

Based mostly on

TAXONOMY AND ECOLOGY OF BRITISH SPIRORBIDAE (POLYCHAETA)

PHYLLIS KNIGHT-JONES AND E. W. KNIGHT-JONES

Department of Zoology, University College of Swansea

Recent additions:-

Circeis paguri Knight-Jones

Pileolaria quadrangularis (Stimpson)

Key to British genera of Spirorbidae

- | | |
|---|---|
| 1. Incubation in tube | 2 |
| Incubation in opercular brood-chamber (Fig. 1B) | 6 |
| 2(1) Embryos attached to inside wall of tube | 3 |
| Embryos not attached to tube | 5 |
| 3(2) Egg string attached posteriorly, by a thread. | <i>Spirorbis</i> 8 |
| Each egg attached individually to tube wall. | 4 |
| 4(3) Simple collar setae (e.g. Fig. 1E). Two thoracic tori on concave side | <i>Circeis</i> 13 |
| Fin and blade collar setae (e.g. Fig. 1F). Three such tori (e.g. Fig. 1D) | <i>Paradexiospira</i> (<i>Spirorbides</i>) 15 |
| 5(2) Embryo mass held unattached in faecal groove | <i>Paralaeospira</i> 16 |
| Embryos attached to reflexed tentacular filament (Fig. 8D) | <i>Protolaeospira</i> 17 |
| 6(1) Fin and blade collar setae. Sinistral coiling (tube mouth faces clockwise) | <i>Pileolaria</i> 18 |
| Simple collar setae. Mostly dextral | 7 (<i>Janua</i>) |
| 7(4) Dorsal groove of thorax open. Sickles setae (e.g. Fig. 1G) in posterior thoracic fascicles | <i>Janua s.s.</i> 22 |
| Thoracic folds fused over groove. No sickles. | Subgenus <i>Dexiospira</i> 23 |

Key to British species of Spirorbis

- | | |
|---|-----------------------|
| 8(3) Opercular plate with a massive talon (Figs. 3, 4) extending proximally down opercular stalk for a distance equal to or exceeding the radius of the plate | 10 |
| Opercular plate with talon absent or rudimentary, protruding less than half radius of plate | 9 |
| 9(8) Tube sometimes with peripheral attachment flange, generally on <i>Fucus</i> . Body pale greenish-brown. Abdominal setae with heels not protruding beyond line of shaft (Fig. 2G) | <i>S. spirorbis</i> |
| Tube never with peripheral flange, on stones or 'lithothamnion'. Body red. Abdominal setae with protruding heels (Fig. 2P) | <i>S. rupestris</i> |
| 10(8) Talon bilobed or like horses hoof (Fig. 3). Tube without longitudinal ridges, usually on algae | 11 |
| Talon rounded or pointed terminally. Tube usually with longitudinal ridges, on stones or shells | 12 |
| 11(10) Usually on <i>Corallina</i> . Dorsal collar flaps only slightly asymmetrical. Larvae with two pairs of eyes | <i>S. corallinae</i> |
| Usually on other algae. Dorsal collar flap on convex side much larger than on other. Larvae with one pair of eyes | <i>S. inornatus</i> |
| 12(10) Often on shore. Last whorl of tube widens abruptly and obscures previous whorls. Talon usually with three blunt lobes. Collar setae without cross-striations | <i>S. tridentatus</i> |
| Never on shore. Last whorl widens gradually, leaving about a quarter of the previous whorl uncovered. Talon usually with three pointed processes. Collar setae blades bear cross-striations | <i>S. cuneatus</i> |

setae Subfamily Circeinae
13(6) Collar "knees" rounded, blades cross-striated. Sublittoral, usually on hydroids & bryozoans Circeis spirillum

Collar setae "knees" angular, blades without cross-striations, usually on algae & macrocrustaceans 14

14(13) Main eyes of larvae angular & about 4x as big as anterior ocelli. Usually on Laminaria, Palinurus or Homarus Circeis armoricana

Main eyes of larvae each like two contiguous rounded ocelli. Always with Eupagurus bernhardus, on abdomen or inside the surrounding gastropod shell. Circeis paguri

15(4) Adult tubes usually glassy, with longitudinal ridges. On stones, mostly in shallow sublittoral Paradexiospira vitrea

Subfamily Paralaeospirinae

16(5) Tube opaque white, with one obtuse median longitudinal ridge. Opercular plate flat, with a central pointed talon. Fin & blade collar setae. Three thoracic tori on concave side. On stones & Gibbula shells in shallow water & low water pools Paralaeospira malardi

Subfamily Romanchellinae

17(5) Tube usually translucent, with transverse ridges. Opercular talon bears a median spur and lateral tubercles. Fin & blade collar setae. Three thoracic tori on concave side Protolaeospira striata

Key to British species of Pileolaria

18(6) Brood chamber spiny. Always on algae P. militaris
Brood chamber lacks spines 19

19(18) Brood chamber flattened distally, with a distinct peripheral rim and usually with another opercular plate (which bears a flattened peripheral talon) stuck on top of it. 21
Brood chamber rounded distally, rarely bearing another plate stuck to it. If it has one, the latter bears a more or less central talon 20

20(19) Brood chamber bilobed. Juvenile talon tapering gradually. One diffuse orange-pink area covering much of the thorax dorsally. In shallow water, sometimes on algae P. rosepigmentata
Brood chamber not bilobed. Juvenile talon narrow, like a drawing pin. Two dorsal sausage-shaped orange patches on thorax. On shells in depths exceeding 25 m.

P. heteropoma

21(19) Operculum flat. Talon broader than long, broadest near free margin. Largest abdominal tori are on abdominal setigers 8-11. On rocks & shells in calm conditions, e.g. deep water Pileolaria granulata

Operculum may be domed. Talon longer than broad, broadest about middle. Largest abd. tori are on abd. setigers 2 or 3. On Laminaria in a sea-loch between Inveraray & Glasgow.

Pileolaria quadrangularis

Subfamily Januinae

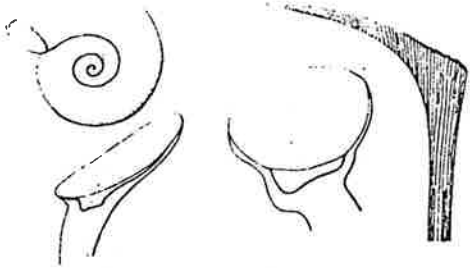
22(7) Tube opaque, usually with longitudinal ridges, mouth facing anticlockwise. Brood chamber without lateral calcification. Common on algae & stones from shore & deep water.

Janua pagenstecheri

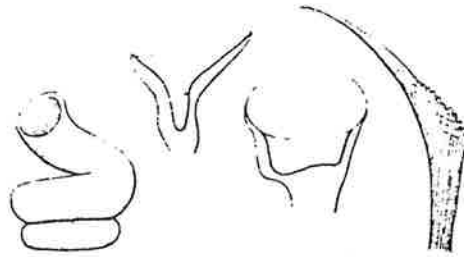
23(7) Distal half of brood chamber with calcified walls, unlike J. pagenstecheri, but this calcification is transparent & glistening, & perforated by rows of minute pits. On English S. coast & as far north as Lundy, on shore & shallow-water algae. Dexiospira pseudocorrugata

Distal half of brood chamber with calcified walls, which are almost opaque. On algae in Portsmouth harbour.

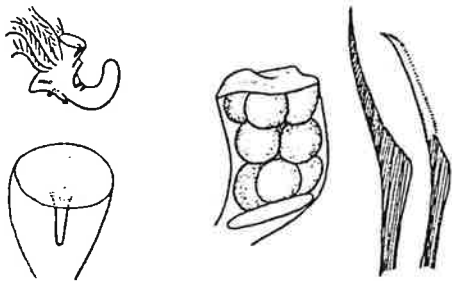
Dexiospira brasiliensis



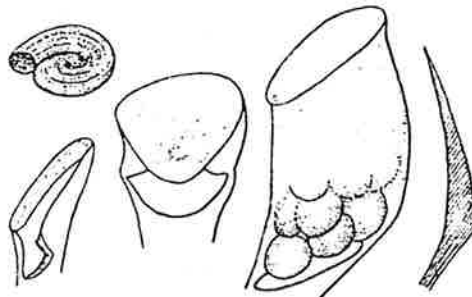
Circeis armoricana



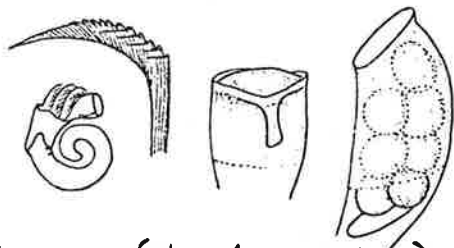
Circeis spirillum



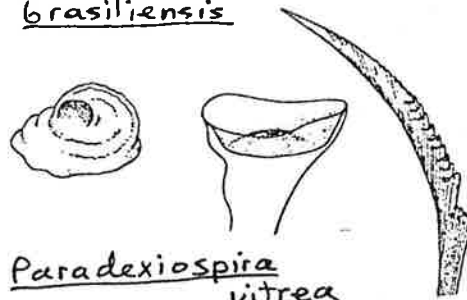
Janua pagenstecheri



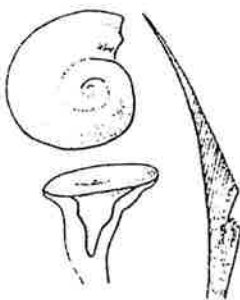
Janua (Neodexiospira) brasiliensis



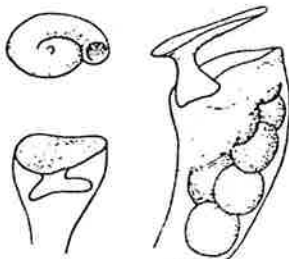
Janua (Neodexiospira) pseudo-corrugata



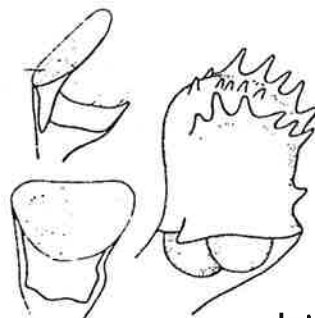
Paradexiospira vitrea



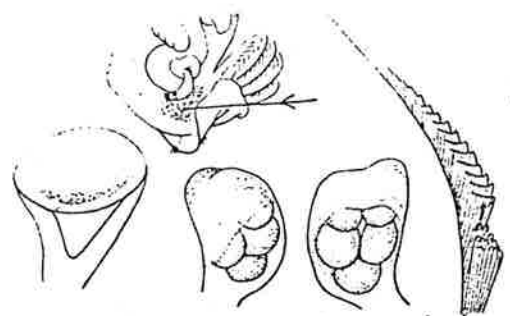
Paralaeospira mairardi



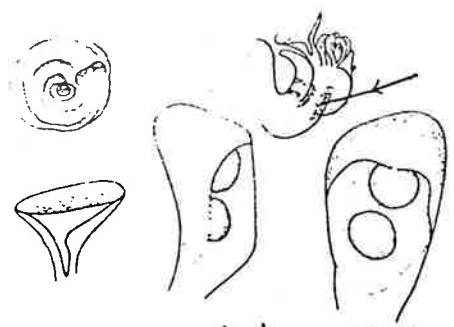
Pileolaria (Jugaria) granulata



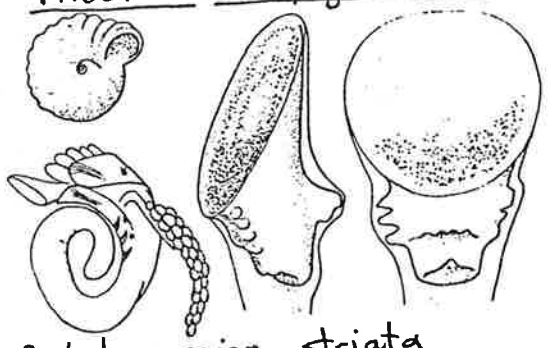
Pileolaria militaris



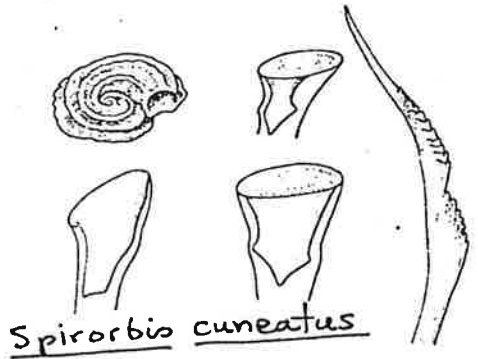
Pileolaria rosepigmentata



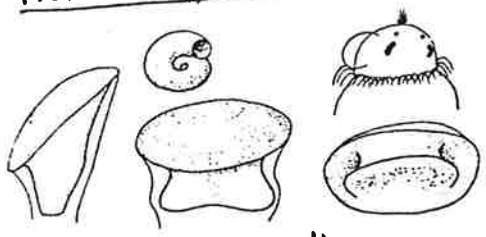
Pileolaria heteropoma glabra



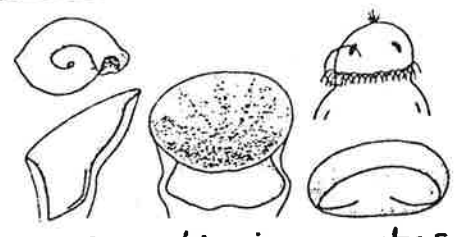
Protolaeospira striata



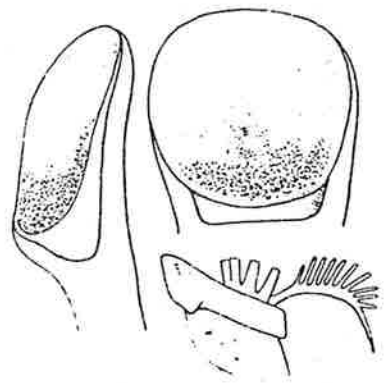
Spirorbis cuneatus



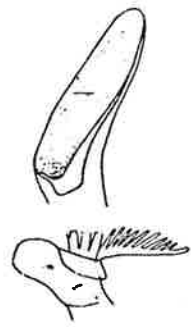
Spirorbis corallinae



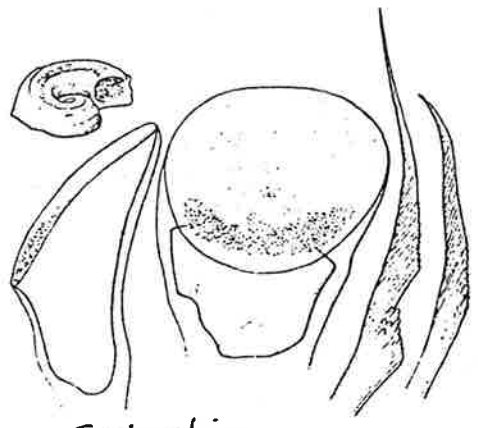
Spirorbis inornatus



Spirorbis rupestris



Spirorbis spirorbis



Spirorbis tridentatus