

*radiatus** agree with the *Pycnodi* in the limitation of the articulated scales to the anterior part of the body. I am inclined to consider this character of generic value; and I find it associated with other peculiarities in the position and form of the fins and tail, which suggest the propriety of adding *Microdon hexagonus* and *Microdon analis* to the genus *Gyrodus*. Count Münster has described a Pycnodont jaw found by Herr Althaus in the Kupferschiefer at Richelsdorf, which he named *Globulodus elegans*†. In alluding to this genus Agassiz says that it is probably founded on the dentition of the genus *Platysomus*‡, a surmise which is proved by Mr. King's specimen of *Platysomus macrurus* to be perfectly correct. The genus *Globulodus* must therefore be cancelled. It is probable from the small size of the oral aperture and the character of the dentition, that the *Platysomi* fed either on marine plants or on small shell-fish or zoophytes, and we trace in their dense tegumentary investment a kind of scale-armour to protect them against the aggressions of the *Acerolepides* and *Pygopteri* and other voracious Sauroids with which they co-existed; but that even this protection did not always avail is substantiated by the fact, that the *Globulodus* jaw of Count Münster was discovered in a Coprolite!!

3. On *NERITOMA*, a fossil genus of *Gasteropodous Mollusks* allied to *NERITA*. By JOHN MORRIS, Esq., F.G.S.

AMONG the fossil shells of the oolite hitherto referred to *Nerita*, there occurs a small group presenting characters of sufficient importance to justify their being separated, not only as a distinct section of the genus, but as forming a different generic type, probably belonging to the same family, for which I propose the name *Neritoma*.

The peculiar character to which I allude is, in the outer lip (which in all the typical *Nerita* is entire) having two more or less deep sinuses, probably corresponding to a particular organization in the animal inhabitant; the form of the aperture and the columellar lip are also distinct from those of *Nerita*, and do not approximate it to any other described genus.

The above-mentioned characters of this genus,—certainly allied to *Nerita*, although aberrant from it,—are interesting under two points of view: first, as connecting the true *Nerites* with *Amphibola*, Schum. (*Ampullacera*, Quoy), also an aberrant form of *Ampullaria* and *Natica*; and secondly, as adding another instance to certain genera of Mollusca, which with analogous forms present a similar character in having a greater or less sinus in the outer lip. In this latter respect, *Neritoma* bears the same relation to *Nerita*, as the other genera first mentioned in the following list do to their respective analogous forms.

* Poiss. Foss. tab. 69^e. figs. 1 & 2.

† Beiträge, &c. pt. 5. p. 47. pl. 15. fig. 7.

‡ Poiss. Foss. vol. ii. pt. 2. p. 203.

Genera in which the outer lip has

<i>A greater or less sinus.</i>	<i>No sinus.</i>
<i>Neritoma.</i>	<i>Nerita.</i>
<i>Amphibola.</i>	<i>Ampullaria.</i>
<i>Clithon.</i>	<i>Neritina.</i>
<i>Platychisma.</i>	<i>Trochus.</i>
<i>Pleurotomaria.</i>	<i>Trochus.</i>
<i>Acroculia.</i>	<i>Pileopsis.</i>
<i>Pleurotoma.</i>	<i>Fusus.</i>
<i>Murchisonia.</i>	<i>Cerithium.</i>
<i>Emarginula.</i>	<i>Patella.</i>

In consulting the above table of the two groups, it will be remarked that *most* of those forms furnished with a sinus belong to extinct genera: thus *Acroculia*, *Murchisonia*, *Platychisma*, are found in the palæozoic series, *Pleurotomaria* and *Neritoma* in the secondary strata, *Pleurotoma* in the tertiary and also recent.

TRACHELIPODA, Lam.

Family *Neritacés*, Lam.

NERITOMA.

Testâ ventricosâ, crassiusculâ, læviusculâ, epidermide indutâ, non umbilicatâ, spirâ brevi obtusâ; anfractibus subcarinatis, ultimo ventricosus; aperturâ subovali, obliquâ; labro acuto, bisinuato; labio incrassato, planulato, supernè canalifero, non denticulato nec crenulato; impressione musculari elongato-ovatâ.

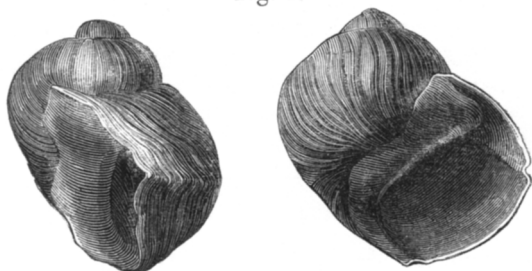
A ventricose and moderately thick shell, nearly smooth, or merely marked by the lines of growth, having a slightly elevated spire and three or four subangular volutions; not umbilicated; aperture ovately oblong, outer lip thin, sharp and bisinuate, with one angular sinus towards the middle of the shell corresponding to the carina and a rounded sinus near the base; inner lip broad, flat, and thickened, slightly depressed in the middle, and not crenulated nor denticulated.

The above characters sufficiently distinguish this genus from *Nerita*, in which also the inner lip is much less confluent with the outer one than in *Neritoma*. The flattened and expanded columellar lip, and not being umbilicate, remove it from *Amphibola*.

From *Neritopsis*, which connects *Nerita* with *Natica*, it is separated by the above-mentioned characters, as well as in not having a deeply notched inner lip, as in that genus. If with Dr. Grateloup and M. Pietet we exclude *Natica* as belonging to a distinct family, the *Neritacés* will be neatly limited to the following genera: *Navicella*, *Pileolus*, *Nerita*, *Neritina*, *Neritopsis*, and *Neritoma*.

The species belonging to *Neritoma* have at present only been found in the oolite. The shell from which the above generic description was formed, was obtained by Mr. Lowe from the upper beds of the Portland series, at Swindon, Wilts. This specimen is interesting, as exhibiting distinctly the coloured marking upon the surface.

Fig. 1.



NERITOMA SINUOSA.

Nerita, Sow. 1821, Min. Con. t. 217. f. 2.

Nerita angulata, Sow. 1836, Geol. Trans. vol. iv. t. 23. f. 2.

Testâ ventricosâ, sublævi, fuscescente, spirâ abbreviatâ, obtusâ, anfractibus quatuor convexusculis, ultimo obtusè carinato, supernè depresso, aperturâ oblongâ.

A rather thick and ventricose shell with a slightly elevated and obtuse spire, the last volution carinated about the middle, the carina terminating in the shallow sinus at the edge of the outer lip. The surface is nearly smooth, although in some specimens the lines of growth are well-defined, and become more prominent as the shell approaches the adult state.

This species was first noticed by Mr. Sowerby, sen., as *Nerita sinuosa* in the 'Mineral Conchology,' where its peculiar characters are carefully described, from a specimen collected by Miss Benett at Chilmarsh, near Tisbury, Wilts.

A cast of this species was subsequently described by Mr. J. D. C. Sowerby, in Dr. Fitton's Memoir*, under the name of *Nerita angulata*, from specimens obtained at Swindon, Wilts, where in the state of casts this species is generally very abundant.

Locality, Swindon, and near Tisbury, Wilts, in the Portland oolite.

NERITOMA BISINUATA.

Nerita, Buvignier, Statistique Minéralogique et Géologique du Département des Ardennes, p. 535. t. 5. fig. 12, 13.

Testâ globosâ, sublævi, spirâ depressâ, obtusâ, ultimo anfractu carinato, ad suturam canaliculato, aperturâ ovali vel semicirculari.

A ventricose shell with somewhat angular volutions, marked by the lines of growth, and a depressed spire. The last whorl has a slight furrow at the suture. The aperture is nearly semicircular; the sinus at the edge of the aperture, corresponding to the carina, is narrow and deep in the adult stage, and only faintly marked in the young shell. M. Buvignier in the description of this species remarks,

* "Observations on some of the strata between the Chalk and Oxford Oolite," Geol. Trans. vol. iv. p. 347.

1849.] DAWSON ON THE GYPSUM OF PLAISTER COVE. 335

that it is with doubt he places this shell under *Nerita*; the double sinus appearing to indicate particular organs, which are not possessed by the animals of that genus. In breaking some specimens, M. Buvignier has also observed a depression under the columella, similar to that which receives the apophysis of the operculum of the *Nerites*.

Locality, Launois and Vieil-Saint-Remy, Ardennes, in the upper beds of the Oxford clay.

FEBRUARY 21, 1849.

The following communications were read :—

1. *Notice of the Gypsum of PLAISTER COVE in the STRAIT OF CANSEAU.* By J. W. DAWSON, Esq.

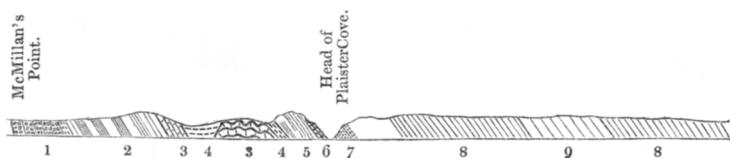
[Communicated by the President.]

THE Strait of Canseau is a narrow passage fourteen miles in length, separating Nova Scotia proper from Cape Breton Island. On the Nova Scotia side it affords an imperfect section of carboniferous strata, interrupted near the middle of the Strait by a mass of reddish syenite and disturbed slates, forming the promontory of Cape Porcupine, which is the abrupt termination of a hilly range extending far into Nova Scotia. On the Cape Breton side, the section exhibits carboniferous rocks; and nearly opposite Cape Porcupine is the small indentation, whose name of Plaister Cove is derived from the mass of gypsum to which the following remarks refer.

The gypsum of Plaister Cove, like other large masses of that rock occurring in this province, belongs to the lower part of the carboniferous system, and is associated with limestone and marls. The structure and accompaniments of the bed are, however, more perfectly exposed than in most of the larger masses of gypsum which I have examined. For this reason I shall endeavour, with the aid of the accompanying section fig. 1, and specimens, to give a somewhat detailed view of the appearances presented at this place, with the object of recording facts which may be useful in explaining the origin of the great beds of gypsum.

Fig. 1.

Coast Section at Plaister Cove.



1. Hard grey conglomerate. 2. Alternations of hard sandstone and grey shale. 3. Limestone. 4. Marl. 5. Gypsum. 6. Gypseous limestone. 7. Marl. 8. Dark shales with calcareous bands. 9. Brown and grey sandstone and shale.

(1.) At McMillan's Point, about three-quarters of a mile north of