

Sphaerodoropsis amoueuxi and *S. stellifer*, two new species of Sphaerodoridae (Polychaeta) from the Capbreton Canyon (Bay of Biscay, NE Atlantic)

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Abstract: Seven specimens belonging to three species of sphaerodorid polychaetes were collected from bathyal depths (492-1113 m) of the Capbreton Canyon, Bay of Biscay, NE Atlantic. Two of them, *Sphaerodoropsis amoueuxi* and *S. stellifer*, collected at a depth of around 1000 m, are new to science. *S. amoueuxi* is characterized by having three pairs of lateral prostomial appendages and a single transverse row of eight dorsal macrotubercles per segment. *S. stellifer* has three pairs of lateral prostomial appendages, a single transverse row of four dorsal macrotubercles per segment, and papillae ending in a star shape. The third species, *Sphaerodoridium fauchaldi*, was collected at a depth of around 500 m; it is the first record since its description. In order to be in accord with the findings of Orrhage, an amendment of the nomenclature of the head appendages of Sphaerodorids with three pairs of “antennae” is proposed.

Resumé : *Sphaerodoropsis amoueuxi* et *S. stellifer*, deux nouvelles espèces de Sphaerodoridae (Polychaeta) du Canyon de Capbreton (Golfe de Gascogne, Atlantique NE). Sept exemplaires appartenant à trois espèces de polychètes sphaerodoridés ont été collectés dans l'étage bathyal (492-1113 m) du Canyon de Capbreton, Golfe de Gascogne, Atlantique NE. Deux d'entre elles, *Sphaerodoropsis amoueuxi* et *S. stellifer*, collectées à environ 1000 m de profondeur, sont nouvelles pour la science. *S. amoueuxi* est caractérisée par la présence de trois paires d'appendices prostomiaux latéraux, une unique rangée transversale formée de huit macrotubercules dorsaux par segment. *S. stellifer* possède trois paires d'appendices prostomiaux latéraux et une unique rangée transversale de quatre macrotubercules dorsaux par segment et des papilles terminées en forme d'étoile. La troisième espèce, *Sphaerodoridium fauchaldi*, a été collectée à environ 500 m de profondeur, pour la première fois depuis sa description. Afin de converger avec les travaux d'Orrhage, une correction de la nomenclature des appendices prostomiaux des sphaerodoridés, prenant en compte trois paires “d'antennes”, est proposée.

Keywords: Polychaeta, Sphaerodoridae, *Sphaerodoropsis*, New species, Bay of Biscay, NE Atlantic

Introduction

In his world-wide revision of the sphaerodorid polychaetes, Fauchald (1974) included 45 valid species in the family,

with 26 species found in the deep-sea (bathyal or abyssal zones). Subsequently, several new works have been published, including Desbruyères (1980), Kudenov (1987a,b & 1993), Perkins (1987), Sardá (1987), Hartmann-Schröder & Rosenfeldt (1988 & 1990), Hartmann-Schröder (1993), Borowski (1994), Bakken (2002) and Moreira et al. (2004), increasing the number of valid species to approximately 86.

Between 1987 to 1990, four oceanographic cruises were

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conducted in a French-Spanish research project directed by Dr. J.C. Sorbe (Centre National de la Recherche Scientifique – CNRS, Laboratoire d’Océanographie Biologique d’Arcachon) on board the R.V. “Côte d’Aquitaine”. These studies of bathyal macrofauna communities yielded 7 specimens of sphaerodorid polychaetes, consisting of three species, *Sphaerodoridium fauchaldi* Hartmann-Schröder, 1993, as well as *Sphaerodoropsis amoueuxi* sp. nov. and *S. stellifer* sp. nov., which are described below.

Material and methods

The specimens were collected in the Capbreton Canyon, at 5 stations (Table 1) using two different types of gear: a Sanders-Hessler epibenthic dredge (DI), with a mesh size of 0.5 mm, and a Flusha box-corer (KF). Samples were sieved with a mesh of 0.5 mm.

The types were deposited in the following institutions: Museo Nacional de Ciencias Naturales, Madrid (MNCN); Muséum National d’Histoire Naturelle, Paris (MNHN); Sociedad Cultural de Investigación Submarina (INSUB).

Systematics

Table 1. Main characteristics of sampling stations in the Capbreton Canyon with sphaerodorid specimens. DI - Sanders-Hessler epibenthic dredge. KF - Flusha box-corer.

Tableau 1. Principales caractéristiques des stations échantillonnées dans le canyon du Capbreton, contenant des spécimens de sphaerodoridés. DI – Drague épibenthique Sanders-Hessler. KF – Carottier Flusha.

Station	Date	Position at the beginning and the end of the tow on the sea floor	Depth (m)	Time of dredging
DI-12	6/07/88	43°38,57' N - 2°17,93' W	1012	20'
		43°38,33' N - 2°18,11' W	1113	
DI-13	6/07/88	43°38,36' N - 2°18,03' W	1040	15'
		43°38,08' N - 2°18,14' W	1007	
DI-26	8/07/88	43°42,89' N - 2°18,71' W	984	25'
		43°43,25' N - 2°18,80' W	1029	
DI-33	10/07/88	43°50,32' N - 2°10,90' W	495	15'
		43°49,78' N - 2°11,12' W	492	
	Date	Position	Depth (m)	
KF-40	12/09/89	43°42,01' N - 2°18,52' W	990	
		DI - Sanders-Hessler dredge KF - Flusha box-corer		

Family SPHAERODORIDAE Malmgren, 1867
Genus *Sphaerodoropsis* Hartman and Fauchald, 1971
Sphaerodoropsis amoueuxi sp. nov.

(Figs 1 & 2)

Material examined

Atlantic Ocean, Bay of Biscay, Capbreton Canyon (coordinates in Table 1). CB 88/DI-26: holotype (MNCN 16.01/8925), one paratype (MNHN in progress) and one other specimen in poor condition.

Description

Three specimens, all complete: holotype 3.65 mm long, 0.46 mm maximum width, 25 chaetigers; paratype 2.65 mm long, 0.49 mm wide, 22 chaetigers; one specimen in poor condition, 3.2 mm long.

Prostomium anteriorly truncate, rounded. Two eyes, dark, well developed. Median antenna and three pairs of lateral prostomial appendages present (Fig. 1A, B). Median antenna smooth, short, basally enlarged, distally blunt. Dorsal antenniform papillae similar in shape but shorter than median antenna. Intermediate antennae and ventral palps digitiform, distally rounded, blunt, much longer than median antenna and dorsal antenniform papillae. Inter-

mediate antennae slightly longer than palps. Intermediate antennae and palps basally enlarged, with 6-8 and 4-6 papillar spurs respectively. Several papillae (6-8) encircled by lateral prostomial appendages.

Peristomial cirri digitiform with 4-6 digitiform papillae at enlarged base (Fig. 1A). Peristomium with other numerous digitiform papillae, mainly close to peristomial cirri (Fig. 1A).

Parapodia uniramous; chaetigers 1-2 with triangular, rounded acicular lobe, bluntly conical ventral cirrus extending beyond acicular lobe, and 1-2 digitiform, distally inflated postchaetal lobes (Fig. 2A, B). From chaetiger 3 also one bluntly, conical, prechaetal lobe (Fig. 2C). 2-4 spherical parapodial papillae.

Each chaetiger dorsally with 8 spherical, sessile macrotubercles in one transverse row (Fig. 1C). Numerous smaller spheri-

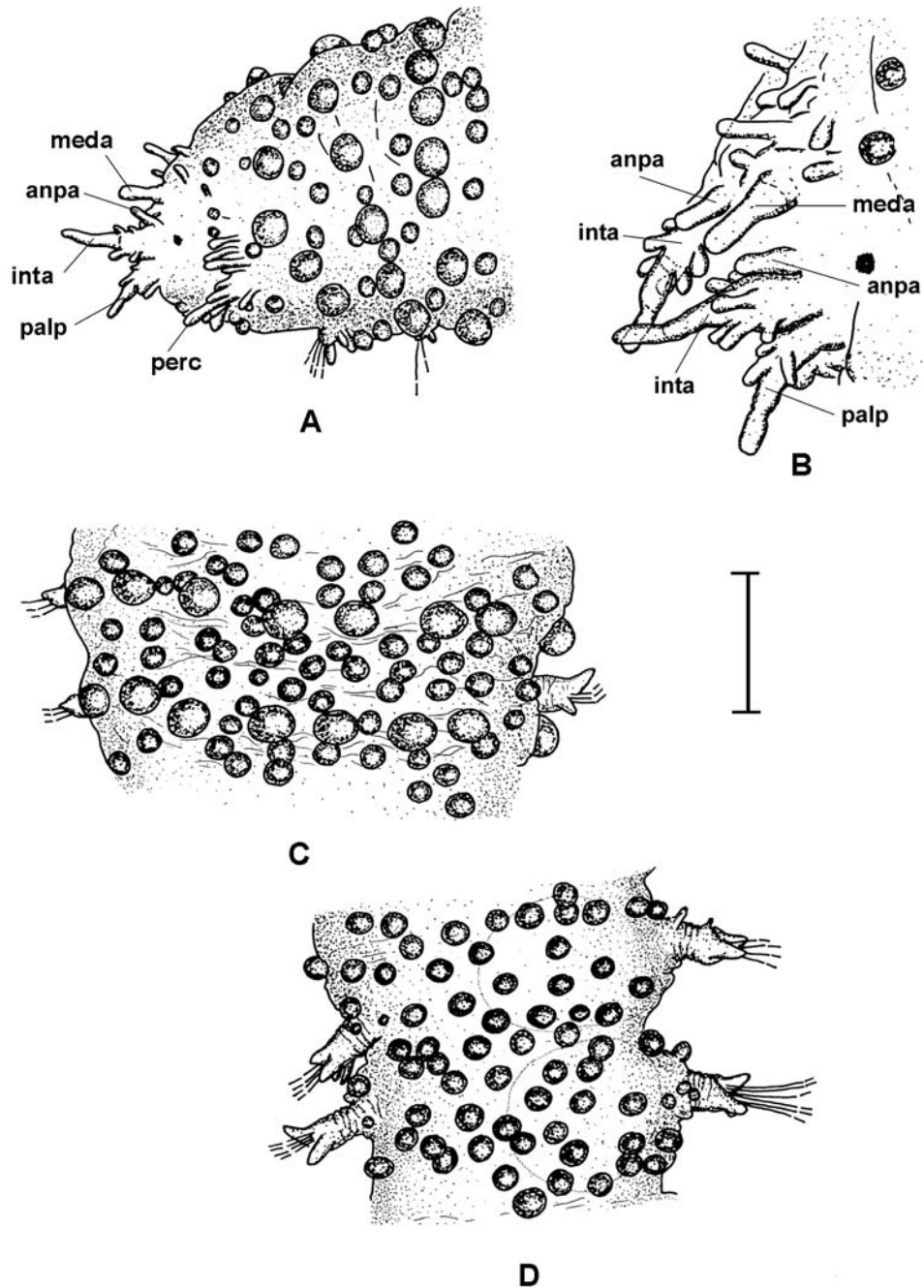


Figure 1. *Sphaerodoropsis amoureuxi* sp. nov. Holotype (MNCN 16.01/8925). **A.** Anterior end, dorso-lateral view. **B.** Anterior end, dorso-lateral view, close-up of prostomium. **C.** Chaetigers 8-9, dorsal view. **D.** Chaetigers 14-15, ventral view (**meda**: median antenna; **anpa**: antenniform papilla; **inta**: intermediate antenna; **palp**: palp; **perc**: peristomial cirrus). Scale bar: A: 200 μ m. B: 100 μ m. C, D: 200 μ m.

Figure 1. *Sphaerodoropsis amoureuxi* sp. nov. Holotype (MNCN 16.01/8925). **A.** Région antérieure, vue dorso-latérale. **B.** Région antérieure, vue dorso-latérale du prostomium. **C.** Sétigères 8-9, vue dorsale. **D.** Sétigères 14-15, vue ventrale (**meda**: antenne médiane ; **anpa**: papille antenniforme ; **inta**: antenne intermédiaire ; **palp**: palpe ; **perc**: cirre peristomial). Échelle: A: 200 μ m. B: 100 μ m. C, D: 200 μ m.

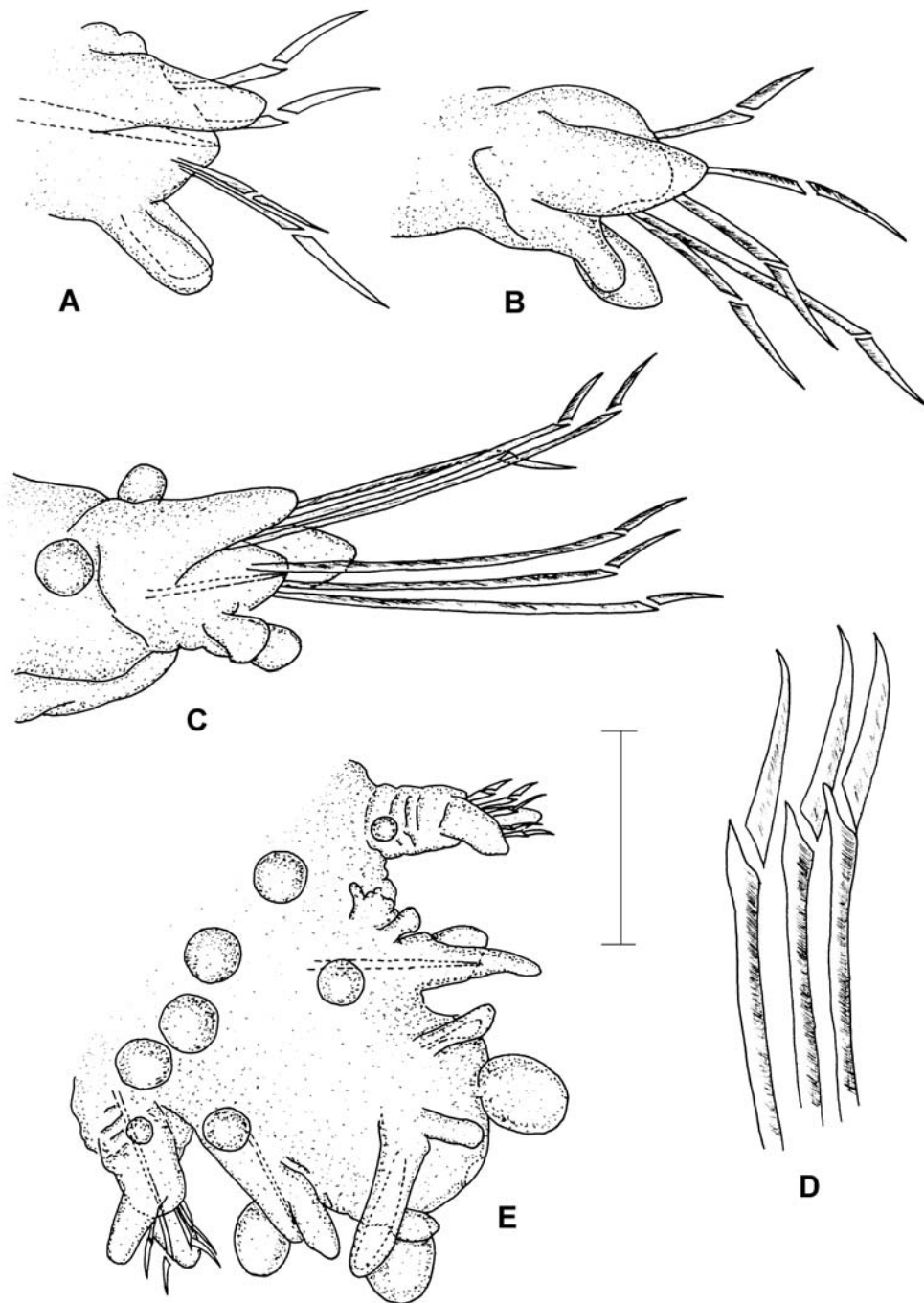


Figure 2. *Sphaerodoropsis amoureuxi* sp. nov. Holotype (MNCN 16.01/8925). **A.** Left parapodium chaetiger 1, ventral view. **B.** Parapodium chaetiger 2, ventral view. **C.** Parapodium chaetiger 4, ventral view. **D.** Composite falcigerous chaetae of chaetiger 11. **E.** Posterior end, ventral view. Scale bar: A-C: 50 μ m. D: 20 μ m. E: 100 μ m.

Figure 2. *Sphaerodoropsis amoureuxi* sp. nov. Holotype (MNCN 16.01/8925). **A.** Parapode du sétigère 1 (gauche), vue ventrale. **B.** Parapode du sétigère 2, vue ventrale. **C.** Parapode du sétigère 4, vue ventrale. **D.** Soies composées à serpe du sétigère 11. **E.** Région postérieure, vue ventrale. Échelle: A-C: 50 μ m. D: 20 μ m. E: 100 μ m.

cal papillae distributed on dorsal surface, arranged in 3 irregular transverse rows per segment, each one with 8-10 papillae (Fig. 1C). Ventral surface without macrotubercles, covered with numerous papillae, similar in shape, size, number and distribution to dorsal papillae (Fig. 1D).

Composite falcigers numbering 6-10 per fascicle; blades of median length, unidentate, smooth; shafts distally inflated (Fig. 2D).

Pygidium with two distal macrotubercles and one large, digitiform ventral cirrus; nearby are 3 digitiform papillae, smaller, similar to those of prostomium (Fig. 2E).

Eggs visible through body wall (Fig. 1D).

Remarks

Until now, nine species belonging to the genus *Sphaerodoropsis* have been described as having more than 4 dorsal macrotubercles arranged in a single segmental transverse row: *S. aestuarium* Averincev, 1990, *S. balticum* (Reiners, 1933), *S. benguellarum* (Day, 1963), *S. katchemakensis* Kudenov, 1987, *S. minuta* (Webster & Benedict, 1887) *S. octopapillatum* (Hartmann-Schröder, 1965), *S. polypapillata* Hartmann-Schröder & Rosenfeldt 1988, *S. sphaerulifer* (Moore, 1909) and *S. uzintunensis* Kudenov, 1987. Of these, only *Sphaerodoropsis polypapillata* has 3 pairs of lateral prostomial appendages and a single transverse row of dorsal macrotubercles per segment. *Sphaerodoropsis amoueuxi* is easy to distinguish from *S. polypapillata* by having 8 macrotubercles per segment instead of 7-13 as in the last species (Hartmann-Schröder & Rosenfeldt 1988), numerous dorsal papillae, and by the shape of the parapodia.

The eight remaining species have been described as having 2 pairs of lateral prostomial appendages. Furthermore, *Sphaerodoropsis amoueuxi* is distinguished from *S. aestuarium* and *S. minuta* by having 8 macrotubercles per segment instead of 8-10 and 10-14 respectively (Pettibone, 1963; Borowski, 1994). *S. octopapillatum* and *S. balticum* have two prechaetal parapodial lobes (Hartmann-Schröder, 1971; Fauchald, 1974), whereas *S. amoueuxi* has only a single prechaetal lobe. *S. amoueuxi* differs from *S. sphaerulifer* and *S. benguellarum* in having 1-2 postchaetal lobes, which are absent in the last two species (Day, 1967; Fauchald, 1974). *Sphaerodoropsis amoueuxi* is similar to *S. uzintunensis* and *S. katchemakensis* in the number of macrotubercles, the general shape of the antennae, palps, parapodia and chaetae, except for the absence of a prechaetal lobe in the first two chaetigers in *S. amoueuxi*. Also, *S. amoueuxi* has intermediate antennae and palps with more papillar spurs (6-8 spurs instead of 2-3 for *S. katchemakensis* and 4-4 for *S. uzintunensis*), and peristomial cirri with 4-6 digitiform papillar spurs. Finally, *S. amoueuxi* differs from both species in the shape and number per segment of dorsal and ventral papillae; spherical

and numerous (24-30) in *S. amoueuxi*, long and 13-15 in *S. uzintunensis* and 11 in *S. katchemakensis* (Kudenov 1987a).

Distribution

Capbreton Canyon, Bay of Biscay, Northeast Atlantic; 984-1029 m; soft bottom.

Etymology

This species is named in honour of the late Dr. L. Amoueux, in recognition of his work, especially on bathyal polychaetes from the Bay of Biscay.

Sphaerodoropsis stellifer sp. nov. (Figs. 3 & 4)

Material examined

Atlantic Ocean, Bay of Biscay, Capbreton Canyon (coordinates in Table 1). CB 89/KF-40: holotype (MNCN 16.01/9051); CB 88/DI-12: one paratype (MNHN in progress); CB 88/DI-13: one paratype (INSUB POL319).

Description

Three specimens, all complete: holotype 1.95 mm long, 0.81 mm wide, 19 chaetigers; paratypes 1.68 mm long, 0.70 mm wide, 18 chaetigers; and 3.11 mm long, 0.62 mm wide, 20 chaetigers.

Anterior part of prostomium rounded (Fig. 3A). Median antenna and 3 pairs of lateral prostomial appendages, all digitiform and smooth (Fig. 3B). Median antenna short, basally enlarged and bluntly. Dorsal antenniform papillae similar in shape and size to median antenna, although slightly more slender. Intermediate antennae and ventral palps the longest. Peristomial cirri similar in shape and size to intermediate antennae and palps. 8-10 digitiform papillae encircled by lateral prostomial appendages (Fig. 3B).

Parapodia uniramous, all chaetigers similar; acicular lobe truncate-conical, one conical prechaetal lobe extending well beyond acicular lobe, and ventral cirrus conical as prechaetal lobe but shorter (Fig. 4B). Postchaetal lobe absent. Parapodia with wrinkled epidermis, with 7-10 papillae uniformly distributed, similar in shape to those on the body of the animal.

Dorsal macrotubercles arranged in 4 longitudinal rows, on each segment forming one transverse row of 4 macrotubercles except on chaetiger 1 which is only provided with two lateral macrotubercles (Fig. 3A). Macrotubercles sessile, spherical to pear-shaped, with distal funnel-shaped opening resembling a terminal papilla (Fig. 4C). Numerous papillae ending in star shape with 6-7 tips (Fig. 3A, 4D).

Ventral surface without macrotubercles, but with nume-

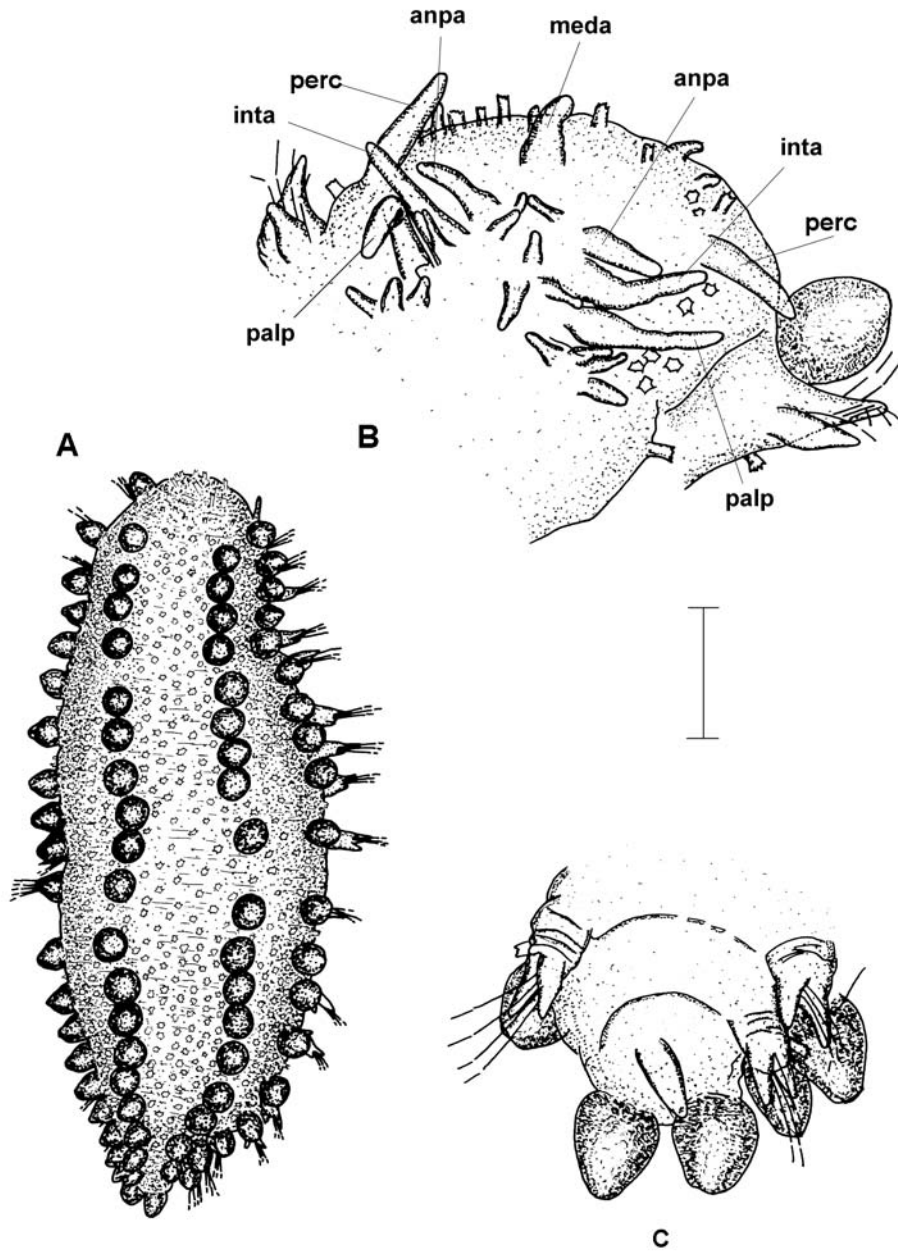


Figure 3. *Sphaerodoropsis stellifer* sp. nov. Holotype (MNCN 16.01/9051). **A.** Entire animal, dorsal view. **B.** Anterior end, ventral view. **C.** Pygidium, ventral view (**meda**: median antenna; **anpa**: antenniform papilla; **inta**: intermediate antenna; **palp**: palp; **perc**: peristomial cirrus). Scale bar: A: 400 μ m. B, C: 100 μ m.

Figure 3. *Sphaerodoropsis stellifer* sp. nov. Holotype (MNCN 16.01/9051). **A.** Animal entier, vue dorsale. **B.** Région antérieure, vue ventrale. **C.** Région anale, vue ventrale (**meda**: antenne médiane; **anpa**: papille antenniforme; **inta**: antenne intermédiaire; **palp**: palpe; **perc**: cirre peristomial). Échelle: A: 400 μ m. B, C: 100 μ m.

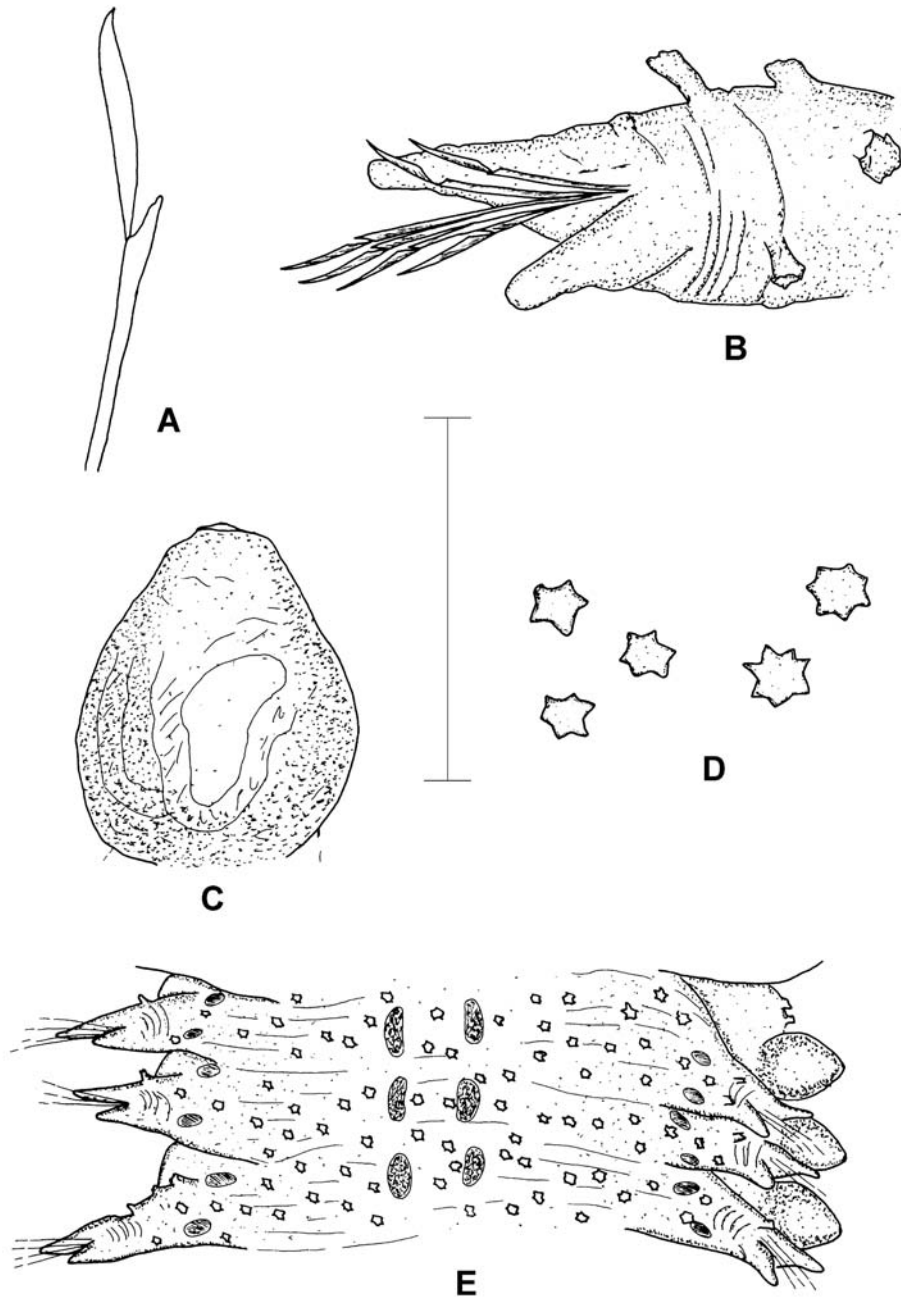


Figure 4. *Sphaerodoropsis stellifer* sp. nov. Holotype (MNCN 16.01/9051). **A.** Composite falcigerous chaeta. **B.** Left parapodium of 13th chaetiger, ventral view. **C.** Dorsal macrotubercle. **D.** Tips of star-shaped dorsal and ventral papillae. **E.** Chaetigers 8-10, ventral view. Scale bar: A: 40 μ m. B-D: 100 μ m. E: 400 μ m.

Figure 4. *Sphaerodoropsis stellifer* sp. nov. Holotype (MNCN 16.01/9051). **A.** Soie composée à serpe. **B.** Parapode gauche du sétigère 13, vue ventrale. **C.** Macrotubercule dorsal. **D.** Extrémité en forme d'étoile des papilles dorsales et ventrales. **E.** Sétigères 8-10, vue ventrale. Échelle: A: 40 μ m. B-D: 100 μ m. E: 400 μ m.

rous papillae of similar shape, size and arrangement as dorsal papillae (Fig. 4E).

Composite falcigers numbering 6-12 per fascicle; blades of median length, smooth, unidentate (Fig. 4A).

One pair of medioventral red-brown oval-rounded spots on each segment and two orange spots at the base of each parapodium (Fig. 4E).

Pygidium with one pair of dorsal macrotubercles and one median ventral cirrus (Fig. 3C).

Remarks

Eight previously described species of *Sphaerodoropsis* – *S. elegans* Hartman & Fauchald, 1971, *S. furca* Fauchald, 1974, *S. laevis* Fauchald, 1974, *S. laureci* Desbruyères, 1980, *S. longipapillata* Desbruyères, 1980, *S. martinae* Desbruyères, 1980, *S. parva* (Ehlers, 1913) and *S. sibuetae* Desbruyères, 1980 – have 4 longitudinal rows of dorsal macrotubercles arranged in a single transverse row per segment and three pairs of lateral prostomial appendages. *Sphaerodoropsis stellifer* is the only species of the genus having terminally star-shaped papillae.

Moreover, *S. stellifer* differs:

- from *S. elegans* by having parapodia with a prechaetal lobe but lacking a postchaetal lobe and not on the contrary (Hartman & Fauchald, 1971). Also, *S. stellifer* has parapodia with 7-10 papillae rather than with a single papilla near the base.

- from *S. furca* by having the dorsal antenniform papillae entire rather than bifurcated, and spherical to pear-shaped rather than non-spherical macrotubercles.

- from *S. laevis* by having numerous papillae and spherical to pear-shaped macrotubercles rather than hardly any papillae and macrotubercles poorly defined as swellings of the dorsal epithelium (Fauchald, 1974).

- from *S. laureci* by having the median antenna smooth and not bifurcated and by having spherical to pear-shaped rather than dorsoventrally flattened macrotubercles (Desbruyères, 1980).

- from *S. longipapillata* by having smooth rather than papillate lateral prostomial appendages.

- from *S. martinae* by having the dorsal antenniform papillae digitiform, parapodia with 7-10 papillae and spherical to pear-shaped macrotubercles rather than dorsal antenniform papillae very short and papilliform, parapodia without papillae and macrotubercles in the shape of spherical cap (Desbruyères, 1980).

- from *S. parva* and *S. sibuetae* by having a longer median antenna, larger dorsal antenniform papillae, and spherical to pear-shaped instead of hemispherical macrotubercles (Desbruyères, 1980).

S. stellifer has macrotubercles with funnel-like distal invaginations as *S. laureci* and, especially, *S. discolis* Borowski, 1994 which has macrotubercles of similar shape.

Moreover, *S. stellifer* resembles *S. discolis* in having the median antenna, the intermediate antenna, the ventral palps and the parapodia similar. However, *S. stellifer* differs from *S. discolis* by having three rather than two pairs of lateral prostomial appendages and numerous papillae ending in a star shape on the dorsum and venter instead of dorsal and ventral surfaces largely smooth with a few small, rounded to rod-shaped papillae (Borowski, 1994).

Distribution

Capbreton Canyon, Bay of Biscay, Northeast Atlantic; 990-1040 m; soft bottom.

Etymology

The denomination *stellifer* refers to the star form of the end of the papillae.

Genus *Sphaerodoridium* Lützen, 1961 amend.

Fauchald 1974

Sphaerodoridium fauchaldi Hartmann-Schröder, 1993

(Figs. 5, 6)

Material examined

Atlantic Ocean, Bay of Biscay, Capbreton Canyon (coordinates in Table 1). CB 88/DI-33: one specimen (INSUB POL320).

Description

Specimen complete, divided into two fragments: anterior part with prostomium, peristomium and six chaetigers (0.9 mm long); and posterior part with nine chaetigers and pygidium (1.45 mm long), 0.37 mm wide without parapodia.

Prostomium rounded anteriorly, median antenna digitiform, distally slightly inflated, blunt. Two pairs of lateral prostomial appendages, digitiform, distally blunt, longer than median antenna; dorsal antennae slightly longer than ventral palps. Each dorsal antenna and palp with at least one pair of basal papillae/spurs (Fig. 5A). Peristomial cirri similar in shape but shorter and slender than median antenna. Ventrolaterally, close to peristomial cirri, one papilla and dorsally, between peristomial cirri, four papillae in transverse row, similar in shape but smaller than peristomial cirri. Several papillae around mouth.

Parapodia uniramous, long/extended. Parapodia of chaetigers 1-3 with acicular lobe conical and ventral cirrus oval, extending beyond acicular lobe. From chaetiger 4 acicular lobe long, oval, smaller than ventral cirrus (Fig. 5B, C). Parapodial papillae numbering 3, including one papilla on anterior medial surface, one on posterior distal edge, and

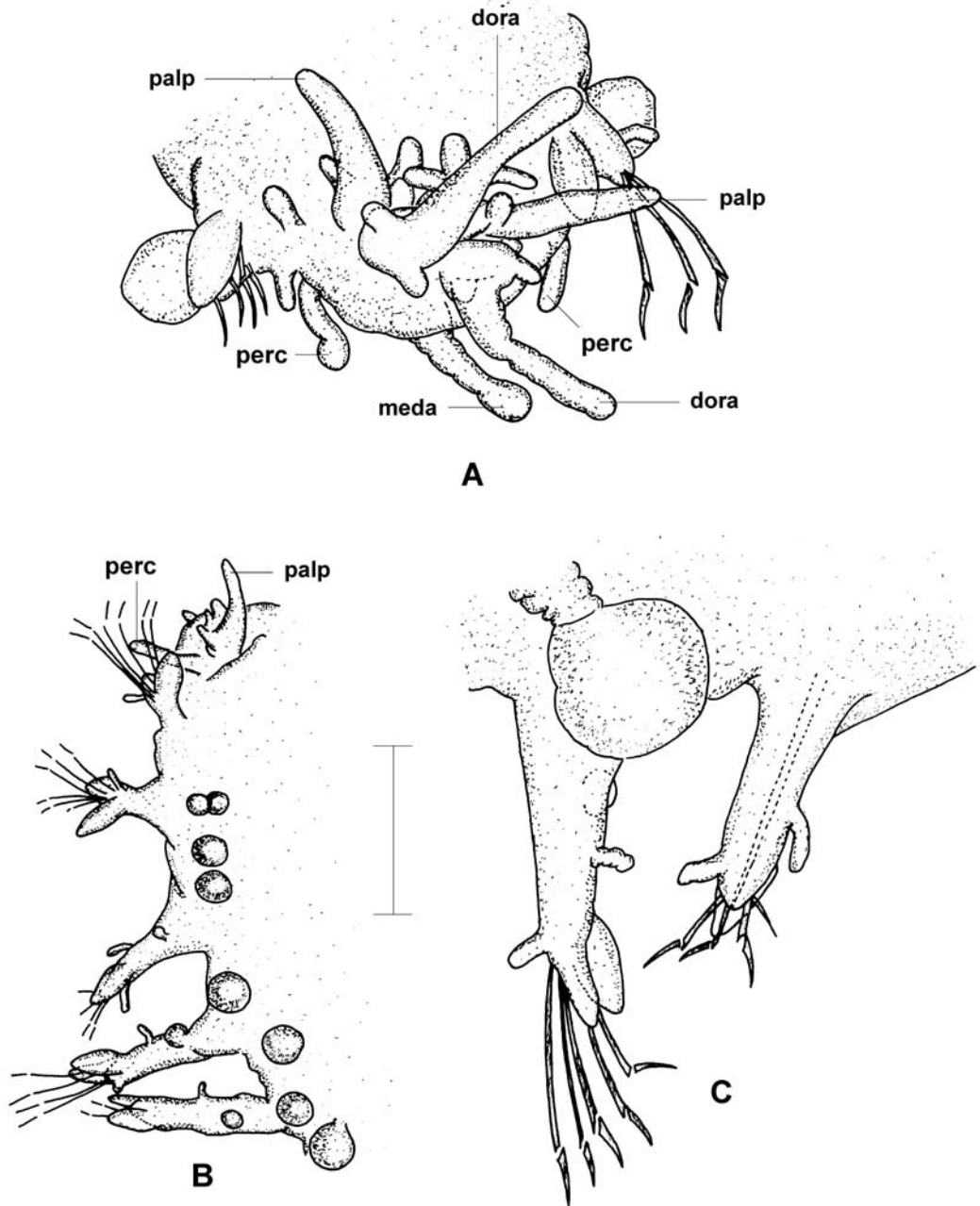


Figure 5. *Sphaerodoridium fauchaldi*. **A.** Anterior end, ventral view. **B.** Right side of anterior end, ventral view. **C.** Right parapodia of chaetigers 3-4, dorsal view (**meda**: median antenna; **dora**: dorsal antenna; **palp**: palp; **perc**: peristomial cirrus). Scale bar: A: 100 μ m. B: 200 μ m. C: 100 μ m.

Figure 5. *Sphaerodoridium fauchaldi*. **A.** Région antérieure, vue ventrale. **B.** Côté droit de la région antérieure, vue ventrale. **C.** Parapodes du côté droit des sétigères 3-4, vue dorsale (**meda**: antenne médiane; **dora**: antenne dorsale; **palp**: palpe; **perc**: cirre peristomial). Échelle: A: 100 μ m. B: 200 μ m. C: 100 μ m.

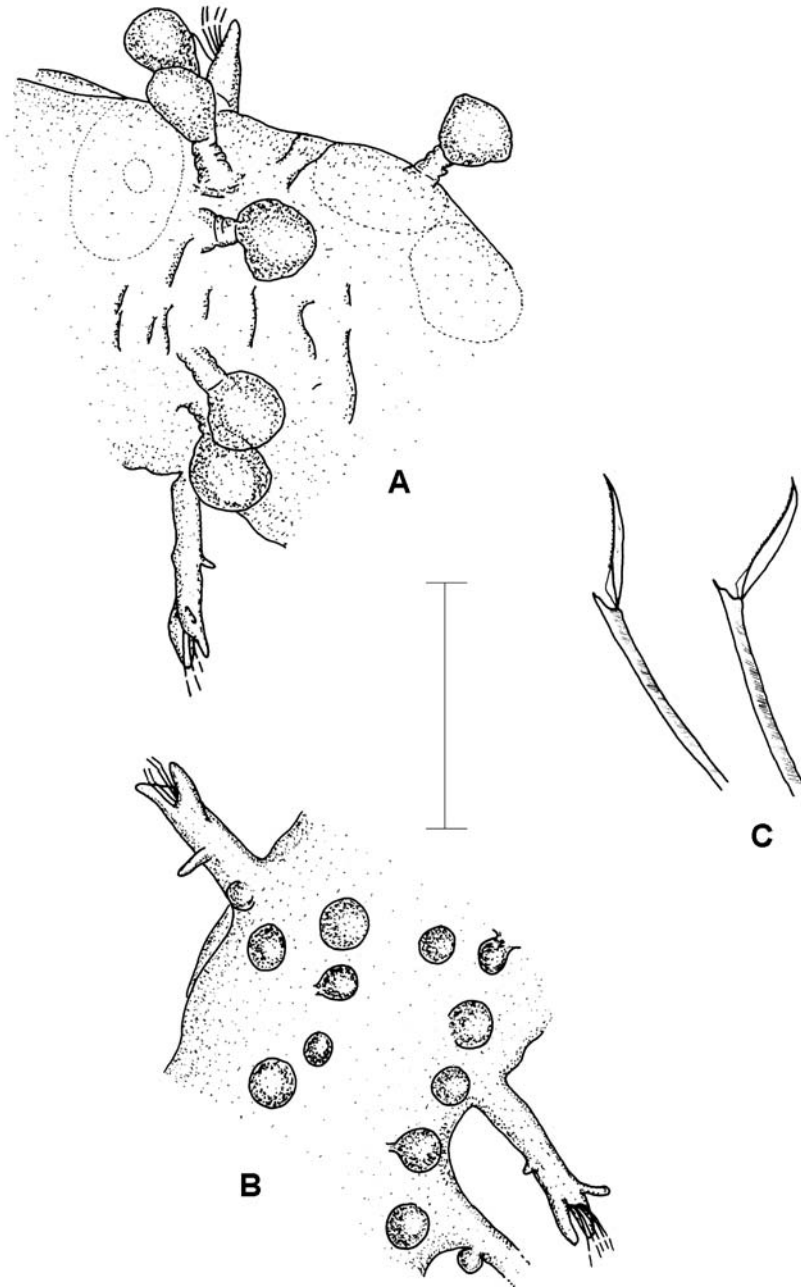


Figure 6. *Sphaerodoridium fauchaldi*. **A.** Chaetiger 5, dorsal view. **B.** Chaetiger 5, ventral view. **C.** Composite falcigerous chaetae. Scale bar: A, B: 200 μm . C: 40 μm .

Figure 6. *Sphaerodoridium fauchaldi*. **A.** Sétigère 5, vue dorsale. **B.** Sétigère 5, vue ventrale. **C.** Soies composées à serpe. Échelle: A, B: 200 μm . C: 40 μm .

one, spherical, on ventral basal parapodial surface (Fig. 5B, C). Dorsal macrotubercles with long and wrinkled stalk, arranged in transverse row (Fig. 6A). Chaetigers 1-3 with 5 macrotubercles, subsequent chaetigers with 6 macrotubercles. Ventral surface with spherical tubercles, smaller than dorsal ones, possibly with very short stalk, and irregularly distributed (Fig. 6B). One orange coloured spot at base of each parapodium.

Composite falcigers numbering 8-10 per fascicle; blades median length, unidentate, edge slightly serrate. Shafts distally inflated, with long spike-shaped tip (Fig. 6C).

Pygidium with one large ventral cirrus and one pair of dorsal macrotubercles.

Eggs visible through body wall (Fig. 6A).

Remarks

Our specimen well agrees with the description of Hartmann-Schröder (1993), but shows some small differences, such as the presence of one parapodial spherical ventral papilla from chaetiger 3 (absent according to Hartmann-Schröder), two instead of one basal papillae/spurs on the lateral antennae, 4 instead of 3 papillae between the peristomial cirri, and, possibly, ventral spherical papillae with a very short stalk rather than unstalked.

In spite of these differences we consider our specimen to belong to the species *Sphaerodoridium fauchaldi*.

Distribution

North Sea; Bay of Biscay, North Atlantic; 172-495 m; soft bottom.

Discussion

The present generic classification of the family Sphaerodoridae was created by Fauchald (1974) and is mainly based on characteristics of dorsal macrotubercles, setae and “antennae”. Sphaerodorids have been considered as having up to seven “antennae”: a median antenna and 2 or 3 pairs of lateral “antennae”.

Orrhage (1995) put in evidence that only three antennae may be present on polychaetes. Following Orrhage, Rouse & Pleijel (2001) stated that, in Sphaerodorids, anteriorly there is a dorsal pair of antennae, a more dorsally inserted median antenna and a pair of ventral unarticulated palps (often referred to as ventral antennae). The antennae and palps may be similar to each other, or differ in both shape and size. However, most recent works on systematics of Sphaerodorids (Bakken, 2002; Moreira et al., 2004) followed the old nomenclature and Sphaerodorids are still considered as having more than three antennae.

Most of the genera of the family Sphaerodoridae have a

median antenna and two pairs of lateral “antennae” and it is easy to match the old nomenclature to the one proposed by Rouse & Pleijel (2001), according to Orrhage (1995): a median antenna, a pair of dorsal antennae and a pair of ventral palps.

However, three genera (*Euritmia*, *Sphaerephesia* and *Sphaerodoropsis*) include some species having three pairs of lateral “antennae” (10 species in *Sphaerodoropsis*, without including the present two new species). Besides, *Sphaerodoridium campanulata* Borowski, 1994 includes also this third pair of cephalic appendages, being described as “prostomial papillae” (Borowski, 1994). The nature of this third pair of appendages situated dorsally of the dorsal antennae is, for the moment, unknown.

Sphaerodorids have not yet been studied to determine the true nature of the prostomial appendages and therefore the function of each of them is still not clear.

In order to match the nomenclature of the head appendages of Sphaerodorids with three pairs of “antennae”, until their true nature is determined, we propose to name the third pair of appendages, situated dorsally to the pair of dorsal antenna as prostomial antenniform papillae. Thus, in Sphaerodorids with three pairs of prostomial appendages, these would be named, from dorsal to ventral, as: one pair of dorsal prostomial antenniform papillae, one pair of intermediate antennae and one pair of ventral palps.

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