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Three new species of *Syllis* (Syllidae: Polychaeta) from Iberian coasts.

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Abstract. During the project "Fauna Ibérica", established to develop a complete study of the Iberian fauna, several new polychaete species belonging to the family Syllidae were found and we describe here three new species included in the genus *Syllis*. *Syllis parapari* sp. nov. is characterized by the presence of both pseudospiniger and falciger compound chaetae, short and spindle-shaped dorsal cirri on midbody parapodia and posterior aciculae with an oblique tip and a subdistal knob. *S. pontxioi* sp. nov. is characterized by very short antennae, tentacular and dorsal cirri; by the shape of midbody and posterior chaetal blades, very short and with an enlarged distal tooth; by stout posterior aciculae, with a slightly curved tip. *S. jorgei* sp. nov. is characterized by very long spines on the cutting edge of falciger blades, the distal ones longer than the terminal tooth, by the shape of aciculae with subdistal knobs and acute tips. These three species have been previously reported for the Iberian fauna as *Syllis cornuta*, *S. gerlachi*, and *S. lutea*. However, after comparison with a recent re-description of these species, the authors conclude that the species studied here are three new species.

Résumé. *Trois nouvelles espèces de* Syllis *(Syllidae: Polychaeta) des côtes Ibériques*. Au cours du projet "Fauna Ibérica", destiné à une étude complète de la faune ibérique, quelques nouvelles espèces de Syllidae ont été récoltées et nous décrivons ici trois nouvelles espèces du genre *Syllis*. *Syllis parapari* sp. nov. est caractérisée par la présence de soies composées pseudospinigères et falcigères, de cirres dorsaux courts et fusiformes sur les parapodes de la région moyenne, et d'acicules postérieurs avec une pointe oblique et un renflement subterminal. *S. pontxioi* sp. nov. est caractérisée par des antennes, des cirres tentaculaires et des cirres dorsaux très courts, par les articles des soies moyennes et postérieures très courts, avec une grosse dent terminale et par de gros acicules postérieurs, portant une pointe légèrement courbe. *S. jorgei* sp. nov. est caractérisée par de très longues épines sur le bord intérieur de l'article, les plus distales dépassant la dent apicale, et par la forme des acicules, avec un renflement subdistal terminé en pointe aiguë. Ces trois espèces ont été précédemment mentionnées dans la Péninsule Ibérique, respectivement sous les noms de *Syllis cornuta*, *S. gerlachi*, et *S. lutea*. Cependant, leur comparaison avec la redescription récente de ces trois espèces nous permet de conclure que les espèces décrites ici sont trois espèces nouvelles.

Keywords.- Polychaeta, Syllidae, systematics, Iberian coasts

Introduction

The family Syllidae Grube, 1850 is one of the most complex and diverse within the Polychaeta. In terms of number of species, the largest genus in the family is *Syllis* Savigny in

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Lamarck, 1818, on which a recent partial revision has been performed (Licher, 1999).

Within the project "Fauna Ibérica", addressed to develop a complete description of the Iberian fauna, some monographs are to be devoted to polychaete families, among them the Syllidae. This project encompassed several sampling cruises around the Iberian Peninsula, as well as the examination of preserved material deposited in either private or museum collections. During the course of this study, 96 syllid species were reported, six of which were new records for the Iberian fauna (San Martín, 1999); moreover, specimens belonging to several undescribed species were found.

The present paper is the first of a series devoted to the description of these new species and deals with those belonging to genus *Syllis* Savigny in Lamarck, 1818. These three species have been previously reported for the Iberian fauna, and respectively assigned to *Syllis cornuta* Rathke, 1843, *S. gerlachi* (Hartmann-Schröder, 1960), and *S. lutea* (Hartmann-Schröder, 1960). But after a comparison of our specimens with a new re-description of these species provided by Licher (1999), we conclude that our specimens belong actually to three new species. The three species listed above are absent from Iberian waters.

Material and methods

Most of the specimens were collected during the project "Fauna Ibérica" field trips, in which a number of different sampling devices were used (SCUBA diving, Van Veen grab, naturalist's dredge). Some other material was collected separately. The specimens from El Ferrol (NW Spain) and Zumaya (Basque Country) were collected by means of Van Veen grabs.

All the specimens were fixed in 10% formalin in seawater. Subsequently, the specimens were preserved in 70% ethanol or on glycerine jelly permanent slides. Examinations and measurements were made with a light microscope with interference contrast optics (Nomarsky) and a camera lucida drawing tube. Body width measurements were taken across the proventriculus and exclude parapodia or cirri; body length measurements exclude antennae, palps and cirri. Scanning electron microscope (SEM) micrographs were made after critical point drying and coating with 300 Å of gold at the SIdI (Servicio Interdepartamental de Investigación) of the Universidad Autónoma de Madrid.

All specimens are deposited in the collections of the Museo Nacional de Ciencias Naturales (MNCN) of Madrid, Spain. This paper is a contribution of the project "Fauna IV. Poliquetos", supported by the CICYT (PB 95 9235).

Taxonomic results

Family Syllidae Grube, 1850
Subfamily Syllinae Grube, 1850
Genus *Syllis* Savigny in Lamarck, 1818

Syllis parapari sp. nov.
Figs. 1, 2

Syllis cornuta non Rathke, 1843. Campoy, 1982: 378, pl. 34-35; Parapar et al., 1996: 59.

Material examined. Holotype: MNCN 16.01/6070, gravel, sublittoral, ría de El Ferrol (NW Spain), 43°27'11"N-8°19'16"W, 2 June 1987, on permanent microscope slide.

Paratypes: MNCN 16.01/6071, muddy sand, 21 m depth, ría de El Ferrol (NW Spain), 43°27'49"N-8°16'42"W, 5 August 1987, two specimens on permanent microscope slides. MNCN 16.01/6072, muddy sand, 15 m depth, ría de El Ferrol (NW Spain), 43°27'26"N-8°20'06"W, 6 July 1987, one specimen on permanent microscope slide. MNCN 16.01/6073, muddy sand, 11 m depth, ría de El Ferrol (NW Spain), 43°27'47"N-8°19'44"W, 24 June 1987, one specimen on permanent microscope slide. MNCN 16.01/6074, muddy sand with shells, 85 m depth, off ría de Muros (NW Spain) 42°41.6'N-9°10.3'W, 11 June 1991, one specimen in 70% ethanol. MNCN 16.01/6075, rocky bottom, 129-133 m, off Cabo de Finisterre (NW Spain) 42°51.89'N-9°21.19'W, 11 June 1991, four specimens in 70% ethanol. MNCN 16.01/6076, black mud, 157-159 m depth, NW Sisargas Islands (NW Spain) 43°26'N-8°59.35'W, 12 June 1991, one specimen in 70% ethanol. MNCN 16.01/6077, biocoenosis of *Dendrophyllia ramea*, 116-120 m depth, off Gijon (N Spain) 43°43.71'N-5°56.21'W, 15 June 1991, one specimen in 70% ethanol. MNCN 16.01/6078, mud, 135-143 m depth, off San Sebastian (N Spain) 43°29.72'N-2°0.89'W, 22 June 1991, one specimen in 70% ethanol.

Description

Body long, slender; holotype 20 mm long, 0.64 mm wide, with 74 chaetigers. The largest recorded specimen had 95 chaetigers (Campoy, 1982). Prostomium (Fig. 1 A) oval, with four eyes in open trapezoidal arrangement and, sometimes, one pair of anterior eyespots. Median antenna (Figs 1 A, 2 A) longer than prostomium and palps together, with 17-20 articles, originating between posterior pair of eyes; lateral antennae (Figs 1 A, 2 A) somewhat longer than prostomium and palps together, with 15-16 articles, originating in front of anterior eyes. Tentacular segment (Figs 1 A, 2 A) short, dorsally covered by the first chaetiger on posterior half; dorsal tentacular cirri similar in length to median antenna, with 11-18 articles; ventral tentacular cirri shorter, with 14 articles. Anterior dorsal cirri (Figs 1 A, D,

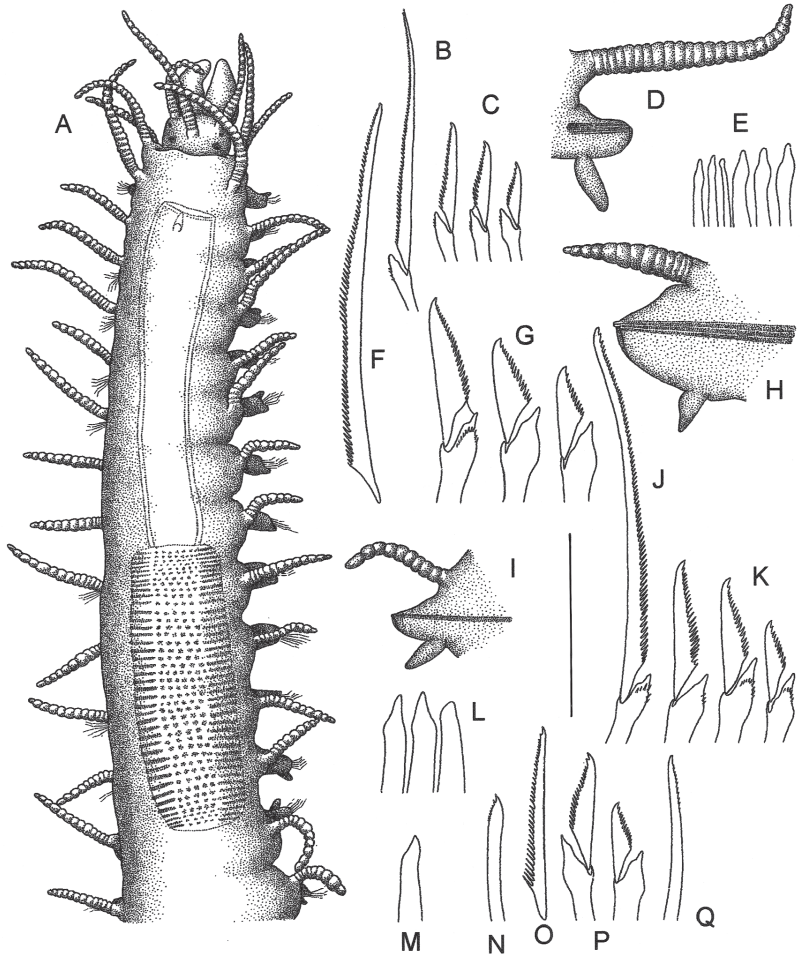

Figure 1. *Syllis parapari* sp. nov. **A** anterior end, dorsal view (holotype). **B** pseudospiniger chaeta, anterior parapodium. **C** falciger chaetae, anterior parapodium. **D** anterior parapodium. **E** aciculae, anterior parapodium. **F** pseudospiniger chaeta blade, median-anterior parapodium. **G** falciger chaetae, median-anterior parapodium. **H** midbody parapodium. **I** posterior parapodium. **J** pseudospiniger chaeta, median-posterior parapodium. **K** falciger chaetae, median-posterior parapodium. **L** aciculae, midbody parapodium. **M** acicula, posterior parapodium. **N** dorsal simple chaeta. **O** pseudospiniger chaeta blade, posterior parapodium. **P** falciger chaetae, posterior parapodium. **Q** ventral simple chaeta. (B-Q after Campoy, 1982).

Figure 1. *Syllis parapari* sp. nov. **A** partie antérieure, vue dorsale (holotype). **B** soie pseudospinigère, parapode antérieur. **C** soies falcigères, parapode antérieur. **D** parapode antérieur. **E** acicules, parapode antérieur. **F** article de soie pseudospinigère, parapode moyen-antérieur. **G** soies falcigères, parapode moyen-antérieur. **H** parapode moyen. **I** parapode postérieur. **J** soie pseudospinigère, parapode moyen-postérieur. **K** soies falcigères, parapode moyen-postérieur. **L** acicules, parapode moyen. **M** acicule, parapode postérieur. **N** soie simple dorsale. **O** article de soie pseudospinigère, parapode postérieur. **P** soies falcigères, parapode postérieur. **Q** soie simple ventrale (B-Q d'après Campoy, 1982).

Scale, échelle : A : 0.85 mm ; D, H, I : 0.4 mm ; B, C, E, F, G, J-Q : 40 µm.

2 A) long and slender, showing little difference in width between basal and terminal articles, cirrophore longer than basal articles; dorsal cirri of first chaetiger longer, with 22-29 articles; the following alternating long ones, similar in length to body width and with 17-19 articles, and short ones, with 11-14 articles. Difference between short and long cirri progressively diminishing posteriorly to proventriculus level; midbody dorsal cirri (Figs 1 H, 2 B) all short, with 9-10 articles, spindle-shaped, showing strong difference in width between basal and terminal articles. Posterior dorsal cirri (Fig. 1 I) somewhat longer, not so distinctly spindle-shaped. Parapodial lobes (Figs 1 D, H, I, 2 B) relatively short, broad, somewhat conical. Anterior ventral cirri (Fig. 1 D) oval, longer than parapodial lobe; midbody and posterior ventral cirri (Fig. 1 H, I) broad at base, tapering to the tip, similar in length to or shorter than parapodial lobe.

Anterior parapodia each bearing about 14 heterogomph compound chaetae; shafts with thin subdistal spines; from first chaetiger, 1-4 dorsalmost chaetae bearing pseudospiniger blades (Fig. 1B), 70-120 µm in length, with short spines on cutting edge, bidentate with small proximal tooth; the rest of chaetae (Fig. 1 C) with falciger blades, bearing moderately long spines, bidentate tip with minute proximal tooth, showing clear dorso-ventral gradation in length (87 to 20 µm).

On midbody parapodia, progressive decrease in number of chaetae, both pseudospinigers and falcigers; pseudospiniger blades (Figs 1 F, J, 2 D) longer, about 120 µm long, with rounded tip and minute, sometimes undiscernible, proximal tooth, cutting edge serrated on its whole length, spines coarse near base, progressively becoming thinner to the tip; falciger blades (Figs 1 G, K, 2 E, F) broad at their bases, with minute proximal tooth, serrated with coarse spines near base and thinner spines near tip, clear dorso-ventral gradation in length (90 µm to 20 µm); shafts with thin subdistal spines.

On posterior parapodia, only 1-2 pseudospiniger chaetae, with shorter (70 µm long), distinctly bidentate blades (Fig. 1 O); falcigers (Fig. 1 P) similar to midbody ones, 85 µm to 24 µm long, but with somewhat longer spines (Fig. 2 G). One solitary dorsal simple chaeta (Figs 1 Q, 2 H) on posterior chaetigers, unidentate, with a few, very short spines on the edge. Solitary ventral simple chaeta (Figs 1 N, 2 I) only on most posterior chaetigers, more stout than dorsal one, bidentate with small proximal tooth, with short, straight spines on edge. Anterior parapodia each with 6-8 thin aciculae (Fig. 1 E) bearing blunt tip and subdistal knob; number decreasing backwards

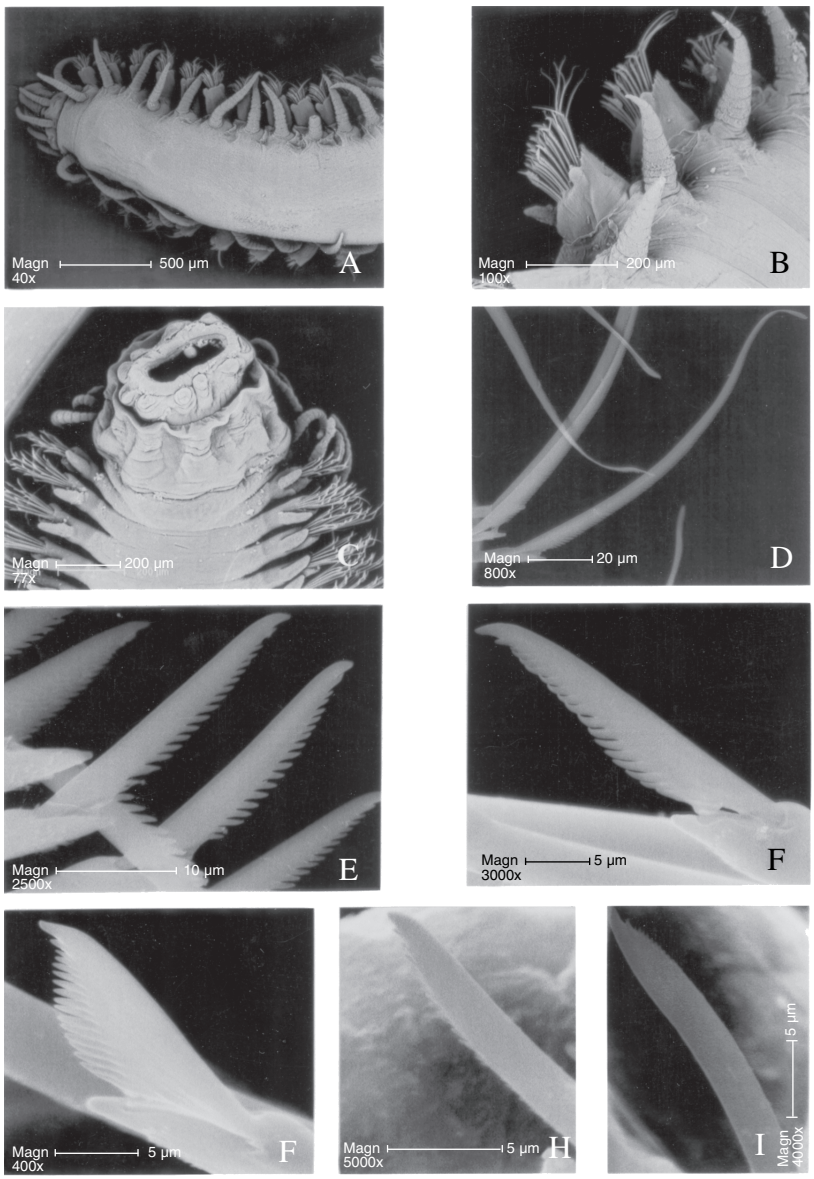

Figure 2. *Syllis parapari* sp. nov. SEM Micrographs. **A** anterior end, dorsal view. **B** dorsal cirri, midbody parapodia. **C** everted pharynx showing anterior rim of papillae. **D** blades of pseudospiniger chaetae, anterior parapodium. **E** blades of falciger chaetae, anterior parapodium. **F** blade of falciger chaeta, midbody parapodium. **G** blade of falciger chaeta, posterior parapodium. **H** dorsal simple chaeta. **I** ventral simple chaeta.

Figure 2. *Syllis parapari* sp. nov. Micrographies MEB (Microscope électronique à balayage). **A** partie antérieure, vue dorsale. **B** cirres dorsaux, parapodes moyens. **C** pharynx extroversé montrant la bordure antérieure de papilles. **D** articles de soie pseudospinigères, parapode antérieur. **E** articles de soies falcigères, parapode antérieur. **F** article de soie falcigère, parapode moyen. **G** article de soie falcigère, parapode postérieur. **H** soie simple dorsale. **I** soie simple ventrale.

(Fig. 1 L), posterior chaetigers with only one acicula (Fig. 1 M), with conical and oblique tip and a small subdistal knob.

Pharynx long and somewhat narrow (Fig. 1 A), extending through about 7 segments, with pharyngeal tooth located on anterior rim and surrounded by ten soft papillae (Fig. 2 C). Proventriculus (Fig. 1 A) long, but shorter than pharynx, extending through 4-5 segments, with 38-43 muscle cell rows.

Pygidium small, with a short median stylus and two long anal cirri with 12 articles.

Remarks

Several authors (Campoy, 1982, San Martín, 1992, Licher, 1999) have stated that several different species have been recorded worldwide as *Syllis cornuta* Rathke, 1843 (also under the denominations *Langerhansia cornuta* and *Ehlersia cornuta*). Licher (1999) redescribed the species, *Typosyllis cornuta*, on the basis of specimens from the type locality and designated a neotype. Thus, it is now possible to compare collected specimens with an adequate description.

Differences with *S. cornuta* are very clear. Firstly, *S. cornuta* possesses long dorsal cirri in its whole length and these are always longer than body width. In addition, it has shorter pseudospiniger blades, and its aciculae are straight and bear acute tips. Moreover, the presence of both pseudospiniger and falciger compound chaetae, the occurrence of short and spindle-shaped dorsal cirri on midbody parapodia and the shape of the posterior aciculae (with oblique tip and subdistal knob) characterize *S. parapari*. This combination of characters is unique within the genus. *Syllis anops* Ehlers, 1897 (Day, 1967, Licher, 1999), *S. cerina* Grube, 1878 (Licher, 1999) and *S. mexicana* (Rioja, 1960) (Rioja, 1960, San Martín, 1992, Licher, 1999) bear a similar combination of compound chaetae but all of them have dorsal cirri that are longer than body width and their proventriculi are proportionately much longer (extending through 8-9 chaetigers). Moreover, *S. cerina* and *S. mexicana* possess falciger blades with coarser spines and *S. anops* and *S. cerina* lack eyes. *Syllis hyllebergi* (Licher, 1999), *S. mauretanica* (Licher, 1999), *S. silkeae* (Licher, 1999) (Licher, 1999), *Syllis hyperioni* Dorsey & Phillips, 1987 (Dorsey & Phillips, 1987, Licher, 1999) and *Syllis alosae* San Martín, 1992 (San Martín, 1992, Licher, 1999) are similar in having pseudospiniger and falciger compound chaetae,

proventriculi that are similar in length and short dorsal cirri. The first three species differ in the shape of their falciger blades, which bear proportionately longer spines and a larger proximal tooth, and in the shape of their ventral simple chaetae, with two distal, upwards directed teeth. In addition, *Syllis hyperioni* lacks eyes, has straight posterior aciculae and different falciger blades, with upwards directed distal and proximal teeth. *Syllis alosae* possesses straight and thicker posterior aciculae that protrude from the posterior parapodial lobe and shows a distinct dorsal colour pattern on anterior half of body.

Etymology. The species is dedicated to Dr. Julio Parapar, polychaetologist from Universidade da Coruña, who provided some of the specimens of the type series.

Biology. This species occurred in several kinds of soft bottoms, i. e. fine sands, coastal sandy mud, muddy detritus, harbour environments, coarse sands and even gravel, and is sometimes commensal with sipunculans in *Turritella* sp. shells. Several records in hard bottoms also exist, but it seems reasonable to consider them as dubious, since they could refer to some similar species.

Distribution. It is difficult to know the real distribution of this species, since it is necessary to know which records for *Syllis cornuta* actually refer to *S. parapari*. Along the Iberian Peninsula coast, the new species was found from off the Basque Country to Portugal, and it could also be present in the Gibraltar area and off the Catalonian coast.

Syllis pontxioi sp. nov.
Fig. 3

Typosyllis gerlachi non Hartmann-Schröder, 1960. Campoy, 1982: 410-411, lam. 45; Parapar et al., 1996: 59.

Material examined. Holotype: MNCN 16.01/6079 “Amphioxus” coarse sand, 50 m, Zumaya (N Spain), 15 August 1986, in 70% ethanol.

Paratypes: MNCN 16.01/6079 “Amphioxus” coarse sand, 50 m depth, Zumaya (N Spain), 15 August 1986, five specimens in 70% ethanol and three specimens on permanent microscope slides. MNCN 16.01/6080, muddy sand, 176-200 m, NW Cabo Peñas (N Spain), 43°43.77’N°56.91’W, 15 June 1991, three specimens in 70% ethanol. MNCN 16.01/6081, muddy detritic, 27-47 m depth, Columbretes Islands (Spanish Mediterranean) 39°54.02’N-0°41.15’E, 11 July 1994, two specimens in 70% ethanol.

Description

Holotype 25 mm long, 0.4 mm wide, with 120 chaetigers; without colour markings. Prostomium (Fig. 3 A) oval, wider than long; with four eyes in open trapezoidal arrangement, without distinct eyespots. Antennae (Fig. 3 A) shorter than prostomium and palps together; median antenna originating near the middle of prostomium, with 15-16 articles; lateral antennae originating in front of anterior eyes, shorter than median one, with 12-14 articles. Palps (Fig. 3 A) broad, similar in length to prostomium or somewhat longer. Tentacular segment (Fig. 3 A) distinct, slightly shorter than the subsequent one; dorsal tentacular cirri with about 16 articles; ventral tentacular cirri somewhat shorter, with 9 articles. Dorsal cirri (Fig. 3 A) short and thin, fragile, much shorter than body width, showing irregular variation in length with 10-12 or 6-8 articles; most articles somewhat wider than long. Ventral cirri relatively stout, digitiform, somewhat shorter than parapodial lobes. Compound chaetae heterogomph; shafts with thin subdistal spines, some shafts of ventral chaetae from midbody and posterior parapodia somewhat enlarged; blades short with fine and straight serration on cutting edge.

Anterior parapodia each with about 10 chaetae (Fig. 3 D), with thin, bidentate blades, bearing small proximal tooth, smaller than distal one, showing slight dorso-ventral gradation in length (18 µm to 13 µm). Midbody compound chaetae (Fig. 3 E) with shorter and somewhat broader blades, strongly bidentate, without dorso-ventral variation in length, all 14-15 µm long. Posterior compound chaetal blades (Fig. 3 F) even shorter (13 µm) and broader, more strongly bidentate. Solitary dorsal simple chaeta (Fig. 3 I) only on posterior chaetigers, slender, unidentate, bearing some short subdistal spines. Solitary ventral simple chaeta (Fig. 3 J) only on most posterior chaetigers, curved, smooth, strongly bidentate with both teeth similar in size.

Anterior parapodia with 4 aciculae (Fig. 3 B), 3 straight, stout, with truncate tip, the other thinner, with tip curved at right angle. Number of aciculae decreasing progressively to more posterior chaetigers; midbody parapodia with 2 aciculae (Fig. 3 G), one straight, the other with somewhat oblique tip; posterior parapodia with only one acicula (Fig. 3 H), very stout, longitudinally striate, tip with a concave edge and at the opposite a convex one, slightly protruding from parapodial lobe.

Pharynx (Fig. 3 A) long and wide, extending through 8 chaetigers, with pharyngeal tooth near anterior rim. Proventriculus (Fig. 3 A) extending through 6 chaetigers, long, rectangular, with 38-45 rows of muscle cells.

Pygidium (Fig. 3 C) rectangular, with a digitiform, smooth median stylus and two anal cirri, much longer than dorsal cirri, with 28-32 articles.

Remarks

In his revision, Licher (1999) stated that the specimens recorded for the Iberian Peninsula as *Syllis truncata cryptica* Ben-Eliahu, 1977 were *Syllis gerlachi* Hartmann-Schröder, 1960. Therefore, the specimens recorded by Campoy (1982) and subsequent authors in the same area as *Typosyllis gerlachi* belong to a different species

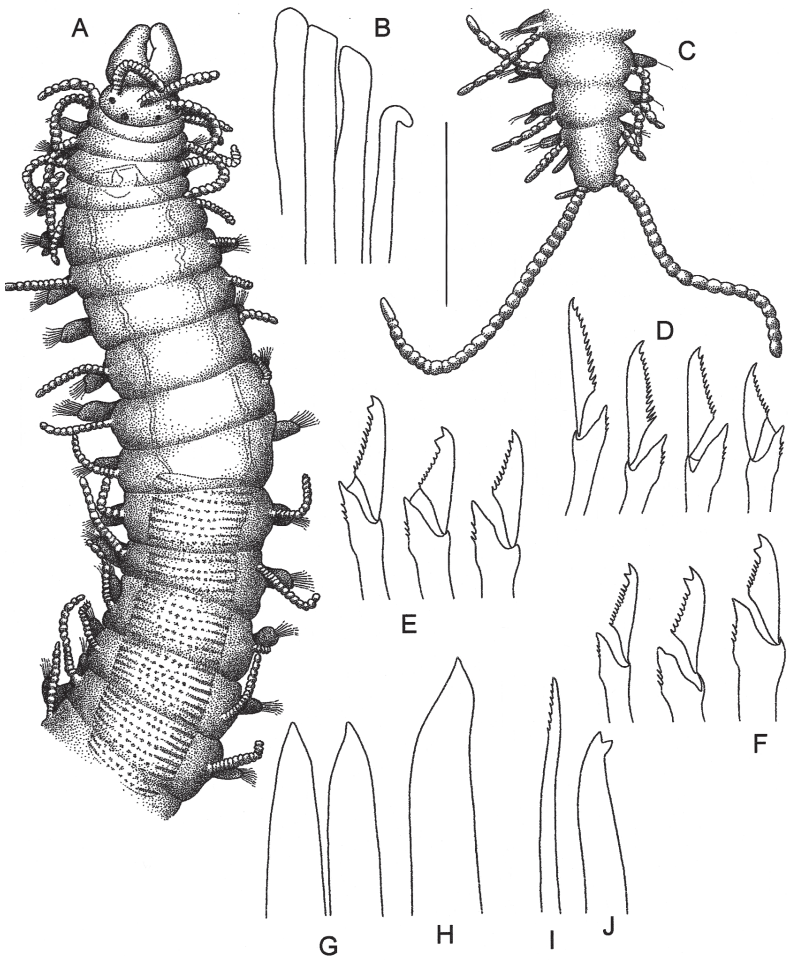

Figure 3. *Syllis pontxioi* sp. nov. **A** anterior end, dorsal view (holotype). **B** aciculae, anterior parapodium. **C** posterior end, dorsal view (holotype). **D** compound chaetae, anterior parapodium. **E** compound chaetae, midbody parapodium. **F** compound chaetae, posterior parapodium. **G** aciculae, midbody parapodium. **H** acicula, posterior parapodium. **I** dorsal simple chaeta. **J** ventral simple chaeta. (B, D-J after Campoy, 1982)

Figure 3. *Syllis pontxioi* sp. nov. **A** partie antérieure, vue dorsale (holotype). **B** acicules, parapode antérieur. **C** partie postérieure, vue dorsale (holotype). **D** soies composées, parapode antérieur. **E** soies composées, parapode moyen. **F** soies composées, parapode postérieur. **G** acicules, parapode moyen. **H** acicule, parapode postérieur. **I** soie simple dorsale. **J** soie simple ventrale. (B, D-J d'après Campoy, 1982)

Scale, échelle : A, C : 0.53 mm ; B, D, E-J : 21.5 µm.

characterized by very short antennae, tentacular cirri and dorsal cirri which, in addition, are very slender. The shape of its midbody and posterior falciger blades (very short and with enlarged proximal tooth), its thick, bidentate ventral simple chaetae and its stout posterior aciculae (that have tips which are provided with hollow and convex edge) are also characteristic features of the new species. The most similar species is *Syllis gerundensis* (Alós & Campoy, 1981), from Spanish Mediterranean (Alós & Campoy, 1981, Campoy, 1982), which possesses similar compound and ventral simple chaetae and also very short dorsal cirri but differs from *S. pontxioi* sp. nov. in having distinctly longer antennae and tentacular cirri and in bearing very different aciculae, with an acute and blunt tip and a subdistal knob.

Etymology. The species is named in honour of Dr. Florencio Aguirrezabalaga (Pontxio), from cultural association INSUB, who collected part of the type series from Zumaya (Basque Country).

Biology. "Amphioxus" sands, muddy sands, muddy gravels, between 11 and 200 m depth.

Distribution. Northern coast of Spain (Basque Country, Asturias, Galicia). Western Mediterranean.

Syllis jorgei sp. nov.
Figs 4-6

Typosyllis lutea non Hartmann-Schröder, 1960. Campoy, 1982:428-430, lam. 52.
Syllis lutea non Hartmann-Schröder, 1960. San Martín, 1984:370-372, lam. 94-95; Núñez et al., 1992: 118; López et al., 1996: 113.

Material examined: Holotype: MNCN 16.01/6082, rocky bottom with shells, 44 m depth, Columbretes Islands (Spanish Mediterranean) 39°53.58'N-0°41.05'E, 15 July 1996, in 70% ethanol.
Paratypes: MNCN 16.01/6083**,** photophilic algae, 2 m depth, Beni Mela (Menorca, Balearic Islands), 2 August 1979, one specimen on permanent microscope slide. MNCN 16.01/6084, sciaphilic algae, 25 m depth, Chafarinas Island (N African Mediterranean) 35°11.16'N-2°26'W, 19 September 1991, one specimen on permanent microscope slide.

Description

Body very long and slender, more stout on anterior half, without colour markings. Holotype (Fig. 4 B) 16 mm long, 0.5 mm wide, with 103 chaetigers. Prostomium (Fig. 4 A, B) from semicircular to subrectangular; four small eyes and, occasionally, two anterior eyespots. Antennae (Fig. 4 A, B) slender, longer than prostomium and palps together; median antenna originating between posterior eyes, with 20-27 articles; lateral antennae originating near anterior margin of prostomium, with 14-19 articles. Palps (Fig. 4 A) stout, broad at base, triangular, longer than prostomium. Tentacular segment (Fig. 4 A, B) shorter than the next one; dorsal tentacular cirri somewhat longer than lateral

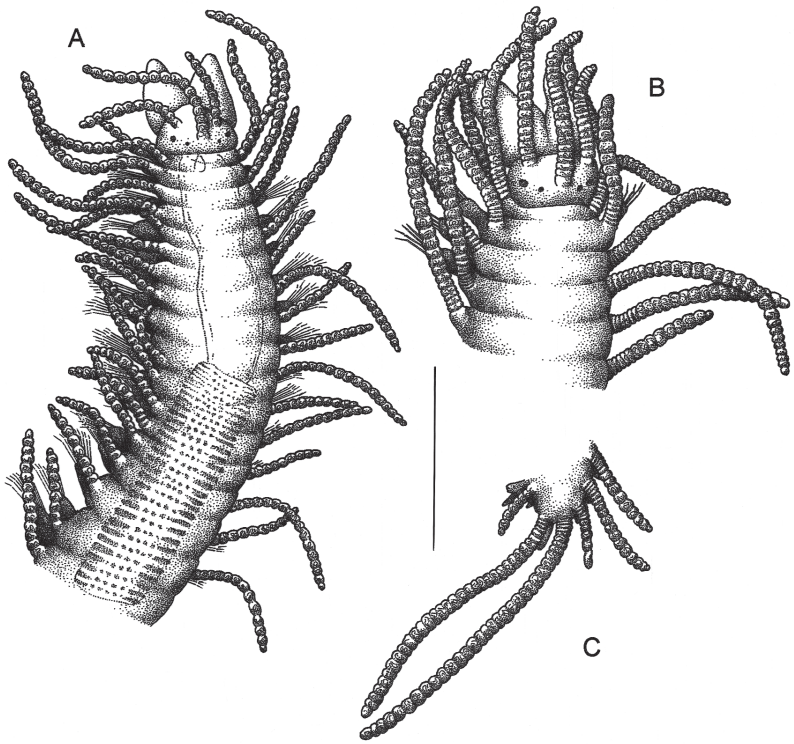

Figure 4. *Syllis jorgei* sp. nov. **A** anterior end of a paratype, dorsal view. **B** anterior end of holotype, dorsal view. **C** pygidium, dorsal view. (A after San Martín, 1984).

Figure 4. *Syllis jorgei* sp. nov. **A** partie antérieure d'un paratype, vue dorsale. **B** partie antérieure de l'holotype, vue dorsale. **C** pygidium, vue dorsale. (A d'après San Martín, 1984). Scale, échelle : A, B, C: 0.8 mm.

antennae, with 16-26 articles; ventral tentacular cirri shorter, with 10-17 articles. Dorsal cirri (Fig. 4 A, B) slender, showing slight difference in size between distal and proximal articles; articles with yellow-greenish spirally filaments and rounded, somewhat darker vacuoles, both giving articles a darker appearance than the body (Fig. 5 B). Anterior dorsal cirri somewhat longer than the following, with 26-30 articles; posteriorly, dorsal cirri (Fig. 5 A) alternating long (longer than body width, with 20-32 articles) and short (with 15-22 articles). Parapodial lobes (Fig. 5 C) conical; ventral cirri digitiform, longer than parapodial lobes.

Anterior parapodia with 10-12 compound chaetae, number progressively decreasing to six on midbody and posterior parapodia. Shafts heterogomph, with some subdistal spines (Fig. 6 A, C). Blades falciger-shaped, with long, fine, upwardly directed spines, all ending at same level

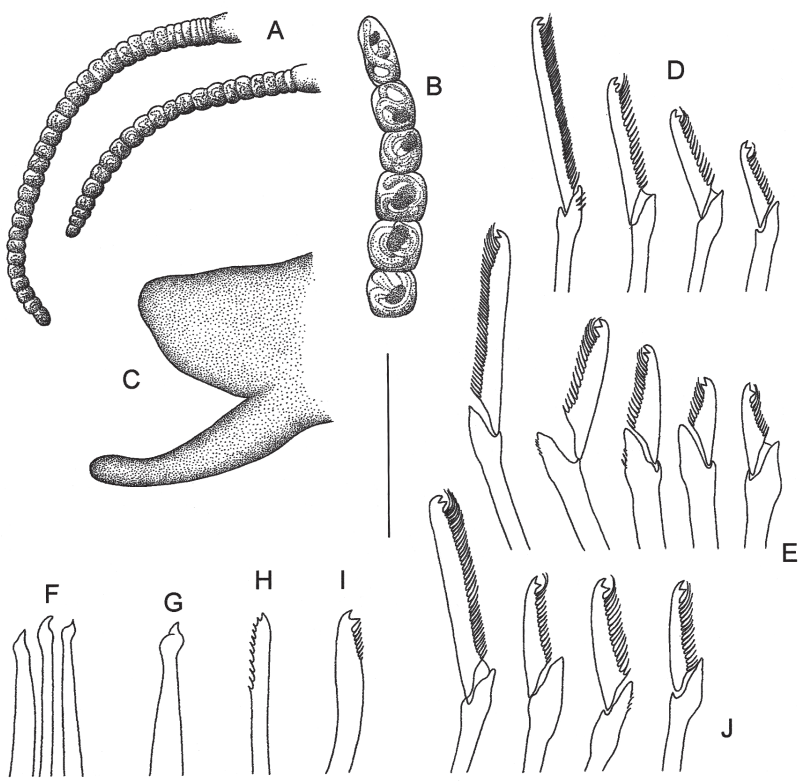

Figure 5. *Syllis jorgei* sp. nov. **A** long and short dorsal cirri. **B** detail of cirrus articles. **C** midbody parapodial lobe and ventral cirrus. **D** compound chaetae, anterior parapodium. **E** compound chaetae, midbody parapodium. **F** aciculae, anterior parapodium. **G** acicula, posterior parapodium. **H** dorsal simple chaeta. **I** ventral simple chaeta. **J** compound chaetae, posterior parapodium. (B, C after San Martín, 1984).

Figure 5. *Syllis jorgei* sp. nov. **A** cirres dorsaux, longs et courts. **B** détail des articles des cirres. **C** lobe parapodial et cirre ventral moyens. **D** soies composées, parapode antérieur. **E** soies composées, parapode moyen. **F** acicules, parapode antérieur. **G** acicule, parapode postérieur. **H** soie simple dorsale. **I** soie simple ventrale. **J** soies composées, parapode postérieur. (B, C d'après San Martín, 1984). Scale, échelle : A : 0.4 mm ; B, C : 0.2 mm ; D-J : 44.5 µm.

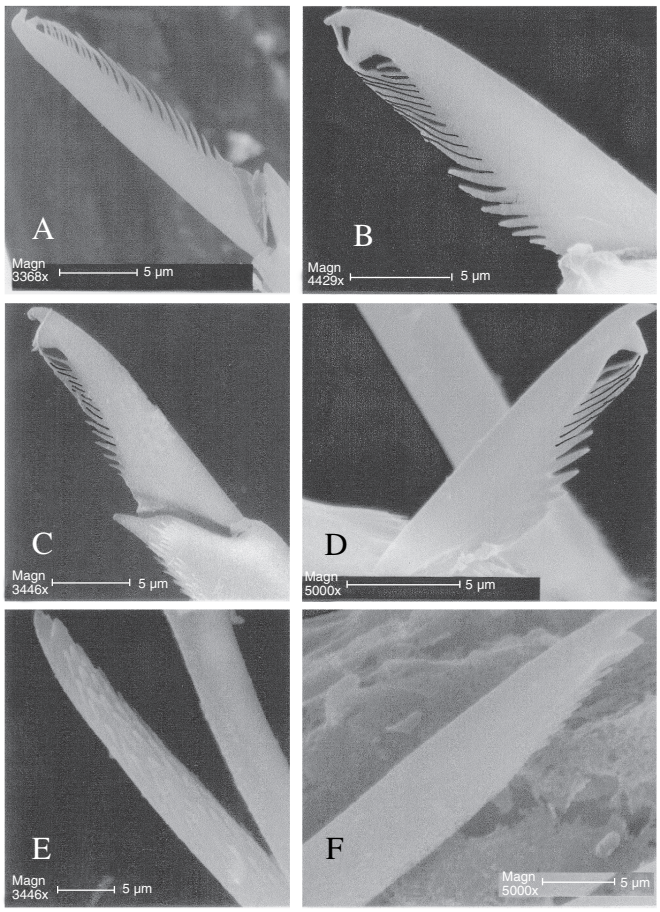

Figure 6. *Syllis jorgei* sp. nov. SEM Micrographs. **A**, **B**, **C** compound chaetae blades. **D** tip of dorsal simple chaeta, ventral view. **E**, **F** tip of ventral simple chaetae.

Figure 6. *Syllis jorgei* sp. nov. Micrographies MEB. **A**, **B**, **C** articles de soies composées. **D** extrémité dÕune soie simple dorsale, vue ventrale. **E**, **F** extrémité de soies simples ventrales.

except the subdistal ones, which are longer and reach (Fig. 6 A, D) or even surpass (Fig. 6 B, C) distal tooth level; basal spines somewhat coarser and shorter (Fig. 6 B, D). Each chaetal bundle with one or two chaetae with longer blades, having straight outer edge and both teeth similar in size and close to one another; the other chaetae with short, curved blades with distinct teeth, distal tooth somewhat hooked, proximal tooth separated from distal one, longer, more stout and downwards oriented. Anterior parapodia (Fig. 5 D) with long blades (50 µm long) and short ones (20 µm long); midbody parapodium blades (Fig. 5 E) showing lesser differences in length, 50 mm (long ones) vs 25 µm (short ones); long blades sometimes lacking on posterior parapodia, all blades being then similar, 25-17 µm long, with enlarged shafts (Fig. 5 J). One bidentate dorsal simple chaeta (Fig. 5 H) on posterior parapodia, with a few rows of spines on edge (Fig. 6 E). One ventral simple chaeta (Figs 5 I, 6 F) on most posterior parapodia, relatively stout, strongly bidentate with both teeth separated and similar in size, and bearing long subdistal spines that can reach level of proximal tooth.

Aciculae of anterior parapodia (Fig. 5 F) numbering 3-4, thin and with curved tips; number decreasing posteriorly; one acicula (Fig. 5 G) in each midbody and posterior parapodium, with a subdistal knob and short acute tip.

Pharynx and proventriculus long; pharynx (Fig. 4 A) extending through 10-15 segments, with 10 large papillae on anterior rim and pharyngeal tooth near mouth; proventriculus (Fig. 4 A), extending through 8-10 segments, with 30 muscle cell rows.

Pygidium small, triangular, with a median stylus and two long anal cirri, with 35 articles.

Remarks

This species, characterized by the very long subdistal spines of its chaeta blades, has been recorded several times for the Iberian Peninsula, Balearic Islands, and Canary Islands. It was always reported as *Syllis lutea* Hartmann-Schröder, 1960, a species which was first described from the Red Sea (Hartmann-Schröder, 1960). However, when comparing Iberian specimens with redescription by Licher (1999) on the type series, important differences can be observed.

S. lutea possesses coarser spines on the compound chaeta blades, especially at their bases. In addition, its subdistal spines never surpass the level of the distal tooth and the latter is proportionally smaller than that of *S. jorgei* sp. nov.. Campoy (1982) and later authors didn't consider these differences to be so important and assigned Iberian and Canarian specimens to *S. lutea*. However, specimens from several Caribbean locations in Cuba and Venezuela (San Martín, 1992) exactly fit the description of *S. lutea*, so it can be concluded that, at least, two very close but different species occur.

Another similar species is *Syllis glarearia* (Westheide, 1974), from the Galapagos Islands (Westheide, 1974, Licher, 1999). Although its compound chaetal blades are closer to those of *S. lutea*, its aciculae have blunter tips and its dorsal simple chaetae have no subdistal spinulation.

Etymology. The new species is dedicated to Dr. Jorge Núñez, from Universidad de La Laguna, who has worked extensively on polychaetes from Canary Islands and who previously recorded this species.

Biology. Calcareous concretions of algal and animal origin, *Posidonia oceanica* rhizomes, algae, under stones in shallow waters.

Distribution. Western Mediterranean and Canary Islands.

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