

PHOLOE

The genus *Pholoe* has been separated from Sigalionidae and is now included in a new family Pholoidae, Pettibone 1992. One of the main reasons for this separation is the absence of dorsal and branchial cirri in the Pholoidae. There are 3 species known in British waters.

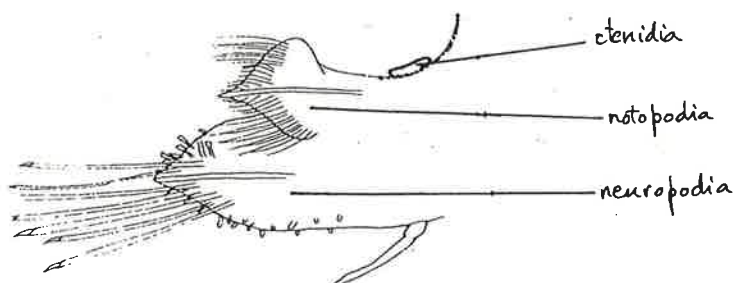
Taxonomic characters of British species

- Body Shape: Small, tapered at posterior end, up to 90 segments
- Prostomium: Not well defined, sometimes obscured by the 1st chaetiger, median antenna dorsal, no lateral antennae present, eyes present or absent
- Peristomium: Achaetous, a pair of dorsal and ventral cirri, a pair of palps, facial tubercle present or absent



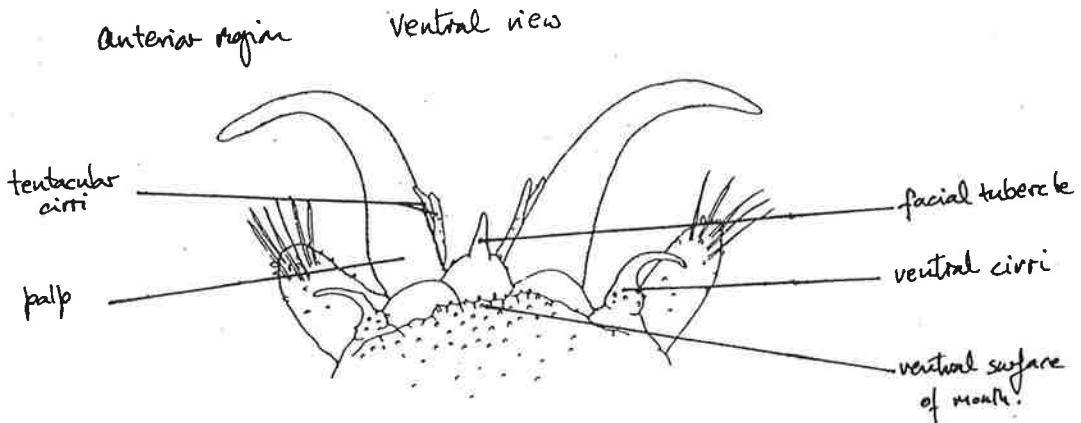
- Parapodia: All biramous, with scales on segments 2, 4, 5 up to the 23rd then on every segment. Ctenidia present above notopodia.

- Chaetae: Notopodia leaf-shaped with capillary chaetae only. Neuropodia well-developed, chaetae compound with bidentate tips and smooth or spinous shafts



**IDENTIFICATION GUIDE**

In order to identify British species of *Pholoe* you need to look very carefully at the head and the scales. Initially a low-power binocular microscope is all that is required.



Facial tubercle

First look at the head in dorsal view removing scales if present, then locate the median antenna and the tentacular cirri. If a facial tubercle is present this is visible from dorsal view. If there is some doubt examine the specimen in ventral view by bending the head forward so you can look directly into the mouth. When the facial tubercle is present it can be seen directly below the median antenna.

Scales

If the fringing papillae are long and obvious they belong to *P. synophthalmica*, if they are not so obvious it is *P. inornata* or *P. pallida*.

Key to *Pholoe* species in British Waters

- 1. Eyes absent; scales with flask shaped papillae on the dorsal surface ..... *Pholoe pallida*
- ..... 2
- 2. Eyes present; scales with long papillae on dorsal surface or smooth .....
- ..... 2
- 2. Eyes touching; facial tubercle absent ..... *Pholoe synophthalmica*
- ..... *Pholoe inornata*
- Eyes separated; facial tubercle present ..... *Pholoe inornata*

Pettibone, M H 1992. 'Contribution to the Polychaete family Pholidae Kinberg'. Smith Contr. Zoo. No 532.

Chambers, S J 1985. 'Polychaetes from Scottish waters: Part 2 Families Aphroditidae, Sigalionidae and Polyodontidae'. Royal Scottish Museum Studies p1-38.

Genus PHOLOE Johnston, 1839

Body with numerous pairs of scales. Prostomium with a median antenna and a pair of palps. Peristomium achaetous. Parapodia with ctenidial cushions, (observed under Electron microscope) notopodial chaetae simple, neuropodial chaetae compound with short unidentate blades.

Pholoe inornata Johnston, 1839

(Fig: 00)

Palmyra ocellata Johnston, 1827:329

Pholoe inornata Johnston, 1839:437

Pholoe minuta: McIntosh, 1900:437 (in part)

Pholoe tuberculata Southern, 1914:57

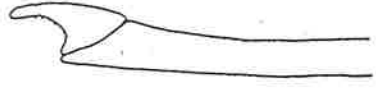
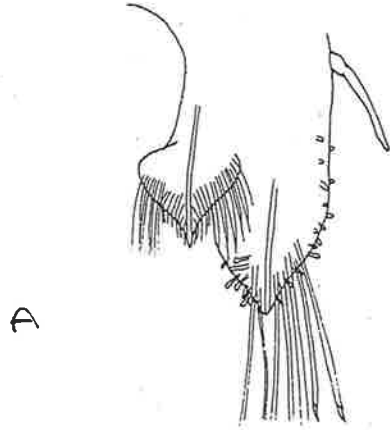
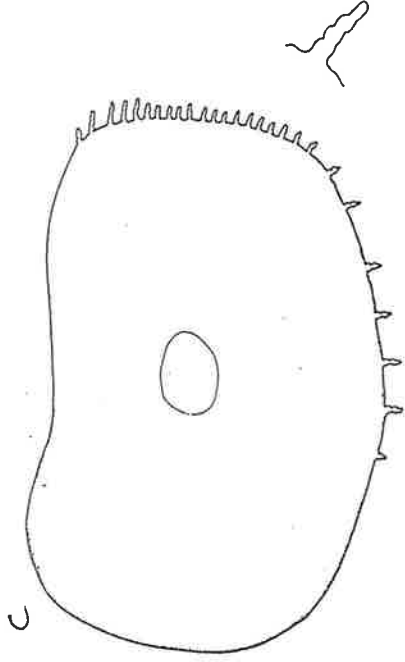
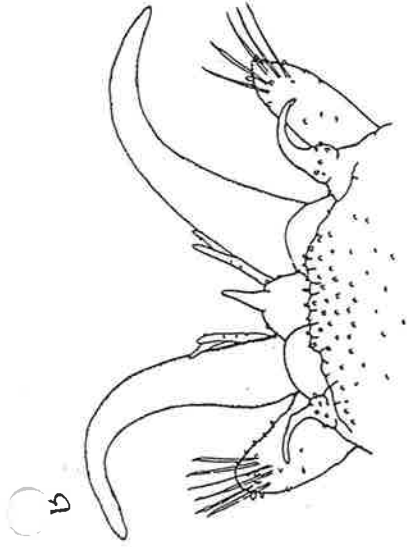
Pholoe minuta: Fauvel, 1923:120 (in part)

Pholoe minuta: Hartmann-Schroder, 1971:78

Pholoe inornata: Chambers, 1985:19

Body small, tapering posteriorly, length up to 8mm, width up to 2mm for 68 chaetigers. Dorsal surface smooth, ventral surface papillate in the anterior region. Nephridial papillae not seen. Prostomium triangular with a median antenna, a pair of palps and a papilla-like facial tubercle, two pairs of eyes separated or just touching. Peristomium achaetous with a pair of papillate dorsal and ventral tentacular cirri in cirrophores which extend to ensheath the base of the palps. Scales overlap but do not cover the anterior dorsal surface when the proboscis is retracted. They occur on segments 1, 3, 4 and 6, then alternately to the 22nd and then on all segments. The first pair are round, the rest oval to kidney-shaped. All

*Prolae inornata*



Pholoe synophthalmica Claparede, 1868

(Fig. 00)

Pholoe synophthalmica Claparede, 1868:389

Pholoe synophthalmica var. dinardensis: St Joseph, 1882:92

Pholoe minuta: McIntosh, 1900:437 (in part)

Pholoe synophthalmica: Fauvel, 1923:120 (in part)

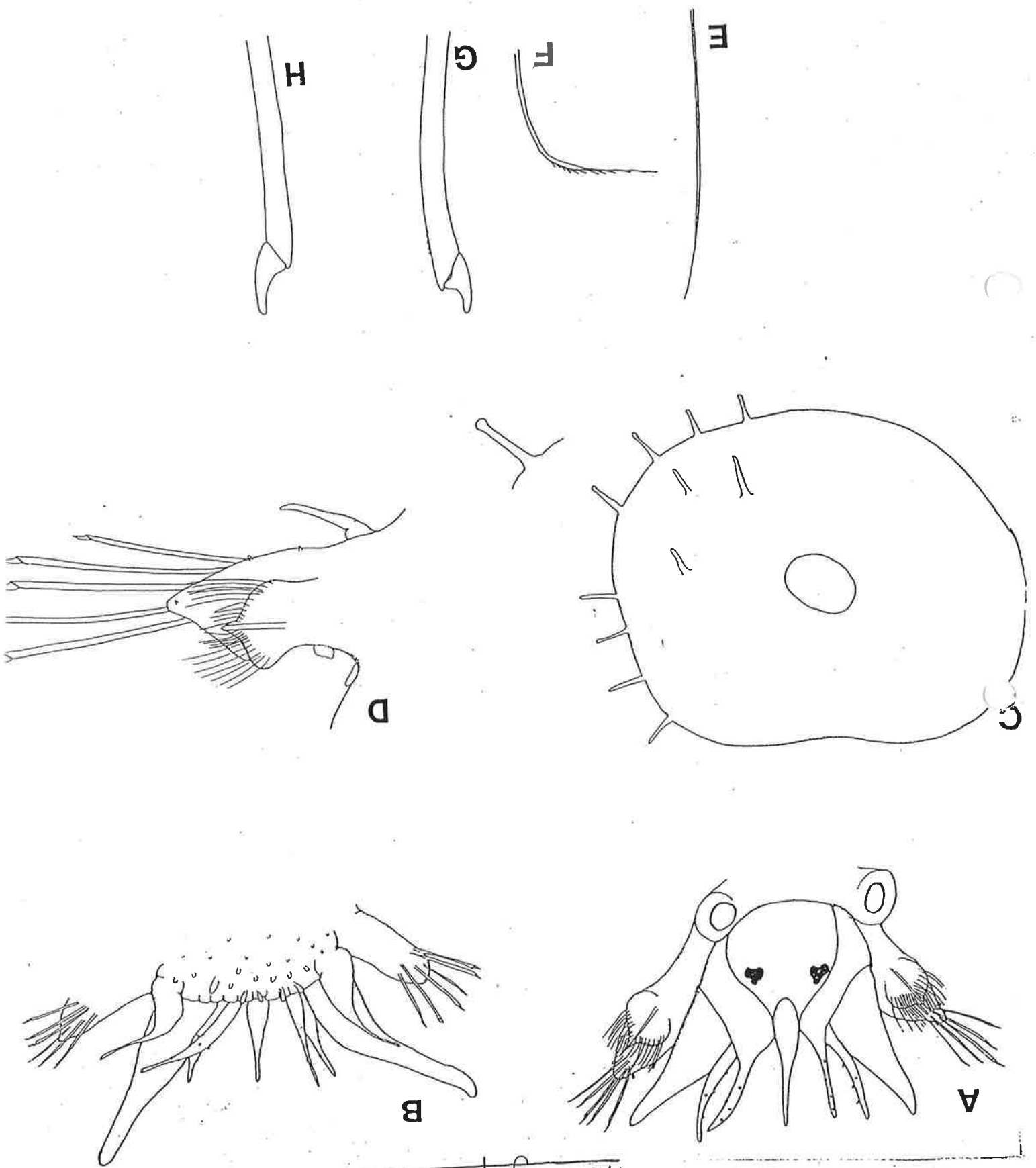
Body small tapering posteriorly, length up to 8mm, width up to 1mm for 50 chaetigers. Dorsal surface smooth, ventral surface papillate in the anterior region. Nephridial papillae not seen. Prostomium triangular with a median antenna, a pair of palps, two pairs of eyes touching coalesced or slightly separated. Peristomium achaetous, with a pair of dorsal and ventral tentacular cirri, in cirrophores which extend to ensheath the base of the palps. Facial tubercle absent. Scales overlap but do not cover the anterior dorsal surface when the proboscis is retracted. They occur on segments 1, 3, 4 and 6 then alternately to the 22nd and then on all segments. The first pair are round, the rest oval to kidney-shaped. All scales have long filiform papillae on the outer margins and a few on the surfaces. Two ctenidial cushions attached to the dorsal surface of notopodia appear on the 2nd segment and three appear on all remaining segments. Notopodia are small mounds with chaetae arranged dorsally in a semi-circle. Notopodial chaetae of two kinds: (1) fine capillaries: (2) geniculate capillaries. Neuropodia, projecting beyond notopodia with only a few papillae and chaetae in a bundle. Neuropodial chaetae with stout blades, unidentate tips shafts spinous or smooth. Pygidium with a terminal anus and a pair of anal cirri.

Colour                      Pale white/grey.

Habitat:                      Littoral to shallow sublittoral.

Type locality:              Bay of Naples.

*P. synophthalmica*



*Pholoe synophthalmica*

Pholoe pallida Chambers, 1985

(Fig. 00)

Pholoe pallida Chambers, 1985:21

Pholoe cf. anoculata: Christie, 1982:284

Body small, tapering posteriorly, length up to 15mm, width up to 2mm for 70 chaetigers. Dorsal surface smooth, ventral surface papillate. Nephridial papillae not seen. Prostomium rounded with a median antenna, a pair of palps and a facial tubercle with a wide papillate base. Eyes absent. Peristomium achaetous with a pair of dorsal and ventral tentacular cirri in cirrophores which extend to ensheath the base of the palps. Scales overlap but do not cover the anterior dorsal surface when the proboscis is retracted. They occur on segments 1, 3, 4 and 6 then alternately to the 22nd and then on all segments. The first pair are round the rest oval to kidney-shaped. All scales have outer margins and surfaces with papillae. Two ctenidial cushions attached to the dorsal surface of notopodia appear on the 2nd segment and three appear on all remaining segments without scales. Notopodia are small mounds with chaetae arranged dorsally in a semi-circle. Notopodial chaetae of two kinds: (1) fine capillaries; (2) geniculate capillaries. Neuropodia projecting beyond notopodia with short papillae and chaetae in a bundle. Neuropodial chaetae with thin blades, unidentate tips and shafts spinous or smooth. Pygidium with a terminal anus and a pair of anal cirri.

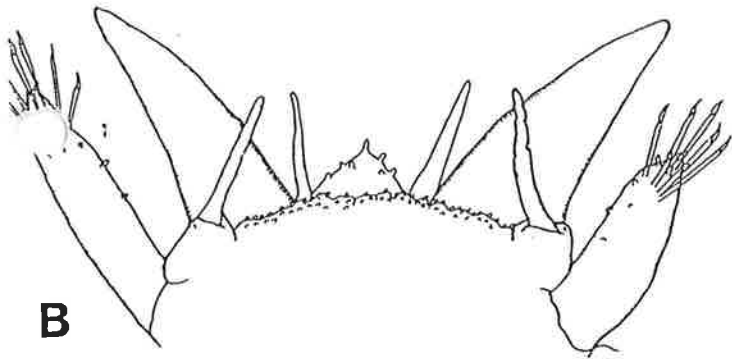
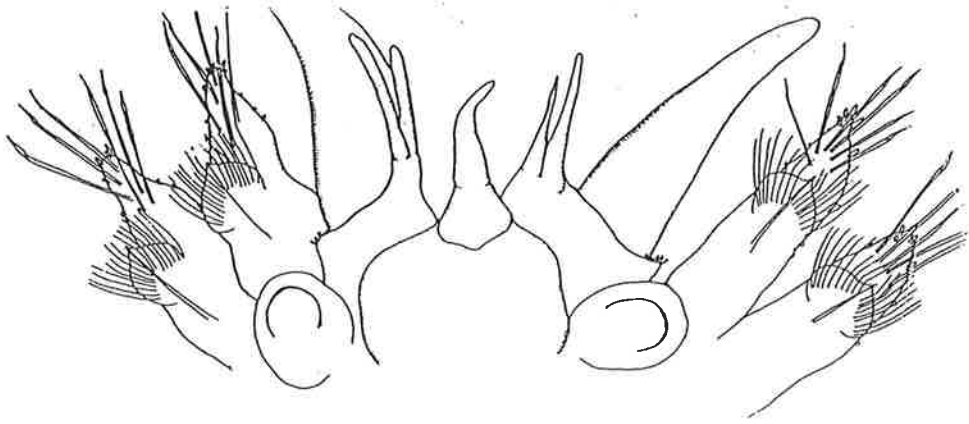
Colour: Pale white/grey.

Habitat: Sublittoral.

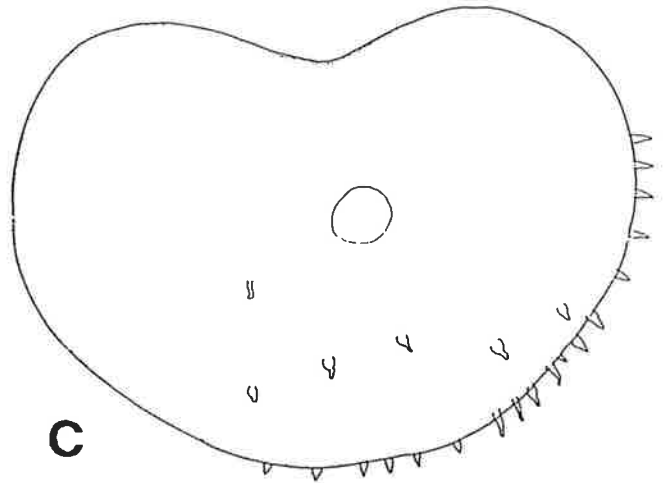
Type locality: St Abbs, south east Scotland.

Distribution: Known in the area from the North Sea. Not reported from outside the area.

Notes: Spawns in November and <sup>probably</sup> larvae have direct lecithotrophic development, (Christie, 1982).



**B**



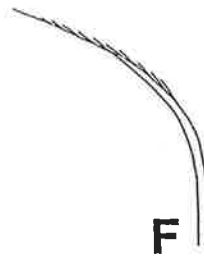
**C**



**D**



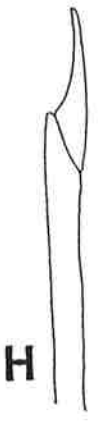
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**F**



**G**



**H**

*P. pallida*