

- Fig. 8. *Stylonychia histrio*, a peculiar phase of; the three globular vesicles subsequently coalesced into one large one, containing numerous granules.
- Fig. 9. *Stylonychia Mytilus*, showing the formation of embryos and the development of germinal globules.
- Fig. 10. *Urnula Epistylidis*, growing on the stem of *Epistylis plicatilis*.
- Fig. 11. *Carchesium Aselli*, with a large embryonic vesicle: *a*, a detached embryo.
- Fig. 12. Development of embryos within embryonic vesicles in the same animalcule.
- Fig. 13. *Carchesium Aselli* strongly contracted, and with its ciliary disk elongated and circumscribed by a constriction, making it resemble an independent germ in course of growth.
- Fig. 14. *Zoothamnium affine*. The nucleus has broken up into numerous minute globular corpuscles, collected within an outgrowth from its side, terminated by an aperture.
- Fig. 15. *Conchophthirus Anodontæ* (Stein).
- Fig. 16. *Chasmatostoma reniforme*.
- Fig. 17. *Microthorax pusillus*, ventral aspect.
- Fig. 18. *Microthorax sulcatus*, ventral aspect.
- Fig. 19. The same, dorsal aspect.
- Fig. 20. *Astylozoon fallax*.

XXV.—*Descriptions of a new Genus and some new Species of Naked Mollusca.* By JOSHUA ALDER and ALBANY HANCOCK, F.L.S.

THE following species of Nudibranchiate Mollusca have recently come under our notice, mostly through the kindness of our friends, to whom our thanks are due for the liberal manner in which they have communicated to us all specimens met with in this department of natural history that were likely to prove new or interesting.

Family Dorididæ.

Doris testudinaria, Risso.

Doris testudinaria, Risso, Hist. Nat. de l'Europe Mérid. vol. iv. p. 33, f. 15; Philippi, Enum. Moll. Sic. vol. ii. p. 78.

Body ovate or broadly elliptical, convex. *Cloak* large, of a chestnut-colour, with indistinct pale-yellowish blotches towards the sides, covered with smallish unequal tubercles, interspersed with a few larger ones, with minute pale lines radiating from them. *Dorsal tentacles* stout, yellowish, with fifteen to seventeen laminæ, divided in front by a groove: *oral tentacles* linear. *Branchial plumes* eight, tripinnate, forming an incomplete circle, open behind, retractile within a large cavity. Underside of the cloak orange- or lemon-coloured, spotted with reddish brown:

the foot orange, grooved in front, with the upper lamina notched in the centre.

Length $1\frac{1}{2}$ to 2 inches.

A specimen of this fine *Doris* was got by Messrs. R. S. Brady and G. Hodge, under a stone between tide-marks, on the Island of Herm, in June last. It is known as a Mediterranean species, but its range further north had not been before ascertained.

The resemblance between *D. testudinaria* and our *D. planata* suggests the question whether the latter may not be the young of the present species. The very depressed form, however, of *D. planata*, its much smaller branchial plumes, their conspicuous dark-brown markings, and the presence of a central plume, which is not the case in *D. testudinaria*, induce us to consider them distinct. The character of the tongue is similar in each,

Doris Loveni.

Doris muricata, Lovén, Index Moll. Scand. p. 5. no. 18.

Body ovate, rather convex, yellowish white. Cloak with very large, rather distant, clavate tubercles, larger and more numerous towards the sides, interspersed with smaller ones. Tentacles robust, yellowish, placed considerably apart. Branchial plumes eleven, pinnate, set in a small incomplete circle or ellipse. Veil large, undulated. Foot broad and ample.

Length half an inch; breadth 0.35 inch.

A single specimen of this species was found by the Rev. A. M. Norman among stones between tide-marks, on the south side of Bantry Bay, in the autumn of 1858. It is remarkable for the enormous size of its tubercles, which, though soft and having a puffed appearance, contain each a bundle of spicula. That this is the *Doris muricata*, α , of Professor Lovén we are able to state with confidence, that distinguished naturalist having kindly sent us a specimen. We think, however, that the *D. muricata* of our Monograph is probably the true *D. muricata* of Müller, as the tubercles come nearer in character to those represented in his figure; and the former may perhaps be the var. β of Lovén, though it does not in all respects correspond with his description. The two varieties described by Professor Lovén are clearly distinct species, differing not only in the size of the tubercles as well as of the animal, but also in the character of the tongue, which, in the present species (the typical form of Lovén) has numerous small lateral plates or spines, similar to those of *D. proxima*, in addition to a large and rather slender falcate spine on each side. In *D. muricata*, var. β . Lov., there is a very broad-based falcate spine and an obtuse small one only on each side, the large spine having very minute lateral denticulations. There is also a rectangular central plate.

Family Polyceridæ.

CRIMORA, nov. gen.

Body limaciform. *Cloak* nearly obsolete, forming a veil with branched appendages over the head, and a papillated ridge on the sides of the back. *Dorsal tentacles* laminated, retractile within sheaths: *oral tentacles* tubercular. *Branchiæ* plumose, non-retractile, placed about two-thirds down the centre of the back. Tail short, without a fin-like crest.

Tongue.—Lateral spines twenty-six or twenty-seven on each side, of three kinds: the first next the centre large, hooked, bicuspid; the next five or six short, obtuse, and supported on subquadrilateral plates; the remainder very long, slender, curved and minutely denticulated on the inner margin. No central spine.

This genus comes very near to *Plocamophorus* of Rüppell, agreeing with it in having a branched veil in front, but differing in the absence of the large fin-like tail, and somewhat in the character of the lateral appendages, which in *Plocamophorus* are fewer, larger, and a little branched or papillated. It has also considerable relationship with *Thecacera*, in which genus, however, the veil is either absent or very imperfectly developed, and there are no oral tentacles. The members of this family, though bearing great general resemblance, are so variable in details that it is difficult to avoid raising each species to the rank of a genus. We have been rather reluctant, in the present instance, to add another to the number; but the species above described will not come into any of the known genera as at present understood; and the peculiar character of the tongue strengthens its title to generic rank. This organ differs from that of any of the allied genera in having very numerous, slender, denticulated, lateral spines, as in the *Trochidæ*.

Crimora papillata, n. sp.

Body ovate-oblong, swelling a little in the centre and tapering to a blunt point posteriorly; white, with the processes tipped with yellow. *Dorsal tentacles* subclavate, pale yellow, retractile within short sheaths: *oral tentacles* short, tubercular. *Veil* bilobed, each lobe furnished with five more or less branched appendages, leaving a small vacant space in the centre. A slight pallial ridge runs along each side of the back, bearing numerous small filamentous papillæ tipped with yellow, terminating behind in a bifid process of no great size: an indistinct ridge runs down the centre of the tail, also bearing yellow-tipped papillæ, the anterior one of which is larger than the rest, and bifid; similar small papillæ are disposed over the body, forming a line

on the centre of the back, and one or two imperfect rows at the sides. *Branchial plumes* three, tripinnate, tipped with yellow. *Foot* narrow, produced a little at the sides in front.

Length (in spirit) $\frac{6}{10}$ inch.

This interesting addition to our fauna was dredged among *Zostera*, in a few fathoms water, in Moulin Huet Bay, Guernsey, by Mr. Norman, in July 1859.

Family Eolididæ.

Doto cuspidata, n. sp.

Body nearly linear, slender, smooth, white or yellowish, spotted on the back with pink or purple, the spots forming two lines of curves between the branchial processes, bending towards each, and extending from the tentacles to near the tail. *Tentacles* filiform, slender, tapering a little upwards; the sheaths trumpet-shaped, with scalloped margins, extending into a point in front. Veil entire, arched in front, and produced into obtuse recurved points at the sides. There is a raised portion of the surface in front of each tentacle, as in *D. fragilis*. *Branchiæ* six pairs, rather distant; the first pair placed not far behind the tentacles, the last pair very small. They are ovate-conical, with four whorls of strongly pointed conical tubercles, and a terminal one at the apex; apices without spots. *Foot* narrow, a little expanded in front, and tapering to a point at the tail.

Length (in spirit) a quarter of an inch.

Dredged in deep water on the outer Haaf, Shetland, by J. Gwyn Jeffreys, Esq., and Edward Waller, Esq., in the summer of 1861.

This new species of *Doto* is somewhat intermediate in character between *D. fragilis* and *D. coronata*, but approaching more nearly to the latter, from which it differs in the conical form of the branchial processes and their more pointed tubercles, as well as in the absence of the dark spots at their apices. The tentacular sheaths, too, have scalloped margins, and the veil is more arched than in *D. coronata*.

Family Limapontiadæ.

Limapontia depressa, n. sp.

Body oblong-ovate, depressed, swelling behind the centre and terminating in a blunt point posteriorly, but varying much according to the degree of expansion or contraction; black, with minute yellowish-white spots or freckles, not always present, and very inconspicuous. *Head* rounded in front, and slightly angulated at the sides; the lateral crests less elevated than in *L. nigra*, with the eyes situated near the centre of a white oblong area at

the side of each. *Anus* placed in a depression at the posterior extremity of the body. *Foot* yellowish white, linear, and squared in front.

Length upwards of a quarter of an inch.

A few individuals of this species were obtained, last October, in brackish-water pools at the mouth of Hylton Dene, near Sunderland, associated with *Alderia modesta*, on a *Conferva* (*Vaucheria submarina*?).

The same animal, apparently, was taken by Mr. Muggridge and Mr. C. Spence Bate, in Loughor Marsh, South Wales, in 1849, similarly associated, and was figured by the latter gentleman in the Report of the Swansea Literary and Scientific Society for 1850, where it is named *Limapontia nigra*. It is, however, readily distinguished from that species by its greater size, more depressed form, and wider lateral expansion, by the backward position of the anus, and the more branched hepatic organ, besides other minor characters. Mr. Spence Bate's specimens seem to have been nearly twice the length of ours.

This species comes very near to the *Fasciola capitata* of Müller, perhaps more so than the *Limapontia nigra*, which has been referred to that species by Professor Lovén; but as Müller had not observed the characters by which these two species are more especially distinguished from each other (namely, the position of the anus and the branching of the liver), we think it better to consider our animal as new than to revive an old name that may prove to be erroneous.

XXVI.—*A Synopsis of the Species of Crocodiles.*

By Dr. J. E. GRAY, F.R.S. &c.

THE distinction of the species of Crocodiles has hitherto been one of the difficult problems in systematic zoology; and therefore I believe that it may be of some slight use to lay before the readers of the 'Annals' the result of my examination of the very large collection of Crocodiles, of all ages and from various localities, which are contained in the British Museum. Knowing the difficulty that surrounds the subject, I have made great exertions to obtain specimens from different countries; and the examination of these specimens has shown that the characters of the species, when allowance is made for the changes that take place in the growth of the animal, are quite as permanent as in any other group of Reptiles.

One of the difficulties in distinguishing the species of Crocodiles arises from the changes that take place in the form of the head during growth. When the Crocodile is just hatched, the