTOMIA, Fl.

Animal elongatum; caput latum, robustum; tentacula duo, conica, complanata; oculi bini, ad basim tentaculorum in medio juxtaponiti; sustentaculum depressum, antice latius et truncatum; operculum corneum, subspirale, longitudinaliter striatum, testæ aperturam obtegens.

Testa conoidea seu pyramidalis, anfractibus duobus primariis heterostrophis; peristoma retro incontinuum, ad basim aperturæ subeffusum; columella subverticalis, denticulo aut plica plerumque instructa.

Odostomia, Fl., Macg., Thorpe, Wood, and other modern authors.

Turbo (pars), Linnæus, Mont., and other authors.

Helix (pars), Mont., Turt.

Voluta (pars), Maton, Rackett.

Turbonilla (Leach), Risso, Lovén.

Phasianella (pars), Fl.

Turritella (pars), Fl.

Odontostoma, Turt.

Melania (pars), Phil., Forbes.

Eulima (pars), Phil., Jeffr.

Auricula (pars), Phil.

Chemnitzia, D'Orb., Phil., and other authors.

Parthenia, Lowe, Thorpe.

Odontostomia, Jeffr.

Pyramidella (?), Jeffr.

Pyramis (pars), Br.

Risso (pars), Phil., Br., Recluz, and other modern authors.

Jamnia (Bruguière), Br.

Cingula (pars), Thorpe.

Eulimella, Forbes.

A few of the species (viz. *O. Rissoides*, *plicata*, *unidentata*, *interstincta* and *lactea*) are sublittoral, or inhabit the coasts at low-water mark, lurking under loose stones and in the roots of the *Corallina officinalis*, which are left uncovered by the recess of the

tide. The rest inhabit gravelly and stony ground in various depths of water, ranging from 1 to 50 fathoms and probably more, and are found in the crevices of stones and shells and at the roots of *Laminaria digitata*. The animal is most probably zoophagous, inasmuch as they are not found on sea-weed, and they frequently occur beyond the range of vegetable life in the deeper parts of the sea.

Specierum enumeratio.

A. Columellari denticulo seu plica instructæ.

* Lævæ aut concentricæ striatæ.

- | | | |
|---------------|-----------------|--------------------|
| 1. pallida. | 7. albella. | 13. conoidea. |
| 2. notata. | 8. acuta. | 14. diaphana. |
| 3. Rissoides. | 9. turrita. | 15. obliqua. |
| 4. alba. | 10. cylindrica. | 16. insculpta. |
| 5. nitida. | 11. plicata. | 17. dolioliformis. |
| 6. dubia. | 12. unidentata. | |

** Longitudinaliter costatæ.

- | | |
|---------------|-------------------|
| 18. spiralis. | 19. interstincta. |
|---------------|-------------------|

B. Edentulæ et plica carentes.

* Longitudinaliter costatæ aut decussatæ.

- | | | |
|------------------|----------------|--------------|
| 20. indistincta. | 23. excavata. | 26. rufa. |
| 21. pellucida. | 24. clathrata. | 27. formosa. |
| 22. fenestrata. | 25. scalaris. | 28. lactea. |

** Lævæ.

- | | | |
|--------------|--------------|--------------|
| 29. Scillæ. | 31. acicula. | 32. affinis. |
| 30. clavula. | | |

1. *Odostomia pallida*.

Turbo pallidus, Mont. Test. Brit. 325. tab. 21. fig. 4.

Voluta ambigua, Mat. and Rack. in Linn. Trans. viii. p. 132.

Turbo unidentatus, Turt. Conch. Dict. 222.

Odostomia unidentata, Fl. Brit. An. 310; Macg. Moll. Aberd. 154.

Phasianella pallida, Fl. Brit. An. 302.

Pyramidella (?) *pallida*, Jeffr. in Ann. Nat. Hist. 1841, p. 165.

Rissoa pallida, Br. (2nd ed.) 13. pl. 8. fig. 24.

Jamina unidentata, id. 21. pl. 9. figs. 34, 35.

Odostomia pallida, Ald. Cat. 51.

Salcomb Bay, Devonshire (Montagu). Western coast and Dublin Bay (Turton and J. G. J.). Northumberland coast (Alder). Exmouth (Mr. Clark and J. G. J.). Oban; Lochs Broom, Kishorn and Carron, Ross-shire; Zetland, five miles east of Lerwick, in forty fathoms; Swansea; Whitesand Bay, Cornwall. West coast of Scotland; Arran Isle, county Galway (Mr. Barlee). Torbay (Dr. Battersby).

Var. *a. solidior*.

Birtabay Bay, co. Galway (Mr. Barlee).

Var. *b. gracilior*, anfractibus productioribus.

Odostomia eulimoides, Hanley in Zool. Proc. 1844; Thorpe, Br. Mar. Conch. 36. fig. 12.

Tenby; Lerwick; Oxwich Bay near Swansea. Oban and west coast of Scotland; Guernsey (Mr. Barlee). South coast of Devon (Mrs. Richard Smith). Torquay (Dr. Battersby).

Var. *c. minor*, subovalis.

Dealvoe, Zetland. West coast of Scotland (Mr. Barlee). Torquay (Dr. Battersby).

Var. *d. 1-6 transversis carinis notata*.

N.B. These ridges appear to be caused by the confluence and excessive prominence of the irregular spiral striæ which are sometimes observable in this species.

Odostomia crassa, Thompson in Ann. Nat. Hist. vol. xv. (1845), p. 315. pl. 19. fig. 5.

Jaminia pullus, Br. 22. pl. 9. fig. 11.

Turbonilla crassa, Lov. 18.

Birtabay Bay, co. Galway (Mr. Barlee). Torquay (Mr. Hanley).

Var. *e. ovalis*.

Zetland, five miles east of Lerwick, in forty fathoms.

Monstr. spira producta et anfractibus complanatis.

Birtabay Bay, co. Galway (Mr. Barlee).

One of the most common species.

It may be objected to the specific name here proposed to be retained as that of Montagu, that he described the shells "as destitute of any tooth." But the tooth in this species is very much sunk within the aperture and not easily perceptible, and Montagu evidently made the same mistake with respect to his *Turbo decussatus* (*Odostomia pellucida* of Searles Wood and this catalogue), in which he did not notice the fold on the pillar lip. It ought also to be recollected that it is now nearly half a century since the publication of Montagu's work, and although the general accuracy of his descriptions is undeniable, the materials which he had at that time were by no means equal to those which the use of the dredge and other appliances have in modern days placed at the disposal of (so to say) marine naturalists.

2. *Odostomia notata*.

Testa oblongo-ovata, tenuis, nitida, opaca, concentricè striis æquis confertis impressis et fere undulatis notata; anfractus 6, convexi, ultimo $\frac{2}{3}$ spiræ subæquante, cæteris sensim decrescentibus; apex obtusus; sutura distincta; apertura oblongo-ovata, infra subeffusa et incrassata; umbilicus vix ullus; denticulus validus, obliquus. Longitudo plus quam $\frac{1}{3}$, latitudo $\frac{1}{2}$ uncie.

Differs from the last species (to which it is allied) in form and texture, in the whorls being more rounded and the suture more distinct, and especially in the regular impressed concentric striae.

Zetland, five miles east of Lerwick, in forty fathoms water, where one specimen only occurred to me.

3. *Odostomia Rissoides*.

Odostomia scalaris, Macg. Moll. Ab. 154.

Odostomia Rissoides, Hanley in Zool. Proc. 1844; Thorpe, 36. fig. 9.

Aberdeen (Macgillivray). Guernsey (Hanley and Mr. Barlee). Caswell and Langland Bays near Swansea; Tenby; Fishguard; Whitesand Bay, Cornwall; Scarborough. Exmouth (Mr. Clark). Roundstone and Arran Isle, co. Galway (Mr. Barlee).

Var. *a. scalariformis*.

Burrow Island, Devonshire (Mr. Barlee).

Var. *b. plus ovalis et anfractu ultimo majore*.

Aberdeen (Mr. Macgillivray).

The specific name of *scalaris* was preoccupied by Philippi at the time of Professor Macgillivray's publication, although the last-named author is perhaps entitled to priority in distinguishing the species.

A local species.

4. *Odostomia alba*.

Testa oblongo-ovata, tenuis, nitida, glabra, alba; anfractus 5-6, ventricosi, sensim incrementes, ultimo reliquos exsuperante; apex subacutus; sutura profunda; apertura magna, rotundata et subtus vix effusa; umbilicus valde conspicuus; denticulus parvus, columella subobtectus. Long. $\frac{1}{8}$, lat. $\frac{1}{12}$ unc.

Somewhat resembles *Rissoides*, but the whorls are more swollen and tapering. The umbilicus also is a very distinct character, there being none in the other species.

Oxwich Bay near Swansea.

Var. *a. paullo major et plus conica*.

Bantry Bay (Mr. MacAndrew).

A rare species.

5. *Odostomia nitida*.

Odostomia nitida, Alder in Ann. Nat. Hist. (1844), p. 326. pl. 8. fig. 5; Id. Cat. 52.

Tynemouth (Mr. Alder). West coast of Scotland (Mr. Barlee). Torquay (Dr. Battersby).

Var. *a. paullo major, ad basim subcarinata et latior*.

West coast of Scotland (Mr. Barlee).

Var. *b.* *spira elatiore.*

Southampton ; Oxwich Bay near Swansea.

Rare.

6. *Odostomia dubia.*

Testa ovalis, tenuis, nitida, pellucida, glabra, alba ; anfractus 5, convexi, ultimo $\frac{2}{3}$ spiræ subæquante ; apex obtusus ; sutura distincta ; apertura ovalis, paullulum subtus effusa ; peristoma postice reflexum ; denticulus parvus sed conspicuus ; umbilicus distinctus. Long. $\frac{1}{12}$, lat. $\frac{1}{20}$ unc.

Differs from *nitida* in the spire being more produced, the volutions not being so gibbous, and in the aperture being more oval and the tooth smaller. From *albella* it differs in its smaller size, its less cylindrical form, the proportionate size of the last whorl (which is only half the size of the spire in that species), as well as its having a distinct umbilicus, and the tooth being much stronger and more conspicuous ; from *pallida* in the volutions being more convex, the presence of an umbilicus, and the tooth being more conspicuous. From *Rissoides* it differs in its smaller size, and in not being turriculate as in that species.

Southampton. Exmouth (Mr. Clark). Torquay (Dr. Battersby). West coast of Scotland (Mr. Barlee). Rare.

Var. *a.* *major et plus ovalis.*

Lerwick. West coast of Scotland (Mr. Barlee).

7. *Odostomia albella.*

Turbonilla albella, Lov. 19.

Odostomia albella, Ald. Cat. 51.

Tynemouth and Cullercoats (Alder). Oban and other parts of the west coast of Scotland ; Roundstone, co. Galway ; Guernsey (Mr. Barlee).

Var. *a.* *spira brevior.*

Torquay (Dr. Battersby).

A local species.

8. *Odostomia acuta.*

Testa oblonga, conica, solidula, nitida, glabra, rufescenti-alba ; anfractus 8, convexi, teretes, ultimo dimidiam testæ subæquante et paullulum carinato ; apex acutus ; sutura distincta ; apertura rotundato-ovalis, subtus effusa ; peristoma non reflexum ; denticulus validulus, acutus ; umbilicus conspicuus. Long. $\frac{1}{6}$, lat. $\frac{1}{12}$ unc.

Exmouth (Mr. Clark). Loch Fyne and west coast of Scotland ; Arran Isle, co. Galway (Mr. Barlee). Torbay (Dr. Battersby). Local.

Odostomiu unidentata var. Alder Cat. 51 ?

This elegant species differs from *plicata* in the spire being much

more pointed and the last volution being proportionably larger, in its colour and glossy appearance, and in its being umbilicated.

9. *Odostomia turrita*.

Odostomia turrita, Hanley in Zool. Proc. 1844 ; Thorpe, 36. fig. 10.
 “ *Odostomia striolata*,” Alder MSS.

Guernsey (Mr. Metcalfe). Oxwich Bay near Swansea ; Loch Fyne ; Zetland, five miles east of Lerwick, in forty fathoms water. Ilfracombe (Mr. Alder). Rare.

As the solitary specimen from which Mr. Hanley’s description was taken is so battered and wants one of the principal characters of this species (the transverse striæ), I have added a description from my own specimens.

Testa cylindrica, solidiuscula, nitida, alba, opaca, striis concentricis concentricis notata ; anfractus 6, convexusculi, turriculati, ultimo dimidium testæ subæquante ; apex prominulus ; sutura distincta ; apertura subrhomboidea, subtus rotundata et parum effusa, superne ad angulum exteriorem contracta ; peristoma in columellam vix reflexum ; denticulus parvus, acutus ; umbilicus angustus, in adultis tantum discernendus. Long. $\frac{1}{10}$, lat. $\frac{1}{20}$ unc.

Differs from *plicata* in the volutions being more convex, in the concentric striæ which are distinctly visible by the aid of a magnifier, and in the contraction of the aperture at its upper and outer angle.

10. *Odostomia cylindrica*.

Odostomia cylindrica, Alder in Ann. Nat. Hist. 1844, p. 327. pl. 8. fig. 14.

Ilfracombe ; Land’s End ; Kilkee (Alder). Cork Harbour ; Whitesand Bay, Cornwall ; Scarborough (Mr. Bean). Burrow Island, Devonshire (Rev. M. Beevor and Mr. Barlee). Guernsey (Mr. Barlee).

11. *Odostomia plicata*.

Turbo plicatus, Mont. 325. tab. 21. fig. 2 ; Turt. 222.

Voluta plicata, Mat. and Rack. Linn. Trans. viii. 131.

Voluta plicatula, Dillwyn, Descr. Cat. i. p. 509.

Melania (subg. *Eulima*) *plicata*, Forbes, Malacologia Monensis, 16.

Odontostomia plicata, Jeffr. in Mal. and Conch. Mag. (1839) pt. 1. p. 34.

Odostomia unidentata, Maclaurin in Trans. Berw. Nat. Club (1842), p. 40.

Odostomia plicata, Macg. 154.

Odostomia Annæ, id. 157 (described from a small and worn specimen).

Jamnia plicata, Br. 21. pl. 8. fig. 10.

Odostomia turrita, Ald. Cat. 51.

Salcomb Bay, Devon (Montagu). Western coasts and Dublin Bay (Turton). Cruden Bay, Aberdeenshire (Macgillivray). Lums-

dain, Berwickshire (Maclaurin). Isle of Man (Forbes). Tynemouth (Alder). Swansea and adjacent bays; Tenby; Weymouth; Exmouth; Scarborough; Bantry Bay; Lerwick. West coast of Scotland; Arran Isle, co. Galway (Mr. Barlee). Northumberland coast (Mr. Richard Howse). Torquay (Dr. Battersby).

Var. *a.* ultimo anfractu subcarinato; apertura subrhomboidea.

Falmouth; Penzance; Swansea and adjacent bays; Tenby; Whitesand Bay, Cornwall; Oban; Lerwick Sound, in from five to ten fathoms; Skye. West coast of Scotland (Mr. Barlee). Torquay (Dr. Battersby).

Var. *b.* spira brevior; apertura subrhomboidea.

Swansea and adjacent bays; Tenby; Oban; Skye; Lerwick Sound, in from five to ten fathoms. West coast of Scotland (Mr. Barlee). Torquay (Dr. Battersby).

A very common species.

I subjoin a description of the animal of var. *b.*

Animal luteum; tentacula breviuscula, cylindrica, complanata, ad basim eorum divergentia, aliquantulum producta ultra sustentaculum gradiente animali; oculi bini, parvi, juxtapositi in medio spatii inter tentacula ad eorum basim; proboscis antice rotundatus; sustentaculum angustum, longiusculum, antice latius et aliquantulum lobatum; operculum corneum, subspirale.

Animal hoc solet, ut cæteri pectinibranchiati gasteropodes, supra dorsum natare et gradi oculis retractis sub anteriore parte testæ perquam illi conspicui sunt.

It has the same faculty as many other of the pectinibranchous gasteropods of swimming on its back, and (like the animal of *Rissoa glabra* described by Mr. Alder in the 'Annals of Natural History,' or *Turbo nivosus* of Montagu) it has occasionally the habit of walking with its eyes retracted within the shell, through which they are distinctly seen. The specific difference between the animals of this species and *unidentata* is very slight.

12. *Odostomia unidentata*.

Turbo unidentatus, Mont. 324.

Voluta unidentata, Mat. and Rack. in Linn. Trans. viii. 131; Dillw. i. p. 508.

Turbo pallidus, Turt. 222.

Odostomia plicata, Fl. 310; Thorpe, 35. fig. 13.

Melania (subg. *Eulima*) *unidentata*, Forbes, Mal. Mon. 15.

Turbonilla oscitans, Lov. 19.

Odostomia unidentata, Alder, Cat. 50.

Salcomb Bay (Mont.). Dunbar (Laskey). Western coasts and Dublin Bay (Turton). Douglas, Isle of Man (Forbes). Swansea and adjacent bays; Tenby; Ilfracombe; Scarborough; Oban; Loch

Carron, Ross-shire; Lerwick Sound, and five miles eastward, in forty fathoms. Clonakilty, Ireland (Mr. Dillwyn). Northumberland coast (Mr. Richard Howse, jun.). Exmouth (Mr. Clark). West coast of Scotland; Guernsey (Mr. Barlee).

Monstr. spiræ basi complanato et late umbilicato.

Torquay (Dr. Battersby).

13. *Odostomia conoidea*.

Auricula conoidea (Fer.), Phil. i. p. 143.

Odostomia unidentata, Thorpe, 35. fig. 11.

Turbonilla plicata, Lov. 19.

Odostomia Eulimoides, Jeffr. in Ann. Nat. Hist. 1847, p. 17.

Odostomia plicata, Wood, Cr. Moll. part 1. p. 85. tab. 9. fig. 3 a-b.

Guernsey (Mr. Metcalfe). Skye, Oban, Loch Fyne, and other parts of the west coast of Scotland (Mr. Barlee).

Var. *a.* spiræ productiore; anfractibus rotundatis et non carinatis.

Odostomia plicata var. β , Wood, *l. c.*

Torquay (Dr. Battersby).

The variety appears to show specifically distinct characters; but I have only seen a single specimen, which is not in good condition.

Var. *b.* minor et plus conica.

Birtabuy Bay, co. Galway (Mr. Barlee).

14. *Odostomia diaphana*.

Testa cylindrica, tenuis, diaphana, nitida, glabra, alba; anfractus 4, convexiusculi, sensim incrementos, ultimo $\frac{2}{3}$ testæ subæquante; apex obtusus; sutura obliqua, profunda; apertura ovato-oblonga, infra rotundata et subeffusa, superne exteriore angulo fere contracta; peristoma in columellam reflexum et subincrassatum; plica indistincta. Long. $\frac{1}{12}$, lat. $\frac{1}{24}$ unc.

Hab. Exmouth (Mr. Clark). Very rare.

Differs from *obliqua* in its smaller size, in the last whorl not being so disproportionately large and tumid, and the spire being consequently more tapering, in being quite smooth and not (as in that species) spirally striated at the base of each volution, and in the nearly total absence of a fold on the pillar.

15. *Odostomia obliqua*.

Odostomia obliqua, Alder in Ann. Nat. Hist. 1844, p. 327. pl. 8. fig. 12.

Tynemouth (Alder). West coast of Ireland (Mr. Thompson). Falmouth; Exmouth; Caswell Bay near Swansea; Bantry Bay; Cork Harbour. Burrow Island (Mr. Bean and Mr. Barlee). West coast of Scotland (Mr. Barlee).

16. *Odostomia insculpta*.

Turbo divisus, Adams in Linn. Trans. iii. 254?

Turbo insculptus, Mont. Suppl. 129; Turt. 221.

Voluta insculpta, Dillw. i. p. 509.

Odostomia insculpta, Fl. 310; Macg. 329; Thorpe, 173; Alder, Cat. 52.

Pyramidella (?) *insculpta*, Jeffr. in Ann. Nat. Hist. 1841, p. 165.

Jaminia insculpta, Br. 22.

Turbonilla obliqua, Lov. 19.

Linny Bay, Pembrokeshire (Adams). Coast of Devon (Montagu). Aberdeen (Macgillivray). Tynemouth and Cullercoats (Alder). Tenby; Langland Bay near Swansea; Ullapool, Ross-shire; Zetland, five miles east of Lerwick, in forty fathoms. Hebrides and Loch Fyne (Mr. Barlee). Torquay (Dr. Battersby).

Var. *a. plus cylindrica*; spira elatiore.

Rissoa Warreni, Thompson in Ann. Nat. Hist. vol. xv. (1845), p. 315. pl. 19. fig. 4?

Portmarnock, Dublin Bay (Mr. W. H. Warren). Birtabay Bay, co. Galway (Mr. Barlee).

17. *Odostomia dolioliformis*.

Testa ovalis, Dolio Perdix forma assimilans, tenuis, pellucida, alba, circa 20 striis undulatis transversim exarata; anfractus 4, ventricosi, subproducti, ad apicem cujusque complanati, ultimo $\frac{2}{3}$ testæ æquante; apex subacutus; sutura profunda; apertura rotundato-ovalis, subtus vix effusa, angulo exteriori superne in ultimum anfractum inflexa; columella fere recta; peristoma retro subreflexum et incrassatum; umbilicus parvus, angustus; denticulus validus, conspicuus. Long. $\frac{1}{13}$, lat. $\frac{1}{20}$ unc.

Hab. Exmouth (Mr. Clark). Swansea shore; Tenby; Sandwich; Scarborough. Rare.

This shell can scarcely be the *Turbo Sandvicensis* of Mont. (from Walker), because that is described as "elegantly reticulated." It is extremely difficult to say what many of Walker's shells are, by reason of his descriptions and figures being so very indistinct.

The fry of this species is, I believe, the *Helix resupinata* of Montagu (p. 444), from Walker's figure 24.

18. *Odostomia spiralis*.

Turbo longitudinaliter striatus, quinque anfractibus, apertura subrotunda, Walker, 13. fig. 40?

Turbo spiralis, Mont. 323. tab. 12. fig. 9; Turt. 221.

Voluta spiralis, Mat. and Rack. in Linn. Trans. viii. 130.

Voluta pellucida, Dillw. i. 508.

Odostomia spiralis, Fl. 310; Macg. 155; Dr. Johnston in Trans. Berw. Nat. Club (1841), 273; Thorpe, 172; Alder, Cat. 52.

Melania (subg. *Eulima*) *spiralis*, Forbes, Mal. Mon. 16.

Rissoa spiralis, Br. 13. pl. 9. fig. 49.

Turbonilla spiralis, Lov. 19.

Young. *Odostomia plicatula*, Macg. 156.

Fry. *Helix striata, apertura subovali, anfractibus supra dorsalibus*, Walk. 8. fig. 29.

Helix striata, Mont. 445.

Salcomb Bay, Devonshire (Mont.). Aberdeen (Macgillivray). Eyemouth, Berw. (Dr. Johnston). Kiristal, Isle of Man (Forbes). Northumberland coast (Alder). Swansea and adjacent bays; Tenby; Fishguard; Whitesand Bay, Cornwall; Exmouth; Sandwich; Bantry Bay; Cork Harbour; Oban; Lerwick Sound in from five to ten fathoms, and five miles east of Lerwick in forty fathoms. West coast of Scotland; Birtabay Bay, co. Galway (Mr. Barlee).

Fry. Sandwich (Boys).

Rather a common species.

It is very difficult to say whether this species or *interstincta* was meant to be represented by Walker's description and figure no. 40. The figure more nearly agrees with this species; but the slight indication of the species given in the description may apply to either.

19. *Odostomia interstincta*.

Turbo canaliculatus, Adams in Linn. Trans. iii. (1796), 253.

Turbo interstinctus, Mont. 324. tab. 12. fig. 10; Turt. 223.

Voluta interstincta, M. and R. in Linn. Trans. viii. 131; Dillw. i. 509.

Odostomia interstincta, Fl. 310; Macg. 155; Thorpe, 175; Alder, Cat. 52.

Rissoa Deshayesiana, Recluz in Rev. Zool. 1842, p. 105.

Pyramis Lamarckii, Br. 15. pl. 9. fig. 39?

Jaminia interstincta, id. 21. pl. 9. fig. 10.

Jaminia obtusa, id. 22. pl. 9. fig. 38.

Pyramidella (?) *interstincta*, Jeffr. in Ann. Nat. Hist. 1841, p. 165.

Linny Bay, Pembrokeshire (Adams). Bigberry Bay, Devonshire (Mont.). Aberdeen (Macgillivray). Tynemouth and Cullercoats (Alder). Whitburn (Mr. Richard Howse). Swansea coast; Tenby; Sandwich; Scarborough; Cork; Dublin Bay; Oban. West coast of Scotland; Birtabay Bay, Galway; Guernsey (Mr. Barlee).

Var. *a. angustior et plus cylindrica*.

Odostomia oblonga, Macg. 157.

"*Odostomia costata*, Bean MSS.," Alder, Cat. 52.

Aberdeen (Macgillivray). Scarborough (Bean). Exmouth; Falmouth; Whitesand Bay, Cornwall; Tenby; Oban; Lochs Kishorn and Broom, Ross-shire; Lerwick Sound in five fathoms; Bantry Bay. West coast of Scotland (Mr. Barlee).

Var. *b. elongata*; costæ pauciores et obliquiores; denticulus validior.

Oxwich Bay near Swansea; Cork Harbour.

One of our most common species.

The *Turbo interstinctus* of Adams (to whom Montagu has referred) is described by him as “testa *levi* quinque anfractibus, costa tenui interstinctis;” and I have little doubt that this species is his *Turbo canaliculatus*. But his descriptions and figures are too indistinct to justify my changing Montagu’s name.

20. *Odostomia indistincta*.

Turbo turritus septem anfractibus strigatis, apertura ovali, Walk. 11. fig. 40?

Turbo indistinctus, Mont. Supp. 129; Turt. 215.

Turritella truncata, Fl. 303.

Chemnitzia terebellum, Ph. ii. 138. tab. 24. fig. 12.

Pyramis indistinctus, Br. 14. pl. 9. fig. 47.

Chemnitzia indistincta, Alder, Cat. 48.

Chemnitzia curvicostata, Wood, Crag Mollusca, part 1. p. 79. tab. 10. fig. 1-1^a.

Exmouth; Tenby; Bantry Bay; Cork Harbour; Zetland, five miles east of Lerwick, in forty fathoms. West coast of Scotland; Birtabay Bay, co. Galway (Mr. Barlee).

Var. *a. minor*.

Rissoa Balliæ, Thomps. Ann. Nat. Hist. v. 98. pl. 2. f. 9.

Youghal, Miss M. Ball (Thomps.). Oxwich Bay near Swansea.

Var. *b. spira elatiore*.

Falmouth; Weymouth; Dublin Bay.

A local species.

I am not quite satisfied that this species is distinct from the last (*interstincta*). The only distinguishing characters appear to be its more cylindrical form and the absence of a tooth. It is also a thinner shell.

I do not know the *Pyramis lacteus* of Brown (p. 15. pl. 9. fig. 58), unless his description was taken from a worn specimen of this shell, as he describes the longitudinal ribs as being “not very distinct.”

21. *Odostomia pellucida*.

Turbo quatuor anfractibus, subumbilicatus, reticulatus, apertura ovali, Walk. 14. fig. 52?

Turbo pellucidus, Adams in Linn. Trans. vol. iii. p. 66. figs. 33, 34.

Turbo decussatus, Mont. 322. tab. 12. fig. 4; Turt. 210; Fl. 299; Thorpe, 169.

Helix arenaria, Mat. and Rack. in Linn. Trans. viii. 214.

Turbo arenarius, Dillw. ii. p. 839.

Rissoa arenaria, Br. 12. pl. 9. fig. 12.

Cingula decussata, Thorpe, 43.

Odostomia pellucida, Wood, Crag. Moll. part 1. p. 86. tab. 9. fig. 4 a-b ?

Sandwich (Boys). Pembrokeshire coast (Adams). Salcomb Bay (Mont.). Western coasts and Dublin Bay (Turton). Exmouth; Bantry Bay; Oban; Lerwick Sound, and five miles east of Lerwick, in forty fathoms. West coast of Scotland; Arran Isle, co. Galway (Mr. Barlee).

A local and rare species.

22. *Odostomia fenestrata*.

Testa conico-cylindræa, solidula, sordide albescens; anfractus 8, complanati, turriti et sensim decrescentes, longitudinaliter notati 16 obliquis costellis qui 3 majoribus et 1 minore costellis transversim decussati sunt, duobus superioribus cæteros anfractus subtus circumornantibus, basi testæ glabro; apex prominulus; sutura profunda; apertura ovalis, $\frac{1}{4}$ testæ subæquans, subtus parum effusa aut subcanaliculata; peristoma aliquantulum incrassatum ad columellam; umbilicus nullus. Long. fere $\frac{1}{8}$, lat. $\frac{1}{20}$ unc.

Dredged by Mr. MacAndrew off Dartmouth, and since by Dr. Baftersby at Torquay.

A local species.

It may possibly be the *Pyramis spirolinus* of Brown (15. pl. 9. fig. 66), but he describes that shell as having numerous spiral striæ instead of the four ribs at the base of each whorl.

This species was first noticed and named by Professor Edward Forbes at the meeting of the British Association in 1846, but no account of it appears in their reports.

23. *Odostomia excavata*.

Rissoa excavata, Phil. vol. i. p. 154. tab. 10. fig. 6.

Rissoa Harveyi, Thomps. in Ann. Nat. Hist. vol. v. (1840), p. 97. pl. 2. fig. 11.

Parthenia turrata (Metcalf), Thorpe, 44.

Odostomia pupa, Wood, Crag Mollusca, part 1. p. 86. tab. 9. fig. 5 a-b.

Milltown Malbay, co. Clare (Mr. Harvey). Guernsey (Mr. Metcalfe and Mr. Barlee). Lamlash Bay, Buteshire (Mr. Bean). Burrow Island; Arran Isle, co. Galway (Mr. Barlee).

A local and rare species.

24. *Odostomia clathrata*.

Testa cylindrica, subnitida, rufescenti-fusca, 20 longitudinalibus subcurvis et complanatis costis instructa, costæ interstitiis
Ann. & Mag. N. Hist. Ser. 2. Vol. ii. 24

latiores et ad basim ultimam testæ excurrentes, 6 costellis vix $\frac{1}{4}$ aliorum magnitudine clathratæ; anfractus 7, convexiusculi; apex subacutus; sutura profunda et subobliqua; apertura rotundato-ovalis; peristoma fere continuum et non reflexum; umbilicus distinctus, angustus. Long. $\frac{1}{6}$, lat. $\frac{1}{20}$ unc.

Birtabuy Bay, co. Galway, where a single specimen was found by Mr. Barlee.

Very distinct from any of its congeners.

25. *Odostomia scalaris*.

Turritella indistincta, Fl. 304; Thorpe. 191.

Melania scalaris, Phil. vol. i. p. 157, t. 9. fig. 9.

Eulima decussata, Jeffr. in Mal. and Conch. Mag. (1839), part I. p. 34.

Chemnitzia scalaris, Ph. ii. 137.

Chemnitzia rufescens, Forb. in Brit. Assoc. Rep. 1845; Jeffr. in Ann. Nat. Hist. 1847, p. 311.

Turbonilla interrupta, Lov. 18.

Chemnitzia rufa, Wood, Cr. Moll. part 1. p. 79. tab. 10. figs. 2, 2^a, 2^b?

Loch Broom (Fleming). Oban; Lochs Gair and Broom, Ross-shire. Loch Fyne and west coast of Scotland (Mr. Barlee).

A local species.

Var. *a. testacei coloris*; costæ admodum pauciores.

Exmouth (Mr. Clark, who gave to this variety the MS. name of *Jeffreysii*). Fishguard. Dartmouth; Milford Haven (Mr. MacAndrew). Guernsey (Mr. Barlee).

Local and rare.

Fragments of a shell resembling this variety, but stronger and of a pure glossy white colour, the ribs being also much sharper and more distant, occurred to me in dredging off Fishguard (in thirty fathoms water) in 1842. It may be the *Turbo marginatus* of Montagu. In *Turbo coniferus* (Mont.) the ribs are described as undulating, and in his *denticulatus* there occur transverse striæ.

26. *Odostomia rufa*.

Turbo simillimus, Mont. Suppl. 136?; Lask. Wern. Mem. 406. fig. 15?; Turt. 209?

Turritella simillima, Fl. 305?; Thorpe, 190?

Melania rufa, Phil. vol. i. p. 156. tab. 9. fig. 7.

Turritella fulvocincta, Thomps. Ann. Nat. Hist. vol. v. p. 98; Thorpe, 191. fig. 19; Alder, Cat. 48.

Chemnitzia rufa, Phil. ii. 136.

Pyramis crenatus, Br. 14. pl. 9. fig. 53.

Pyramis simillimus, id. 15. pl. 9. fig. 83?

Turbonilla rufa, Lov. 18.

Chemnitzia similis, Wood, Cr. Moll. part 1. p. 84. tab. 9. fig. 11
a-c?

Portmarnock near Dublin, Miss M. Ball (Thomps.). Northumberland coast (Alder). Oxwich Bay near Swansea in fifteen fathoms water; Fishguard in eight fathoms; Dublin Bay; Dealvoe, Zetland. Loch Fyne; Oban; Birtabay Bay, co. Galway (Mr. Barlee).

Var. *a. minor*, angustior; costæ plus numerosæ et obliquiores.

Zetland, five miles east of Lerwick, in forty fathoms water. Bantry Bay (Mr. J. D. Humphreys). Oban; Loch Fyne (Mr. Barlee).

Var. *b. multo minor et gracilior*.

South of Devon (Mrs. Richard Smith).

A local species.

Most probably the *Turbo simillimus* of Montagu; but that author did not notice in his description the transverse striæ. Nor has Philippi described the rufous band which encircles each whorl at its base, although in every other respect the species agrees with his description of *rufa*. The *Odostomia simillima* of Wood, who refers it to the *Turbo simillimus* of Montagu, is a very different shell.

Under a powerful magnifier some indistinct longitudinal striæ are observable in the interstices of the ribs.

27. *Odostomia formosa*.

Testa elongata, gracilissima, solidula, alba, 20 longitudinalibus subrectis angustis et prominulis costis instructa, cujusque anfractus sutura interruptis, et transversim interstitiis striata; costæ subtus profunde punctatæ, striæ interstitiales curvæ sub lente lineas confertas efformantes, diameter cujusque costæ et spatii interstitialis fere æqualis; basis transversim striatus; anfractus 14, convexiusculi, superne turriculati; sutura subobliqua, profundissima et distincta; apex acutissimus; apertura ovato-quadrata et in superiore parte columellæ plica indistincta et obliqua instructa; labium columellare rectum. Long. $\frac{5}{16}$, lat. $\frac{1}{16}$ unc.

Oxwich Bay near Swansea. Shellness, Kent (Mr. G. B. Sowerby). Bantry Bay (Mr. MacAndrew).

Very rare.

This most elegant species is easily distinguishable from either of the slender varieties of *rufa* by the colour, much more slender and tapering form, the whorls being turriculate and suture rather oblique, the peculiar character of the interstitial transverse striæ, and by the more elongated and subquadrate form of the aperture.

28. *Odostomia lactea*.

Turbo lacteus, Linn. Syst. Nat. (13th ed.) 3604.

Turbo turritus novem anfractibus striatis, apertura rotunda, Walk.

11. fig. 39.

Turbo acutus, Donovan, Br. Sh. pl. 179.

Turbo elegantissimus, Mont. 298. tab. 10. fig. 2; Turt. 209.

Helix elegantissima, Mat. and Rack. Linn. Trans. vol. viii. 209.

Eulima elegantissima, Risso, vol. iv. p. 123; Jeffr. in Mal. and Conch. Mag. part 1 (1839), p. 34; Macg. Moll. Ab. 141.

Turritella elegantissima, Fl. 303; Thorpe, 189. fig. 34.

Melania Campanellæ, Phil. i. p. 156. tab. 9. fig. 5.

Melania (subg. *Eulima*) *elegantissima*, Forb. Mal. Mon. 15.

Chemnitzia elegantissima, Phil. ii. 136; Wood, Cr. Moll. part 1. p. 81. tab. 10. fig. 5^a?

Rissoa turritella (Scacchi), Phil. ii. 136.

Pyramis elegantissimus, Br. 14. pl. 9. fig. 61.

Parthenia elegantissima (Lowe), Humphr. Fauna and Flora of Cork, 10.

Sandwich (Boys). Falmouth Harbour; Salcomb Bay; Ilfracombe (Mont.). Western coasts and Dublin Bay (Turton). Douglas Bay, Isle of Man (Forbes). Aberdeen (Macgillivray). Cork Harbour and Youghal Bay (Humphreys). Swansea and adjacent bays; Tenby; Exmouth; Weymouth; Bantry Bay at low water; Dublin Bay; Cork Harbour; Oban; Loch Carron, Ross-shire. West coast of Scotland; Arran Isle, co. Galway (Mr. Barlee). Milford Haven (Mr. MacAndrew).

Var. *a. costæ obliquiores*.

Cork Harbour.

Var. *b. minor*; spira brevior; costæ subrectæ.

Barricane, North Devon (Miss Jeffreys). Burrow Island (Mr. Barlee). Ilfracombe (Mr. Alder).

Var. *c. minor*; spira brevior; costæ obliquæ et curvæ.

Chemnitzia pusilla, Phil. ii. 224. tab. 28. fig. 21.

Exmouth (Mr. Clark).

Monstr. spira subarcuata.

Turbo subarcuatus, Adams in Linn. Trans. vol. iii. p. 66. figs. 27, 28.

Pyramis subarcuatus, Br. 14. pl. 9. fig. 62.

Pembrokeshire coast (Adams). Bantry Bay.

Var. *d. minor et angustior*; costæ plus numerosæ et subrectiores.

Chemnitzia gracilis, Phil. ii. 137. tab. 24. fig. 11.

Pyramis lacteus, Br. 15. pl. 9. fig. 58?

Oxwich Bay near Swansea; Falmouth; Bantry Bay; Dublin Bay. Birtabay Bay, co. Galway (Mr. Barlee).

29. *Odostomia Scillæ*.

Eulima crassula, Jeffr. in Mal. and Conch. Mag. part 1 (1839), p. 34.

Eulima Scillæ, Phil. ii. (1844) 135. tab. 24. fig. 6.

Eulima MacAndrei, Forbes in Ann. Nat. Hist. (Dec. 1844) p. 412.

Turritella Scillæ, Lov. 18.

Eulimella crassula, Jeffr. in Ann. Nat. Hist. 1847, p. 311.

Oban; Loch Broom; Skye. Loch Fyne (Mr. Barlee and Mr. MacAndrew).

A local and rare species.

Var. *a.*? minor, plus cylindrica.

A single specimen of this shell, which for the present I can only consider a variety of *Scillæ*, although the discovery of more specimens may give it a claim to specific distinction, was found by Mr. Barlee in dredging off Stornaway in the Hebrides last year. It is apparently only half-grown, but is peculiar from its wanting the conical form of the present species.

30. *Odostomia clavula*.

Turbonilla clavula, Lov. 18 (certe).

Torquay (Dr. Battersby). Brixham (Mr. Hanley).

Very rare. I have only seen four specimens from these localities. It is undoubtedly Lovén's species, as I have had an opportunity of examining specimens from, and named by, him. My reference (in the Annals of Nat. Hist.) of the next species to that shell was made before I had the opportunity of such examination and is erroneous.

This differs from the next species (*acicula*) in its much smaller size, the angular convexity of each whorl, and its possessing a distinct umbilicus.

31. *Odostomia acicula*.

Melania acicula, Phil. i. p. 158. tab. 9. fig. 6.

Eulima acicula, id. ii. 135; Alder, Cat. 49.

Pyramis lævis, Br. 14. pl. 9. figs. 51, 52?

Eulimella clavula, Jeffr. in Ann. Nat. Hist. 1847, p. 17.

Bantry Bay; Zetland, five miles east of Lerwick, in forty fathoms water. Burrow Island, Devonshire; Birtabay Bay and Arran Isle, co. Galway; Loch Fyne and other parts of the west coast of Scotland (Mr. Barlee). Whitburn, Rev. G. B. Abbes and Mr. Howse (Alder).

Var. *a.* gracilior; anfractibus magis complanatis et subtus aliquantum carinatis.

Tenby; Exmouth. Dartmouth (Mr. MacAndrew). Torquay (Dr. Battersby).

Var. *b.* spira elongata, anfractibus magis compactis.
Coast of Devon (Mr. Richard Damon).

Var. *c.* minor, spira et anfractibus compactis.
Oban. Torquay (Dr. Battersby).

A rare species.

Not the *Rissoa acicula* of Risso.

Fresh specimens are most minutely and closely striated in a concentric direction.

The variety *a.* may possibly be considered a distinct species ; but judging from its analogy with other species of the same genus, I do not consider the distinctive characters sufficient to justify my separating it specifically.

32. *Odostomia affinis*.

Parthenia turris, Forb. Ægean Invert. in Brit. Assoc. Rep. 1843, p. 188?

Eulima affinis, Phil. ii. 135. tab. 24. fig. 7 ; Jeffr. in Ann. Nat. Hist. 1847, p. 17.

Eulimella gracilis, Jeffr. in Ann. Nat. Hist. 1846, p. 311.

Skye. Oban ; Loch Fyne ; Guernsey (Mr. Barlee).

A local and rare species.

I cannot identify any of these shells with the descriptions and figures in Gould's Report on the Invertebrata of Massachusetts, although Lovén has referred the *Odostomia scalaris* to the *Turritella interrupta* of that author and Totten.

The *Odostomia semicostata* and *Marionæ* of Macgillivray (Moll. Aberdeen) are the young of *Rissoa communis*.

On taking a review of this catalogue it appears that the total number of species here noticed and described are thirty-two ; out of which nine (viz. *notata*, *alba*, *dubia*, *acuta*, *diaphana*, *dolioliformis*, *fenestrata*, *clathrata* and *formosa*) have been now for the first time described, and one (*clavula*) is new to this country ; nine of the species (viz. *conoidea*, *indistincta*, *excavata*, *scalaris*, *rufa*, *lactea*, *Scilla*, *acicula* and *affinis*) have been described and figured by Philippi as occurring on the coast of Sicily. Another species (*interstincta*) has been described by Recluz as occurring on the coast of Normandy. Ten species (viz. *scalaris*, *rufa*, *Scilla*, *clavula*, *insculpta*, *conoidea*, *spiratis*, *albella*, *undentata* and *pallida*) have been noticed by Lovén as inhabiting the Scandinavian coasts. Seven only (viz. *conoidea*, *indistincta*, *pellucida*, *excavata*, *scalaris*, *rufa* and *lactea*) are included in Wood's list of the Crag fossils ; and one species (*lactea*) seems to be indigenous to the middle and south of Europe, but not further north than Scotland.

Before concluding, I would take the opportunity of expressing

my thanks to the Rev. Dr. Fleming, Professor Macgillivray, Mr. Hanley, Mr. Metcalfe, Mr. Alder, Mr. Bean, Mr. MacAndrew, the Rev. G. M. Beevor, Dr. Battersby, and my zealous fellow-labourer Mr. Barlee, for the kind assistance they have afforded me in my examination of their collections as well as the transmission and use of their specimens for comparison.

XXXVII.—*Notices of British Shells.* By J. G. JEFFREYS, F.R.S.

Rissoa pulcherrima.

Shell ovato-conical, thin, semitransparent, smooth and somewhat glossy, of a yellowish colour, marked on each whorl with four equidistant rows of reddish brown spots (about twelve in each row) which are generally confluent on the upper row, giving it a streaky appearance; whorls $4\frac{1}{2}$, convex and rather swollen, the last being about half the size of the spire; apex blunt; suture deep and distinct; base broad and spread; aperture roundish; peristome detached and simple, slightly thickened on the pillar side; umbilicus small but deep; length $\frac{1}{20}$, breadth $\frac{1}{30}$ of an inch.

Several specimens of this exquisite little shell were found by Mr. Barlee at the roots of *Corallina officinalis* on the shores of Guernsey and Sark.

Rissoa (?) *opalina.*

Shell ovato-globose, thin, transparent, very smooth and glossy, of a brownish colour and prismatic lustre; whorls 3, convex, the last exceeding in size $\frac{3}{4}$ ths of the spire; suture distinct; apex blunt and rounded; aperture roundish oval, large; outer lip of the peristome thin, and not reflected or margined; inner lip rather straight and thickened, not detached from the pillar; umbilicus forming a narrow groove behind it; operculum horny, thin, concentrically striate, and having its nucleus on the side next the pillar-lip; length $\frac{1}{20}$, breadth $\frac{1}{25}$ of an inch.

It is probably allied generically to *Turbo nivosus* of Montagu (*Rissoa glabra* of Alder, not Brown), but the animal is not known.

At the roots of *Corallina officinalis* on the shores of Guernsey and Sark (Mr. Barlee): rare.