

## Nudibranchiata Collected in the North Sea by the s.s. "Huxley" during July and August, 1907.

By

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DURING July and August, 1907 (Voyages XCII, XCIII, XCIV, XCV, and XCVI), the s.s. *Huxley* worked a series of stations reaching from near Cromer to St. Abb's Head more or less parallel with the coast line, and also a series further to the north, and extending around the eastern borders of the Dogger Bank.

Many of the hauls were in and about "roughs," and, as might be expected, a considerable number of species of Nudibranchs were obtained, some of them of considerable interest. The specimens were examined in the living state as thoroughly as circumstances permitted, and as often as possible in their natural environment. Unfortunately in many cases this was impossible, as the animals had become either detached in the dredge or trawl, or were found adhering to the mesh of the nets, and were in consequence more or less injured.

All the specimens were killed with menthol, preserved in formalin, and subsequently re-examined in the Laboratory at Lowestoft.

The following species were obtained:—

### Aeolidiidaë.

1. *Aeolidia papillosa* (Linn.).
2. *Aeolidiella alderi* (Cocks).
3. *Aeolidiella glauca* (A. & H.).
4. *Cuthona nana* (A. & H.).
5. *Amphorina aurantiaca* (A. & H.).
6. *Cratena amœna* (A. & H.).
7. *Galvina cingulata* (A. & H.).
8. *Galvina picta* (A. & H.).
9. *Galvina tricolor* (Forbes).

10. *Coryphella gracilis* (A. & H.)
11. *C. lineata* (Lovén).
12. *C. rufibranchialis* (Johnst.).
13. *C. salmonacea* (Couth.).
14. *Facelina drummondi* (Thomp.).

**Lomanotidæ.**

15. *Lomanotus genei* (Vérany).

**Dotonidæ.**

16. *Doto coronata* (Gmelin).
17. *D. fragilis* (Forbes).

**Dendronotidæ.**

18. *Dendronotus arborescens* (Müller).

**Tritoniidæ.**

19. *Tritonia hombergi*, Cuvier.
20. *T. plebeia*, Johnston.

**Dorididæ.**

21. *Archidoris testudinaria* (A. & H.).
22. *A. tuberculata* (Cuvier).

**Polyceridæ.**

23. *Acanthodoris pilosa* (Müller).
24. *A. subquadrata* (A. & H.).
25. *Lamellidoris bilamellata* (Linn.).
26. *Goniodoris castanea*, A. & H.
27. *Idaliella aspersa* (A. & H.).
28. *Ancula cristata* (Alder).

While following Bergh, Vayssière, Trinchese, and other authors in regarding *Coryphella rufibranchialis*, *C. pellucida* and *C. landsburgii* as synonyms, I have preferred to treat *C. gracilis* as a good species, and also describe *Coryphella salmonacea* as occurring in the British area.

**ÆOLIDIA PAPILLOSA** (Linn.).

Voyage XCVI. Station. 15. Lat. 54° 30' N. Long. 3° 59' E. 25 fathoms.  
1 specimen.

Length 2 cm. The colouration almost identical with that of most littoral specimens. The triangular white mark on the head prominent. Oral tentacles of a clear white, spotted with opaque white. Body,

rhinophores and papillæ, dull yellowish white, freckled with brown. Tail very obtuse.

The specimen was found upon a colony of *Alcyonium digitatum*.

### **ÆOLIDIELLA ALDERI** (Cocks).

Voyage XCVI. Station 15. Lat.  $54^{\circ} 30' N$ . Long.  $3^{\circ} 59' E$ . 25 fathoms.  
1 specimen.

Found on *Alcyonium digitatum*. Length about 16 mm.

When first obtained the specimen was taken to be a variety of *A. glauca*, but upon examining it in the Laboratory I found that it belonged to the present species.

Oral tentacles longer than the rhinophores, and white; rhinophores stout, wrinkled, bright orange-red, and very like those of *A. glauca*. Papillæ set in 8 or 9 rows, of a reddish chestnut colour, paler at the bases and tips, and more or less freckled with white.

The "ruff" was not well marked, but the papillæ forming it were paler than the rest. All the papillæ were erected upon irritation. Tail tapering to a fairly fine point.

The radula agreed generally with Alder & Hancock's plate and description. There were 14 plates of a clear yellowish white, tapering gradually; the central tooth rather stronger than in their figure, and the laterals 24 in number.

### **ÆOLIDIELLA GLAUCA** (A. & H.).

Voyage XCV. Station 24. S. edge of the Coal Pit. 13 fathoms. 1 specimen.  
Voyage XCVI. Station 18. Lat.  $54^{\circ} 16' N$ . Long.  $1^{\circ} 46' E$ . 23 fathoms.  
2 specimens.

The specimen from XCV—24 was upon *Alcyonium digitatum*.

Those from XCVI—18 were found clinging to the meshes of the beam trawl, but *A. digitatum* occurred commonly in the haul.

All the individuals agreed with Alder and Hancock's specimen in form, but showed considerable variation in their colouration, especially in the colouration of the papillæ.

(a) In the specimen from XCV—24 the length was 14 mm. The rhinophores were somewhat wrinkled, short, stout, and tipped with white. Oral tentacles semi-transparent and freckled all over with white. Body and papillæ as in Alder and Hancock's plate. Eyes plainly visible.

(b) Those from XCVI—18 measured 35 and 25 mm. in length, respectively.

In both the papillæ were for almost their whole length of a dull green, freckled with opaque white, no red being seen.

In (a) the head and body were as figured by Alder & Hancock; in (b) the oral tentacles were much paler, and the head and rhinophores of a dull uniform red.

The animals showed little activity, but both crawled on the surface film on several occasions.

E. Hecht (*Contribution à l'étude des Nudibranches*, 1896) says of this species: "Remarquable par la variabilité de sa coloration, qui est parfois plus foncée que celle indiquée par Alder et Hancock, et plus souvent d'un jaune grisâtre."

### CUTHONA NANA, A. & H.

Voyage XCII. Station 45. Edge of Sylt Outer Rough. 13 fathoms.  
Several specimens.

Voyage XCII. Station 46. Edge of Sylt Outer Rough. 13 fathoms.  
Several specimens.

Voyage XCIII. Station 9. N. of Dogger Rough. 13 fathoms. Several specimens.

Voyage XCIII. Station 19. Bruecy's Garden. 27 fathoms. 6 specimens.

Most of the specimens obtained were small, four of those from XCIII—19 measuring 9, 8, 6 and 4 mm.

All were feeding upon *Hydractinia echinata*.

Those from XCII—45 were upon a large specimen of *Hyas coarctatus*, which was almost covered with a growth of *Hydractinia*. Some nine individuals, mostly small, were clustered upon the under side of the head of the crab, and several others upon the crapace. All were of a transparent white, the papillæ having a light chestnut or pink core.

Those obtained at the other stations were upon *Hydractinia*, encrusting the shells of *Natica monilifera* and *Buccinum*. Leslie and Herdman (*The Invertebrate Fauna of the Firth of Forth*, 1881) also record *C. nana* on *Hydractinia* at "Morrison's Haven," collected by Dr. T. Strethill Wright.

### AMPHORINA AURANTIACA (A. & H.):

Voyage XCIV. Station 47. Outer Dowsing Ground. Lat. 53° 28 $\frac{3}{4}$ ' N.  
Long. 1° 93' E. 14 $\frac{1}{2}$  fathoms. 1 specimen.

Length 1 cm. The specimen differed slightly from Alder and Hancock's plate and description, the rhinophores being wrinkled and slightly shorter than the oral tentacles. The white area below the tips of the papillæ very faint; the animal was damaged, and many of the papillæ were missing from the posterior region.

It was living upon a colony of *Tubularia larnyx*, which was growing upon a large stone. The spawn, which was similar to the figure of Alder and Hancock, was attached to the bases of the *Tubularia*.

### CRATENA AMOENA (A. & H.).

Voyage XCV. Station 23. S. edge of the Coal Pit. 24 fathoms. 2 specimens.

The two examples of this most beautiful species were discovered creeping about the base of a colony of *Sertularia argenta*, growing upon a dead valve of *Pecten opercularis*.

Length 6 and 4 mm. respectively.

They differed from Alder and Hancock's plate and description in the following particulars, but otherwise were similar:—

1. The oral tentacles were not much longer than the rhinophores, and were white and without the brown band.
2. There was a prominent dark green mark on the centre of the head, probably due to the jaws showing through the tissues.
3. The red band on the rhinophores was broad, and in one specimen occupied the centre of the organ. In the other specimen the basal half of the rhinophore was red-brown and the upper half white.
4. The foot was more bilobed, and produced into rounded lobes at the sides.

The animals were active and restless, and progressed with ease on a flat surface contrary to Alder and Hancock's surmise.

Papillæ pale green, spotted with white and brown at their bases; a few white spots were present on the head region, but I could not make out any "white tubercles" in that region.

### GALVINA CINGULATA, A. & H.

Voyage XCIV. Station 13. Inner Silver Pit. 43 fathoms. 1 specimen.

Length 13 mm.

The specimen was in a very perfect condition, and as it differs in several minor points from the plate and description of Alder and Hancock, a detailed description may be of interest. Body dull white, shaded, patched, blotched, and streaked with brown and olive-brown, much darker in the regions from which the papillæ arise.

The rhinophores smooth and very little shorter than the oral tentacles, a band of olive near the tip, and streaks of white down to the base. Oral tentacles similar. Head olive, spotted with white. Eyes not discernible. The region immediately behind the head streaked and lined with dark olive-brown and spotted with white.

Papillæ long, stout, and irregular in outline, set in 9 transverse rows, the first somewhat remote from the others and arising close behind the rhinophores, thickest near the summit, and terminating somewhat abruptly in a small point; the inner rows held more or less curved inwards; 5 or 6 papillæ in each row.

The bases very pale, the "core" of light yellowish brown, irregularly and indistinctly tinged with olive, an olive band near the tip, which is white (due to numerous minute white crowded dots), or sometimes tinged with olive or yellow. A bare space down the centre of the back; posterior region pinkish fawn. Body rather narrow, foot as in Alder and Hancock's plate. Tail shorter than their figure.

The white spots on the body well marked, those on the rhinophores and papillæ less so.

The specimen was living on a branch of *Antennularia ramosa* growing upon a stone brought up by the conical dredge. The hydroid was crowded with yellow gonophores, and the animal was by no means conspicuous when extended with the body parallel with the stem, the general colour and form of the papillæ approximating closely to what was undoubtedly its natural environment.

#### GALVINA PICTA, A. & H.

Voyage XCII. Station 45. Sylt Outer Ground. 13 fathoms. 1 specimen.

Voyage XCIII. Station 30. Hartlepool Grounds. 30 fathoms. 2 specimens.

The specimens were of the normal colouration, that from CXII—45 was living upon a colony of *Sertularia cupressina*.

#### GALVINA TRICOLOR (Forbes).

Voyage XCIII. Station 96. Lat. 55° 50' N. Long. 0° 35' E. 45 fathoms.  
4 specimens.

Voyage XCIII. Station 99. Lat. 55° 48' N. Long. 0° 49' E. 45 fathoms.  
1 specimen.

Voyage XCIV. Station 11. Inner Silver Pit. 43 fathoms. 1 specimen.

„ XCV. „ 24. S. edge of the Coal Pit. 13 fathoms. 1  
specimen.

Voyage XCVI. Station 18. Lat. 54° 16' N. Long. 1° 46' E. 23 fathoms.  
1 specimen.

Some variations were observable in the colours of the body and papillæ.

In the younger specimens the yellow band near the tip of the papillæ was paler than in the adults, and in one case it was absent from some of the papillæ, though present in others; when absent the whole tip was white.

In some of the adult specimens the body was brownish and in others of a greenish yellow.

The specimen from XCIV—11 had had a number of the papillæ torn off, and fresh ones were growing in their places.

### CORYPHELLA GRACILIS (A. & H.).

Voyage XCIV. Station 45. Lat.  $53^{\circ} 22'$  N. Long.  $0^{\circ} 34\frac{3}{4}$  E. 15 fathoms. 5 specimens.

Voyage XCIV. Station 47. Lat.  $53^{\circ} 28\frac{3}{4}'$  N. Long.  $1^{\circ} 39'$  E.  $14\frac{1}{2}$  fathoms. 1 specimen.

XCIV—45. Length of specimens, 8, 7, 7, 7, and 6 mm. respectively. Living on *Antennularia antennina* and *Sertularia argenta*.

Agreed in all particulars with Alder and Hancock's description, as also did the specimen from Station 47, which, however, was living upon *Tubularia larnyx*.

### CORYPHELLA LINEATA (Loven).

Voyage XCIII. Station 21. West of Brucey's Garden. 40 fathoms. 3 specimens.

Voyage XCIII. Station 23. Whitby Outer Rough. 36 fathoms. 7 specimens.

Voyage XCIII. Station 25. Whitby Grounds. 34 fathoms. 6 specimens.

" " " 30. Off Hartlepool. 30 fathoms. 1 specimen.

" " " 32. N. of Hartlepool. A few specimens.

" " " 53. Lat  $55^{\circ} 21'$  N. Long.  $1^{\circ} 10'$  W. 45 fathoms. 3 specimens.

The colour of the papillæ varies somewhat in shade, lighter or darker chestnut-red or carmine; the white tips also may be either well demarcated, narrower or wider, or may be continued downwards for a little way in streaks and blotches.

The papillæ arise from or about two lateral transparent ridges, which are more prominent in some individuals than others; the first pair of clusters are much the largest, and are somewhat compressed and taper rapidly to the tip.

The posterior portion of the foot is broad, and capable of considerable expansion; the animal attaches itself by this, the rest of the body swinging freely in the water (as in many other species). It can also crawl on the surface film.

The radula agrees with the figure and description of Alder and Hancock.

The food of the species appears to be *Tubularia indivisa* and *T. larnyx*.

**CORYPHELLA RUFIBRANCHIALIS** (Johnst.).

Voyage XCIII. Station 21. W. of Brucey's Garden. 40 fathoms. 2 specimens.

Voyage XCIII. Station 23. Whitby Outer Rough. 36 fathoms. 5 specimens.

" " " 30. Off Hartlepool. 30 fathoms. Common.

" XCV. " 24. S. edge of the Coal Pit. 13 fathoms. 1 specimen.

With the exception of that from XCV—24, all the specimens obtained from the above, and a number of other stations off the coasts of Durham and Northumberland and to the N. of the Dogger Bank, etc., were referred when captured to the *C. pellucida* of Alder and Hancock. In size and external features almost all exactly agreed with the plate and description of those authors, but upon examining the radulae it became evident that they must all be referred to the present species.

Some 16 specimens were examined from XCIII—21, 23, and 30. Unfortunately specimens from the other stations had not been preserved, so I can only conjecture that they were also referable to this species.

All the radulae examined agreed very closely, and many were identical with the figures and description of Alder and Hancock. Generally of a yellowish white, the central plate with usually 15 denticles, the central cusp strong; the laterals, as described by Alder and Hancock, "of an acute triangular form with the apex turned outwards;" the denticles on their inner margins, however, very irregular in size and number, in some cases 12 to 14 and of fair size, in others the same number but much smaller, in others again only 7 or 8 might be present upon the upper portion of the tooth.

It is possible that specimens occur without any denticles on the laterals, and although the radula, figured by Alder and Hancock for *C. pellucida*, is of a different shape to any I examined, still the evidence, I think, supports the opinions of Bergh and Vayssière, who unite these species.

One specimen from XCIII—30 had a faint white bifurcating line on the head as in *C. lineata*, and in another from the same station the head region was coloured as in *C. landsburgii* (A. & H.). Oral tentacles and rhinophores amethystine, and tipped with yellowish white; length, half an inch. Both these cases also support the views of Bergh and Vayssière in uniting these species also with *C. rufibranchialis*.

*Tubularia indivisa* and *T. larnyx* were in every case the habitat of the species, and when crawling along the stems among the colonies the animals very closely resembled their surroundings. Some of the specimens were 4 cm. and many 3 and 3½ cm. in length.

**CORYPHELLA SALMONACEA** (Couth.).

- Voyage XCIII. Station 59. Lat. 55° 31' N. Long. 0° 36' W. 47 fathoms.  
1 specimen.
- Voyage XCIII. Station 89. Lat. 55° 57' N. Long. 0° 27' W. 42 fathoms.  
2 specimens.
- Voyage XCIII. Station 96. Lat. 55° 50' N. Long. 0° 35' E. 45 fathoms.  
Very common.
- Voyage XCIII. Station 99. Lat. 55° 48' N. Long. 0° 49' E. 45 fathoms.  
Very abundant.
- Voyage XCIII. Station 101. Lat. 55° 48' N. Long. 1° 40' E. 40 fathoms.  
About 100 specimens.
- Voyage XCIII. Station 103. Lat. 55° 44' N. Long. 1° 40' E. 43 fathoms.  
Several specimens.
- Voyage XCVI. Station 1. Lat. 56° 00' N. Long. 3° 23' E. 38 fathoms.  
1 specimen.

Length, 20 mm. for the largest; the greater number of specimens, 15 mm. Other measurements of a specimen of 20 mm. in length: height of body, 5 mm.; breadth, 5 mm.; length of oral tentacles 5 mm.; rhinophores, 4 mm.; papillæ, 3.5 mm. (for the largest).

*Form*—Body firm, foot rather narrow, produced at the angles into thin points, tapers gradually to a somewhat obtuse point at the tail.

Oral tentacles broad and thick; rhinophores slightly wrinkled; eyes very small, placed behind the rhinophores; papillæ very numerous, the grouping obscure, continuous almost to the tip of the tail; a bare space continuous from head for three-quarters of the length of the back.

*Colours*—Body and foot semi-pellucid white; oral tentacles and rhinophores of the same colour, with frequently a line of opaque white down the front, or in the rhinophores confined to the upper third; papillæ reddish brown or fawn coloured, with a very distinct white ring just below the tip, giving an "eyed" appearance when viewed from above; this white ring speedily disappears in preserved specimens. Dorsal area frequently tinged with reddish brown, a faint white line along the dorsal surface of the tail.

Jaws very strong and of a dark horn colour.

Radula triseriate, of 16 to 18 rows, pale yellowish white in colour. Central plate broad, central cusp long and strong, with 7 to 8 denticles on either side, curved inwards and of fair size.

Laterals slender and acute, generally bearing 8 or 9 small and irregular denticles.

Almost all the specimens obtained were adhering to the meshes of the trawl or dredge, so that it is not possible to state its natural

habitat. Few hydroids occurred in any of the hauls. These specimens differ from the majority of *C. salmonacea* in that the lateral teeth have only 8 or 9 denticles on their inner edges, while in typical *C. salmonacea* they are very numerous (See Bergh, *Danish Ingolf Expedition*, Vol. II, Pt. 3, pp. 33-34, Pl. IV, Fig. 19; and Pl. V, Fig. 9).

The numerous, closely-set, small papillæ, from among which arise the ill-defined groups of larger ones, were a constant feature in all the specimens examined.

### FACELINA DRUMMONDI (Thompson).

Voyage XCIII. Station 7. W. edge of the Hills. 23 fathoms. 1 specimen.  
 " " " 86. Lat. 56° 20' N. Long 0° 55'. 36 fathoms.  
 2 specimens.

Voyage XCIII. Station 89. Lat. 55° 57' N. Long. 0° 23' W. 42 fathoms.  
 1 specimen.

Voyage XCIV. Station 47. Lat. 53° 28 $\frac{3}{4}$ ' N. Long. 1° 39' E. 14 $\frac{1}{2}$  fathoms.  
 1 specimen.

XCIII—86. Head orange, with white blotches between the rhinophores; back light orange, becoming patchy towards the tail, which was pellucid white, and had a white line to the tip. Oral tentacles long, somewhat wrinkled, orange, the tips lighter and spotted with white. Rhinophores laminated, dark orange, the tip white, and a white line down the front of the tip. Eyes situated in front of the rhinophores in one specimen and behind them in the other. Papillæ run on to the head around the rhinophores; many were missing, but those remaining were of a chestnut-maroon, with a prominent white ring below the pellucid tip, those nearest the rhinophores with a longitudinal white line on the front face, and the white ring absent. Length of animals, 15 and 20 mm.

XCIII—89. The body lighter in colour and semi-transparent. Foot sharply angulated, propodium deeply notched; a white line on the foot angles. Oral tentacles twice the length of the rhinophores. Papillæ dark chocolate colour.

XCIV—47. A young specimen  $\frac{1}{2}$  of an inch in length.

Foot angles produced into long fine points. Occurred upon *Tubularia larynx*.

### LOMANOTUS GENEI, Verany.

Voyage XCIII. Station 96. Lat. 55° 50' N. Long. 0° 35' E. 45 fathoms.  
 1 specimen.

Length 14 mm.

The rhinophores were of an orange-yellow colour, stout, and with about 15 closely-set laminae, the tip produced, truncated, and smooth;

sheaths "calyx like," extending for half the length of the rhinophores, the margin divided into a number of small blunt teeth. Margins of foot rounded.

Body semi-transparent, tinged with pink; viscera yellowish and visible through the body wall. Faint pinkish brown lines on the epipodial processes.

#### **DOTO CORONATA** (Gmelin).

Voyage XCIV. Station 45. Lat.  $53^{\circ} 22' N$ . Long.  $0^{\circ} 34\frac{3}{4}' E$ . 15 fathoms.  
Common.

Voyage XCV. Station 23. Knoll Deeps. 22 fathoms. 1 specimen.

Those from XCIV—45 were living and spawning freely upon *Gemellaria loricata* and *Hydrallmania falcata*.

#### **DOTO FRAGILIS**, Forbes.

Voyage XCI. Station 62. Lat.  $55^{\circ} 31' N$ . Long.  $0^{\circ} 19' W$ . 36 fathoms.  
3 specimens.

Voyage XCIV. Station 13. Inner Silver Pit. 43 fathoms. 1 specimen.

" " " 38. N. of Haisboro L.V. 14 fathoms. 1 specimen.

" XCVI. " 20. Lat.  $54^{\circ} 11' N$ . Long.  $1^{\circ} 40' E$ . 22 fathoms.  
1 specimen.

XVIII—62. The three specimens varied in length from .5 to 1 cm. One was upon *Tubularia larnyx*, and was much darker in colour than the other two, which were living and spawning on a species of *Halecium*.

#### **DENDRONOTUS ARBORESCENS** (Müller).

An enumeration of the stations where this species was obtained is scarcely necessary, as it occurred throughout the entire area explored. *Tubularia* would appear to be its general habitat, and it is most plentiful where *Tubularia* is likewise abundant. Three varieties are especially distinguishable.

(a) The body transparent or yellowish white, and the dentritic processes opaque white,

(b) a uniform, dull, semi-transparent pink,

(c) red, with darker red or red-brown blotches.

The last is the most general, and approximates well with the colonies of *Tubularia* on which it is usually found.

More rarely specimens are found with the body much spotted with white. All these varieties are mentioned by Alder and Hancock.

In one or two specimens a number of small wart-like projections were observable, scattered about the dorsal surface, particularly in the region between the rhinophores and the first pair of processes.

Several very young examples were examined, the smallest being 2 mm. in length; in this specimen the dentritic processes were simple, cylindrical, clavate, and incipiently branched in the first pair, which was much the largest; rhinophores plain and unbranched.

**TRITONIA HOMBERGI**, Cuvier.

This species was taken at a large number of stations.

It appears to be generally distributed, though seldom abundant; it was especially numerous where *Alcyonium digitatum* abounded. The colouration varied from white, yellowish white and grey, to light or very dark brown.

**TRITONIA PLEBEIA**, Johnst.

Like the last, this species was found wherever *Alcyonium digitatum* was at all abundant, and was generally to be found creeping about the base of a colony, or between the fleshy lobes. Considerable difference exists between the individuals from the white and those from the orange colonies of *Alcyonium*; those from the white being of a pale hue, and those from the orange a warm orange-brown with darker markings.

**ARCHIDORIS TESTUDINARIA** (A. & H.).

Voyage XCIII. Station 59. Lat. 55° 31' N. Long. 0° 19' W. 47 fathoms.  
1 specimen,

Length 45 mm.; general colour dark greenish yellow.

Branchiæ 9, with a dusky fringe Rhinophores short. Warts of two sizes, low and obtuse. Mantle ample, covering the sides and foot. The radula agreed with the figures given by Eliot (*Journ. Mar. Biol. Assoc.*, Vol. VII, 1906, Pl. XI, Fig. 2).

**ARCHIDORIS TUBERCULATA** (Cuvier).

East Hartlepool. Rocks about low tide mark. 1 specimen.

**ACANTHODORIS PILOSA** (Müller).

Very common wherever *Alcyonidium gelatinosum* is at all abundant, and is widely distributed.

Varying in size from a few mm. to nearly 5 cm. in length. Usually pure white, sometimes grey, and occasionally brown or dusky. Spawn abundant upon *Alcyonidium gelatinosum*.

**ACANTHODORIS SUBQUADRATA**, A. & H.

Voyage XCIII. Station 77. Off Holy Island. 32 fathoms. 1 specimen.

The single example obtained agreed exactly with the description and plate of Alder and Hancock.

**LAMELLIDORIS BILAMELLATA** (Linn.).

Voyage XCIV. Station 47. Lat.  $53^{\circ} 28\frac{3}{4}'$  N. Long.  $1^{\circ} 39'$  E.  $14\frac{1}{2}$  fathoms. 1 specimen.

Voyage XCIV. Station 52. Lat.  $53^{\circ} 30'$  N. Long.  $1^{\circ} 80\frac{1}{2}'$  E. 10 fathoms. 3 specimens.

Voyage XCV. Station 24. S. edge of the Coal Pit. 13 fathoms. Fairly common.

Voyage XCVI. Station 24. Lat.  $54^{\circ} 16'$  N. Long.  $1^{\circ} 14'$  E. 31 fathoms. Fairly common.

All the specimens but one were living among colonies of *Balanus*, upon stones of various sizes.

In colour they were perfectly normal, and agreed so well with their environment as to be extremely difficult to detect, and repeated searching of the colonies of *Balanus* was necessary to obtain all the specimens present.

The only marked variation was in the case of a specimen living upon a colony of *Alcyonium digitatum*, growing on a stone covered with *Balanus*, on which normally coloured specimens of *L. bilamellata* were living. This one specimen was of a very clear white, the only dark marks being two obscure and shadowy patches on the mantle, and a slight dusky shade on the branchiæ.

The largest specimens were not more than 16 mm. in length. It was observable that the branchiæ increased in number with age.

**GONIODORIS CASTANEA**, A. & H.

Voyage XCIV. Station 54. The Sole Pit. Lat.  $53^{\circ} 40'$  N. Long.  $1^{\circ} 28'$  E. 47 fathoms. 1 specimen.

Colour pinkish white, shaded with yellow. Rhinophores with yellowish laminae and yellow tips.

Cloak more or less warted all over, the central and transverse ridges strongly warted, a double row on the central one.

Jaws showed through the tissues of the head as a broad purple patch. Branchiæ 7, pinkish brown, with a few white spots, especially near the bases.

The upper part of the foot paler than the mantle and with smaller tubercles.

The specimen was living upon a colony of *Botryllus*, which was attached to a large tube of *Sabella pavonina*, and upon which *A. digitatum* was growing. The animal lay in a depression eaten into the colony, to which it approximated very closely in colouration.

**IDALIELLA ASPERSA** (A. & H.).

Voyage XCIII. Station 77. Off Holy Island. Lat.  $55^{\circ} 44'$  N. Long.  $1^{\circ} 40'$  W. 32 fathoms. 1 specimen.

In all respects resembled the specimen described by Alder and Hancock.

**ANCULA CRISTATA** (Alder).

Voyage XCIV. Station 2. N.E. of Sherringham Bank. 11 fathoms. 1 specimen.

Colour a very transparent white; the orange line on the keel very faint.

The linear appendages surrounding the branchiæ tipped with opaque white in about half their number, the rest with the normal yellow tip; they were very irregular in length.