



<http://www.biodiversitylibrary.org/>

**Transactions of the Natural History Society of  
Northumberland, Durham, and Newcastle-upon-Tyne.**

Newcastle-upon-Tyne [et al.]F. & W. Dodsworth [et al.]1865/67-1973.  
<http://www.biodiversitylibrary.org/bibliography/51646>

**v.1 (1865-1867):** <http://www.biodiversitylibrary.org/item/114192>

Article/Chapter Title: Report on the Crustacea. In: Deep Sea Dredgings  
on the Coast of Northumberland and Durham, 1862-1864

Author(s): Norman, A. M.

Subject(s): Ostracoda

Page(s): Page 12, Page 13, Page 14, Page 15, Page 16, Page 17, Page  
18, Page 19, Page 20, Page 21, Page 22, Page 23, Page 24, Page 25,  
Page 26, Page 27, Page 28, Page 29

Contributed by: Harvard University, Museum of Comparative Zoology,  
Ernst Mayr Library

Sponsored by: Harvard University, Museum of Comparative Zoology,  
Ernst Mayr Library

This page intentionally left blank.

**Report on the Crustacea, by the Rev. Alfred Merle Norman, M.A.**

The Crustacea taken during the Association dredging of the summer of 1864 number 157 species, including the Pycnogonoidea reported on by Mr. Hodge. Among them are two Amphipods and several Ostracoda which are new to science, and will be presently described. The following also deserve especial notice as either new to our local Fauna, or interesting on other accounts.

*Pagurus ferrugineus*, Norman. (Ann. Nat. Hist. Oct. 1861. Pl. XIII, figs. 1-3.) Two examples of this recently distinguished species were procured three miles off Dunstanborough, associated on the same ground with *Pagurus Bernhardus*, *P. pubescens*, *P. laevis*, and *P. Hyndmanni*. This species has now been dredged by me in the four most extreme parts of the British coast, namely, at Shetland, Guernsey, in the Firth of Clyde, and off the Northumberland coast. *Pagurus ferrugineus* would therefore seem to be distributed all around our shores, but has probably hitherto generally escaped attention on account of its small size, and the mistaken assumption that it was the young of some other species.

*Crangon fasciatus*, Risso. A single specimen of this shrimp, which had not been previously met with on any part of the eastern coast, was dredged in shallow water within the Fern Islands.

Some rare Amphipoda were for the first time taken in our district, namely, *Anonyx Holböllii*, Kroyer; *Monoculodes carinatus*, Bate; *Westwoodilla cacula*, Bate; and *Protomedeia Whitei*, Bate; and two species were also found which belong to genera previously unknown in Great Britain, and one of which is new to science. It may be thus characterized—

FAM. GAMMARIDÆ, Norman. (Subfam. Gammarides B. & W.)

GENUS. CHEIROCRATUS,\* n. gen.

Superior antennæ shorter than inferior, having a secondary appendage. First gnathopods not subchelate. Second gnathopods

\* χείρ and κρατέω; strong in the hand. The new Amphipoda will also be described in the Brit. Assoc. Report for 1864.

subchelate, very large. Telson double. Last pair of pereopods very long.

*Cheirocratus mantis*, n. sp. Pl. VII, figs. 14, 15.

*Eyes* of moderate size, irregularly round, placed between the origins of the two pairs of antennæ. *Superior antennæ* about equal to the first four segments of the body in length; first joint much stouter than, but not quite so long as, the second; third joint half the length of the second; filament of about twenty articulations and of nearly the same length as the peduncle; secondary appendage two-jointed, and about equal in length to the first two articulations of the filament. *Inferior antennæ* imperfect in the type specimen, very large and strongly developed, the end of the penultimate joint of the peduncle reaching to half the length of the filament of the superior antennæ; the olfactory denticle is large, and there is a small spine at the inferior extremity of the third joint. *First gnathopods* not subchelate, having the propodos 3-4 times as long as broad, and the dactylus scarcely curved, broad, with numerous short spines fringing the posterior margin. *Second gnathopods* having a large basos which becomes gradually wider towards the lower extremity, fringed anteriorly with very long simple hairs, and furnished with a few very minute and short hairs on the hinder margin; carpus triangular, not produced above or below, but widening towards the extremity to receive the very large propodos; propodos equalling in length the first three segments of the body, about two and a half times as long as broad, widest at the commencement of the palm, which is very oblique, half the length of the propodos, and furnished with three large teeth; dactylus strong, much curved, inner margin simple, equal to rather more than half the palm in length (reaching beyond the second tooth). Last three pairs of *pereipods* having the basos twice as long as broad, anteriorly beset with strong, spine-like hairs, and posteriorly with very minute slender hairs, each of which is set in a little notch. Last *pereipods* very long, with the propodos greatly developed and much flattened. First *uropods* extending considerably beyond the second; those of the last pair imperfect in

the type specimen. *Telson* double. *Pleon* having the inferior margins of the second and third segments furnished with hairs and produced posteriorly into a spine-like point; the dorsal margin of the fourth segment is produced into two or three spines, between which is a long cilium; and the dorsal margin of the fifth segment has two spines placed close together on either side of the central line. *Coxæ* shallow.

A single specimen dredged in deep water off Holy Island, July, 1864.

FAM. COROPHIIDÆ. *Bate and Westwood.*

GENUS. UNCIOLA, *Say.*

Antennæ of both pairs with multiarticulate flagellæ; the superior pair furnished with a minute secondary appendage. First gnathopods subchelate; second not subchelate. Telson squamate, simple. Last uropods double-branched, tipped with hairs, inner branch minute, scarcely as long as the peduncle of two preceding pairs, which are two-branched, and have their truncate extremities armed with strong spines.

*Unciola planipes*, n. sp. Pl. VII, figs. 9-11.

*Superior antennæ* having the first joint of the peduncle not so long as the second, but slightly longer than the third; filament (about seventeen jointed) equal in length to the peduncle; secondary appendage very minute, consisting of a single joint, which is not longer than the first joint of the filament. *Inferior antennæ* having the peduncle equal in length to that of the superior, but the filament not more than half the length of that of the preceding organs; third joint of peduncle much shorter than fourth, which equals the fifth. *Head* furnished with a rostrum. First *gnathopods* subchelate, beset on both margins with tufts of simple hairs; propodos slightly longer than the carpus, subovate with a very oblique concave palm extending about half its length, and furnished with two tubercular processes; dactylus simple, gently curved. Second *gnathopods* not subchelate, having the carpus and propodos remarkably flattened, and fringed with thick sets of hairs; dactylus small, taking its origin from the

inferior half of the truncated apex of the propodos, immersed in a dense tuft of hairs which spring from the upper portions of the apex, and from the sides of the propodos. *Pereiopods* having large falciform dactyli, which are furnished on their inner side with simple hairs. *Body* slender; basos of all the legs very small; posterior angles of first three abdominal segments produced backwards into conspicuous teeth. *Telson* squamiform. *Uropods* of first and second pair having their branches margined and terminated by large spines; uropods of last pair two-branched, small, scarcely reaching beyond telson, or the basal joint of preceding pair; outer branch tipped with long simple hairs; inner branch terminating in a single spine. Length a third of an inch.

A single specimen was dredged in July, 1864, off Holy Island; but the species was procured by me more abundantly in about seven fathoms water at Balta Sound, Shetland, in June, 1863. *Unciola planipes* is apparently nearly allied to *Unciola leucopes* of Kröyer, which is a native of South Greenland.

## ORDER. OSTRACODA.

### FAM. CYPRIDÆ.

#### GENUS. CYTHERE, Müller.

*Cythere debilis*. Jones. Pl. V, figs. 5-8.

*Cytheridea debilis*, Jones, Tertiary Entomostraca (Palæon. Soc. Trans.) p. 43. Pl. VI, fig. 13.

*Cythere Bradii*, Norman, M.S. Brit. Assoc. Report for 1864.

Oblong-ovate, of nearly equal height throughout; length to breadth as two and a half to one, very tumid. Ventral margin nearly straight, very slightly incurved a little before the middle, dorsal margin subparallel to ventral, having a nearly equal slope at the two extremities, the anterior of which is well and equally rounded, while the posterior, which is slightly the wider of the two, and a little more produced below, has the dorsal curve much longer than the ventral. Lucid spots, consisting of a transverse row of four placed close to each other, and two others at some

distance in advance of these, and separated from each other. Dorsal view elongated ovate. End view nearly round. Hinge margin crenulated throughout its length. Carapace white, smooth, but studded with scattered opaque white punctures. Length half a line.

Dredged 100 miles off Tynemouth in 1862, and 10-15 miles off Seaham in 40-48 fathoms in 1864.

It would have been impossible to identify this species with the figure and description given by Mr. T. Rupert Jones in "The Entomostraca of the Tertiary Formation;" but Mr. G. S. Brady has kindly informed me that he has Norwegian and Arctic specimens which seem to be identical with those taken on this coast, and which have been pronounced by Mr. Jones to be his *Cytheridea debilis*.

*Cythere declivis*, n. sp. Pl. V, figs. 9-12.

Subtriangular, closely resembling a miniature *Mytilus edulis* in form; highest before the middle, length to breadth as about one and three quarters to one; subcompressed. Ventral margin slightly (rarely considerably) incurved in the centre; dorsal margin anteriorly well arched, but sloping rapidly from about the middle towards the posterior extremity. Anterior end wide and well rounded; posterior extremity narrow, rounded. Lucid spots consisting of four placed close together in a transverse curved line (of which the lowest is the largest, and each of those above smaller than its predecessor,) and in front of these a large comma-shaped spot, apparently formed by the coalescence of two. Ventral view cuneiform, moderately convex behind, much compressed in front, juncture of the valves impressed. Carapace white, translucent, smooth, but marked with conspicuous opaque white scattered punctures;\* anterior margin with radiating riblike markings. Length not quite one third of a line.

Taken off Holy Island and Seaham during the past season. I

\* What I have called here and in the description of the last species "punctures" are not sunken impressions, but slightly *elevated tubercular processes, which are perforated in the centre*. Such structures are not uncommon among the Ostracoda, and might perhaps be best described as "*perforated papillæ*."

have also specimens from Plymouth, Roundstone Bay, and Shetland; and others are in Mr. G. S. Brady's collection from Donegal and Preston Pans. Thus the species would appear to be distributed all round our coasts.

*Cythere avena*, Norman.

*Cythere mytiloides*, Norman, Ann. Nat. Hist., January, 1862. Pl. III, figs. 1-3.

The specific name, *mytiloides*, having been previously employed in this genus by Bosquet, it becomes necessary to change the title of the form described by me in the *Annals of Natural History*. *Cythere avena*, as it is now proposed to style it, has been taken off both the Durham and Northumberland coasts. The type specimens were from the Firth of Clyde, and I have since obtained it from Arran in Ireland, Roundstone Bay, and Shetland.

*Cythere simplex*, n. sp. Pl. V, figs. 1-4.

Elongo-elliptic, cuneiformly produced posteriorly; greatest height behind the centre; length to breadth as two and a half to one; compressed. Ventral margin slightly incurved anteally, and very convex posteally; dorsal margin straight in the centre, and sloping nearly equally towards each extremity. Anterior extremity well rounded; posterior considerably produced to a central point to which the dorsal and ventral margins equally and gradually converge. The only lucid spots which I am able to detect are five elongated spots ranged side by side in the form of a fan slightly in advance of the middle of the carapace. Carapace very thin and delicate in structure, transparent, and perfectly smooth, presenting no appearance of punctures or sculpture of any kind. Hinge line perfectly simple; valves having a broad internal marginal lamella, most developed behind. Length three quarters of a line.

This is the species which was recorded by me in the report of the dredging of 1862 (Trans. T. N. F. C., Vol. V, p. 266), under the name of *Cythere acuta*, Baird. I have since, however, through the kindness of Dr. Baird, had an opportunity of examining the type specimens on which that species was established,



and find them to be carapaces of the larva of a *Balanus*, and not of a *Cythere*. At the time when the *Natural History of the British Entomostraca* was written we were not so well acquainted with the development of the Cirripedia as at the present day, and hence arose my friend's mistake. *Cythere acuta* must therefore be struck out of our lists. *Cythere simplex* was dredged in 1862, about 100 miles off Tynemouth, and again in 1864 off Holy Island. Mr. G. S. Brady's collection contains specimens from Bute, Shetland, and the Arctic seas.

*Cythere levata*, n. sp. Pl. V, figs. 13-16.

Oblongo-ovate, highest before the middle at the commencement of the supero-anteal slope; length to breadth as one and three quarters to one, moderately convex. Ventral margin slightly concave on the anterior half, and convex posteriorly; dorsal margin nearly straight, the anterior slope the longer. Anterior extremity well rounded, gradually arched into the superior margin above, more suddenly rounded below. Posterior extremity slightly produced centrally, the superior and inferior slopes nearly equal. Lucid spots, consisting of four oblong impressions in a transverse line, and a semicircular spot in front. Carapace white, smooth, polished, with a few small scattered punctures; valves bordered by a keel-like fillet, which is more conspicuous behind. Length, not one third of a line.

Dredged July, 1864, off Holy Island, and I have also seen it from the following localities:—Shetland and Roundstone Bay (A. M. N.); Margate, Southwold, Donegal, Race's Bank, and mouth of the Ribble (Mr. G. S. Brady).

*Cythere multifora*, n. sp. Pl. VI, figs. 13-16.

*Cythere rugosa*, Norman, M.S. Brit. Assoc. Report for 1864,  
(but not *C. rugosa* of Speyer.)

Oblongo-ovate, of nearly equal height throughout, length to breadth as two and a half to one, abruptly swollen immediately above the margin of the valves, and thence sloping to dorsal margin. Dorsal and ventral margins nearly straight, and sub-parallel; both extremities rounded. Dorsal view prismoidal; (parallel-sided, with conical extremities). Carapace excavated

with large deep cells, which leave the insterstices standing out in the form of an elegant network. Junction of the valves keeled. Length one fourth of a line.

Taken off Holy Island July, 1864; and obtained by me also during the previous year in the Shetland seas.

*Cythere latissima*, n. sp. Pl. VI, figs. 5-8.

*Cythere obesa*, Norman, M.S. Trans. Tyneside Nat. Field Club. Vol. V, p. 266, and Brit. Assoc. Report for 1864 (*but not C. obesa of Reuss*).

Peach-stone formed, or shortly ovate, with a short central posterior projecting process; greatest height subcentral; length to breadth as one and a half to one, excessively tumid and gibbous. The ventral margins of the valves are produced into a conspicuous keel, on either side of which the carapace is extremely broad, the valves being projected directly outwards in the form of a strong ridge which externally bends outwards and downwards so as to reach below the level of the margin of the valves. The tumidity of the carapace in this part is excessive, and from thence the valves slope rapidly to the dorsal margin. End view triangular. Carapace white, opaque, punctate. Length one third of a line.

This remarkable form was dredged in 1862 on the Dogger Bank, and during the past season off Holy Island, and off Seaham. I have also specimens from Shetland and Roundstone Bay, and Mr. G. S. Brady has found it among sand dredged at the mouth of the Ribble, and in shell-sand from Cowes, Isle of Wight.

*Cythere guttata*, n. sp. Pl. VI, figs. 9-12.

*Cythere concentrica*, Norman, M.S. Report Brit. Assoc. for 1864 (*but not of Reuss nor Williamson*).

Ovate, or peach-stone shaped, slightly produced to a central point behind; greatest height and greatest tumidity before the centre; very tumid. Dorsal margin nearly straight in the centre, suddenly sloping posteally, and forming in conjunction with the infero-posteal similarly suddenly sloping margin a small truncated projection. Ventral margin slightly waved. Anterior extremity

broadly rounded. Carapace excavated with large cells, which have a somewhat concentric arrangement. Length one third of a line.

Allied to *C. convexa*, but in that species the carapace is less tumid, the anterior extremity is broader, and the posterior process is not central but inferior; the excavations are not so large, though the species attains much greater dimensions than *C. guttata*. The close resemblance which *C. guttata* bears to a peach-stone in all respects is most striking.

Dredged in 1864 off Holy Island, and also 10–15 miles off Seaham, in about 40 fathoms.

The genus *Cythere* is so extensive, and the recent and fossil species, already described, are so numerous, that it has become a matter of no small difficulty to find appropriate names, which have not been already pre-occupied by British or foreign authors. It will be seen in the previous descriptions that I have been unfortunately compelled to re-name many of the species, having found that the names which I had at first proposed were already appropriated to some fossil forms by Bosquet, Reuss, and Speyer.

GENUS. *CYHEREIS*, Jones.

*Cythereis limicola*, n. sp. Pl. VI, figs. 1–4.

Oblong, short: greatest height at the commencement of the antero-dorsal slope; length to breadth as one and three quarters to one; sub-compressed. Ventral margin straight, dorsal having a long anterior slope from the highest point; and a gradual downward inclination from the same point posteriorwards. Anterior extremity wide, rounded; posterior extremity rather narrower and subtruncate. Carapace having a greatly elevated longitudinal rib a little within the ventral margin, from the anterior extremity of which about three smaller ribs or crenations proceed divergingly to the front of the valve; there are also two nodular humps placed side by side near the posterior termination of the hinge margin. Length, about one fourth of a line.

Discovered on the Dogger Bank, about 100 miles east of

Tynemouth, in 1862; and again obtained last summer 10–15 miles off Seaham in about 40 fathoms.

*Cythereis Jonesii*, Baird. Pl. VII, figs. 5–8.

*Cythereis Jonesii*, Baird, Hist. Brit. Entom. p. 175, Pl. XX, fig. 1.

*Cythereis fimbriata* (Roemer), Norman, Ann. Nat. Hist., Jan. 1862, Pl. III, fig. 9.

Having had the opportunity, through the kindness of Dr. Baird, of examining the type specimens of his *Cythereis Jonesii*, I find that they are the same species as that described by myself in the *Annals* under the name of *Cythereis fimbriata* (Roemer). As some doubt may attach to the identification of the species with that of Roemer it will be better to make use of the name given to it in "The History of British Entomostraca."

*Cythereis Jonesii* has been taken by me 100 miles east of Tynemouth, in 1862; in Lamlash Bay; and at Shetland: and Dr. Baird's specimens are from the Isle of Skye. Neither Dr. Baird's figure nor my own do justice to the great beauty of form of this species when in a perfect state, since in each case they were drawn from single and imperfect valves. The species is now therefore refigured from a fine specimen taken on the Dogger Bank, and it seems also desirable thus to redefine it.

Oblong, or oblongo-elliptic; greatest height at the anterior extremity of the hinge; length to breadth as about two to one; compressed above, very tumid below. Ventral margin slightly arched, extended at both extremities beyond the dorsal margin; dorsal margin somewhat concave; extremities obliquely truncate, the anterior the wider. Carapace smooth in the central area, but ornamented with a fringe of greatly developed linguiform, erect or nearly erect processes commencing at the middle of the anterior extremity, and passing round the ventral side of the valve at a short distance from the margin, and thence ultimately bending upwards, and terminating in some greatly elevated processes situated on the central portion of the valves at a little distance from the hinder extremity. Similar linguiform processes, (four or five in number,) again reappear at the infero-posteal angle, and

also on the dorsal margin. Hinge line furnished in front with a large tubercular hump, whence a well-defined rib passes down the supero-anteal slope, and is continuous with the commencement of the fringe of linguiform processes. Carapace seen from below irregularly lozenge-shaped, having elevated longitudinal riblets on each side of the junction of the valves, and the linguiform processes stretched out laterally as elegant wings, which are widest behind the middle. End view in the form of an equilateral triangle, the basal line of which is remarkably straight. Length rather more than half a line.

*Cythereis Dunelmensis*, n. sp. Pl. VII, figs. 1-4.

Oblong. Dorsal and ventral margins straight but not parallel, gradually inclining towards each other from the broad well rounded anterior extremity to the rectangularly truncate posterior end. Surface of valves excavated with cells, the interstices between which stand out as a network. Carapace margined in front by a row of beadlike spines; posteal extremity of ventral margin bearing four large, semi-erect, flattened, linguiform processes; other parts of the surface are also armed with small spines, conspicuous among which is a tubercular spine at the anterior extremity of the hinge line. Length half a line.

The type specimen—for as yet I have only seen a single example—was dredged 10-15 miles off Seaham in about 40 fathoms.

[A description of the following species, though not procured during the dredging expeditions, is added here, as it will complete the list of new *Cytheres*, which have been met with on the north eastern coast of England.

*Cythere cellulosa*, n. sp. Pl. V, figs. 17-20; and Pl. VI, fig. 17.

Nearly semicircular, but having one end of the semicircle replaced by an angle; highest in the middle; length to breadth as scarcely two to one; compressed. Ventral margin straight; dorsal margin strongly arched, the arch being continued anteriorly until it meets the straight ventral margin, which scarcely rises at all towards it; posterior extremity with a produced central angle, the upper and lower sides of which are unusually straight and equally divergent. Carapace having the valves

excavated with very large cellular areolæ. Length about one sixth of a line.

*Cythere cellulosa* is the smallest species of this genus with which I am acquainted, and is a very remarkable and interesting form, the chief peculiarity of which consists in the very large cells which are excavated in the valves. I have procured it in sand from Berwick-on-Tweed, Lamash Bay, and Guernsey; and Mr. G. S. Brady has specimens from Donegal Bay.]

In concluding the descriptions of the preceding new Crustacea, I must express my sincere thanks to Mr. G. S. Brady for the time and care which, amidst many pressing engagements, he has so kindly bestowed in drawing for me the admirable figures which illustrate the species.

The following table is intended to show the total number of Crustacea taken during the course of the three seasons' dredging on the Durham and Northumberland coasts.

	1862.		1863.		1864.		REMARKS.
	Northumberland.	Dogger Bank.	Northumberland.	Durham.	Northumberland.	Durham.	
<i>Stenorhynchus rostratus</i> , <i>Lin.</i>	*	..	*	..	*	..	
<i>longirostris</i> , <i>Fabr.</i>	..	..	..	..	*	..	
<i>Inachus Dorsettensis</i> , <i>Penn.</i>	*	..	*	..	*	*	
<i>dorhynchus</i> , <i>Leach.</i>	*	..	*	..	*	..	
<i>Hyas coarctatus</i> , <i>Leach.</i> . . . .	*	*	*	..	*	*	
<i>Eurynome aspera</i> , <i>Penn.</i> . . . .	..	..	..	..	*	..	
<i>Cancer pagurus</i> , <i>Linn.</i> . . . .	..	..	*	..	*	..	Tide marks.
<i>Carcinus mænas</i> , <i>Linn.</i> . . . .	..	..	..	..	*	..	Tide marks.
<i>Portunus holsatus</i> , <i>Fabr.</i> . . .	*	..	*	..	*	*	
<i>pusillus</i> , <i>Leach.</i> . . .	*	*	*	..	*	*	
<i>Ebalia Cranchii</i> , <i>Leach.</i> . . . .	*	*	..	..	*	*	
<i>tuberosa</i> , <i>Penn.</i> . . . .	*	..	*	..	*	*	
<i>Atelecyclus septemdentatus</i> , <i>Mont.</i> . . . . .	*	..	..	..	*	..	
<i>Pagurus Bernhardus</i> , <i>Linn.</i>	*	*	*	*	*	*	
<i>pubescens</i> , <i>Kröyer.</i>	*	*	*	*	*	*	
<i>cuanensis</i> , <i>Thomp.</i>	..	..	*	..	*	..	Rare.
<i>lævis</i> , <i>Thomp.</i> . . . .	*	*	*	*	*	*	
<i>Hyndmanni</i> , <i>Thom.</i>	*	..	*	..	*	..	
<i>ferrugineus</i> , <i>Nor.</i>	..	..	..	..	*	..	Very rare.
<i>Porcellana platycheles</i> , <i>Penn.</i>	..	..	..	..	*	..	Tide marks.
<i>longicornis</i> , <i>Penn.</i>	*	..	*	..	*	..	
<i>Galathea squamifera</i> , <i>Leach.</i>	..	..	*	..	..	..	
<i>intermedia</i> , <i>Kröyer.</i>	*	..	*	..	*	..	
<i>Andrewsii</i> , <i>Kin.</i> . . .	*	..	*	..	*	..	

	1862.		1863.		1864.		REMARKS.
	North-berland.	Dogger Bank.	North-berland.	Durham.	North-berland.	Durham.	
<i>Crangon vulgaris</i> , <i>Fabr.</i> .....	..	..	*	..	*	..	One specimen.
<i>fasciatus</i> , <i>Risso</i> .....	..	..	..	..	*	..	
<i>Allmanni</i> , <i>Kinahan</i>	*	*	*	..	*	..	
<i>nanus</i> , <i>Kröyer</i> .....	..	*	*	..	..	*	Very rare.
<i>spinosus</i> , <i>Leach</i> .....	*	..	*	..	*	..	
<i>trispinosus</i> , <i>Hailst.</i>	..	..	*	..	..	..	
<i>Pandalus annulicornis</i> , <i>Leach</i>	*	*	*	..	*	*	
<i>brevirostris</i> , <i>Rath.</i>	*	..	*	..	*	*	
<i>Hippolyte varians</i> , <i>Leach</i> ..	..	..	*	..	*	*	
<i>pusiola</i> , <i>Kröyer</i> ..	*	..	*	..	..	..	
<i>securifrons</i> , <i>Nor.</i>	*	*	*	..	*	*	
<i>Diastylis Rathkii</i> , <i>Kröyer</i> ..	*	..	*	..	*	*	Rare.
<i>Vaunthompsonia cristata</i> , <i>Bte.</i>	..	*	..	..	..	..	
<i>rosea</i> , <i>Norman</i>	..	*	..	..	..	..	One specimen.
<i>Eudora truncatula</i> , <i>Bate</i> .....	..	*	..	..	..	..	Rare.
<i>Cyrianassa ciliata</i> , <i>Norman</i> ..	..	*	..	..	..	..	Very rare.
<i>elegans</i> , <i>Norman</i>	..	*	..	..	..	..	One specimen.
<i>Mysis flexuosus</i> , <i>Fabr.</i> .....	..	..	..	..	*	..	One specimen.
<i>spiritus</i> , <i>Norman</i> .....	*	*	..	..	..	..	
<i>Didelphys</i> , <i>Norman</i> ..	*	..	..	..	..	..	
<i>Montagua monoculoides</i> , <i>Mon.</i>	..	..	*	..	..	..	
<i>Alderii</i> , <i>Bate</i> .....	*	..	..	..	..	..	
<i>pollexiana</i> , <i>Bate</i> ..	*	..	..	..	*	..	
<i>Lysianassa Costæ</i> , <i>Edwards</i> ..	..	..	..	..	*	..	Rare.
<i>longicornis</i> , <i>Lucas</i>	..	..	*	..	..	..	Very rare.
<i>Anonyx Holbölli</i> , <i>Kroyer</i> ..	..	..	..	..	*	..	Very rare.
<i>denticulatus</i> , <i>Bate</i> ..	*	..	*	..	*	..	Rare.
<i>longipes</i> , <i>Bate</i> .....	..	*	*	..	..	..	
<i>Edwardsii</i> , <i>Kröyer</i> .	*	*	..	..	..	..	
<i>ampulla</i> , <i>Kröyer</i> ..	..	*	..	..	..	..	Very rare.
<i>Callisoma crenata</i> , <i>Bate</i> .....	*	..	..	..	*	..	
<i>Ampelisca Gaimardi</i> , <i>Kröyer</i> .	*	*	*	..	*	*	
<i>Belliana</i> , <i>Bate</i> ..	*	*	..	..	*	..	
<i>Haploops tubicola</i> , <i>Lillj.</i> .....	*	..	*	..	*	*	
<i>Phoxus plumosus</i> , <i>Kröyer</i> ..	*	*	..	..	..	..	One specimen.
<i>Monoculodes carinatus</i> , <i>Bate</i> .	..	..	..	..	*	..	
<i>Kroyera altamarina</i> , <i>Bate &amp; W.</i>	..	*	..	..	..	..	One specimen.
<i>Ædiceros parvimanus</i> , <i>Bate &amp; Westw.</i> .....	..	*	..	..	*	..	One specimen.
<i>Westwoodilla cæcula</i> , <i>Bate</i> ..	..	..	..	..	*	..	
<i>Urothoe marinus</i> , <i>Bate</i> .....	..	..	..	..	*	..	
<i>Iphimedia obesa</i> , <i>Rathke</i> .....	*	*	..	..	..	..	
<i>Otus carinatus</i> , <i>Bate</i> .....	..	..	*	..	..	..	Very rare.
<i>Acanthonotus Owenii</i> , <i>Bate</i> ..	*	*	*	..	*	..	
<i>Dexamine Vedlomensis</i> , <i>Bate &amp; Westw.</i> .....	*	..	*	..	*	..	
<i>Atylus bispinosus</i> , <i>Bate</i> .....	*	..	..	..	..	..	
<i>Calliope bidentata</i> , nov. sp....	*	*	..	..	*	..	
<i>Eusirus Helvetiæ</i> , <i>Bate</i> .....	..	*	*	..	*	..	Rare.
<i>Microdeutopus anomalus</i> , <i>Rathke</i> .....	*	..	..	..	*	..	

	1862.		1863.		1864.		REMARKS.
	North-berland.	Dogger Bank.	North-berland.	Durham.	North-berland.	Durham.	
<i>Protomedeia Whitei</i> , Bate ..	..	..	..	..	*	..	One specimen.
<i>Melita proxima</i> , Bate .....	..	*	..	..	..	..	
<i>Cheirocratus Mantis</i> , Norman	..	..	..	..	*	..	One only.
<i>Eurystheus erythrophthalmus</i> , Lillj.....	*	..	..	..	*	*	
<i>Amathilla Sabini</i> , Leach .....	..	..	*	..	..	..	
<i>Gammarus marinus</i> , Leach ..	..	..	..	..	*	..	
<i>Megamoera longimana</i> , Leach	*	..	*	..	*	..	
<i>Othonis</i> , Edwards	*	..	*	..	*	..	
<i>Alderii</i> , Bate .....	..	*	..	..	..	..	
<i>Heiscladus longicaudatus</i> , B. & Westw. ....	*	..	..	..	*	*	
<i>Heiscladus brevicaudatus</i> , n. sp. ....	*	..	..	..	..	..	Very rare.
<i>Amphithoe rubricata</i> , Mont.	..	..	*	..	..	..	
<i>Podocerus pelagicus</i> , Leach ..	..	..	*	..	..	..	
<i>capillatus</i> , Rathke.	..	..	*	..	..	..	
<i>variegatus</i> , Leach	..	..	..	*	..	..	
<i>Cerapus difformis</i> , Edwards	*	*	*	..	*	..	
<i>Dercothoe punctatus</i> , Edwards.	..	..	*	..	*	..	
<i>Noenia excavata</i> , Bate .....	..	..	..	..	*	..	
<i>caudadentata</i> , nov. sp.	*	..	..	..	..	..	One specimen.
<i>Unciola planipes</i> , Norman ..	..	..	..	..	*	..	
<i>Corophium longicorne</i> , Fab.	..	..	..	..	*	..	Shore.
<i>Proto Goodsirii</i> , Bate .....	*	..	..	..	..	..	
<i>Protella phasma</i> , Mont. ....	*	..	..	..	*	..	
<i>Caprella linearis</i> , Latr. ....	*	..	..	..	..	..	
<i>lobata</i> , Müller .....	*	..	..	..	*	..	
<i>Arcturus longicornis</i> , Sow. ...	*	*	..	..	*	*	
<i>intermedius</i> , Goods.	*	..	*	..	..	..	
<i>gracilis</i> , Goodsir. ...	*	..	..	..	*	..	
<i>Phryxus longibranchialis</i> , n.s.	*	..	..	..	..	..	One only.
<i>Bopyrus</i> .....	..	..	..	..	*	..	One specimen.
<i>Idotea tricuspida</i> , Desm. ...	..	..	*	..	..	..	
<i>Oniscoda maculosa</i> , Leach (?)	*	..	..	..	*	..	
<i>Eurydice pulchra</i> , Leach .....	..	..	..	..	*	..	Rare.
<i>Nebalia bipes</i> , Fabr. ....	*	..	..	..	..	..	
<i>Cythere reniformis</i> , Baird ..	..	..	..	..	*	..	Tide marks.
<i>guttata</i> , Norman ..	..	..	..	..	*	*	
<i>multifora</i> , Norman ..	..	..	..	..	*	..	
<i>pellucida</i> , Baird ..	*	*	..	..	*	*	
<i>quadridentata</i> , Baird	*	*	..	..	*	*	
<i>latissima</i> , Norman ..	*	..	..	..	*	*	
<i>nigrescens</i> , Baird ..	..	..	..	..	*	..	
<i>lævata</i> , Norman .....	..	..	..	..	*	..	
<i>variabilis</i> , Baird ..	..	..	..	..	*	..	
<i>avena</i> , Norman .....	..	..	..	..	*	*	
<i>contorta</i> , Norman ..	..	*	..	..	*	*	
<i>debilis</i> , Jones .....	*	..	..	..	..	*	
<i>aurantia</i> , Baird .....	..	..	..	..	*	*	
<i>simplex</i> , Norman ..	..	*	..	..	..	..	Rare.



	1862.		1863.		1864.		REMARKS.
	North-berland.	Dogger Bank.	North-berland.	Durham.	North-berland.	Durham.	
<i>Cythere declivis</i> , Norman ..	..	..	..	..	*	*	
<i>Cythereis limicola</i> , Norman ..	*	..	..	..	..	*	Rare.
<i>Jonesii</i> , Baird ..	..	*	..	..	..	..	Rare.
<i>Dunelmensis</i> , Nor. ..	..	..	..	..	..	*	One specimen.
<i>Cypridina Brenda</i> , Baird ..	..	*	..	..	..	..	
<i>Tisbe furcata</i> , Baird .....	..	..	..	..	*	..	Betw. tide mks.
<i>Caligus curtus</i> , Müller .....	*	*	*	..	*	..	
<i>rapax</i> , Edwards .....	..	*	*	..	*	..	
<i>Anchorella uncinata</i> , Müller ..	..	*	..	..	..	..	
<i>Sacculina Carcini</i> , Thomp. ..	..	..	*	..	..	..	
<i>Peltogaster Paguri</i> , Rathke ..	..	..	..	*	..	..	Very rare.
<i>sulcatus</i> , Lillj. ..	..	..	..	*	..	..	Rare.
<i>Clistosaccus Paguri</i> , Lillj. ..	..	..	..	*	..	..	One specimen.
<i>Balanus porcatus</i> , Da Costa ..	*	..	..	..	*	..	
<i>crenatus</i> , Brug. ....	..	*	..	..	..	..	
<i>Hameri</i> , Ascanius ..	..	*	..	..	..	..	
<i>Verruca Strömia</i> , Müller .....	*	..	..	..	*	..	
<i>Scalpellum vulgare</i> , Leach ..	*	..	..	..	*	..	
	66	43	51	7	88	31	
Total species taken .....	87		55		92		
Pelagic Entomostraca .....	9		11		0		
Pycnogonoidea .....	9		2		7		
	105		68		99		

It may be interesting to throw into tabular form the numbers of the different sections of the Crustacea procured during the several years. It must be understood, that the sections here employed are not scientifically equivalent to each other, though sufficiently so for our present purpose.

	1862.	1863.	1864.	Total in the three yrs.
Brachyura .....	9	8	13	13
Anomoura .....	7	9	10	11
Macroura .....	7	10	9	11
Mysidea .....	8	1	2	9
Isopoda .....	5	2	5	8
Amphipoda .....	33	19	31	53
Phyllopoda .....	1	0	0	1
Cladocera .....	2	2	0	2
Ostracoda .....	9	0	16	19
Copepoda .....	10	11*	3	12*
Pycnogonoidea .....	9	2	7	10
Cirripedia .....	5	4	3	9
	105	68	99	158

\* This number includes *Alteutha bopyroides* (Claus), and *Thalestris longimana* (Claus), which were not actually taken during the expedition of 1863, but about the time of it.

The localities which have proved richest in Crustacea are the Dogger Bank, which was peculiarly productive in the Diastylidæ, and the deep water off Holy Island. From the latter locality not a few Amphipods have been obtained which have not occurred elsewhere in our district.

In the year 1862 the deep sea on our coast had been but little dredged for Crustacea, and no less than 49 species were added to the local Fauna during the expedition of that year. They may be thus distributed: —

A. New to Science, 14.

*Mysis Didelphys*, Norman; *Vaunthompsonia rosea*, Norman; *Cyrianassa ciliata*, Norman; *C. elegans*, Norman; *Calliope bidentata*, sp. indes; *Heiscladus brevicaudatus*, sp. indes; *Nœnia caudadentata*, sp. indes; *Phryxus longibranchialis*, sp. indes; *Cythere simplex*, Norman; *C. limicola*, Norman; *C. latissima*, Norman; *Calanus Clausii*, G. S. Brady; *Nymphon brevitarse*, Hodge.

B. Species new to Britain, 6.

*Haploops tubicola*, Lilljeborg; *Cythere debilis*, Jones; *Pleopis polyphemoides*, Lilljeborg; *Ichthyophorba hamata*, Lilljeborg; *I. denticornis*, Claus; *Dias longiremis*, Lilljeborg.

C. Species new to the Local Fauna, 29.

*Inachus Dorsettensis*, Pennant; *Crangon Allmanni*, Kinahan; *C. spinosus*, Leach; *C. nanus*, Kröyer; *Hippolyte securifrons*, Norman; *Vaunthompsonia cristata*, Bate; *Eudora truncatula*, Bate; *Anonyx Edwardsii*, Kröyer; *A. ampulla*, Kröyer; *A. longipes*, Bate; *Phoxus plumosus*, Holböll; *Kroyera altamarina*, B. & W.; *Acanthonotus Owenii*, Bate; *Dexamine Vedlomensis*, B. & W.; *Eusirus Helvetice*, Bate; *Microdeutopus anomalus*, Rathke; *Melita proxima*, Bate; *Eurystheus erythropthalmus*, Lilljeborg; *Megamœra longimana*, Leach; *M. Othonis*, Edwards; *Heiscladus longicaudatus*, B. & W.; *Siphonoecetes*, ———; *Proto Goodsirii*, Bate; *Arcturus intermedius*, Goodsir; *A. gracilis*, Goodsir; *Nebalia bipes*, O. Fabricius; *Cythere quadridentata*, Baird; *Cythereis Jonesii*, Baird; *Anomalocera Patersonii*, Templeton.

In 1863, eight of the species procured may be thus distributed :

A. Species new to science, 0.

B. Species new to Britain, 4.

*Thalestris longimana*, Claus ; *Alteutha bopyroides*, Claus ;  
*Peltogaster sulcatus*, Lilljeborg ; and *Clistosaccus Paguri*,  
Lilljeborg.

C. Species new to the Local Fauna, 4.

*Lysianassa longicornis*, Lucas ; *Otus carinatus*, Bate ; *Saccu-  
lina Carcini*, Thompson ; *Peltogaster Paguri*, Rathke.

In 1864, of 16 species for the first time obtained on the coasts  
of Durham and Northumberland there were—

A. Species new to science, 8.

*Cheirocratus Mantis*, Norman ; *Unciola planipes*, Norman ;  
*Cythere declivis*, Norman ; *C. levata*, Norman ; *C. multi-  
fora*, Norman ; *C. guttata*, Norman ; *Cythereis Dunelmensis*,  
Norman ; *Nymphon rubrum*, Hodge.

B. Species new to Britain, 0.

C. Species new to the Local Fauna, 8.

*Pagurus ferrugineus*, Norman ; *Crangon fasciatus*, Risso ;  
*Anonyx Holbölli*, Kröyer ; *Monoculodes carinatus*, Bate ;  
*Westwoodilla caecula*, Bate ; *Protomedeia Whitei*, Bate ;  
*Bopyrus*, ———— ; *Cythere avena*, Norman.

It will be seen from the foregoing statistics, that the whole  
results of the British Association dredging, as regards the Crus-  
tacea, are, that of a sum total of 158 species procured, 22 were  
new to science, 10 were species which had been described by  
Scandinavian and other naturalists but had not before been found  
in the British seas, and 41 others had not previously been ob-  
tained on this part of the coast. The additions therefore which  
have been made in this branch of marine zoology to our local  
Fauna are very satisfactory.

\*.\* Since the foregoing has been in print, I have had an oppor-  
tunity of examining the type specimens of *Cytheridea debilis*, Jones,  
and I am at a loss to understand how Professor Rupert Jones can  
have identified Mr. Brady's Arctic specimens with that species,

to which they appear to me to bear no resemblance; and in the opinion which I here express Mr. G. S. Brady now entirely coincides. I propose therefore to restore to the recent form, which has been found on this coast, and in the Norwegian and Arctic seas, the name *C. Bradii*, which I had previously proposed for it. Judging from the figures and description in the *Monograph of the Tertiary Entomostraca of England*, *C. Bradii* (Norman), would seem to approach very closely to *C. pinguis*, Jones, and is chiefly distinguishable from that species by the absence of angulation of the dorsal margin. It was *C. pinguis* which I had in my thoughts when I inserted *C. Bradii*—without a name—in the dredging report of 1862, as a Cythere “new to science, if it be not identical with a Tertiary Fossil species.”

---

### Report on the Pelagic Entomostraca, by George S. Brady.

During the dredging expeditions of 1863 and 1864 the sea was mostly too rough to allow of the towing-net being used successfully. In 1862, owing to the generally smoother sea, it was worked to more advantage; but as the dredges occupied almost the entire attention of the party, the captures which we have to record must be looked upon as embracing only the commoner species of our free-swimming Oceanic Entomostraca. The gatherings of 1862 were made at a distance of fifty to one hundred miles from shore nearly due east of Tynemouth. Those of the following year were taken in the Holy Island district, and on the Durham coast, three or four miles off Ryhope. The total number of species taken was eleven, five of which are new to the British Fauna, and two others have been hitherto only very imperfectly recognized and described. Two out of the eleven belong to the order *Cladocera*, the remaining nine to the *Copepoda*. The two Cladocera belong to the family *Polyphemidæ*, the nine Copepods are distributed amongst the families *Harpactidæ* (one), *Peltididæ* (one), *Calanidæ* (six), *Pontellidæ* (one).

I have described and figured in this report all the new or imperfectly known species excepting *Thalestris longimana* and