NMBAQC workshop - Dove Lab, Cullercoats. PRB Nov-06

FAMILY SYLLIDAE

The polychaete family Syllidae is well represented in the British fauna in terms of number of species, being particularly abundant in habitats such as algal holdfasts, maerl beds and amongst epifaunal hydroids and bryozoans. They occur in most marine habitats, from the intertidal zone down to the depths of the ocean.
The family is well defined and recognising a syllid is relatively easy.

Characteristically all syllids have a muscular organ anteriorly in the gut – the proventriculus – which is just behind the pharynx and is often visible through the body wall even in preserved material. They have 3 prostomial antennae and usually a pair of anterior palps; there are 1 or 2 pairs of tentacular cirri; the parapodia are uniramous with dorseal cirri and ventral cirri in most species (the latter are absent in the autolytines); chaetae include a wide variety of forms, both simple and compound. The family is divided into 4 subfamilies, based upon their morphology and, to some extent linked to their mode of reproduction. Syllids generally develop a swimming phase at sexual maturity, developing bunches of accesory swimming chaetae dorsal to the ordinary parapodia in some segments. Additional morphological modifications of various sensory structures may also occur. There are basically two types of somatic modification at maturity – epigamy in which the complete individual shows changes in morphology and schizogamy in which sexual buds, known as stolons, are produced from the posterior end of maturing individuals.

Of the 4 subfamilies, 2, the Eusyllinae and the Exogoninae, reproduce by epigamy, whilst the other 2, the Syllinae and Autolytinae undergo schizogamy. There are, however, rare exceptions the most notable being the epigamous reproduction of a few species of the Autolytinae.

SYLLINAE

The Syllinae are characterised by antennae, tentacular and dorsal cirri composed of a series of articles, giving them a more or less pronounced beaded appearance (except in the small bodied species of the genera *Eurysyllis* and *Plakosyllis* in which these structures are reduced to one article only); 2 pairs of tentacular cirri; pharynx with a single dorsal tooth or dorsal tooth plus ring of teeth at the opening of the pharynx (trepan) or occasionally unarmed; reproduction involving schizogamy, with male and female stolons essentially the same.
6 genera are represented in Britain:

Eurysyllis	1 species
Haplosyllis	1 species
Plakosyllis	1 species
Syllis	11+ species
Trypanosyllis	2 species
Xenosyllis	1 species

I follow San Martin (2003) in considering the genera *Typosyllis* and *Langerhansia* as being contained within the genus *Syllis*. *Syllis* in its narrow sense is restricted to species which have compound chaetae in anterior and posterior setigers, with only simple chaetae in mid-body parapodia. However, small specimens of *Syllis gracilis* are known to have compound chaetae in all parapodia, the condition characteristic of *Typosyllis*. The species previously assigned to *Langerhansia* were said to be characterised by the presence of spinigerous compound chaetae together with the usual falcigers.

However these chaetae are not true spinigers, in that they do not end in a fine point, and are effectively just elongate falcigers. Within the variety of species described, there are those in which these pseudospinigers are markedly different in blade length from the short bladed falcigers, and others in which they are just one extreme of a gradation in length. Maintaining separate genera for species which, when large, have simple chaetae in mid-body parapodia, or for species in which some compound chaetae have elongated blades, does not seem warranted.

EUSYLLINAE

The Eusyllinae is characterised by antennae, tentacular and dorsal cirri which are not articulated, being either smooth or irregularly wrinkled; ventral cirri are present; 2 pairs of tentacular cirri; pharynx unarmed or with a single dorsal tooth, or with several teeth; reproduction involving epigamy; brooding in only a very few species.
10 genera are represented in Britain:

Amblyosyllis	1 species
Dioplosyllis	1 species
Ehlersia	2 species
Eusyllis	2 species
Odontosyllis	3 species
Opisthodonta	2 species
Pionosyllis	2 species
Palposyllis	1 species
Streptosyllis	3 species
Syllides	3 species

Generic subdivisions of the Eusyllinae are relatively stable. Over recent years the genus *Pionosyllis* which was used as a dumping ground for species which did not have the features which defined many of the other genera has been the subject of some revision, but this has had no impact on the British members of the genus. The single member of the genus *Palposyllis* bears a striking resemblance to *Pionosyllis prope-weismanni* Dauvin and Lee, 1983 which is the name I used in an earlier identification guide. This was an error, and it is likely that the two taxa are synonymous. San Martin (2003a) has renamed the genus *Ehlersia* as *Parehlersia*, though without giving his justification.

EXOGONINAE

This subfamily is characterised by small body size, with simple antennae, tentacular and dorsal cirri, often reduced; 1 or occasionally 2 pairs of tentacular cirri; dorsal cirri absent from setiger 2 in some species as adults (apparently absent in juveniles of all species); pharynx armed with a single dorsal tooth; reproduction by epigamy; embryos brooded on the dorsal or ventral surface of the female; cilia absent from the body surface of adults.

4 genera are represented:

Brania	4 species
Exogone	4 species
Parapionosyllis	1 species
Sphaerosyllis	7? species

The generic divisions in the Exogoninae have recently been reviewed, and are summarised in San Martin (2003). According to his revision, there are 7 genera of exogonines in the British fauna, *Brania, Exogone, Erinaceusyllis, Parapionosyllis, Prosphaerosyllis, Salvatoria* and *Sphaerosyllis*. The validity

of these additional genera has yet to receive general acceptance, but the conventional names and those used by San Martin will be presented later.

AUTOLYTINAE

This subfamily is characterised by the absence of ventral cirri (histological evidence shows that they are fused to the parapodial lobe); tentacular and dorsal cirri may be divided into a basal cirrophore and distal cirrostyle; 2 pairs of tentacular cirri; pharynx usually armed with a ring of teeth of various sizes, forming a trepan; reproduction involving shizogamy, with male and female stolons showing a marked dimorphism; segmentally arranged ciliary rings present in adults of some species.
The following genera are represented:

Autolytus	9 species
Myrianida	1 species
Proceraea	4 species
Procerastea	2 species
Virchowia	1 species

Recently, Nygren (2004) has reviewed the Autolytinae, providing a phylogeneetic analysis of the subfamily together with descriptions and photographs of many species worldwide. He has also suggested a few nomenclatural changes, and has combined a traditional Linnaean approach with the PhyloCode system. The implications of this valuable work will be commented on below.

IDENTIFICATION OF BRITISH SPECIES OF SYLLIDAE

There are a number of approaches to the identification of syllids, and, as yet, the ideal of complete descriptions of all species together with the use of the most approriate names in a single volume is some distance away. The frustrations of those involved in the routine identification of syllids taken in samples in British waters is entirely understandable, and this guide is intended to move things along a little towards the recognition of different syllid taxa and consistency between workers in the use of names. In many cases taxa are well defined and cause few problems. However, many of these species currently have extensive geographic ranges, making one suspicious that a name may be being used for different species in different parts of the world. In many other cases, however, there are real taxonomic and nomenclatural problems which can and will be resolved given sufficient effort.

This guide aims to provide assistance to those identifying syllids by presenting keys and information on the 4 subfamilies in turn, and providing a key to all the species considered.

If the specimen has:

a muscular proventriculus following a pharynx
3 prostomial antennae
(a pair of prostomial palps usually present)
no more than 2 pairs of tentacular cirri
uniramous parapodia
(capillary chaetae may be present above parapodial lobe in mid-body and posterior segments in mature epigamous forms)

then it is very likely to be an adult **syllid.**

Stolons and some epigamous mature individuals would not necessarily be recognised as syllids, but identification of these is a separate subject.

If the specimen has:

clearly articulated antennae, tentacular and dorsal cirri
distinct ventral cirri
2 pairs of tentacular cirri

then it is likely to belong to the **Syllinae.**

If it has:

smooth antennae, tentacular and dorsal cirri
(tentacular and dorsal cirri may arise from cirrophores)
no ventral cirri
2 pairs of tentacular cirri

then it belongs to the **Autolytinae.**

If it has:

dorsal cirri shorter than or of similar length to parapodia
(dorsal cirri may be bottle-shaped)
(dorsal cirri may be absent from setiger 2)
distinct ventral cirri
1 pair of tentacular cirri, which are usually short

then it is likely to belong to the **Exogoninae**

If it has:

smooth antennae, tentacular and dorsal cirri
distinct ventral cirri
2 pairs of tentacular cirri

then it is likely to belong to the **Eusyllinae** (or the exogonine genus *Brania*)

Subfamily SYLLINAE

The Syllinae are characterised by the presence of antennae, tentacular and dorsal cirri composed of a string of articles, giving them a beaded appearance, except in rare instances where these appendages are reduced to effectively one article each. The pharynx is typically armed with a single dorsal tooth, but this may be accompanied by or replaced by a cirle of smaller teeth at the pharyngeal opening, or rarely, the pharynx may be unarmed. 2 pairs of tentacular cirri are generally present, and the ventral cirri are smooth.

The chaetae show considerable variety, but primarily in the length of the blades of the compound chaetae. These chaetae may be unidentate, minutely bidentate or distinctly bidentate, and the blade length may be very short, like those of autolytines, or extremely long, when they are termed pseudospinigers. In addition to the terminal tooth, and the subterminal tooth where present, the cutting edge of the blade may be smooth, serrated or have distict teeth. Where a falciger is decribed as minutely bidentate it is because the subterminal tooth is only just more prominent that the other serrations/teeth along the cutting edge. The chaetae in the anterior parapodia are often different to those in more posterior segments, and a useful contrast is between chaetae in the segments in the pre-proventricular region and those in the post-proventricular segments. The chaetae of the extreme posterior end, the last 5-10 segments, may be different again. Single simple dorsal and simple ventral chaetae are ususally present, at least in posterior segments.

Amongst the syllines, the variety of forms of aciculae reaches its best devlopment in the Syllidae, and these supporting rods of the parapodia can be very valuable in identification. As with the chaetae, the situation in the pre-proventricular region is generally different to that in the post-proventricular. The aciculae of pre-proventricular segments are often thinner and more numerous and generally speaking more conservative between species. Characteristic aciculae, in terms of shape, size and possible emergence from the parapodia develop in the post-proventricular segments.

Syllines reproduce by producing stolons. Single stolons are produced, never chains, and the separated stolons vary in the degree of development of the head. There is no sexual dimorphism in the stolons, in contrast to the situation in the autolytines.

1 Antennae, tentacular and dorsal cirri each reduced to a single globular article 2

\- Antennae, tentacular and dorsal cirri each composed of a few or many articles giving them a beaded appearance 3

2 Dorsum with 4 rows of globular tubercles on each segment (species superficially resembling a sphaerodorid, but with the head much better developed and the body flattened) ..... *Eurysyllis tuberculata*

\- Dorsum with no such tubercles ..... *Plakosyllis brevipes*

3 Antennae, tentacular and dorsal cirri each with 4 or 5 articles only; dorsum with a rough texture; pharynx unarmed ..... *Xenosyllis scabra*

- Antennae, tentacular and dorsal cirri with at least 8 articles, usually many more; dorsum smooth; pharynx armed with a tooth or teeth 4

4 Body dorso-ventrally flattened along its length; pharynx with a number of teeth around its margin, forming a trepan in addition to the subterminal dorsal tooth 5

- Body never dorso-ventrally flattened anteriorly, and usually not along its length, but some flattening may be noticed in the posterior part of the animal; a single large dorsal tooth in the pharynx 6

5 Body pigmented; dorsal cirri with more than 20 articles, often some cirri missing ..... *Trypanosyllis zebra*

- Body lacking pigment; dorsal cirri with fewer than 15 articles, cirri firmly attached ..... *Trypanosyllis coeliaca*

6 Dorsal cirri showing a pattern of alternation in length (number of articles) and thickness, with longer thicker cirri and shorter thinner ones ..... *Syllis krohnii*

- Dorsal cirri showing a pattern in alternation in length (number of articles) only 7

7 Anterior dorsum with a distinct pigment pattern after preservation 8

Anterior dorsum showing no pigment pattern (if unsure about pigment pattern, take this route, which will cover all the species) 11

8 Pigment pattern of transverse stripes, or a patch in the middle of each sement, with 1 or 2 transverse stripes, incomplete in the midline; pigment dark brown or black 9

Pigment pattern described as a figure of eight or a pair of spectacles across each segment; pigment quite pale brown ..... *Syllis variegata*

9 Mid-body parapodia with enlarged simple chaetae formed by the fusion of the falciger blade to the shaft of the ordinary falcigers in anterior and posterior segments ..... *Syllis gracilis*

- All parapodia with compound falcigers 10

10 Dorsal cirri cigar-shaped with fewer than 15 articles in the longer ones; mid-body parapodia with unidentate or minutely bidentate falcigers; distinctly bidentate falcigers in anterior and posterior segments ..... *Syllis armillaris*

- Dorsal cirri gradually tapering, with at least 20 articles in the longer ones (possibly up to 35 articles); falcigers distinctly bidentate throughout ..... *Syllis* sp. A

11 Chaetae all simple, with bidentate tip and large subterminal tooth ..... *Haplosyllis spongicola*

- At least some compound chaetae present 12

12 Mid-body parapodia with enlarged simple chaetae 13

- All parapodia with compound falcigers 14

13 Enlarged simple chaetae of mid-body parapodia formed by the fusion of the falciger blade to the shaft ..... *Syllis gracilis*
- Enlarged simple chaetae of mid-body parapodia formed by the loss of blades ..... *Syllis amica*

14 Dorsal cirri cigar-shaped, widest part way along their length 15
Dorsal cirri gradually tapering from base to tip, or of uniform width 17

15 Compound chaetae include long-bladed pseudospinigers, the blades clearly longer than those of the other falcigerous chaetae in the parapodium ..... *Syllis cornuta*
- Compound chaetae all falcigers, which show only a slight gradation in blade length within a parapodium 16

16 In posterior segments a stout emergent aciculum in each parapodium ..... *Syllis* sp. D S. hyalia
Aciculae never emergent; 2 equal aciculae in posterior parapodia (dorsal pigment pattern may be present) ..... *Syllis armillaris*

17 Chaetae include pseudospinigers with blades clearly longer than the accompanying falcigers; dorsal cirri with refractile inclusions which take up stains such as rose bengal ..... *Syllis* sp. E S. garciai
- Compound chaetae all falcigers, showing a gradation in length within a parapodium 18

18 Eyes poorly defined; dorsal cirri very thin with no more than 13 articles; compound falcigers minutely bidentate; characteristic large aciculum in post-proventricular segments, with a subterminal bend ..... *Syllis* sp. H S. pontxioi
- Eyes well defined; dorsal cirri realtively thick with more than 20 articles; compound falcigers distinctly bidentate; aciculae of various types, but not as above 19

19 2 equally developed aciculae in post-proventricular parapodia, neither of which is emergent; anterior dorsum dull and matt; occasional specimens may have a diamond-shaped pigment patch dorsally on some anterior segments ..... *Syllis* sp. F
- In post-proventricular parapodia an emergent aciculum is present, perhaps accompanied by another thinner aciculum 20

20 An emergent aciculum present in all parapodia from setiger 1, relatively thin in anterior parapodia becoming stouter in post-proventricular segments ..... *Syllis* sp. G
- An emergent aciculum present in parapodia of post-proventricular segments only; anterior parapodia with several thin parapodia 21

21 Dorsal cirri shorter than the body width; (no colour pattern) ..... *Syllis* sp. D S. hyalia
- Dorsal cirri longer than the body width; (characteristic colour pattern may be present) 22

22 Emergent aciculum very stout and obvious, without accompanying aciculum in posterior segments ..... *Syllis variegata*

\- Emergent aciculum slightly thicker than the accompanying aciculum in posterior segments ..... *Syllis* sp. A

Genus *Eurysyllis*

Characterised by a flattened body with antennae, tentacular and dorsal cirri reduced each to one globular article; ventral palps also globular; dorsum with 4 rows of globular tubercles; pharynx with a mid-dorsal tooth and poorly developed trepan; chaetae short-bladed unidentate falcigers.

E. tuberculata is readily recognisable, with the appendages and dorsal tubercles charateristic of the genus. The unidentate falcigers are all of similar blade length, some showing prominent teeth on the cutting edge. Aciculae have a swollen subterminal region.

Genus *Plakosyllis*

Again a flattened body, with antennae, tentacular and dorsal cirri each reduced to a single globular article; globular palps; smooth dorsum; pharynx with a single mid-dorsal tooth; compound chaetae unidentate falcigers.

P. brevipes has all the features characterising the genus. Its unidentate falcigers are all short-bladed, with prominent teeth on the cutting edge.

The differences between *Eurysyllis* and *Plakosyllis* may be viewed as specific rather than generic, in which case *Eurysyllis* has priority.

Genus *Trypanosyllis*

Body very much dorso-ventrally flattened, despite considerable body size (for a syllid) in some species; antennae, tentacular and dorsal cirri composed of few to many distinct articles; pharynx armed with a mid-dorsal tooth and a ring of teeth around the pharyngeal opening, forming the trepan; chaetae include minutely or distinctly bidentate falcigers; stout emergent aciculum usually present in post-proventricular region.

T. coeliaca has no pigment pattern and a short proventriculus; the antennae, tentacular and dorsal cirri have a relatively small number of articles, the longer dorsal cirri with up to 20, usually fewer. The chaetae are relatively short-bladed minutely bidentate falcigers, those of posterior setigers being shorter than those in the anterior part of the body. Intra-parapodial gradation in blade length of a maximum of about 2:1. Stout emergent aciculae in post-proventricular region.

T. zebra is a larger species, with transverse pigment lines across the dorsum of anterior segments. The dorsal cirri have a maximum of about 20 articles, and these dorsal cirri are quite readily lost during routine processing. The falcigers are distinctly bidentate, with some intraparapodial gradation in blade length.

Genus *Xenosyllis*

Known for only a single species, the genus is dorso-ventrally flattened with antennae, tentacular and dorsal cirri made up of only a few (ca 5) articles; pharynx unarmed; body dorsally rough, as are the appendages; chaetae includes minutely bidentate and unidentate falcigers, all short-bladed.

X. scabra has the features of the genus, and looks like a small *Trypanosyllis*. The roughness on the body and the unarmed pharynx allow a positive identification.

Genus *Haplosyllis*

Characterised by the presence of only simple chaetae, all of which are essentially the same, consisting of a unidendate or bidentate tip with a large lateral tooth subterminally. These chaetae are few in number in each parapodium and thick and prominent. Otherwise the genus has antennae, tentacular and dorsal cirri composed of a number of articles and a pharynx armed with a single mid-dorsal tooth.

H. spongicola has chaetae with bidentate tips, and British material has relatively thin dorsal cirri with relatively few articles. Martin et al (2003) have shown *H. spongicola* to be a worldwide species complex.

Genus *Syllis*

Characterised by antennae, tentacular and dorsal cirri composed of distinct articles; pharynx with a single mid-dorsal tooth; compound chaetae of various forms of falciger; aciculae often of characteristic form or shape.

The number of articles in the dorsal cirri is useful, but limitations must be borne in mind. Firstly, there is the normal variation in length in the pattern of dorsal cirri along the body. Secondly, in species with short dorsal cirri, there is little variation in the maximum number of articles, but in species with long dorsal cirri, the actual number of articles has to be dependent on the size of the animal. So actual numbers of articles is relevant only in species with short dorsal cirri. Similarly when chaetal blade lengths are being considered, the actual length of blades is going to be more dependent on the size of the animal when the falcigers are of the long-bladed type.

The identification of British species of *Syllis* is frustrating, in that there are a number of clearly defined species, 10 of which are dealt with in the key above. However, only 5 of these can currently be named with any degree of certainty, and several of these species are all recorded over a wide geographical area, and so each may prove to contain more than one taxon. However, for the time being, it is reasonable to use these names for them.

Syllis sp. A has a dorsal pigment pattern on anterior segments, in the form of a central dark patch on each segment with 1 or 2 transverse lines incomplete in the mid-line; a distinct pigment spot is present at the base of each dorsal cirrus of anterior segments. Longer dorsal cirri with at least 20 articles, probably up to 35 in larger aspecimens. All the falcigers are distinctly bidentate and short-bladed, and there are 2 aciculae throughout the body length, one of which becomes slightly stouter than the other and may be just emergent, whilst the other is thinner with a slightly bent tip.
If the characteristic pigment is not visible, then this species may be confused with sp. F, especially in small individuals.

Syllis armillaris (= *Syllis* sp. B) has a distinct dorsal pigment pattern of a central spot on each segment and 1 (occasionally 2) stripes anterior to it, the stripes incomplete in the mid-line. 2 pigment spots may be present at the base of dorsal cirri in anterior segments. The dorsal cirri are cigar-shaped and relatively short, with a maximum of 12 articles. Anterior segments have minutely bidentate falcigers, blades ranging from approximately 24-34 µm with distinct teeth on the cutting edge. In post-proventricular segments, the falcigers are shorter (14-16 µm) and unidentate or minutely bidentate, with no teeth or serrations on the cutting edge and the shafts being thicker than in anterior segments. In posterior segments the falcigers are again all minutely bidentate with blades of 16-20 µm, some of which have teeth on the cutting edge, and the shafts are relatively thin. Parapodia in post-proventricular region have 2 equal aciculae, with slightly bent tips.

Syllis variegata (= *Syllis* sp. C) has a distinct dorsal pigment pattern, which does, however, fade after prolonged preservation. Anterior segments have pigment in the form of a figure of eight or pair of spectacles across them, rather pale in colour. The dorsal cirri are relatively long, with approximately 20 articles in the longer ones. The falcigers are distinctly bidentate along the body length, showing intra-parapodial gradation from 20-40 µm in blade length. A stout emergent aciculum is present in each parapodium in the posterior region.

Syllis sp. D lacks pigment when preserved. The dorsal cirri are cigar-shaped, or tapering, with a maximum of 19 articles in anterior segments, reducing to 13-14 in post-proventricular region. The chaetae follow the same pattern as seen in *S. armillaris*, with minutely bidentate falcigers in anterior segments, stouter essentially unidentate falcigers in the mid-body, and thinner minutely bidentate ones in posterior segments. Parapodia of post-proventricular segements have 3 aciculae, reducing to 2, one of which is stouter and emergent, and only this emergent aciculum present in posteriormost segments.
Syllis sp. D is very similar to *S. armillaris* in many respects, but the emergent aciculum of posterior parapodia seems to be diagnostic.

Syllis sp. E lacks a pigment pattern, but has granular inclusions in the dorsal cirri which take up stains such as rose bengal. The dorsal cirri are long, with up to 23 articles, usually 18-20. The chaetae include pseudospinigers and falcigers from setiger 1. In anterior segments, each parapodium has 1-3 pseudospinigers with blades of 50-60 µm and several falcigers of blade lengths 10-14 µm. In the parapodia of post-proventricular segments there is typically 1 pseudospiniger, with blade of up to 90 µm in length and 3-5 falcigers with blades of 10-20 µm. The falcigers are minutely bidentate, but in the most posterior segments they become more distinctly bidentate.

In the parapodia of post-proventricular segments there are 2 thin aciculae, one with an obliquely cut off tip. In the most posterior segments, this aciculum becomes slightly stouter and tends to obscure the second one.
This species is readily recognisable by the presence of pseudospinigers and the long thin dorsal cirri with characteristic inclusions.

Syllis sp. F has no pigment pattern, but the anterior dorsum is noticeably dull and matt. Some specimens have a diamond-shaped pigment patch dorsally on some posterior segments, and stolons may have pigment intersegmentally on the ventrum. It has long dorsal cirri with up to 30 articles. In anterior segments, the dorsal cirri originate relatively high up on the body wall, and show a pattern of the longer cirri originating higher up than the shorter ones. The falcigers are all distinctly bidentate with blades of 22-32 µm anteriorly, reducing to 12-20 µm in post-proventricular region. Parapodia of post-proventricular segments have 2 thin sciculae, one with a slightly modified tip. Large specimens show distinct pre-and post-chaetal lobes dorsally on the parapodia.
Large specimens of this species are relatively easy to recognise. In smaller ones, the pattern of origin of the anterior dorsal cirri and the pre-and post-chaetal parapodial lobes may be difficult to see.

Syllis sp. G has no dorsal pigment pattern. The dorsal cirri are of moderate length, with 20 articles (probably considerably more in large individuals) in longer ones, and obvious granular inclusions. The falcigers are bidentate throughout, showing a considerable gradation in blade length within a parapodium, 10-40 µm in anterior parapodia, 20-70 µm in post-proventricular region. Falcigers all have prominent teeth along the cutting edge. An emergent aciculum is present from setiger 1, accompanied by 1-2 thinner non-emergent ones. The emergent aciculum is stouter in post-proventricular segments, with 1 thin pointed non-emergent one alongside it.
The presence of an emergent aciculum from setiger 1 and the relatively large range of falciger blade lengths within a parapodium make this species easy to recognise.

Syllis sp. H has no pigment pattern, and has very poorly defined eyes, so that often it looks as though they are absent. The dorsal cirri are characteristically thin, with a small number of articles (up to 13). Falcigers are all short-bladed, 14-16 µm in length and minutely bidentate. In parapodia of the post-proventricular region there is 1 stout bluntly rounded aciculum, which is bent a short distance from its tip.
The poorly developed eyes, thin dorsal cirri and characteristic aciculum of posterior segments makes this species readily recognisable. It is often found together with *Syllis* sp. E.

Syllis cornuta (= *Syllis* sp. J) has no dorsal pigment pattern. Its dorsal cirri are short and cigar-shaped with a maximum of about 17 articles. Chaetae include pseudospinigers and falcigers from setiger 1. Anterior parapodia with 3 pseudospinigers with blades of 40-60 µm and numerous falcigers with blades of 14-20 µm; in post-proventricular segments. pseudospinigers with blades up to 80-120 µm and falcigers with blades of 14-24 µm. Falcigers minutely bidentate becoming more distinctly bidentate posteriorly, with teeth visible on the cutting edge. Aciculae numbering 3 or 4 per parapodium in post-proventricular region, none particularly stout or emergent.

S. cornuta is typically found in association with *Phascolion strombus* in the upper whorls of a *Turritella communis* shell, though it is occasionally taken free-living.

Syllis krohnii (= *Syllis* sp. N) has an anterior pigment pattern of transverse stripes across the dorsum. The dorsal cirri are markedly unequal, with long thick ones more or less alternating with short thin ones. The falcigers of anterior parapodia sre distinctly bidentate, with blade lengths of 20-30 µm. Blades shorter and chaetae stouter in post-proventricular segments. Aciculae of post-proventricular region reducing from 2 to 1, stout with a slightly bent tip.

Syllis amica has characteristic large simple chaetae in mid-body segments, formed by the loss of the blade of an ordinary falciger, accompanied by a few thin unidentate falcigers. Anterior parapodia have minutely bidentate falcigers showing only a slight gradation in blade length (16-20 µm). Posterior parapodia also have minutely bidentate falcigers with even shorter blades. Longer dorsal cirri have up to 25 articles. 2 thin aciculae throughout.

Syllis gracilis has large simple chaetae in mid-body segments formed by the fusion of blade and shaft. Anterior falcigers are bidentate with blades of 25-45 µm, with teeth on the cutting edge. Posterior parapodia with falcigers with shorter bidentate blades (maximum 20 µm). Aciculum with swollen end with short tip to it is present in posterior segments. In the mid-body 2-3 thinner aciculae of the same shape are found. Dorsal cirri are quite short, especially after the first few segments, mid-body parapodia having about 10 articles in their dorsal cirri. Anterior dorsum with transverse pigment stripes. This species seems to undergo asexual reproduction by fragmentation and regeneration, at least at certain times of the year.

There is also a species of *Syllis* with only unidentate chaetae, which may or may not be *Syllis vittata*. Material is scarce, and more than one species may be involved. Other species are also likely to be found in British waters once more people begin to look closely at the material they collect.

Subfamily EUSYLLINAE

Eusyllines all have 3 antennae and 2 pairs of tentacular cirri, but the presence of anterior palps and their degree of development is variable within the subfamily. In some taxa there is an occipital flap arising from the segment bearing the tentacular cirri and extending forward to cover the posterior part of the prostomium. The dorsal cirri are generally smooth, but may be wrinkled, occasionally enough to suggest that they are composed of articles such as are found in species of the Syllinae, but examination of the dorsal cirri of posterior segemnts of these taxa generally show them to be smooth. In the genera *Syllides* and *Streptosyllis* some of the dorsal cirri have a distinctly beaded appearance due to the presence of glandular inclusions within them. Dorsal cirri are usually longer than the parapodial lobes, and may be very long and coiled. They are also delicately attached in many cases, and may be damaged or missing. In a very few taxa they may be absent from setiger 2.

The pharynx may be short or long, but only rarely showing the sinuations seen in the Autolytinae. It may be unarmed, have a single dorsal tooth, a single tooth plus denticulations around the pharyngeal opening, a series of teeth forming a trepan or a series of teeth pointing backwards.

The chaetae include simple dorsal and ventral forms and compound chaetae of various types. In some taxa the chaetae of a number of anterior segments differ markedly from those of remaining setigers. Aciculae may be useful in identification, particularly in genera such as *Streptosyllis* and *Odontosyllis* in which enlarged aciculae with knob-like ends are found in anterior segments.

1 Pharynx very long and straight, extending over at least 10 segments, considerably longer than the proventriculus 2
\- Pharynx relatively short, or coiled, extending over no more than 5 segments 4

2 Anterior parapodia with one or more enlarged aciculae with knob-like tip, visible under a dissecting microscope 3
\- No enlarged aciculae visible in anterior parapodia; very long coiled dorsal cirri, but these are easily lost ..... *Dioplosyllis cirrosa*

3 Compound chaetae all short bladed falcigers ..... *Opisthodonta pterochaeta*
\- Compound chaetae also include long-bladed spinigers ..... *Opisthodonta* sp. A

4 Body short with only 13 setigers; dorsal cirri very long and coiled, but easily lost; pharynx convoluted in front of proventriculus ..... *Amblyosyllis formosa*
\- Body with more than 13 setigers (beware of juveniles, obviously); dorsal cirri never coiled; pharynx straight 5

5 Eyes absent; dorsal cirri absent from setiger 2 ..... *Palposyllis prosostoma* (Pionosyllis probe Westheide)
\- Eyes present; dorsal cirri on all setigers (beware of damage) 6

6 Occipital flap covering the posterior part of the prostomium 7
\- No occipital flap 10

7 Antennae, tentacular and dorsal cirri all relatively short; compound chaetae with long blades (maximum 50 µm); dorsum often with distinct pattern of dark patches ..... *Odontosyllis gibba*
\- Antennae, tentacular and dorsal cirri all; compound chaetae with relatively short blades (maximum 20 µm); no colour pattern dorsally 8

8 Compound chaetae unidentate falcigers ..... *Odontosyllis ctenostoma*
\- Compound chaetae bidentate falcigers 9

9 Antennae, tentacular and anterior dorsal cirri ireegularly wrinkled; pharynx with a single dorsal tooth and minute serrations on the pharyngeal opening ..... *Eusyllis blomstrandi*
\- Antennae, tentacular and dorsal ciir smooth; pharynx with a series of approximately 6 backwardly directed teeth ..... *Odontosyllis fulgurans*

10 Aciculae of a number of anterior segments obviously enlarged, with knob-like tips; chaetae of these anterior segments stouter and with modified blades; palps very much reduced and not visible in dorsal view 11

\- Aciculae and chaetae of anterior segments not markedly different to those of more posterior setigers; palps well developed, visible in dorsal view 12

11 Aciculae enlarged in setigers 2-5 ..... *Streptosyllis websteri*

\- Aciculae enlarged in setigers 2-6 ..... *Streptosyllis bidentata*

12 Ventral cirri of the first setiger lamellar, forming 2 flaps on the ventrum, with a small gap between them in the mid-line 13

\- Ventral cirri of the first setiger cirriform or globular but not markedly different from those of subsequent segments 14

13 Animal very delicate, usually fragmented; proventriculus short, in 2-3 segments ..... *Pionosyllis lamelligera*

\- Animals relatively robust; proventriculus long, in 6-8 segments ..... *Eusyllis lamelligera*

14 All antennae, tentacular and dorsal cirri smooth ..... *Pionosyllis pulligera*

\- Some appendages at the anterior end either irregularly wrinkled or distinctly beaded 15

15 Antennae, tentacular and anterior dorsal cirri all irregularly wrinkled or distinctly beaded; pharynx with a dorsal tooth 16

Antennae and tentacular cirri smooth; some dorsal cirri beaded, others smooth (beware of specimens with missing cirri); pharynx unarmed 18

16 Compound chaetae all falcigers with blades showing a gradation in blade length ..... *Eusyllis assimilis*

\- Compound chaetae consisting of falcigers and long bladed pseudospinigers 17

17 In posterior setigers the falcigers have very short blades and are almost autolytoid in appearance ..... *Ehlersia ferruginea*

\- In all setigers the falcigers have moderately long blades ..... *Ehlersia* sp. A

18 Simple dorsal chaeta long and tapering ..... *Syllides japonica*

Simple dorsal chaeta with slightly expanded tip of complex structure ..... *Syllides benedicti*

Genus *Amblyosyllis*

This genus differs from other eusylline genera in several respects; the body is short with a fixed number (13) of setigers; the pharynx is long and convoluted anterior to the proventriculus, armed with a trepan of complex teeth; nuchal epaulettes very well developed; all chaetae compound falcigers.

British records of the genus have consistently been assigned to *A. formosa*, described from Normandy. This requires confirmation.

Genus *Dioplosyllis*

The genus is characterised by palps basally fused but diverging distally, a pharynx with one large dorsal tooth and several smaller teeth close to the pharyngeal margin. The antennae, tentacular and dorsal cirri are all long or very long. The compound chaetae are short-bladed falcigers.

D. cirrosa was described from Roscoff (Gidholm, 1962), and is readily recognisable by the very long pharynx with a prominent dorsal tooth some distance away from the pharyngeal margin, with 5 smaller teeth forming ventral semicircle subterminally, and the very long antennae, tentacular and dorsal cirri, which contain glandular inclusions, but which are readily lost. The parapodia are elongate, with the ventral cirri arising subdistally. Short-bladed falcigers are accompanied by single simple dorsal chaetae in posteriormost segments.

Genus *Ehlersia*

The name *Ehlersia* will be found in the literature referring to species of the Syllinae which posess pseudospinigers in addition to falcigers. The confusion has arisen because the species of the eusylline genus *Ehlersia* have anterior appendages which look like those of a *Syllis* species, but the species of *Ehlersia* have been shown beyond doubt to belong to the Eusyllinae. San Martin (2003) changed the generic name to *Parehlersia* without giving any reasons, so for now I will retain *Ehlersia*.

E. ferruginea has antennae, tentacular cirri and anterior dorsal cirri which show the beaded appearance of *Syllis* species. The pharynx is short and wide, with a single dorsal tooth, and the proventriculus is well devloped, occupying approximately 6 segments. The chaetae include 1-2 pseudospinigers per parapodium, with very long blades with minutely bidentate tips (maximum blade length 80-100 µm) and falcigers with blades of 10-20 µm. In posterior setigers these falcigers have shorter blades, with thicker shafts. A small digitiform papilla is present on the underside of each dorsal cirrus.

E. sp. A has been found in the Irish Sea, and differs from *E. ferruginea* mainly in having falcigers in posterior segments with longer blades. This species requires a full description.

Genus *Eusyllis*

Eusyllis is characterised by the presence of a single dorsal tooth in the pharynx, together with denticulations around the opening of the pharynx. Species of the genus tend to have anterior appendages irregularly wrinkled, and may or may not have an occipital flap covering the posterior part of the prostomium. Compound chaetae are falcigers. Three species are likely to be found in British waters.

E. blomstrandi is one of the syllids most frequently recorded, living in tubes of hydroids, bryozoans and algae. It has a short wide pharynx leading into a very prominent proventriculus occupying 6-8 segments. In anterior segments, the compound falcigers have relatively long bidentate blades, the longest 2x length of the shortest (maximum blade length 20 µm). In more posterior segments the range of

blade length is less (maximum blade length aprroximately 10 μm). The body is quite fragile.

E. assimilis is very similar to *E. blomstrandi* but there is a greater range in the blade length of the falcigers in all segments. The dorsal cirri are somewhat longer than in *E. blomstrandi.*

E. lamelligera is readily separable from the other 2 species by the shape of the ventral cirri of the first setiger. The longest of the bidentate falcigers in mid-body and posterior segments are also longer than those of the other 2 species (maximum blade length 35 μm).

Genus *Odontosyllis*

The genus is characterised by its pharyngeal armature, which consists of a small number of teeth forming a ventral semicircle directed posteriorly, and the possession of an occipital flap arising from the segment bearing the tentacular cirri and extending over the posterior part of the prostomium.

O. gibba is the most readily identifiable species, having short antennae, tentacular and dorsal cirri, the latter being not much longer than the parapodial lobes. The chaetae include falcigers with long blades up to 40 μm in length. There is often a colour pattern of dark patches every few segments dorsally. *O. gibba* is short bodied and robust.

O. ctenostoma has relatively longer antennae, tentacular and dorsal cirri, and its chaetae are short-bladed and unidentate. The body is quite fragile.

O. fulgurans is separated from *O. ctenostoma* by its short bidentate falcigers.

Genus *Opisthodonta*

Opisthodonta has a single dorsal tooth in the pharynx which is situated closer to the mid-point than the anterior margin. The ventral cirri are quite bulbous, partially fused to the parapodial lobes in anterior setigers. (NB. the enlarged aciculae of anterior segments in the 2 British species are not found in the type species *O. morena* Langerhans, 1879).

O. pterochaeta is very distinct, having a long pharynx occupying at least 10 segments, folowed by a long and wide proventriculus and having one or more enlarged aciculae with knob-like tips in the parapodia of pre-proventricular segments. The falcigers are very distinctive, having what appears to be a hood around the blade. The species is very delicate, and generally loses appendages readily and breaks behind the proventriculus.

O. sp. A is similar to *O. pterochaeta* in having enlarged aciculae in anterior segments, but differs in having a group of chaetae with long blades as well as the group with

short blades in each parapodium. It is also delicate and usually damaged. It is yet to be described fully.

Genus *Palposyllis*

Antennae, tentacular and dorsal cirri smooth; palps very well developed; pharynx with a single dorsal tooth; compound chaetae falcigerous. The genus is essentially the same as *Pionosyllis*, but the single species it contains, *P. prosostoma*, lacks dorsal cirri on setiger 2, a character not found in *Pionosyllis*.

P. prosostoma has no pigmented eyes, it lacks dorsal cirri on setiger 2, the dorsal cirri of other setigers apart from setiger 1 are short, scarcely longer than the parapodial lobes, and the compound chaetae are all short-bladed unidentate falcigers. The species *Pionosyllis prope-weismanni* described from Roscoff by Dauvin and Lee (1983) appears to be identical to *Palposyllis prosostoma*, except that it is described as having dorsal cirri on all setigers.

Genus *Pionosyllis*

For a long time *Pionosyllis* contained a rather disparate group of species which did not readily fit into any of the other eusylline genera. This situation has gradually been rectified over recent years, principally by San Martin in various papers. It is characterised by the presence of only a dorsal tooth in the pharynx, other characters showing considerable variety.

P. lamelligera is relatively easily identifiable by the shape of the ventral cirri of setiger 1, being similar in this respect only to *Eusyllis lamelligera*. The pharyngeal armature would separate these 2, but in addition *P. lamelligera* is a small delicate species, which readily fragments and which has a mid-dorsal pigment patch on each segment from about setiger 2 or 3. It also has a short proventriculus occupying only 2-3 segments. Its chaetae include bidentate falcigers with the longest blade being approximately 2x the shortest in anterior segments (maximum blade length 40 µm). In posterior segments, the shortest falciger blades are very much reduced, and although the longest ones are also reduced in length, the ratio of the longest to the shortest is approximately 4:1.

P. pulligera has a short pharynx with dorsal tooth and a short proventriculus. It is a short worm with only about 25 setigers, and has minutely bidentate falcigers of anterior segments with blades of up to 30 µm with some variation in blade length. They have a few long spines at the proximal end of the cutting edge of the blades. The falcigers in posterior segments are unidentate with blades of a maximum length of approximately 15 µm. This species is reputed to brood embryos dorsally, attached to the dorsal cirri, and is the only british eusylline so to do. According to San Martin (2003) *Pionosyllis serrata* Southern, 1914 is a synonym of *P. pulligera*. Indeed these 2 species, together with *P. divaricata* are all extremely similar.

P. compacta and *P. longocirrata* may be found in British waters. Both have distinctly bidentate chaetae, *P. compacta* with all dorsal cirri except those of setiger 1 short, whilst *P. longocirrata*, as its name suggests, has all dorsal cirri much longer. I have seen nothing which I would identify as either, yet.

Genus *Streptosyllis*

This genus is characterised by the presence of enlarged aciculae with knob-like tips in a number of anterior segments, together with modified chaetae in those segments. Antennae and tentacular cirri are smooth, but some of the dorsal cirri have granular inclusions, similar to those seen in species of *Syllides*. Palps are usually very much reduced and normally not visible in dorsal view. The pharynx is unarmed.

S. websteri may be very abundant locally, and is characterised by the presence of enlarged aciculae in setigers 2-5. From setiger 6 they are slim, though with the same knob-like tip. In setigers 1-5 the chaetae are modified, those of setigers 2-5 being relatively massive, corresponding to the size of the aciculae in these segments. From setiger 6 onwards, the compound chaetae are all bidentate falcigers with only a small variation in blade length (maximum 25 µm).

S. bidentata has enlarged aciculae in setigers 2-6, with the modified chaetae confined to these segments. The bidentate falcigers of setigers 7 and onwards have a maximum blade length of some 30 µm.

A few specimens of a third species which probably belongs to this genus have been collected in the Irish Sea, characterised by the presence of chaetae similar to the modified chaetae of the other 2 *Streptosyllis* species in all parapodia.

Genus *Syllides*

Syllides is characterised by an unarmed pharynx and some dorsal cirri showing distinct articulation caused by granular inclusions. Antennae, tentacular and anterior dorsal cirri smooth; palps present and visible in dorsal view. Compound chaetae all falcigers of various lengths, usually minutely bidentate, and sometimes with proximal spurs on the blades of some of the chaetae. Separation of the species is not easy, and there would appear to be at least 2 species in British waters.The details of the dorsal simple chaetae are extremely useful.

S. benedicti has simple dorsal chaetae with sub-terminal serrations on its convex side, and the tip is complex and slightly variable, bearing irregular spines and sometimes a membranous collar. The compound chaetae include forms with moderately long blades with single basal spurs.

S. japonica has curved simple dorsal chaetae which gradually taper to a point. The compound chaetae include forms each with several basal spurs. This species is widely recorded, and requires closer scrutiny.

I have not seen any material which belongs to *S. longocirrata*, a species which tends towards the condition in *Streptosyllis*, with modified aciculae and chaetae in 5 anterior setigers. *Syllides articulocirrata* was described from Helgoland (Gillandt 1979), and differs from other species in the genus in having antennae, tentacular and anterior dorsal crri showing articulations with other dorsal cirri smooth. The compound chaetae are very short-bladed bidentate falcigers. It is doubtful if the species belongs to *Syllides*.

Subfamily EXOGONINAE

The exogonines are small or very small forms, which have essentially smooth antennae, tentacular and dorsal cirri, which may be of characteristic shapes in some species. The prostomium bears the usual 3 antennae and a pair of palps, which are prominent and fused along their length. Typically there is only 1 pair of tentacular cirri, but the genus *Brania* has 2 pairs. In many species of exogonines, adults lack dorsal cirri on setiger 2, and it would appear that this state is typical for all species during their early stages of development. Those taxa in which dorsal cirri are present on all setigers in adults develop the cirri on setiger 2 as they develop.

The pharynx is short and straight, bearing a single dorsal tooth, which is usually close to the anterior margin. The proventriculus has relatively few muscle rows.

The chaetae include both simple and compound forms. The typical arrangement in a parapodium from the posterior half of the animal is a simple dorsal chaeta arising dorsal to the aciculum, a series of compound chaetae below the aciculum and a single simple ventral chaeta. The compound chaetae may be quite varied in form even within a parapodium, and in some species the chaetae of the anteriormost setigers are different to those of remaining setigers.

All exogonines undergo epigamous reproduction, and the typical situation is for both sexes to develop capillary swimming chaetae above the parapodial lobes of mid-body and posterior segments as they reach maturity, and to leave their normal habitat to breed in the water column. After fertilisation, the embryos develop attached to body of the female, which sheds its swimming chaetae and returns to its normal habitat. Embryos and larvae are brooded on either the dorsum or the ventrum of the female until they are capable of an independent life. Such brooding females may be quite common.

1 Dorsal cirri shorter than or of comparable length to the parapodial lobes 2
\- Dorsal cirri obviously longer than the parapodial lobes 10

2 Body and parapodia with papillae, to which debris may be attached 3
\- Body and parapodia lacking papillae 7

3 Parapodia with glandular inclusions which are clearly visible when viewed dorsally, and take up stains such as rose bengal 4
\- Parapodia lacking glandular inclusions 5

4 Compound chaetae showing little variation in blade length within a parapodium; maximum blade length 15 µm..... *Sphaerosyllis taylori*
\- Compound chaetae showing considerable variation in blade length within a parapodium; maximum blade length of 30 µm ..... *Sphaerosyllis hystrix*

5 4 eyes in a straight line across the prostomium ..... *Sphaerosyllis erinaceus*
\- 4 eyes in the usual trapezoid arrangement 6

6 Dorsal cirri absent from setiger 2; proventriculus small, occupying approximately 2 segments ..... *Sphaerosyllis bulbosa*

-	Dorsal cirri present on all setigers; proventriculus large, occupying 4-5 segments	*Sphaerosyllis tetralix*
7	Proventriculus short, occupying no more than 2 segments	8
-	Proventriculus longer occupying 3 or more segments	9
8	Antennae all equally well developed, with the median only slightly longer than the laterals; chaetae include spinigers and falcigers; chaetae of the first 3 setigers noticeably different from those of subsequent segments	*Exogone naidina*
-	Median antenna much longer than the very short laterals; median extending well beyond the anterior margin of the palps; chaetae all falcigers, but some with very long blades	*Exogone furcifera*
8	Antennae all very short	*Exogone verugera*
-	Median antenna much longer than the laterals	9
9	Chaetae include both falcigers and spinigers; dorsal cirri present on all setigers	*Exogone dispar*
-	Compound chaetae all short-bladed falcigers; dorsal cirri absent from setiger 2	*Exogone hebes*
10	1 pair of tentacular cirri present; parapodial glands present after the first few segments	*Parapionosyllis minuta*
-	2 pairs of tentacular cirri; no parapodial glands	11
11	Dorsal cirri truncate, containing capsules of fibrillar material	*Brania pusilla*
-	Dorsal cirri tapering, containing no fibrillar material	12
12	Dorsal cirri absent from setiger 2	*Brania swedmarki*
-	Dorsal cirri present on all setigers	13
13	Compound chaetae include mostly unidentate forms with smooth or minutely serrated cutting edges to the blades together with 1-2 with much longer blades (maximum 25 µm), minutely bidentate with obvious basal spines	*Brania limbata*
-	Compound chaetae all distinctly bidentate with minute serrations along the cutting edge, showing only a slight variation in blade length within a parapodium	*Brania clavata*

Genus *Sphaerosyllis*

San Martin (1984) removed some species of *Sphaerosyllis* to a new genus *Prosphaerosyllis* using a combination of characters to separate the 2 genera. In *Prosphaerosyllis* the pharynx is relatively wide, the proventriculus relatively massive, there are 2 anterior eyespots in addition to the usual 4 eyes; the aciculae are acuminate rather than with a tip bent at a right angle, and brooding of embryos is on the dorsum of the female rather than the ventrum. San Martin (2005) also erected another genus, *Erinaceusyllis* to which a further group of species were removed from *Sphaerosyllis*.
These species are more similar to those retained within *Sphaerosyllis*, but they have the anterior eyespots and lack the aciculae characteristic of *Sphaerosyllis*. These three subdivisions of *Sphaerosyllis* broadly agree with the 3 groups of species recognised by Riser (1991).

The genus *Sphaerosyllis* is characterised by 1 pair of tentacular cirri, which, together with the antennae and dorsal cirri, are often bottle shaped. Dorsal cirri are present or absent on setiger 2, and the chaetae include simple dorsal and ventral forms and compound falcigers. The body has adhesive papillae variously arranged, and to which debris becomes attached. Useful characters in the identification of *Sphaerosyllis* species include: the width of the pharynx relative to the body, the position of the single dorsal tooth and the size and number of muscle rows in the proventriculus; the arrangement of the 2 pairs of eyes and the presence or absence of the anterior eyespots which are close to the origins of the lateral antennae; the presence or absence of dorsal cirri on setiger 2; the shape of the single aciculum seen in each parapodium; the details of the simple and compound chaetae. The compound chaetae are typically short-bladed unidentate falcigers, but in some species spines along the blade may be prominent and the variation in blade length within a parapodium may be quite marked.

The British species in this genus would appear to number between the 5 in the key above and 8, but the exact status of the 3 possible additions remains to be confirmed. Additional species are also likely to be found.

S. bulbosa is a species which can occur in quite large numbers in coarse sediments subtidally. It has a rather flattened body, which generally only has a small amount of material attached to it. The 2 pairs of eyes are in the usual trapezoid arrangement, dorsal cirri are absent from setiger 2 and parapodial glands are absent. The pharynx and proventriculus are relatively small, and the compound chaetae are all short-bladed, becoming stouter in mid-body segments. The aciculae are characteristic, with a swollen region subterminally, with a short thinner tip. Embryos are brooded ventrally. San Martin (2003) leaves this in his restricted *Sphaerosyllis*, although the aciculae are more like those of *Erinaceusyllis* species.

S. erinaceus is a short-bodied species, with 2 pairs of eyes in a straight line across the prostomium with 2 anterior eyespots. It lacks dorsal cirri on setiger 2 and has no parapodial glands. The pharynx is short and relatively thin with an anterior tooth, and the proventriculus is not particularly large. Compound chaetae are unidentate falcigers, with spines along the cutting edge and distinct differences in blade length within a parapodium. The aciculae are thin with a subterminal swelling before the short tip. Embryos are brooded dorsally. San Martin (2003) includes this species in the genus *Erinaceusyllis*.

S. taylori has a flattened body shape, with 2 pairs of eyes in the usual trapezoid arrangement. The pharynx is thin with an anterior tooth, and the proventriculus is short with approximately 10 major muscle rows. Dorsal cirri are absent from setiger 2, and fibrillar parapodial glands are present, usually from setiger 4. These glands contain material arranged as rods in approximately parallel bundles. The aciculae have the common shape with the tip bent at right angles to the axis of the aciculum. The compound chaetae are all unidentate falcigers, mostly smooth along the cutting edge, showing little variation in blade length (maximum 15 µm). Embryos are brooded ventrally.

S. hystrix is very similar to *S. taylori*, being flattened, lacking dorsal cirri on setiger 2 and having fibrillar parapodial glands. It differs in having comound chaetae showing a considerable variation in blade length within a parapodium, the longest being approximately 2x the length of the shortest, and showing distinct spines along the cutting edge (maximum blade length 30 µm). Embryos are brooded ventrally.
(Specimens essentially like *S. hystrix* but with much longer bodies with up to 60 setigers have been found, and these may represent a third species with fibrillar parapodial glands).

S. tetralix is a short fat species, with a short wide pharynx with the dorsal tooth situated a short distance from the anterior margin and a relatively large proventriculus. It has dorsal cirri on all setigers and no parapodial glands. Its compound chaetae are short-bladed smooth unidentate falcigers. The papillae on the dorsum are well developed and distributed in a regular pattern. Embryos are brooded dorsally. San Martin (2003) calls this *Prosphaerosyllis tetralix*.
(There is another species of similar shape, with dorsal cirri on all setigers and no parapodial glands which seems to differ from *S. tetralix* in details of its chaetae. A third species has large irregularly arranged sphaerical blobs dorsally, which may be something to do with secretions from the papillae. The relationships between these 3 taxa and their identities need further investigation.)

Genus *Exogone*

San Martin (2003) divides the genus into 2 subgenera - *Exogone* and *Parexogone* - essentially on the details of the chaetae. This conveniently splits a large genus, but is not followed here.

There are 3 well established species with a 4th recorded in the Irish Sea and a 5th reported to occur in the North Sea. *Exogone* species show a remarkable range of morphology, primarily in the degree of development of the antennae and the details of the varied chaetal forms. The genus is characterised by the presence of 1 pair of tentacular cirri, which, together with the dorsal cirri, are small relative to the parapodial lobes. Dorsal cirri may be present or absent on setiger 2 and the chaetae include simple dorsal and ventral forms, and compound falcigers, with or without compound spinigers. The compound chaetae of anterior setigers may differ markedly from those of subsequent segments. Embryos are brooded on the ventrum of the female.

E. naidina is a very common and sometimes abundant species, living in a variety of habitats. It is characterised by the possession of a short proventriculus, 3 equally well developed antennae, no dorsal cirri on setiger 2 and has chaetae which include both compound spinigers and falcigers. The first 3 setigers have modified falcigers with no accompanying spinigers.

E. hebes may be locally abundant in sandy beaches and in the subtidal. It has a well developed median antenna, but very much reduced laterals. The fused palps are very prominent, and dorsal cirri are absent from setiger 2. Compound chaetae are all short-bladed falcigers. On the Atlantic coast of North America, this species has been shown to be viviparous (Pocklington and Hutchenson, 1983), but this is not the case in a population studied in the UK (personal observation), raising the possibility that another species may be involved. Southern (1920) described a subspecies from Clare Island, *E. hebes hibernica*, which showed minor differences from the original

description. Further investigation is required to clarify the status of British specimens of *E. hebes*.

E. verugera is a sublittoral species, taken in soft sediment. It has a long proventriculus, 3 very small antennae and lacks dorsal cirri on setiger 2 (NB. the original description shows dorsal cirri on all setigers). The compound chaetae include both falcigers and spinigers, both of which have shafts with elaborate expanded heads.

E furcifera has been recorded from the Irish Sea, and has a very long median antenna, with the laterals very much reduced. The proventriculus is short and dorsal cirri are absent from setiger 2. The compound chaetae are all falcigers ie. they have tips which are rounded and do not come to a point, showing considerable variation in blade length and with the longest blades approximately 60 µm.

E. dispar is the only species of the genus recorded from British waters which has dorsal cirri on all setigers. It has a well developed proventriculus, and the median antenna extends approximately to the anterior margin of the palps. The lateral antennae are much shorter, but still quite well developed. The compound chaetae consist of spinigers and falcigers.

Genus *Parapionosyllis*

This genus at first sight appears more likely to belong to the Eusyllinae, but the presence of just 1 pair of tentacular cirri and the habit of brooding embryos attached to the ventrum of females shows it to be an exogonine genus. The body lacks the papillae found on species of *Sphaerosyllis* and has generally quite well developed antennae, tentacular and dorsal cirri, with dorsal cirri present on all setigers. Most (all?) species have parapodial glands.

P. minuta has 2 pairs of eyes in the usual trapezoid arrangement, with a pair of anterior eyespots. The palps are fused for about one half of their length, and the 3 antennae are well developed and somewhat bottle-shaped. The 1 pair of tentacular cirri are approximately the same size as the lateral antennae, and the slightly smaller dorsal cirri are present on every setiger. The pharynx is thin, with an anterior tooth, and the proventriculus occupies 2-3 segments, with 11 major muscle rows. The chaetae are falcigers, with prominent spines along the cutting edge, showing considerable variation in blade length within a parapodium (maximum blade length 25µm).

Genus *Brania*

San Martin (2003) has revived the name *Salvatoria* (first used by McIntosh in 1885) for a large number of species previously included in *Brania*. The justification for this is not particularly convincing, the most consistent difference being the brooding of embryos on the ventrum of the female in *Brania* and on the dorsum in species of *Salvatoria*.

The species of *Brania* present in British waters require re-evaluation. Full descriptions of material will almost certainly point to problems when compared to existing species descriptions. The species named here, with the exception of *B. swedmarki*, should be treated with caution.

B. pusilla in British waters has the characteristic dorsal cirri with fibrillar inclusions. There are 3 antennae and 2 pairs of tentacular cirri, all of approximately the same length. The pharynx is short with a prominent mid-dorsal tooth close to its anterior margin, and the proventriculus has 15 major muscle bands. The simple dorsal chaeta, present after the first few setigers, has minute denticulations subterminally. The compound chaetae are all falcigers, which in anterior segments show considerable variation in blade length within a parapodium, the longest being 4x length of the shortest (maximum blade length 35 μm). They are bidentate. In posterior setigers the compound chaetae are stouter, with shorter unidentate blades in British material, in contrast to the situation described by San Martin (2003) from Spain. The significance of these differences needs to be investigated.

B swedmarki is distinguished from other members of the genus by the absence of dorsal cirri on setiger 2. It has relatively short lateral antennae, tentacular and dorsal cirri compared with other species of *Brania,* and its palps are joined together by a dorsal flap. It has a wide pharynx with a tooth some distance away from the pharyngeal opening, and the proventriculus is massive, occupying about 3 segments with approximately 22 major muscle rows. Its compound chaetae are all short-bladed unidentate falcigers, some with smooth blades, others with distinct serrations along the cutting edge. San Martin (2003) calls this *Salvatoria swedmarki*.

B. clavata has well developed antennae tentacular and dorsal cirri, and a pair of anterior palps joined by a dorsal flap. The tooth is close to the anterior margin of the pharynx, and the proventriculus is relatively short. The compound chaetae are all bidentate falcigers, showing distinct variation in blade length within a parapodium (maximum blade length approximately 40 μm). Serrations are usually present on the cutting edge. The parapodia show a group of 3-4 bulbous papillae distally. San Martin (2003) calls this *Salvatoria clavata*.

B. limbata is separated from *B. clavata* by its chaetae. The falcigers are predominantly unidentate with smooth or minutely serrated blades, but these are accompanied by 1 or 2 minutely bidentate falcigers with much longer blades and distinct spines basally on the cutting edge. San Martin (2003) calls this *Salvatoria limbata*.

Subfamily AUTOLYTINAE

Nygren (2004) has included all species of *Autolytus* in the genus *Myrianida*, and has introduced the genus *Epigamia* for the species which were previously in *Autolytus* but which showed epigamous rather than schizogamous reproduction.

Autolytines are notoriously difficult to identify mainly because there are relatively few morphological characteristics that can be used to separate them. The main charatcers currently considered to be of significance are the details of the chaetae, the dorsal cirri and the trepan in the pharynx. In living specimens, colour patterns can be very useful, but they are not consistently retained in fixed material.

The chaetae consist of both compound and simple forms, the typical arrangement being of a group of compound chaetae in a parapodium with a single simple chaeta in the most dorsal position. Simple ventral chaetae are absent. The compound chaetae

are typically bidentate falcigers with the subterminal tooth well devloped and usually more prominent than the terminal one. The simple chaeta, known as a bayonet chaeta, typically has a series of subterminal teeth and a terminal filament. Two forms exist, one with a thin shaft and filament following the longitudinal axis of the shaft, and the other thicker, with the filament at an angle to the chaetal axis.

The dorsal cirri usually show a pattern in their length and orientation, and may be composed of two elements, a basal cirrophore to which is attached the cirrostyle. Between setigers 3 and 27 the dorsal cirri alternate in length and orientation, with the exception of setigers 8 and 9, where short cirri are found on consecutive segments. After setiger 27, the arrangement gets more complicated, but may be of taxonomic significance. Generally speaking, the absence of dorsal cirri over most of the body length, the presence or absence of cirrophores, the details of the relative lengths of cirrophores and cirrostyles and the shape of the cirrostyles are important in the identification of British autolytines.

The pharynx in autolytines is armed with a ring of teeth, forming the trepan. The teeth of the trepan may be equal or show a pattern of larger and smaller ones, the teeth arising from a basal ring, which may be well or poorly developed. The precise number of teeth in the trepan is of little value, but the general arrangement can be of taxonomic significance. However, getting a good view of the trepan is not easy and is probably not practical as part of routine identification. It requires the clearing of specimens and/or the dissection of the pharynx. The proventriculus has a number of muscle rows, which are difficult to count precisely, and their number is of only limited use in recognising species in the British fauna

Other characters which may be worth noting are the extent of parapodial glands, which may be restricted to the parapodia or extend into the body, the details of the curves and sinuations of the pharynx, the size of the proventriculus and the types of epidermal gland cells on the dorsum of the animal. Cilated sensory structures on the posterior edge of the prostomium, the nuchal organs, are developed as nuchal epaulettes which may extend backwards over the segment bearing the tentacular cirri and even some anterior setigers. The presence of segmental ciliary bands is restricted in autolytine species, and finally any observations on the details of the stolonisation process can be useful.

1 Dorsal cirri absent from all segments after setiger 1 (genus *Procerastea*) 2
\- Dorsal cirri present on all setigers, though they may be short 3

2 6-7 chaetae in anterior setigers, reducing to 4 more posteriorly; pharynx with a distinct sinuation ..... *Procerastea halleziana*
\- Up to 12 chaetae in anterior setigers, reducing to 6 more posteriorly; pharynx with only a slight bend ..... *Procerastea nematodes*

3 Dorsal cirri with swollen ends, showing a pattern of long ones and much shorter ones along the body ..... *Virchowia clavata*
\- Dorsal cirri without noticeably swollen ends 4

4 Dorsal cirri flattened, almost like those of a phyllodocid . *Myrianida pinnigera*
\- Dorsal cirri not flattened 5

5 Compound chaetae accompanied by a simple chaeta in each parapodium which is of the same thickness as the shafts of the compound chaetae; cirrophores absent after setiger 1 6
\- Compound chaetae accompanied by a simple chaeta in each parapodium which is much thinner than the shafts of the compound chaetae; cirrophores present and usually obvious on all setigers 9

6 Terminal tooth of compound chaetae as large as the secondary tooth; animal with a very distinct colour pattern of white longitudinal and transverse lines separating dark rectangles on the dorsal surface (may fade or be lost in preserved material) ..... *Proceraea picta*
\- Terminal tooth of compound chaetae noticeably smaller than the secondary tooth; colour pattern of 2 or 3 longitudinal dark lines present in living animals, (may fade or be lost in preserved material) 7

7 Nuchal epaulettes reaching setiger1; proventriculus large, occupying 2-4 setigers with 45-50 muscle rows; 2 dark dorso-lateral lines in living material ..... *Proceraea scapularis*
\- Nuchal epaulettes extending back over the segment bearing the tentacular cirri only; proventriculus relatively small with 30-35 muscle rows; 2 feint lines laterally or 3 distinct lines on dorsum in living material..... 8

8 3 distinct dark lines on dorsum, which may be retained in fixed material ..... *Proceraea prismatica*
\- 2 feint lateral lines on dorsum in living material, which disappear after fixation ..... *Proceraea cornuta*

9 Cirrophores inflated, with cirrostyles arising at an angle; ..... *Autolytus inermis*
\- Cirrophores of the same width as the cirrostyles 10

10 Cirrophores longer than the parapodial lobes 11
\- Cirrophores as long as or shorter than the parapodial lobes 12

11 Cirrostyles of longer dorsal cirri of mid-body segments longer than the cirrophores ..... *Autolytus langerhansi*
\- Cirrostyles of longer dorsal cirri of mid-body segments shorter than the cirrophores ..... *Autolytus brachycephalus*

12 Compound chaetae with terminal tooth as large as the subterminal one 13
\- Compound chaetae with terminal tooth noticeably smaller than the subterminal one 15

13 Pharynx with complex sinuations extending lateral to the proventriculus; never showing signs of stolon production ..... *Autolytus alexandri*
\- Pharynx with sinuation anterior to, but not extending lateral to the proventriculus; signs of stolonisation may be visible

..... 14

14 Living animals with a mid-dorsal red line along the body length; trepan with teeth of two sizes, although the small ones are not markedly smaller than the large ones ..... *Autolytus rubrolineatus*

\- Living animals with 4 red spots across the dorsum of each segment; trepan with teeth of two distinct sizes, the large ones being basally fused to the neighbouring smaller ones ..... *Autolytus rubropunctatus*

15 Pharynx with sinuation extending lateral to the proventriculus; living animals with median antenna and pygidial cirri white as a consequence of reflective granules ..... *Autolytus quindecimdentatus*

\- Pharynx with sinuation anterior to, not extending lateral to the proventriculus 16

16 Dorsal cirri essentially equal in length; living animals with two reddish lateral stripes on dorsum, and a mid-dorsal line of white light reflecting granules in the gut ..... *Autolytus edwarsi*

\- Dorsal cirri showing a slight variation in length; living animals lacking lateral stripes, and with white granules irregularly distributed in the gut ..... *Autolytus prolifera*

Genus *Autolytus*

The current estimate is that there may be 9 species present in British waters, but further species or changes in names used would not be unexpected.

A. alexandri is the sole representative of the group of species which show epigamy, ie. do not produce stolons. It has complex convolutions of the pharynx anterior to the proventriculus, and extending lateral to it, has a terminal tooth on the compound chaetae which is as large as the subterminal one, and has two ciliary bands across the dorsum of each body segment (all the other British *Autolytus* species have only one ciliary band per segment). Gidholm (1967) calls this species *A. longeferiens*, whilst Nygren (2004) refers to it as *Epigamia alexandri*. Hartmann-Schröder (1996) separates *A. alexandri*, *A. longeferiens* and *A. paradoxus*, which are all considered here to be synonymous.

A. brachycephalus and *A. langerhansi* are similar in that they have long cirrophores, which extend beyond the parapodial lobes. Both have parapodial glands restricted to the parapodia. *A. brachycephalus* is recognisable by having the cirrostyles longer than the cirrophores in the longer dorsal cirri, whilst in *A. langerhansi* the cirrostyles are shorter than the cirrophores. These two species both produce chains of stolons (gemmiparity). Nygren (2004) refers to these species as *Myrianida brachycephala* and *Myrianida langerhansi*.

Autolytus inermis is relatively easily recognised by its dorsal cirri, which show very little variation in length, with the cirrostyles arising at an angle from the slightly inflated cirrophores. It also has a pharynx with a double sinuation, extending lateral to the proventriculus, very long nuchal epaulettes extending back to setiger 4, and a trepan with very poorly developed teeth, sometimes seeming to be smooth. It

reproduces by the production of only single stolons (scissiparity). Nygren (2004) calls this species *Myrianida inermis*.

A. rubrolineatus is characterised by short cirrophores and cirrostyles showing considerable differences in length, and in having compound chaetae with the terminal tooth as prominent as the subterminal one. The nuchal epaulettes are long, extending to setiger 3, the parapodial glands are restricted to the parapodia, and the pharynx has only a short sinuation anterior to the proventriculus. It has a red mid-dorsal stripe along the body when alive. It is similar to *A. alexandri* in its chaetae, but can be distinguished by the pharynx not extending lateral to the proventriculus, the presence of only a single ciliary band on the dorsum of body segments, and the fact that it produces stolons. Its presence in British waters is yet to be confirmed, and Nygren (2004) has synonymised this species with *A. irregularis* as *Myrianida irregularis*.

A. rubropunctatus is readily recognisable by the presence of 4 red spots dorsally on each segment. In preserved material, it would be most similar to *A. rubrolineata* and only the differences in the trepan could be used to separate the 2 species if their colour patterns do not persist. Both appear to produce single stolons. Note that Hartmann-Schröder (1996), reproducing a figure from Fauvel (1923) gives the erroneous impression that the teeth in the trepan of *A. rubropunctatus* are all equal in size. Nygren (2004) uses the name *Myrianida rubropunctata* for this species.

A. quindecimdentatus is recognised by the presence of white light reflecting granules in the median antenna and pygidial cirri in live animals. It has its pharynx extending lateral to the proventriculus (though not in all specimens according to Gidholm 1966), short subequal dorsal cirri, with cirrophores shorter than the parapodial lobes. It seems to produce single stolons. Nygren (2004) calls this species *Myrianida quindecimdentata*. Hartmann-Schröder (1996) erroneously refers to this species as *Autolytus quinquedecimdentatus*.

A. edwarsi and *A. prolifera* are very similar, and may be impossible to separate when preserved. Both have short dorsal cirri arising from cirrophores shorter than the parapodial lobes, and parapodial glands which extend into the body wall dorsal to the parapodium. The pharynx has a short sinuation anterior to the proventriculus. In living material, *A. edwarsi* is recognisable by the presence of lateral red lines on anterior segments and a mid-dorsal line of white light reflecting granules in the gut. In *A. prolifera*, there are no red lines, and the light reflecting granules are scattered radomly on the dorsal side of the gut. In preserved animals *A. edwarsi* has dorsal cirri showing virtually no pattern of variation in length, whilst in *A. prolifera* there is a slight, but noticeable difference between longer and shorter cirri. Both species produce chains of stolons. Gidholm (1966) uses the name *A. prolifer* and Nygren (2004) calls the two species *Myrianida edwarsi* and *M. prolifera*.

NB. Hartmann-Schröder (1996) includes *A. smittiae* which is currently regarded as a dubious species.

Genus *Myrianida*

Using this genus in its strict sense, and not as extended by Nygren (2004), there is only one British representative, *Myrianida pinnigera*. It is readily identifiable by the presence of flattened cirrostyles arising from well developed cirrophores. *M.*

pinnigera also has a distinct colour pattern when alive, with prominent orange or red marks dorsally on every 3 or 4 segments. This species produces long chains of stolons.

Genus *Proceraea*

The best estimate is that there are 4 species of this genus belonging to the British fauna. *Proceraea* species have very few significant characters to separate them, especially in fixed material when distinct colour patterns may or may not be retained. All species of *Proceraea* share features such as bayonet chaetae of the thick form, lack of segmental ciliary bands on the dorsum, a trepan with teeth of 2 distinct sizes (usually 9 large +9 small), cirrophores present only on the tentacular cirri and the dorsal cirri of the first setiger and the production of single stolons, with the stolon head always forming at setiger 14 of the stock.

P. picta is the most readily recognisable, having a very distinctive colour pattern when living, remnants of which may persist after preservation. It is also the only species of *Proceraea* in which the compound chaetae have the terminal tooth as prominent as the subterminal one.

P. prismatica has 3 longitudinal dark lines on the dorsum when alive, but if these are not retained after fixation, it seems that this species can not be distinguished from *P. cornuta*.

P. cornuta seems to be the commonest member of the genus, but it lacks any specific features which enable positive identification.

P. scapularis is characterised by the possession of dark lateral longitudinal lines, at least in the anterior part of the body, which appear to be retained in fixed material. It also has a prominent proventriculus, larger than that typical of other *Proceraea* species.

Genus *Procerastea*

Two species of this genus are recorded in British waters, both of which have no dorsal cirri after setiger1 and simple chaetae formed from the fusion of blade and shaft of the compound form in the first 4 setigers. These particular chaetae are present immediately below the bayonet chaeta, which is of the thick type, and number 1 or 2 per parapodium. The trepan is relatively poorly developed, with a small number of equal teeth. Reproduction involves the production of single stolons, with the head forming at setiger 14, as in *Proceraea*.

The 2 species are very similar, but according to Gidholm (1966) living specimens of *P. halleziana* are yellowish, whilst *P. nematodes* is reddish in colour. There are also minor differences in the pharynx, which has a distinct sinuation anterior to the proventriculus in the larger *P. halleziana*, as opposed to a slight curve in *P. nematodes*. The chaetae are more numerous in the smaller *P. nematodes*, with up to 12 in anterior setigers, reducing to 6 more posteriorly, as opposed to up to 7 anteriorly reducing to 4 in *P. halleziana*. The trepan of *P. halleziana* is reported to have 15-30 teeth, whilst that of *P. nematodes* has only 6-10.

Genus *Virchowia*

One species of this genus is recorded in British waters. *Virchowia* is characterised by dorsal cirri with short cirrophores with swollen tips, giving them a clavate shape, nuchal epaulettes which are free from the body at their distal ends, and a pharynx with complex coiling anterior to and sometimes lateral to the proventriculus.

V. clavata has compound chaetae with well devloped serrations as well as the subterminal and terminal teeth, and the dorsal cirri showing a marked variation in length.

REFERENCES

Banse, K., 1971. A new species, and additions to the descriptions of six other species of *Syllides* Örsted (Syllidae: Polychaeta). J. Fish Res. Bd. Canada, 28; 1469-1481.

Dauvin, J.C and J.H. Lee, 1983. Description d'une nouvelle espèce sde Syllidae: *Pionosyllis prope-weismanni* n.sp. (Annélide Polychète) de la région de Roscoff. Bull. Soc. Zool. Fr., 108; 129-134.

Gidholm, L., 1962. Sur quelques polychètes syllidiens des sables de la région de Roscoff avec description de deux nouvelles espèces. Cah. Biol. Mar., 3; 249-260.

Licher., F., 1999. Revision de Gattung *Typosyllis* Langerhans, 1879 (Polychaeta: Syllidae). Morphologie, Taxonomie und Phylogenie. Abhand. Senckenberg.Naturforsch. Gesellschaft, 551; 1-336.

Gidholm, L., 1967. A revision of Autolytinae (Syllidae, Polychaeta) with special reference to Scandinavian species, and with notes on external and internal morphology, reproduction and ecology. Ark. Zool., 19; 157-213.

Gillandt, L., 1979 Zur Systematik, Autökologie und Biologie der Polychaeten des Helgolander Felslitorals. Mitt. Hamb. zool. Mus. Inst., 76; 19-73.

Hartmann-Schröder, G., 1996. Annelida, Borstenwürmer, Polychaeta. In: Die Tierwelt Deutschlands, 58, 2nd edition,. Gustav Fischer Verlag, Jena; 648 pp.

Martin, D., Britayev, T.A., San Martin, G. and J. Gil, 2003. Inter-population variability and character description in the sponge associated *Haplosyllis spongicola* complex (Polychaeta: Syllidae) In: Advances in Polychaete Research, eds. Sigvadadottir, E., A.S.Y. Mackie, G.V. Helgason, D.J.Reish, J. Svavarson, S.A. Steingrimsson and G. Gudmundsson,. Hydrobiologia: Developments in Hydrobiology, 170; 1-18

Nygren, A., 2004. Revision of Autolytinae (Syllidae: Polychaeta). Zootaxa 680, Magnolia Press, Auckland New Zealand; 314 pp.

Nygren, A. and L. Gidholm, 2001. Three new species of *Proceraea* (Polychaeta: Syllidea: Autolytinae) from Brazil and the United States, with a synopsis of all *Proceraea*-like taxa. Ophelia, 54; 177-191.

Pocklington, P. and M.S. Hutchenson, 1983. New record of vivparity for the dominant benthic invertebrate *Exogone hebes* (Polychaeta: Syllidae) from the Grand Banks of Newfaoundland. Mar. Ecol. Prog. Ser., 11; 239-244.

San Martin, G., 2003. Annelida Polychaeta II Syllidae. Fauna Iberica 21. Ramos, M.A et al (eds.). Museo Nacional de Ciencias Naturales, CSIC, Madrid; 554 pp.

Riser, N.W., 1991. An evaluation of taxonomic characters in the genus *Sphaerosyllis* (Polychaeta: Syllidae). In: Systematics, biology and morphology of worldwide Polychaeta. Petersen, M.E. and J.B. Kirkegaard (eds.). Proceedings of the Second International Polychaete Conference, Copenhagen. Ophelia Suppl. 5; 209-217.

PROVISIONAL LIST OF BRITISH SPECIES OF THE FAMILY SYLLIDAE

SYLLINAE

Eurysyllis tuberculata Ehlers, 1864
Haplosyllis spongicola (Grube, 1855)
Plakosyllis brevipes Hartmann-Schröder, 1956
Syllis amica Quatrefages, 1865
Syllis armillaris (O.F. Müller, 1771)
Syllis cornuta Rathke, 1843
Syllis gracilis Grube 1840
Syllis krohnii Ehlers, 1864
Syllis variegata Grube, 1860
Syllis sp. A
Syllis sp. D
Syllis sp. E
Syllis sp. F
Syllis sp. G
Trypanosyllis coeliaca Claparède, 1868
Trypanosyllis zebra (Grube, 1860)
Xenosyllis scabra (Ehlers, 1864)

EUSYLLINAE

Amblyosyllis formosa (Claparède, 1863)
Dioplosyllis cirrosa Gidholm, 1962
Ehlersia ferruginea Langerhans, 1881
Ehlersia sp. A
Eusyllis assimilis Marenzeller, 1875
Eusyllis blomstrandi Malmgren, 1867
Eusyllis lamelligera Marion and Bobretzky, 1875
Odontosyllis ctenostoma Claparède, 1868
Odontosyllis fulgurans (Audouin and Milne Edwards, 1834)
Odontosyllis gibba Claparède, 1863
Opisthodonta pterochaeta Southern, 1914
Opisthodonta sp. A
Pionosyllis lamelligera Saint-Joseph, 1887
Pionosyllis pulligera (Krohn, 1852)
Palposyllis prosostoma Hartmann-Schröder, 1977
Streptosyllis bidentata Southern, 1914
Streptosyllis websteri Southern, 1914
Streptosyllis sp.
Syllides benedicti Banse, 1971
Syllides japonicus Imajima, 1966

EXOGONINAE

Brania clavata (Claparède, 1863)
Brania limbata (Claparède, 1868)
Brania pusilla (Dujardin, 1851)
Brania swedmarki Gidholm, 1962
Exogone dispar (Webster, 1879)
Exogone furcifera Eliason, 1962
Exogone hebes (Webster and Benedict, 1884)
Exogone naidina Örsted, 1845

Exogone verugera (Claparède, 1868)
Parapionosyllis minuta (Pierantoni, 1903)
Sphaerosyllis bulbosa Southern, 1914
Sphaerosyllis erinaceus Claparède, 1863
Sphaerosyllis hystrix Claparède, 1863
Sphaerosyllis taylori Perkins, 1981
Sphaerosyllis tetralix Eliason, 1920
Sphaerosyllis spp. x3

AUTOLYTINAE

Autolytus alexandri Malmgren, 1867
Autolytus brachycephalus (Marenzeller, 1884)
Autolytus edwarsi Saint-Joseph, 1887
Autolytus inermis Saint-Joseph, 1887
Autolytus langerhansi Gidholm, 1967
Autolytus prolifera (O.F. Müller,1784)
Autolytus rubrolineatus Gidholm, 1967
Autolytus rubropunctatus (Grube, 1860)
Autolytus quindecimdentatus Langerhans, 1884
Myrianida pinnigera (Montagu 1808)
Proceraea cornuta (Agassiz, 1862)
Proceraea picta Ehlers, 1864
Proceraea prismatica (Fabricius, 1780)
Proceraea scapularis (Claparède, 1864)
Procerastea halleziana Malaquin, 1893
Procerastea nematodes Langerhans, 1884
Virchowia clavata (Langerhans, 1879)