

The Marine Fauna of the Cullercoats District

3d

ECHINODERMATA

by

J. B. Buchanan

Univ. Newcastle upon Tyne

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Phylum ECHINODERMATA

Class CRINOIDEA

Order ARTICULATA

ANTEDONIDAE

Antedon bifida (PENNANT)

Mortensen 1927, pp. 28-30, figs. 13-16.

One specimen in summer 1841 from "deep water Embleton Bay" (Embleton 1843, as *Comatula rosacea*): Off Redcar "deep water, rare" (Ferguson 1860, as *Comatula rosacea*): Three specimens in 1864 off Dunstanburgh Castle "from a rocky ledge in about twenty-five fathoms" (Hodge 1872, as *Antedon rosaceus*): One specimen off Seaham 30 fms. (Hodge 1872, as *A. rosaceus*): Two arms dredged 6 miles east of Longstone 1912 (Storror 1913).

Three specimens dredged 26 fms. Dunstanburgh Castle bearing W by N, 1925 (H.O.B.): One specimen, 12 miles E $\frac{1}{2}$ N River Tyne, from a trawler 1934 (H.O.B.): One specimen from a crab pot, 25 fms. E.S.E. Blyth, 1950 (J.A.T.).

Class ASTEROIDEA

Order PHANEROZONIA

ASTROPECTINIDAE

Astropecten irregularis (PENNANT)

Mortensen 1927, pp. 57-58, fig. 32.

Common on Northumberland coast (Embleton 1843, as *Asterias aurantiaca*): Off Seaham Harbour 6-25 fms. 1861 (Hodge 1863, as *A. aurantiaca*): "A considerable number" 25-30 fms., 70-80 miles east of Tynemouth (Brady 1863, as *A. aurantiaca*): Several from Berwick Bay 26-46 fms. and Durham coast 23-35 fms. 1863 (Hodge 1864, as *A. aurantiaca*): Frequent, Northumberland and Durham coast 1864 (Hodge 1867): "This species appears to be generally distributed along our coast . . . from moderately deep water (20-30 fms.)" (Hodge 1872).

Common on sand and muddy sand 15-35 fms. all along the coast (J.B.B.).

Luidia sarsi DÜBEN & KOREN

Mortensen 1927, p. 69, fig. 39b.

"Not very common", Berwick Bay (Johnston 1836, as *Asterias rubens*): Northumberland coast, "rare" (Embleton 1843, as *L. fragillissima*): Off Redcar "deep water, rare" (Ferguson 1860, as *L. fragillissima*): "This species occurred pretty plentifully . . . no specimens of the seven rayed form were met with"—25-30 fms., 70-80 miles east of Tynemouth 1862 (Brady 1863, as *L. savignii* Audouin): One specimen 46 fms. Berwick Bay; three specimens 35 fms. Durham coast 1863 (Hodge 1864): Northumberland and Durham coast "rather rare" 1864 (Hodge 1867): Occasionally taken by dredge at Seaham; common off Cullercoats 1866 from line fishing (Hodge 1872): Present S.E. of Crumstone 35 fms. 1912 (Storror 1913).

One specimen 29 fms. W. of Coquet 1925; one specimen 28 fms. E.N.E. Blyth 1937; one specimen 29 fms. $5\frac{1}{4}$ miles E. Souther point 1938 (H.O.B.): The species has been taken frequently but in small numbers 1960-65 in dredge and trawl hauls from 20-40 fms. in the area of Newbiggin and Druridge Bay (J.B.B.).

BREEDING—The larva as "*Bipinnaria asterigera*" found in the plankton in September and early October 1926, 1927, 1929 (Meek 1930); early Oct. 1931 (H.O.B.): Newly metamorphosed young with remnants of bipinnaria attached in Oct. 1932 (H.O.B.).

Luidia ciliaris (PHILIPPI)*

Mortensen 1927, p. 70, fig. 39a.

Present, Berwick Bay (Johnston 1836): The larval forms only 1926-27 (Meek 1930, as "*Bipinnaria asterigera*"): No recent records (J.B.B.).

* The only 20th century records of this species are of the larval forms found by Meek in 1926-27 (Meek 1930) as "*Bipinnaria asterigera*". His collections contained both *Luidia sarsi* with five-armed starfish rudiments and *Luidia ciliaris* with seven arms. *Luidia fragillissima* Forbes contained both *L. ciliaris* (Phillipi) and *L. sarsi* Düben & Koren which were considered to be seven and five-armed varieties. Consequently, it is impossible to state with certainty which species is referred to in records before 1864 if the variety has not been noted. According to Forbes (1841) both the seven-armed and the five-armed species were collected by Johnston from Berwick Bay and indeed Johnston (1836) figures the seven-armed *Luidia ciliaris*, but under the name of *Asterias rubens*. This is the only apparently authentic record of the adult in this area.

Hippasteria phrygiana (PARELIUS)

Mortensen 1927, pp. 88-89, fig. 50.

One specimen "in bay eight miles south of Embleton" (Embleton 1843, as *Goniaster equestris*): "Large basketfull" from the Northumberland Nephrops ground, 40 fms. 1858 (Howse 1863, as *Goniaster equestris*): Frequent from "trawling boats, fishing in deep water far out to sea" (Hodge 1872, as *Goniaster phrygianus*): Common E. of Farne Islands 55°37'N, 1°18'W-1°2'W and 55°28'N-34'N, 0°36'W-0°50'W (S. S. Huxley 1909): Present 40 fms. S.E. Coquet (Storror 1912).

Taken in small numbers from muddy grounds 10-15 miles E. of Blyth.

PORANIIDAE

Porania pulvillus (O. F. MÜLLER)

Mortensen 1927, pp. 90-92, fig. 51.

One specimen, trawl, 24 miles N.E. by N. of Tyne 1939 (H.O.B.).

Order SPINULOSA

ASTERINIDAE

Anseropoda placenta (PENNANT)Mortensen 1927, pp. 100-101, fig. 57 (as *Palmipes membranaceus*),

One specimen, E. of Farne Islands, collected on trawler, 1933 (H.O.B.).

SOLASTERIDAE

Solaster papposus (L.)

Mortensen 1927, pp. 112-114, fig. 66(1) and 67.

Northumberland coast "common" (Embleton 1843): Off Redcar, "common" (Ferguson 1860): "Two or three small specimens from shallow water near Holy Island" 1862 (Brady 1863): Two from 26 fms. Berwick Bay 1863 (Hodge 1864): Frequent, Northumberland and Durham coast 1864 (Hodge 1867): "Often taken by dredge on the Durham coast 10-25 fms."; "Frequent between tide marks" on rocky shores (Hodge 1872).

Common in trawl hauls 1960-65 from southern half of Northumberland coast 20-40 fms. (J.B.B.); small specimens commonly on rock shores.

Solaster endeca (L.)

Mortensen 1927, pp.115-116, fig.68.

Northumberland coast "common" (Embleton 1843): Off Redcar "deep water and occasionally Salt Scar" (Ferguson 1860): Durham coast "frequent" 1864 (Hodge 1867): Rather rare off Seaham": Frequent from fishing lines off Cullercoats (Hodge 1872).

Common 20-30 fms. south Northumberland coast 1960-65 (J.B.B.).

BREEDING—Specimens have been observed to spawn in aquarium tank in May and June.

ECHINASTERIDAE

Henricia sanguinolenta (O. F. MÜLLER)*

Mortensen 1927, pp.118-120, fig.70.

Northumberland coast "common" (Embleton 1843 as *Cribrella oculata*): Off Redcar, West Scar Head (Ferguson 1860, as *C. oculata*): One specimen 26 fms. Berwick Bay 1863 (Hodge 1864, as *Echinaster oculata*): "A generally distributed species", between tide marks to 6 fms. Durham coast but deeper off Northumberland (Hodge 1872, as *Cribrella sanguinolenta*).

Common intertidally on rock shores but also found off Northumberland associated with the epifauna from offshore gravel 20-30 fms. (J.B.B.).

BREEDING—A brood protecting species. Five specimens out of twelve 12 Feb. 1933 low water St. Mary's were brooding eggs. The smallest "brooder" R=1.5 cm. Three out of twelve brooding same locality 28 Feb. 1933. Eggs extruded in aquarium tanks 30 Dec. 1933 and brooded till 10 Feb. 1934 (H.O.B.).

Order FORCIPULATA

STICHASTERIDAE

Stichastrella rosea (O. F. MÜLLER)

Mortensen 1927, p.136, fig.77.

"One fine specimen was obtained 25-30 fms. off Coquet Island" 1862 (Brady 1863, as *Uraster rosea*): "A single specimen . . . taken in Beadnell Bay, some years ago, by Mr. Embleton" (Hodge 1872, as *Stichaster roseus*).

No recent records (J.B.B.).

* In a recent paper, Rasmussen (1965) has made a case for re-adopting the three species of *Henricia* described by O. F. Müller (1776) whereas several authors are of the opinion that only one species—*Henricia sanguinolenta*—actually exists. If Rasmussen's contentions are accepted, both *Henricia perforata* (O. F. Müller) and *Henricia sanguinolenta* (O. F. Müller) occur on our coasts, although no attempt has been made to distinguish the two in the present list.

Asterias rubens L.

Mortensen 1927, pp. 139-141, fig. 79.

The early records are as *Uraster rubens* and *Uraster violacea*, which were regarded as two distinct species (Embleton 1863; Howse 1847; Ferguson 1860; Brady 1863; Hodge 1864), later as *Asterias rubens* and *Asterias violacea* (Hodge 1872), and finally combined as *Asterias rubens* (Meek & Storrow 1912; Storrow 1912).

Common all along the coast, intertidal to 50 fms. on gravel, sand and muddy sand (J.B.B.).

BREEDING—Successful artificial fertilisations in March and April.

Leptasterias mulleri (M. Sars)

Mortensen 1927, pp. 141-143, figs. 80 and 81(1)

(According to Norman (1865) the species recorded by Brady (1863) and Hodge (1864) as *Uraster glacialis* was in fact *Leptasterias mulleri*).

A few specimens 15 fms. 10 miles east of Tynemouth 1862 (Brady 1863, as *Uraster glacialis*): Three specimens 35 fms. Durham coast 1863 (Hodge 1864, as *Uraster glacialis*): Four specimens dredged off Holy Island, 30 fms. 1906 (Tesché 1906, as *Asterias mulleri*).

No recent records (J.B.B.).

[Marthasterias glacialis (L.)]

Mortensen 1927, pp. 143-145, fig. 82.

According to Mortensen (1927) this species is not recorded from the British North Sea coasts. The record of Tesché 1906 from 30 fms. off Holy Island refers to a single juvenile specimen and should be regarded with reservation until confirmatory material is obtained.

Class OPHIUROIDEA

Order OPHIURAE

OPHIOTRICHIDAE

Ophiothrix fragilis (Abildgaard)

Mortensen 1927, pp. 174-176, fig. 98.

Northumberland coast, "common" (Embleton 1843, as *Ophiocoma rosula*): Off Redcar "common" (Ferguson 1860, as *O. rosula*): Off Seaham Harbour 25 fms. 1861 (Hodge 1863, as *O. rosula*): "Common", Farne Islands 13-17 fms.; Berwick Bay 26-46 fms.; Durham coast

23-35 fms. 1863 (Hodge 1864, as *O. rosula*): "It is very abundant on the rocky portions of our coast . . . low water to 35 fms. and even deeper": On Durham coast associated with *Alcyonium digitatum* 20-25 fms. (Hodge 1872).

Common intertidally on stony beaches and on stony or gravelly grounds offshore 10-40 fms. Particularly common in the Holy Island channels, L.W.S.T. (J.B.B.).

OPHIOCOMIDAE

Ophiocomina nigra (ABILDGAARD)

Mortensen 1927, pp. 178-179, fig. 83 and 100.

Northumberland coast, "common" (Embleton 1843, as *Ophiocoma granulata*): Off Redcar, "rare" (Ferguson 1860, as *O. granulata*): Several from 13 fms. Farne Islands 1863 (Hodge 1864, as *O. granulata*): "Partial in distribution" 1864 (Hodge 1867, as *Ophiocoma nigra*): Very common off Dunstanburgh on rough ground "about three miles off the castle" (Hodge 1872, as *Ophiocoma nigra*):

Abundant off the Farne Islands and in the region of Seahouses—Dunstanburgh 1929-39 (H.O.B.): Abundant in same region 1962-63 (J.B.B.).

OPHIACTIDAE

Ophiactis balli (THOMPSON)

Mortensen 1927, pp. 200-202, fig. 112.

One specimen "from a mass of corallines and stones from deep water in Embleton Bay 1842 (Embleton 1843, as *Ophiocoma goodsiri*): Several "from recesses in stones 7-8 miles east of Tynemouth"; "Some off Berwick" 1862 (Brady 1863, as *O. goodsiri*): "Frequent", Farne Islands 13-17 fms.; Berwick Bay 26-46 fms.; Durham coast 23-35 fms. 1863 (Hodge 1864, as *O. goodsiri*): "Very frequent", Northumberland and Durham coast 1865 (Hodge 1867, as *Amphiura balli*): "Very common all along our coast in 10-20 fms., usually inhabiting the crevices and holes of stones . . . : On the Durham coast, the perforated magnesian limestone from deep water contains large numbers" (Hodge 1872, as *A. balli*): Present, 8 miles E. by S. Cullercoats, 32 fms. 1911 (Meek & Storrow 1912).

Two specimens in *Filograna* sp. S.E. of Farne Islands 1933 (H.O.B.): Very common in magnesian limestone and clinker 20-30 fms. off Druridge Bay 1960-65 (J.B.B.).

Ophiopholis aculeata (L.)

Mortensen 1927, pp. 204-206, fig. 116.

Northumberland coast, "common" (Embleton 1843, as *Ophiocoma bellis*): Off Redcar, "rare" (Ferguson 1860, as *Ophiocoma bellis*): Farne Islands 13-17 fms.; Berwick Bay 26-46 fms.; Durham coast 23-35 fms.—"One or two from each locality" 1864 (Hodge 1867, as *O. bellis*): "Off Dunstanburgh 25 fms., frequent": "Its usual habitat . . . 15-30 fms. on a rough bottom . . . associated with *Ophiothrix fragilis* and *Amphiura ballii* . . ." (Hodge 1872): Present, 8 miles E. by S. Cullercoats, 32 fms. 1911 (Meek & Storrow 1912).

One specimen on clinker 18 fms. 2 miles E. St. Mary's Island; 3 specimens on clinker 20 fms. 2 miles E. Marsden Rock; several on clinker 2 miles E. by S. of Souter Point 1932 (H.O.B.): Nine specimens, S.E. Farne Islands in colony of *Filograna* 1933 (H.O.B.): Two specimens, under whinstone boulders L.W.S.T., south end of Embleton Bay 1948 (H.O.B.): Common, 20-30 fms. associated with stones and gravel 1960-65 (J.B.B.).

AMPHIURIDAE

Amphiura chiajei FORBES.

Mortensen 1927, pp. 212-213, figs. 117 and 120 (1 and 2).

Two or three specimens, 25-30 fms. off Seaham 1862 (Hodge 1864) Northumberland and Durham coasts, "rather rare" 1864 (Hodge 1867).

Common, 30-50 fms., 8-20 miles offshore Northumberland and Durham coast 1960-65 (J.B.B.): Present at a density of 13-15 per m², 10 miles E. of Blyth 1961-63 (J.B.B.).

BREEDING—Successful fertilisation 25 Sep. 1933 (H.O.B.).

Amphiura filiformis (O. F. MÜLLER)

Mortensen 1927, pp. 214-215, fig. 120 (3-5).

Present 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863, as *Ophiocoma filiformis*): Berwick Bay and Durham coast, "several from 35-46 fms." 1863 (Hodge 1864, as *Ophiocoma filiformis*): "Frequent", Northumberland and Durham coasts 1864 (Hodge 1867): "This species is generally distributed along our coast, and in considerable numbers" (Hodge 1872).

Very common, up to 400 per m², on sand and muddy sand from 20-40 fms. along most of the coast (J.B.B.).

BREEDING—July.

Acrocnida brachiata (MONTAGU)

Mortensen 1927, pp. 218-219, fig. 123.

Six specimens, from muddy sand in 20 fms., 2 miles E. of Tyne-mouth 1962; no specimens found 1963-65 (J.B.B.).

Amphipholis squamata (DELLE CHIAJE)

Mortensen 1927, pp. 221-22, fig. 125. (1-2).

Northumberland coast, "rare" (Embleton 1843, as *Ophiocoma neglecta*): "Common between tide marks, under stones . . . also occurred from 20-30 fms." (Hodge 1872, as *Amphiura elegans*).

Abundant intertidally beneath stones and in *Cladophora* etc. in rock pools along the coast in most localities (H.O.B.).

OPHIOLEPIDAE

Ophiura texturata LAMARCK

Mortensen 1927, pp. 236-238, fig. 128 (3-4).

Northumberland coast, "frequent" (Embleton 1843): Taken from 30 fms., 30 miles off the south Northumberland coast (King 1846): Two or three specimens from sandy bottom in 60 fms., 50 miles off Durham coast 1846 (Howse 1847): Taken, 7 miles off Seaham Harbour in 25 fms. 1861 (Hodge 1863): Several from Berwick Bay 26-40 fms. and Durham coast 23-35 fms. 1863 (Hodge 1864): "Frequent in deep water", Northumberland coast (Hodge 1867, as *O. lacertosa*): "Frequently brought up by dredge . . . usually from sandy bottom. Immature forms in shallow water 6-15 fms . . . mature forms in deep water 20-46 fms." (Hodge 1872, as *Ophiura lacertosa*): Common, 55°40'—44°N, 0°18'W, 35 fms., sand 1905 (S. S. Huxley).

Single specimens from 3 miles E. of Blyth 1921; 29 fms. off Newbiggin 1934; 3¼ miles E. Souter Point in 24 fms. 1938 (H.O.B.): Twenty-eight specimens from beam trawl Cambois Bay in 20 fms. 1948 (J.A.T.): Very common in Cambois Bay, Newbiggin and Druridge Bay 20-30 fms. 1960-65; several juvenile specimens from intertidal sand Newton Haven 1965 (J.B.B.).

Ophiura albida FORBES

Mortensen 1927, pp. 239-240, fig. 128 (5-6).

Northumberland coast, "not common" (Embleton 1843): Present 7 miles off Seaham Harbour in 25 fms. 1861 (Hodge 1863): Several small specimens from Berwick Bay 40-55 fms. 1862 (Brady 1863): Common, Farne Islands 13-17 fms.; Berwick Bay 26-46 fms.; Durham coast 23-35 fms. 1863 (Hodge 1864): "Very common", Northumber-

land and Durham coast dredging 1864 (Hodge 1867): "It is by far the commonest of the sand stars, 6-20 fms." (Hodge 1872).

The species has been recorded by the laboratory many times 1911-65 mainly from muddy sand 20-30 fms. from the Durham and south Northumberland coast: It is particularly abundant in the muddy sand at 20 fms. all round Newbiggin Point (J.B.B.).

Ophiura robusta AYRES

Mortensen 1927, pp. 242-243, fig. 131 (1-2).

"Rare, a few specimens from 46 fms." Berwick Bay 1863; also taken at Cullercoats and at Seaham (Hodge 1864, as *Ophiura squamosa*)

Twenty-two specimens from a colony of *Filograna* taken S.E. of the Farne Islands 1933 (H.O.B.): Locally common in association with *Haploops tubicola*, 20-25 miles E. of Blyth, 35-40 fms., 40-50 per m², (J.B.B.): Two specimens by grab 2 miles E. Crumstone, 25 fms. (J.B.B.).

Ophiura affinis LÜTKEN

Mortensen 1927, pp. 244-245, fig. 132.

Seaham on a sandy bottom 6-25 fms. 1862 (Hodge 1863, as *Ophiura normani*): Frequent, Farne Islands 13-17 fms. and Berwick Bay 24-46 fms. 1863 (Hodge 1864): Commonly dredged, Northumberland and Durham coast 1864 (Hodge 1867): "Durham coast, 6-25 fms., common" (Hodge 1872).

One specimen 19 miles E. of Alnmouth, 45 fms. and one specimen 22 miles E. of Tyne, 35 fms. 1961 (J.B.B.): This species although apparently common in the mid-19th century must now be considered rare (J.B.B.).

Class ECHINOIDEA

Order ECHINOIDA

ECHINIDAE

Psammechinus miliaris (GMELIN)

Mortensen 1927, pp. 294-295, fig. 166.

Present at Redcar, West Scar (Ferguson 1860, as *Echinus miliaris*): "A few specimens . . . off Coquet Island" 1862 (Brady 1863, as *Echinus miliaris*): "Several" from 24-46 fms. Berwick Bay 1863 (Hodge 1864, as *Echinus miliaris*): Northumberland coast "common" 1862-64; Durham coast "common" 1864 (Hodge 1867, as *Echinus miliaris*): "Frequently taken by dredge . . . Northumberland and Durham coast (Hodge 1872, as *Echinus miliaris*):

Two specimens between Inner Farnes and Bamburgh castle 1912 (H.O.B.): Two specimens N. side Blyth Harbour entrance in Laminaria zone 1946 (H.O.B.): Between tide-marks, a few can generally be found under stones L.W.S.T., St. Mary's, Blyth Harbour, Boulmer; but less common elsewhere (H.O.B.): Common on offshore gravel 20-30 fms. south Northumberland coast (J.B.B.).

Echinus esculentus L.*

Mortensen 1927, pp. 297-299, fig. 168.

"Taken by lobster fishermen off Newton" (Wallis 1769, as "The great subglobose Echinus"): Northumberland coast "very common" (Embleton 1843, as *Echinus sphaera*): Present at Redcar, West Scar (Ferguson 1860, as *E. sphaera*): Several young specimens in "Laminaria Zone off Holy Island (Brady 1863, as *E. sphaera*): "Very common in 13 fms.", Farne Islands and Berwick Bay 1863 (Hodge 1864, as *E. sphaera*): Common, Northumberland coast 1862-1864 (Hodge 1867): Present, N. of Pinnacles and S.E. of Holy Island 14 fms. 1911 (Meek & Storrow 1912). "Plentiful on the local rocks during July" 1920 (Storrow 1921).

Very common intertidally St. Mary's Island in spring and early summer, less common at Cullercoats; Rare intertidally, Durham coast and north Northumberland coast (J.B.B.): Very common in shallow water 5-15 fms. on hard ground all along the coast; rarer in deeper water (J.B.B.).

BREEDING—Successful artificial fertilisation usually possible in May.

* [Two distinct varieties of Echinus are found on the Northumberland coast:—The first occurs from intertidally to a depth of 15 fms. It has a thick low test, robust spines and the colouration is in shades of purple and blue. The second variety occurs around the rock edges 20-25 fms. at the Farne Islands, off Hauxley, Newbiggin and St. Mary's Island. It has a thin light test which is high compared with the diameter, slender spines and the colouration is in shades of brick red, green and yellow (J.B.B.).]

Depth (fms)	Height Diameter	Weight (g.) Volume (ml.)	Colour	Spines
20-25	0.8	0.15	Brick-red/green-yellow	Slender; colourless
0-15	0.68	0.18	Purple-blue	Robust; purple-tipped

Echinus acutus LAMARCK

Mortensen 1927, pp. 300-302, fig. 170.

East of the Farne Islands 55°37'N 1°18'W 1904 (S. S. Huxley)

No recent records (J.B.B.).

STRONGYLOCENTROTIDAE

Strongylocentrotus dröbachiensis (O. F. MÜLLER)

Mortensen 1927, pp. 313-314, fig. 181.

"A large number" dredged inside the Farne Islands 13 fms. 1863 (Hodge 1864, as *Echinus neglectus*): Large numbers, "as many as 41 specimens being taken in one haul", between Inner Farne and Bambergh Castle 1912 (Storror 1913).

Four specimens from same locality 11 fms. 1912 (H.O.B.): Three specimens same locality 1962 (J.B.B.).

Order CLYPEASTROIDEA

FIBULARIIDAE

Echinocyamus pusillus (O. F. MÜLLER)

Mortensen 1927, pp. 316-317, fig. 182.

Northumberland coast, "frequent" (Embleton 1843): Present, 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863): Abundant 25-30 fms. 1862 (Brady 1863): "Several from 26-46 fms. Berwick Bay and Durham coast 23-35 fms. 1863 (Hodge 1864): "Common from deep water all along our coast (Hodge 1872): Single specimens, 55°27'N 0°16'W, 35 fms. (Davis 1925).

Common, 2½ miles E. of Dunstanburgh Castle 1912; common in sand "just off rock edges, Cullercoats" (H.O.B.): Common in sand and fine gravel 25-30 fms. all along Northumberland coast (J.B.B.).

Order SPATANGOIDEA

SPATANGIDAE

Spatangus purpureus O. F. MÜLLER

Mortensen 1927, pp. 328-329, fig. 190.

One specimen, Northumberland coast, 1842 (Embleton 1843): Present 30 miles off S. Northumberland coast 1845 (King 1846): Abundant on sandy bottom 60 fms. 50 miles E. of the Durham coast 1846 (Howse 1847): Present 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863): "Very abundant" 25-35 fms. 50-80 miles E. of Tyne-mouth 1862 (Brady 1863): "Several" from 35-46 fms. Berwick Bay and Durham coast 1863 (Hodge 1867): " . . . great quantity got dead at Alnmouth Bay, 7 Jul., in every haul of the trawl, and again in much

less quantity at Cambois Bay, on 14 Jul., (Meek 1897): Common, E. of Farnes 55°28'N—34°N 0°W—0°50'W 1904 (S. S. Huxley): One specimen 55°29'N 0°7'W 42 fms. 1923 (Davis 1925).

One specimen 3 miles E. of Dunstanburgh Castle, 1912; one specimen 29½ fms. 7 miles E. of Blyth, 1913; one specimen, N.E. Bank from trawler 1935 (H.O.B.): Several specimens, 1960-65 from fine gravel and sand all along the coast 25-35 fms., but more common in the northern parts of the Northumberland coast (J.B.B.).

Echinocardium cordatum (PENNANT)

Mortensen 1927, pp. 331-334, fig. 194 (1-2).

Many washed up dead specimens on the coast S. of Alne river (Wallis 1769, as "*Echinus marinus deppressus cordatus*"): "Very plentiful", Northumberland coast (Embleton 1843, as *Amphidotus cordatus*): Present, 30 miles off S. Northumberland coast 30 fms. 1845 (King 1845, as *A. cordatus*): Present in "deep water" off Redcar (Ferguson 1860, as *A. cordatus*): Present 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863, as *A. cordatus*): Two specimens, Durham coast 23-35 fms. 1863 (Hodge 1864, as *A. cordatus*): Very common "on some sandy portions of our coast" (Hodge 1872): Fifty small specimens, 2 miles off Marsden 10 fms. (Brady 1872).

Several specimens from mouth of the Wansbeck river 1933 (H.O.B.); One specimen at mouth of River Waren 1933 (H.O.B.); Four specimens N.E. St. Mary's Island 10 fms. 1935 (H.O.B.); Three specimens from Blyth sands 1936 (H.O.B.); Abundant, Embleton Bay 1947 (H.O.B.): Common, Embleton Bay 1958-65 (J.B.B.); Common 20-30 fms. in muddy sand off the south Northumberland coast, up to 30 per m², but patchy in distribution 1958-65 (J.B.B.).

Echinocardium flavescens (O. F. MÜLLER)

Mortensen 1927, pp. 334-335, fig. 194 (3).

Present, 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863, as *Amphidotus roseus*): "In considerable numbers" 25-35 fms. 50-80 miles off Tynemouth 1862 (Brady 1863, as *A. roseus*): "Several" from 35-46 fms. Berwick Bay and Durham coast 1863 (Hodge 1864, as *A. roseus*): "Very common" Northumberland and Durham coast 1864 (Hodge 1867, as *E. ovatum*): Common in dredgings from 15-35 fms. (Hodge 1872, as *E. ovatum*): Present 8 miles E. by S. of Cullercoats 32 fms. 1911 (Meek & Storrow 1912): Nine specimens 55°25'N 0°26'W 36 fms. (Davis 1925).

Commonly replaces *E. cordatum* in deeper water all along the coast 30-45 fms. (J.B.B.).

Echinocardium pennatifidum NORMAN

Mortensen 1927, pp. 335-337, fig. 198.

One specimen from Berwick Bay 1864 (Hodge 1867):

There are no other authentic records of this species from the Northumberland and Durham coasts. The records of Meek (1902) where "several" specimens were dredged in Cambois Bay, Druridge Bay and Alnmouth Bay must be regarded with reservation and may represent wrongly identified *E. flavescens* which is moderately common in these areas (J.B.B.).

Brissopsis lyrifera (FORBES)

Mortensen 1927, pp. 338-340, fig. 200.

Present, 7 miles off Seaham Harbour 25 fms. 1861 (Hodge 1863, as *Brissus lyrifer*): "Pretty plentiful" 25-35 fms. 50-80 miles off Tyne mouth 1862 (Brady 1863, as *Brissus lyrifer*): "Several" from 35-46 fms. Berwick Bay and Durham coast 1863 (Hodge 1864): "Frequent in deep water" Northumberland and Durham coast 1864 (Hodge 1867): Abundant E. of Farne Islands 55°37' N 1°18' W and common 55°28'—34°N 0° 36'—0°50' W 1904 (S. S. Huxley): One specimen 55°16' N 1° 3' W 49 fms. (Davis 1925).

Eleven specimens 10 miles E. River Tyne 37 fms. 1935 (H.O.B.): Common in sandy mud 35-50 fms. all along the coast (J.B.B.).

Class HOLOTHURIOIDEA

Order DENDROCHIROTA

CUCUMARIIDAE

Cucumaria elongata DÜBEN & KOREN

Mortensen 1927, pp. 399-400, fig. 237 (2).

Two specimens from fishing boats working in deep water 1857 (Alder 1860): "Two or three" from 35 fms. Durham coast 1863 (Hodge 1864): "Rather rare" Northumberland coast 1864 (Hodge 1867): . . . a few specimens when dredging off Holy Island and again off Seaham (Hodge 1872).

Very common in mud and muddy sand 15-25 fms. all along the coast but patchy in distribution; may reach densities greater than 30 per m² (J.B.B.).

Cucumaria lactea (FORBES)

Mortensen 1927, pp. 402-403, figs. 237(1) and 241(3).

One specimen, Northumberland coast, 1862 (Brady 1863, as *Ocnus lacteus*): "Rather rare", Northumberland coast, 1864 (Hodge 1867): "Two or three" small specimens from Seaham (Hodge 1872): Present, 8 miles E. by S. of Cullercoats 32 fms. 1911 (Meek & Storrow 1912).

Five specimens in Filograna from S.E. of Farne Islands 1933 (H.O.B.): One specimen $5\frac{1}{2}$ miles E. Cullercoats 28 fms. 1960; found commonly associated with hydroids and other epifaunistic growths on rock or gravel bottom (J.B.B.).

Thyone fusus (O. F. MÜLLER)

Mortensen 1927, pp. 406-407, fig. 244.

Several small specimens, Northumberland coast, 1862 (Brady 1863): Two specimens from Durham coast 35 fms. 1863 (Hodge 1864): "Rare" Northumberland coast, 1864 (Hodge 1867, as *Thyone flexus*): "Frequent", Northumberland and Durham coasts 1864 (Hodge 1867).

Common on stones and gravelly sand 20-40 fms. (J.B.B.).

Thyone raphanus DÜBEN & KOREN

Mortensen 1927, pp. 407-408, fig. 242 (2).

One specimen from 46 fms. Berwick Bay and one from 35 fms. Durham coast 1863 (Hodge 1864): "Rather rare", Northumberland coast 1864 (Hodge 1867).

Common in cleaner sand and gravelly sand 20-40 fms. all along the Northumberland coast (J.B.B.).

Thyonidium pellucidum (FLEMING)

Mortensen 1927, pp. 411-412, fig. 250.

"Several specimens . . . off Berwick, adhering to stones and to the surface of dead shells" 1862 (Brady 1863): A single specimen from Northumberland coast 1864 (Hodge 1872, as *T. hyalinum*).

No recent records (J.B.B.).

PSOLIDAE

Psolus phantapus (STRUSSENFELT)

Mortensen 1927, pp. 415-417, fig. 251.

"A few young specimens", 50 fms. 60 miles E. of Sunderland 1845 (King 1846): One small specimen 25-30 fms. Berwick Bay 1862 (Brady 1863).

One large specimen 40 miles E. $\frac{1}{2}$ N. of Tyne 1934; three specimens North-east Bank 1935 (H.O.B.).

Order APODA

SYNAPTIDAE

Leptosynapta inhaerens (O. F. MÜLLER)

Mortensen 1927, pp. 427-429, fig. 261.

Two specimens dug at L.W.S.T. south end of Newton Haven 1947 ; Ten specimens dug at L.W.S.T. behind Emblestone 1948 ; common in gravelly clay on the beaches in front and on either side of Holy Island Castle (H.O.B.) : One specimen, 32 fms. 55°15'N 1° 18'W sandy gravel 1964 (J.B.B.).

Leptosynapta bergensis (OSTERGRÉN)

Mortensen 1927, pp. 429-430, fig. 262 (1).

A fragment from 14 miles E.N.E. Tyne 1936 (H.O.B.) : Very common in muddy sand and mud throughout the area 1958-65 (J.B.B.).

INITIALS

H.O.B.	H. O. Bull
J.A.T.	J. A. Thompson
J.B.B.	J. B. Buchanan

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