

The Marine Fauna of the Cullercoats District

4a

ARTHROPODA 2b

INSECTA ; PTERYGOTA

by

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Sub-Class PTERYGOTA Lang

Order HEMIPTERA (L.) Geoffroy

Sub-Order HETEROPTERA Latreille

SALDIDAE Costa

Chiloxanthus pilosus (FALLÉN)

Lindberg 1935,p.117 : Southwood and Leston 1959,p.324,pl.57,fig.6.

"Common, Durham Coast" (Butler 1923); "occurs sparingly in east coast saltmarshes from Durham to Kent . . ." (Southwood and Leston 1959).

Salda littoralis (L.)

Lindberg 1935,p.117,fig.11 : Southwood and Leston 1959,pp.325-6,pl.57, fig.2.

"Northumberland" (Butler 1923); "not so rare as . . . (next) . . . but with same general distribution in our counties" (Harrison 1963).

Saldula scotica (CURTIS)

Lindberg 1935,p.117 : Southwood and Leston 1959,pp.329-30,fig.140.

"Northumberland" (Butler 1923); "scattered over boggy land, especially near the coast, Alnmouth, Ross Links, Warkworth, and Greatham Marshes" (Harrison 1963).

Gerris thoracicus SCHUMMEL *

Lindberg 1935,p.120 : Macan 1965,p.27,figs.17G,21J.

In Seaton Sluice saltmarsh pools, May-Oct. 1956-1958, 1-30%_{oo} salinity, particularly common Aug.-Oct. and during Sep. H.S.T. Presence of nymphal stages indicates it will breed in brackish water (Sutcliffe 1959, 1961).

GERRIDAE Dohrn

Gerris rufoscutellatus LATREILLE

Lindberg 1935,p.120 : Macan 1965,p.25,fig.17L.

A single specimen (female) on 4 Sep. 1958 in water of 8%_{oo} salinity, Seaton Sluice saltmarsh (Sutcliffe 1959, 1961, 1962).

* (Record by Nicol 1933 of *Gerris argenteus* is possibly of this species).

NOTONECTIDAE Leach

Notonecta viridis DELCOURT = **halophila** EDWARDS

Lindberg 1935,p.111: Macan 1965,p.36,fig.27.

Entered laboratory roof tank** (varying salinities 0-34‰) regularly during summer 1933-1959 (H.O.B.).

CORIXIDAE Leach

Corixa punctata (ILLIGER)

Lindberg 1935,p.114: Macan 1965,p.43,figs.30P.,34C: Southwood and Leston 1959,pp.380-2,pl.60,fig.2.

In Seaton Sluice saltmarsh, 1-10‰ salinity, 1 only from May-Sep.; 2 male, 1 female, in water of 5‰ salinity, 4 Sep. 1958 (Sutcliffe 1959, 1961).

Hesperocorixa sahlbergi (FIEBER)

Lindberg 1935,p.114, as *Sigara* s.: Macan 1965,p.46,figs.35A,36D: Southwood and Leston 1959,pp.383-4,pl.61,fig.7.

In Seaton Sluice saltmarsh 1-10‰ salinity from May-Sep. 1956-1958. Several specimens in water of 5‰ salinity during Sep. 1958, but more during or after the Sep. H.S.T. (Sutcliffe 1959, 1961).

Sigara dorsalis (LEACH)*

Macan 1965,p.51,figs.30D,35B,38C,39A,40D: Southwood and Leston 1959, pp.388-9,pl.61,figs.5,6,10;pl.62,fig.17.

In Seaton Sluice saltmarsh, 1-10‰ salinity, May-Sep.; 4 females taken in water of 5‰ salinity, 4 Sep. 1958 (Sutcliffe 1959, 1961). Regularly colonised roof tank** (varying amounts of salinity) at laboratory during summer months 1933-59 (H.O.B.).

Order COLEOPTERA L.

SCARITIDAE Bonelli

Dyschirius arenosus STEPHENS

Fowler 1888,p.21,pl.4,figs.7,7a (as *D.thoracicus*): Jeannel 1941,pp.268-9,fig. 105b.

"Not uncommon near Whitley. In the burrows of *Bledius arenarius*" (Bold 1871). "Sandy places on the coast. Newcastle-on-Tyne" (Fowler 1888).

* (It is possible that *Corixa striata* recorded from Seaton Sluice by Nicol 1933 is this species).

** No longer extant.

BROSCIDAE Hope (Jeannel)

Broscus cephalotes (L.)

Fowler 1887,p.27,fig.5 : Jeannel 1941,pp.289-90,fig.111.

"Very common on the sea-coast . . . beneath stones and seaweed . . . and in deep burrows in firm sand . . ." (Hardy & Bold 1852).

Larvae (Oct.-May) and adults under stones in wrack strings, Whitburn, 1955-57 (Egglishaw 1958, 1965).

Cillenus lateralis (SAMOUELLE)

Fowler 1887,p.100,pl.16,fig.2 : Jeannel 1941,p.451,figs.174e,175.

"In abundance, near Cambois, in May—Mr. John Scott. Under stones, between tide-marks, near Budle, in Jun.—J.H." (Hardy & Bold 1852).

TRECHIDAE Bonelli

Bembidion pallidipenne (ILLIGER)

Fowler 1887,p.117,pl.18,fig.9 : Jeannel 1941,p.526,figs.198a,d,e (as *Prin-cidium p.*).

"In May (1859) lurking beneath algae, and debris, on the sea shore, between Blyth and Seaton Sluice" (Bold 1861). "Blyth sands, sparingly" (Bold 1871).

Bembidion ustulatum L.

Jeannel 1941,p.509,figs.192f,g (as *Peryphus u.*).

1, in wrack string, Whitburn, 1 Jun. 1956 (Egglishaw 1958, 1965).

Bembidion clarki DAWSON = **Bembidion assimile** GYLLENHAL var. *clarki*

Jeannel 1941,p.466,fig.181c (as *Trepaines c.*).

"Not uncommon on the Durham coast, amongst shingle on the beach . . . also on the coast of Berwickshire" (Bold 1872).

Bembidion aeneum GERMAR

Fowler 1887,p.105,pl.16,fig.9 : Fowler & Donisthorpe 1913,p.10 : Jeannel 1941,p.473,fig.183d (as *Philochthus a.*).

"Very rare on the sea coast . . ." (Bold 1871).

Tachys scutellaris STEPHENS

Fowler 1887,p.98,pl.16,fig.1 : Jeannel 1941,p.431,figs.170a-f.

"Single sp. on the margins of the pools on the sands near South Shields" (Bold 1871).

Aëpopsis robinii (LABOULBÈNE)

Fowler 1887, p.125, pl.19, fig.9 : Jeannel 1941, pp.304-5, figs.118a-e.

"Very local, and confined to the sea coast" (Bold 1871).

Aëpus marinus (STRÖM)

Fowler 1887, p.124, pl.19, figs.8,8a,8b : Jeannel 1941, p.306, figs.119a-e.

"Beneath stones, between tide-marks near Budle, and North Sunderland—J.H. Jun." (Hardy & Bold 1852). "Very local, and confined to the sea coast. Both species (e.g. *marinus* and *robinii*) occur in company" (Bold 1871). Farne Is. 10 Sep. 1911 under stones (Bagnall 1916). Northumberland specimens exhibited by S. Campbell 4 Mar. 1927 (Vasculum 13 p.111, 1927).

Pogonus chalceus (MARSHAM)

Fowler 1887, p.131, pl.20, fig.10 : Jeannel 1941, p.558, fig.208c.

"Found sparingly on the banks of the river Wansbeck, between North Seaton and Cambois, in Sep. (1859)" (Bold 1861, 1871).

HARPALIDAE Le Conte

Dicheirotrichus gustavii CROTCH

Fowler 1887, p.55, pl.9, fig.13 (as *D. pubescens* (Payk.)) : Jeannel 1942, pp. 702-3, figs.243a-e.

"Under stones and rejectamenta below the castle at Tynemouth, and on the borders of Jarrow Slake—G. Wailes Esq. Marshes of the Wear, above Southwick, in Jun.—J.H." (Hardy & Bold 1848 as *Ophonus pubescens*).

Dicheirotrichus obsoletus (DE JEAN)

Fowler 1887, p.55, pl.9, fig.12 : Jeannel 1942, p.704, figs.243f,g.

"Beneath a dead crab, near Cullercoats, in May" (Bold 1862): "Very rare. On the sea coast, near Cullercoats" (Bold 1871) (both entries as *Amara o.*).

PTEROSTICHIDAE Jeannel

Amara convexiuscula (MARSHAM)

Fowler 1887, p.71, pl.12, fig.7 : Jeannel 1942, p.948, fig.312f (as *Cyrtotomus c.*).

"Near South Shields in Aug. Also taken by Mr. Perkins" (Bold 1861); "Near South Shields in some plenty" (Bold 1864b); "Not uncommon about the ballast heaps near South Shields (Bold 1871).

In wrack strings, Bamburgh, 3 Sep. 1957 (Egglishaw 1958, 1965).

HALIPLIDAE Brullé

Haliplus lineatocollis (MARSHAM)

Fowler 1887,p.156 : Balfour-Browne 1940,p.128 : Guignot, 1947,pp.43-4.

"Occasionally found in water of less than 10‰ salinity" Seaton Sluice saltmarsh (Sutcliffe 1961).

DYTISCIDAE Lacordaire

Hygrotus parallelogrammus (AHRENS)

Fowler 1887,p.169,pl.25,fig.3 : Balfour-Browne 1940,pp.213-6 : Guignot 1947,pp.72-3.

"Brackish ditches. Hartlepool and the Northumberland district" (Fowler 1887).

Agabus nebulosus (FORSTER)

Balfour-Browne 1950,pp.107-115 : Guignot 1947,pp.185-6.

A single specimen, Seaton Sluice saltmarsh, in water of 31‰ salinity, 29 Jul. 1959 (Sutcliffe 1961).

Agabus bipustulatus (L.)

Balfour-Browne 1950, pp.127-135 : Guignot 1947,pp.179-80.

Seaton Sluice saltmarsh, in water of 1‰—15‰; adults common throughout summer, in water of less than 10‰ salinity (Sutcliffe 1959, 1961).

Ilybius fuliginosus (FABRICIUS)

Fowler 1887,p.198 : Balfour-Browne 1950,pp.163-7 : Guignot 1947,pp.203-4,fig.83.

Single specimen, Seaton Sluice saltmarsh in water of 1‰ salinity 4 Jul. 1958 (Sutcliffe 1959, 1961).

Colymbetes fuscus (L.)

Balfour-Browne 1950,pp.246-50 : Guignot 1947,pp.217-8.

Common, saltmarsh pools, Seaton Sluice, 1930 (H.O.B.). Many found in pools with salinities up to 23‰, saltmarsh, Seaton Sluice, 1956-58; larvae found during winter months surviving in water of at least 20‰ salinity (Sutcliffe 1959, 1961).

Ochthebius impressicollis CASTLENAU

Fowler 1887,p.246,pl.35,fig.6 (as *O.bicolon*) : Balfour-Browne 1958,pp.168-171.

"Hartlepool. Greatham Marshes. Brackish water" (Balfour-

Browne card cat.).

Ochthebius marinus PAYKULL

Fowler 1887, p. 245, pl. 35, fig. 3 : Balfour-Browne 1958, pp. 163-4.

"Marsden. Whitburn. Greatham. J.G." (Balfour-Browne card cat. mss (2)).

Ochthebius subinteger var. *lejolisii* MULSANT & REY

Fowler 1891, p. 35 : Balfour-Browne 1958, pp. 157-9.

"Berwick (J. Owen), 1952" (Balfour-Browne 1958): "A number taken at Coldingham Cove 11 Jul, 1952 J. Owen (Balfour-Browne ex coll. card. index).

HYDROPHILIDAE Redtenbacher

Cercyon littoralis (GYLLENHAL)

Fowler 1887, p. 255 : Fowler & Donisthorpe 1913, pl. 3, fig. 8, pl. 36.

"Common along the sea-coast; beneath seaweed . . ." (Hardy & Bold 1851; Bold 1871).

Common throughout the year, in wrack strings and banks, Whitburn and near St. Mary's Is., 1955-57; larvae Jul.-Oct. (Egglishaw 1958, 1965).

Cercyon depressus STEPHENS

Fowler 1887, p. 255-6.

"Very rare. I have only seen 2 or 3 local specimens" * (Bold 1871).

Enochrus maritimus THOMSON

Balfour-Browne 1958, pp. 24-7.

"Scarborough" (Fowler 1887). "Recorded from all the coastal counties on the east side from Durham to Kent . . ." (Balfour-Browne 1958). "Greatham (G.B.W. (1) J.G.)" (Balfour-Browne card cat. mss (2)).

PTILIDAE Heer

Ptenidium punctatum (GYLLENHAL)

Fowler 1889, pp. 137-8, pl. 80, fig. 5.

"Amongst algae on the coast" (Bold 1871): "Northumberland and Durham district" (Fowler 1889).

* This record doubted by Fowler (q.v.).

STAPHYLINIDAE Latreille

Omalium rugulipenne RYE

Fowler 1888, pp. 412-3, pl. 69, fig. 4 : Tottenham 1954, p. 23.

"Abundant at Hartlepool" (Fowler 1888).

Omalium laeviusculum GYLLENHAL

Fowler 1888, p. 413 : Tottenham 1954, p. 23.

"Common beneath seaweed, along the coast. Budle Bay, Beadnell, Newton-by-the-Sea, Hartley, Tynemouth, South Shields, Marsden, Sunderland. Feb.-Sep." (Hardy & Bold 1851). "Plentiful on the sea coast" (Bold 1871). "Northumberland and Durham coast, common" (Fowler 1888).

Omalium riparium THOMSON

Fowler 1888, pp. 413-4 : Tottenham 1954, p. 23.

"Living between algae, on the sea coast . . . taken freely from Hartley to Tynemouth; and from South Shields to Sunderland; in especial abundance in the small indentations between Marsden and Whitburn" (Bold 1863); "Plentiful on the sea coast" (Bold 1871).

Under wrack, rare, Inner Farne Is. (Wooff 1958).

Micralymma marinum (STRÖM)

Fowler 1888, pp. 407-8 (as *M. brevipenne* Gyllenhal) : Tottenham 1954, p. 28, fig. 51.

"Under stones between tide-marks, between Budle and the Heather House, and more sparingly in the fissures of a shaly sandstone, near Monkhouse, in Jul.—J.H." (Hardy & Bold 1851); "Northumberland district, sparingly on the sea-coast in the fissures of shaly sandstone, crevices of limestone, beneath stones, etc. often below high-water mark (Bold 1871, Fowler 1888).

Carpelimus elongatus (ERICHSON)

Fowler 1888, p. 388 (as *Trogophloeus e.*) : Tottenham 1954, p. 43.

"Northumberland district, amongst algae on the sea-coast, rare" (Bold 1871, Fowler 1888).

Carpelimus halophilus (KIESENWETTER)

Fowler 1888, p. 389 (as *Trogophloeus h.*) : Tottenham 1954, p. 43.

"One specimen . . . on Whitley sands (1864)" (Bold 1865b).

Oxytelus (Anotylus) maritimus (THOMSON)

Fowler 1888,p.381 : Tottenham 1954,p.46.

"Amongst algae on the sea-coast. Abundant" (Bold 1871); "Hartlepool; Northumberland district, abundant (Bold)" (Fowler 1888).

Bledius (Cotysops) arenoides TOTTENHAM

Fowler 1888,p.367,pl.66,fig. 3 (as *B.arenarius* Paykull) : Tottenham 1954, p.55.

"Whitley sands in plenty" (Bold 1871); "Northumberland coast . ." (Fowler 1888) (both as *B. arenarius*).

Cafius xantholoma (GRAVENHORST)

Fowler 1888,pp.282-3,pl.60,fig.8.

"Beneath seaweed on the coast, very abundant. Feb.-Oct." (Hardy & Bold 1851, as *Philonthus x.*).

Very common in sand under stones (<100 per stone) in wrack beds, at Whitburn and near St. Mary's Is. 1955-57; larvae all year (Egglishaw 1958, 1965).

var. *variolosus* Sharp. "Berwick-upon-Tweed" (Fowler 1888).

Cafius fucicola (CURTIS)

Fowler 1888,p.282,pl.60,fig.7.

"Beneath seaweed at Marsden—J.H. May" (Hardy & Bold 1851, as *Philonthus f.*). "On the sea-coast, in decaying seaweed; . . . Northumberland district, Marsden, rare . ." (Fowler 1888).

Phytosus spinifer CURTIS

Fowler 1888,pp.169-70,pl.50,fig.10.

"Under decaying seaweed, or in the sand which it covers. Hartley.—T.J.B. Monkhouse, near Beadnell, South Shields, and Marsden; also under stones below high water mark, near the Heather houses—J.H. Apr.-Aug." (Hardy & Bold 1851): "Rather plentifully, near Hartley. Under tufts of *Cakile maritima* growing on the sand, in the vicinity of heaps of algae" (Bold 1864b).

Phytosus balticus KRAATZ

Fowler 1888,p.170,pl.50,fig.11 : Fowler & Donisthorpe 1913,p.53.

"On the sea coast, but less common than its congener. Most of my specimens were taken beneath tufts of sea-rocket" (Bold 1871): " . . .

Hartlepool; Northumberland district . . . (Bold)" (Fowler 1888).

Phytosus nigriventris CHEVROLAT

Fowler 1888,p.170 : Fowler & Donisthorpe 1913,p.53.

"Under tufts of . . . *Cakile maritima* . . . growing in the sand, in the vicinity of heaps of algae . . . near Hartley" (Bold 1864b).

Heterota plumbea (WATERHOUSE)

Fowler 1888,pp.64-5,pl.42,fig.7 (as *Alianta p.*).

"Two specimens, from the sea-coast, near Hartley" (Bold 1864a as *Homalota p.*).*

Myrmecopora uvida (ERICHSON)

Fowler 1888,p.146,pl.48,fig.12.

"One specimen taken at Marsden, under decaying seaweed, in company with *T. foveola* and *Homalota algae*—J.H. Mar." (Hardy & Bold 1848, as *Tachyusa u.*)**.

Myremecopora sulcata KIESENWETTER

Fowler 1888,p.146.

"Rare. Sea-coast near Hartley, in Oct." (Bold 1871, as *Tachyusa s.*).

Atheta (Halobrecta) flavipes THOMSON

Fowler 1888,pp.83-4,pl.44,fig.3 (as *Homalota halobrecta* Sharp).

Not rare, amongst algae, on the sea-coast" (Bold 1864a, as *Homalota maritima* Waterhouse).

Atheta (Halobrecta) puncticeps (THOMSON)

Fowler 1888,p.84 (as *Homalota algae* Hardy).

"Under seaweed at Marsden—J. H.—Hartley—T.J.B. Mar. and Apr." (Hardy & Bold 1848, as *Homalota alga* n.sp.): "Not rare, amongst algae, on the sea-coast" (Bold 1864a as *Homalota p.*).

Atheta (Thinobaena) vestita GRAVENHORST

Fowler 1888,pp.79-80,pl.42,fig.11 (as *Homalota v.*).

"Exceedingly abundant amongst decaying algae on the sea shore" (Bold 1871, as *Homalota v.*).

* Fowler 1888 questions this record.

**(as for preceding)

Atheta (Dimetropa) setigera (SHARP)

Fowler 1888, pp. 127-8 (as *Homalota* s.).

"Very rare. Whitley sands. Aug." (Bold 1871, as *Homalota* s.).

Aleochara grisea KRAATZ

Fowler 1888, pp. 21-2.

"Amongst algae, on the coast, but rarely" (Bold 1867, 1871).
". . . Hartlepool; . . . Northumberland district, rare (Bold) . . ." (Fowler 1888).

Present throughout the year, usually in small numbers, in wrack strings and on sand, Whitburn, 1955-57 (Egglishaw 1958, 1965).

Aleochara algarum FAUVEL

Fowler 1888, p. 22, pl. 37, fig. 9.

"Very abundant on our sea-coasts . . ." (Bold 1863, as *A. kirbyi*):
". . . Northumberland district . . ." (Fowler 1888).

2 in wrack string at Whitburn 8 Jul., 2 more on 28 Jul. 1957; 10 in wrack bank near St. Mary's Is. 24 Jun. 1957 (Egglishaw 1958, 1965).

Aleochara obsurella GRAVENHORST

Fowler 1888, p. 22, pl. 37, fig. 10.

"Under seaweed, common on the sea-coast" (Hardy & Bold 1848):
"Hartlepool; Northumberland district . . ." (Fowler 1888).

In wrack string, usually in small numbers, Apr.-Nov. 1955-57 (Egglishaw 1958, 1965).

HISTERIDAE Paykull

Pachylopus maritimus (STEPHENS)

Fowler 1889, p. 212, pl. 86, fig. 6 (as *Saprinus m.*).

"Sea-coast at South Shields—J.H. Cullercoats and Marsden—T.J.B. 'Stockton-on-Tees'—Revd. G. T. Rudd. Near Cambois—Mr. John Scott. Apr. and May" (Hardy & Bold 1852, as *Hister m.*).

CANTHARIDAE Thomson

Cantharis darwiniana (SHARP)

Fowler 1890, p. 139, pl. 111, fig. 12 (as *Telephorus d.*).

Forth at Aberlady (Fowler 1890).

HETEROCERIDAE MacLeay

Heterocerus sericans KIESENWETTER

Fowler 1889, p. 387, pl. 98, fig. 13.

"... Banks of brackish ditches... Northumberland district, very rare, Cambois (John Scott)" (Fowler 1889).

COCCINELLIDAE Leach

Coccinella undecimpunctata L.

Fowler 1889, p. 164.

"Extremely abundant, on sandy sea banks, where the stones may frequently be seen quite red with congregated myriads of these insects. Mar.-Nov." (Hardy & Bold 1852).

SCARABEIDAE Latreille

Aegialia arenaria (FABRICIUS)

Fowler 1890, p. 39, pl. 102, fig. 3 : Paulian 1941, p. 153, figs. 47, 284.

"Sea shore, South Shields, abundant"—G. Wailes, Esq. Plentifully on the sea-coast (near Bamburgh) P. J. Selby, Esq. Links, near Hartlepool, North Sunderland, Cambois, Tynemouth, South Shields, etc. Apr.-Jul." (Hardy & Bold 1852, as *A. globosa*).

CHRYSOMELIDAE Latreille

Macroplea mutica (FABRICIUS) var. *curtisii* (LACORDAIRE)

Fowler 1890, pp. 278-9, pl. 127, fig. 9 (as *Haemonia curtisi* Lac.).

"On... and *Zostera marina*, in brackish water near the coast;... Hartlepool, abundant..." (Fowler 1890).

Psylliodes marcida (ILLIGER)

Fowler 1890, p. 392, pl. 141, fig. 8.

"Sea-coast. In abundance on *Cakile maritima*" (Bold 1849). "On the sea-rocket (*Cakile maritima*); sea-coast, not uncommon. Aug.-Sep." (Hardy & Bold 1852) (both records as *Macrocnema m.*): "... Holy Island; Northumberland and Durham district, abundant..." (Fowler 1890).

Order TRICHOPTERA Kirby

LIMNEPHILIDAE Kolenati

Limnephilus affinis CURTIS

Moseley 1939, p. 65, figs. 91-93, pl. 2, fig. 12.

Larvae abundant in salt pans at Seaton Sluice; first found there in

1930, and seen regularly since; Greatham Marshes, Aug. 1966 (H.O.B.). Larvae found in water of 1-33‰ salinity, salt pans, Seaton Sluice, Aug.-May; some found surviving in water of 34‰ salinity, 12 May 1959 (Sutcliffe 1960, 1961).

Order DIPTERA L.

Sub-Order NEMATOCERA (Latreille) Brauer

CULICIDAE Stephens

Aëdes detritus HALIDAY

Marshall 1938, pp.170-176, pls. 7 & 18, and numerous figs.: Mattingly 1950, p.107.

Larvae in pools with the lower salinities, saltmarsh, Seaton Sluice, May 1933 (Nicol 1933); Adults and larvae in water of 1-30‰ salinity, all year round, saltmarsh, Seaton Sluice (Sutcliffe 1959, 1961).

Aëdes cinereus MEIGEN

Marshall 1938, pp.145-150, numerous figs.: Mattingly 1950, p.104, figs. 172a, 175a.

3 adult females amongst large numbers of *A. detritus*, Seaton Sluice saltmarsh, H.W.S.T., 17 Sep. 1956 (Sutcliffe 1959, 1961).

CHIRONOMIDAE Haliday

Procladius choreus MEIGEN

Edwards 1929, p.301 : Coe 1950, p.133, fig. 183a : Wingate 1906, p.55 (as *Tanypterus ch.*).

Larvae in brackish pools, Seaton Sluice (Nicol 1933): "Common Aug. Hesleden (W.)" (Fordham 1945).

Cricotopus vitripennis (MEIGEN)

Edwards 1929, pp.325-6 : Goetghebuer 1932, p.43 : Coe 1950, p.148.

"Imagines everywhere (on Farne Islands), Apr.-Sep.; larvae in clear rock pools, less salt than sea-water, Apr.-Sep. (Wooff 1958) (incl. var. *halophilus* Kieffer). "Larvae of typical coastal form in shallow rock pools, Seaton Sluice, H.W.S.T. (Sutcliffe 1959, 1961); Isolated groups of larvae of var. *halophilus* in saltmarsh pools Seaton Sluice, May-Oct., 1-30‰ salinity, especially in patches of *Chaetomorpha*, on which larvae browsed (Sutcliffe 1959, 1961).

Hydrobaenus (=Smittia) thalassophilus (GOETGHEBUER)

Edwards 1929,p.362 : Goetghebuer 1932,p.124 : Coe 1950,p.165.

"Common on coasts between tide-marks" (Fordham 1945): "Not very common, rock pools, Farne Is., May and Jun.; Aug. and Sep." (Wooff 1958).

Clunio marinus HALIDAY

Edwards 1929,p.370 : Goetghebuer 1932,p.142,figs.253-6 : Hennig 1935, p.100,figs.4,10,11 : Coe 1950,p.172 : Wingate 1906,p.47,pl.2,fig.12.

"Jun. (1905), Beadnell, males common in rock pools (W). Roker, Cresswell, Bamburgh (B.)" (Fordham 1945): Adults and larvae in rock pools, Farne Islands, Jun.-Aug. (Wooff 1958): Larvae common in rock pools (H.O.B.).

Chironomus aprilinus MEIGEN

Edwards 1929,p.384 : Coe 1950,p.181.

Larvae in pools with the lower salinities, saltmarsh, Seaton Sluice, May 1933 (Nicol 1933). Imagines reared from larvae taken in Seaton Sluice saltmarsh, 1-30%^{oo} salinity throughout the year (Sutcliffe 1959, 1961).

Chironomus riparius MEIGEN

Edwards 1929,p.384 : Coe 1950,p.181.

Imagines reared from larvae taken in Seaton Sluice saltmarsh, 1-10%^{oo} salinity, from May-Sep. (Sutcliffe 1959, 1961).

CERATOPOGONIDAE Malloch

Culicoides maritimus KIEFFER

Edwards, Oldroyd, and Smart 1939,p.38,fig.10.

Larvae in brackish water pools, Seaton Sluice (Nicol 1933): Imagines reared from larvae taken in Seaton Sluice saltmarsh, 1-10%^{oo} salinity, from May-Sep. (Sutcliffe 1959, 1961).

MYCETOPOGONIDAE Macquart

Sciara quinquelineata MACQUART

Edwards 1925,p.539 : Séguy 1940, p.245 (as *Scatopsciara vitripennis* (Meigen)).

Fairly common, May and Jun. and Sep.-Oct., in wrack string and flake, Whitburn; more rarely at St. Mary's Is., 1955-58 (Egglishaw 1965).

Sub-Order BRACHYCERA Brauer

STRATIOMYIDAE Latreille (Kertesz)

Nemotelus uliginosus (L.)

Séguy 1926,p.33,figs.68,102,108,109.

"The commonest of the genus, especially in saltmarshes. Greatham, by sweeping (H.)" (Fordham 1945).

THEREVIDAE Westwood

Thereva annulata FABRICIUS

Séguy 1926,p.266,fig.64 : Wingate 1906,p.108.

"Common on sand dunes. Aug. Hart Sands (W.)" (Fordham 1945)

ASILIDAE Leach

Philonicus albiceps (MEIGEN)

Séguy 1927,p.123,figs.11,28,234,261-3 : Wingate 1906,p.106.

"Common on the sandhills below Hart Station...males much commoner than females" (Wingate 1906); "On coastal sand dunes... Aug. Hesleden... (W.)" (Fordham 1945).

Dysmachus trigonus (MEIGEN)

Séguy 1927,pp.144-5,figs.300,301,321,322 : Wingate 1906,p.105.

"Widespread on sandy areas on coast... Jul., Aug., Hart (W.)" (Fordham 1945).

EMPIDIDAE Latreille

Chersodromia hirta WALKER

Collin 1961,pp.62-4,figs.27,28.

Common, in wrack string and on sand down to 6 yds. below H.T.L., Jun.-Sep. Whitburn 1955-58 (Egglishaw 1965).

Chersodromia arenaria HALIDAY

Collin 1961,p.66-7,fig.31 : Wingate 1906,p.124.

"A species with few records. Aug. Hesleden... (W.)" (Fordham 1945). Common, in wrack string and on sand down to 6 yds. below H.T.L., Jun.-Sep. Whitburn 1955-58 (Egglishaw 1965).

Chersodromia incana WALKER

Collin 1961,pp.69-70,fig.33.

Fairly common, in wrack string and dry sand, Bamburgh, Sep. 1957 (Egglishaw 1965).

DOLICHOPODIDAE Gerstaecker

Hydrophorus oceanus (MACQUART)

Parent 1938,pp.285-6,figs.415,6 : Wingate 1906,p.156 (as *H.bisetosus*).

"Apparently common especially on coast. Jun.-Aug. Hesleden . . . (W.)" (Fordham 1945).

Hydrophorus praecox (LEHMANN)

Parent 1938,pp.286-9,figs.417,8 : Wingate 1906,p.156.

"Not uncommon on coast . . . Aug. Hesleden (W.)" (Fordham 1945).

Syntormon pallipes (FABRICIUS)

Parent 1938,pp.460-1,figs.667-8 : Wingate 1906,p.152.

"Common. Jun.-Aug. Hesleden . . . (W.)" (Fordham 1945).

SYRPHIDAE Leach

Lathyrophthalmus (=Eristalis) **aeneus** (SCOPOLI)

Coe 1953,p.70 : Wingate 1906,p.198.

Not uncommon on the coast. Aug. Hesleden (W.) (Fordham 1945). Larvae in pool in S.E. fissure, Inner Farne, where decomposed seaweed present, salinity of water 12.96‰ (Wooff 1958).

DRYOMYZIDAE Becker

Helcomyza ustulata CURTIS

(Imago) Séguy 1934,p.89,figs.127 & 130 : Wingate 1906,p.316 (as *Actora aestrum* Meigen) : (Larva and puparium) Egglshaw 1960a,pp.39-40,figs.1-4.

"Widespread on the seashore. Jul. Hesleden shore (W.)" (Fordham 1945). In wrack strings, Inner Farne (Wooff 1958); larvae in fairly dry wrack beds and a wrack-string on mid-shore, Whitburn Jul.-Oct. 1956-58; adults on the sand near same place Jun. and Sep.; adults, no larvae, wrack-string, Bamburgh, Sep. 1957 (Egglshaw 1960a).

TRYPETIDAE Loew

Paroxyna plantaginus (HALIDAY)

Séguay 1934,p.144,pl.12,fig.139.

"Rare, deforming inflorescence of *Aster trifolium*. Greatham, galls (H.). Most northerly record" (Fordham 1945).

Paroxyna parvula (LOEW)

Séguay 1934,p.144.

"Not common, bred from *Artemisia maritima*. Jul. Hesleden (W.).

Most northerly record" (Fordham 1945).

CHAMAEMYIIDAE Hendel

Chamaemyia flavipalpis (HALIDAY)

Séguy 1934,p.358 (as *C.maritima* (Zettersted)) : Coe 1942,pp.175-6,fig.1 : Wingate 1906,p.375 (as *Ochthiphila f.*).

"Widespread. Aug. Hesleden (W.)" (Fordham 1945).

COELOPIDAE Hendel

Oedoparea buccata (FALLÉN)

(Imago) Séguy 1934,pp.309,310,fig.427 : (Egg, larva, puparium) Egglshaw 1960b,pp.118-120,figs.15-23.

Common in wrack strings from Oct.-Jan. only (a few into Apr., rarely to May) Whitburn 1955-58; larvae common Oct.-Mar., same situation and locality (Egglshaw 1960a, b).

Orygma luctuosa MEIGEN

(Imago) Séguy 1934,pp.310,311,figs.429,431-3 : Wingate 1906,p.308 : (Egg, larva, puparium) Egglshaw 1960b,pp.114-118,figs.4-14.

"2 males, Hesleden shore, Aug. 1900" (Wingate 1906): "Widely distributed. Aug." (Fordham 1945): Fairly common, Apr.-May (occasionally Jun.) and in Sep. (odd ones to Jan.) in wrack strings and small wrack banks, Whitburn and St. Mary's, 1955-58; eggs in Apr. and Sep.; larvae in May, Sep., Oct. (occasionally Nov. and Dec.) (Egglshaw 1960a, b).

Coelopa pilipes HALIDAY

(Imago) Séguy 1934,p.313,figs.424-6,434 : Egglshaw 1960b,p.110 : Wingate 1906,p.309 : (Larva and puparium) Egglshaw 1960b,pp.112-4.

"Uncommon. Aug. Craster, Howick (W.). Most northerly records. Hesleden shore (W.)" (Fordham 1945). Abundant in wrack strings, banks, and beds and under stones, clefts and crannies in clay etc. at foot of cliffs, Whitburn, and St. Mary's Is. 1955-58; more common Oct.-Mar. but present throughout year; larvae in large numbers in wrack banks Dec.-Mar. (Egglshaw 1960a, b).

Coelopa frigida (FABRICIUS)

(Imago) Séguy 1934,p.313,fig.436 : Egglshaw 1960b,p.110 : Mayhew 1939 : Wingate 1906,p.309 (as *Fucomyia f.*) : (Larva and puparium) Egglshaw 1960b,pp.111-4.

"Uncommon but widespread. Aug. Craster (W.)" (Fordham 1945).

In wrack strings and beds, Inner Farne. Imagines most abundant Mar.-Apr. and again in Sep. (Wooff 1958). Abundant in wrack strings, banks, and beds, and under stones, clefts and crannies in clay etc. at foot of cliffs, Whitburn and St. Mary's Is. 1955-58; more common Oct.-Mar. than other months but always present; larvae in large numbers in wrack banks Sep.-Mar. (Egglishaw 1960a, b).*

EPHYDRIDAE Loew

Ephydra riparia Fallén

Karl 1930, p. 71, figs. 65, 66 : Séguay 1934, p. 435, figs. 564-7, 9.

May-Oct. 1-30‰ salinity. Imagines on the surface of saltmarsh pools, Seaton Sluice, most months. Larvae apparently dependent on patches of *Chaetomorpha*, suddenly becoming common in Sep. in 1956, 57, 58. Pupae in Sep. 1956 (Sutcliffe 1959, 1961). Imagines, larvae, and pupae abundant in saltmarsh pools, Alnmouth and Greatham Marsh, Aug. 1966 (H.O.B.).

SPHAEROCHERIDAE Macquart

Leptocera (Thoracochaeta) brachystoma (STENHAMMAR)

Richards 1930, p. 277 : Séguay 1934, p. 464, fig. 600.

In wrack strings and beds, Inner Farne (Wooff 1958): Adults, in wrack beds and strings Jan.-Mar. 1956, Whitburn (Egglishaw 1961, 1965).

Leptocera (Thoracochaeta) zosterae (HALIDAY)

(Imago) Richards 1930, p. 277 : Séguay 1934, p. 471, fig. 598 : (Egg, larva, puparium) Egglishaw 1961, pp. 124-8, figs. 1-9.

In wrack strings and beds, Inner Farne (Wooff 1958). Larvae in fairly dry wrack at H.W., adults in central shore, Whitburn, 1956-58 (Egglishaw 1960a, 1961); the commonest fly at Whitburn at all times throughout the year during 1956-58 in wrack in all states of decomposition (Egglishaw 1961).

CORDYLURIDAE Verrall

Scopeuma (= Scatophaga) stercorarium (L.)

Séguay 1934, pp. 699, 700, figs. 836, 837, 888, 898-903 : Colyer & Hammond 1951, p. 252, pl. 67, fig. 1 : Wingate 1906, p. 305 (as *Scatophaga* s.).

One or two often found between Mar. and Aug., fairly common in

*Including *C. eximia* Stenhammar and *C. parvula* Haliday (*vide* Mayhew 1939 and Egglishaw 1960b).

Sep., Oct. and Nov. in wrack string at Whitburn; several hundreds in 4 sq. ft. of wrack bank 17 and 20 Sep. 1956 (Egglishaw 1965).

MUSCIDAE Latreille

Fucellia fucorum (FALLÉN)

Séguy 1923,p.178 : Wingate 1906,p.289.

"Common on sea coast . . . Apr.-Aug. Hesleden, abundant on the shore about highwater mark (W.)" (Fordham 1945). In wrack strings, Inner Farne (Wooff 1958).

Fucellia maritima (HALIDAY)

(Imago) Séguy 1923,p.178,figs.312-4 : Wingate 1906,p.289 : Colyer and Hammond 1951,p.307,pl.82,fig.6 : (Egg, larva, puparium) Egglishaw 1960c, pp.225-231,figs.1-10.

"Less common than (*fucorum*). June-Aug. Hesleden shore (W.)" (Fordham 1945): In wrack strings, Inner Farne (Wooff 1958). Regularly bred in wrack beds, Whitburn 1956-58 (Egglishaw 1960a) larvae in fairly dry wrack, H.W., adults in central shore Mar.-Oct. Casual, during summer, St. Mary's; large numbers Bamburgh Sep. 1957; have been found in a large area from Seaham Harbour to Hartlepool (Egglishaw 1960c).

Order HYMENOPTERA L.

Sub-Order APOCRITA Gerstaeker

CYNIPIDAE Westwood

Nedinoptera subaptera (WALKER)

Dalla-Torre & Kieffer 1910,p.224 : Cameron 1890p.231,pl.11,fig.1 (as *Kleidotoma s.*).

Adults all the year round in wrack strings and banks at Whitburn 1955-58, usually few, but sometimes many e.g. 155 collected in 15 mins. on 1 Jul. 1957. Parasitic mainly on *Thoracochaeta zosterae*, but occasionally on *Orygma luctuosa*. Degree of parasitism < 10%; only one parasite per puparium (Egglishaw 1965).

DIAPRIIDAE Dalla-Torre

Platymischus dilatatus WESTWOOD

Kieffer 1916,p.35,fig.11.

Adults in wrack beds, Whitburn, Jul.-Oct. 1955-58, usually 1 or 2,

but sometimes many e.g. 63 females, 3 males collected in 15 min. on 8 Jul. 1957. Parasitic on *Orygma luctuosa*; out of 300-400 puparia of *Orygma* (q.v.) collected over 3 years 8 were parasitized to the extent of 19.5 parasites per puparium (Egglishaw 1965).

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