

Revision of five species referred to *Myriochele* and *Galathowenia* (Polychaeta: Oweniidae) from the Antarctic Seas based upon type material

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Abstract.—Based on the examination of type material, five Antarctic oweniid species (Polychaeta: Oweniidae), belonging to the genus *Myriochele* and *Galathowenia*, were studied: *Myriochele scotiae* Hartman, 1978, *Galathowenia wilsoni*, Blake, 1984, *Myriochele joinvillensis* Hartmann-Schröder & Rosenfeldt, 1989, *Myriochele longicollaris* Hartmann-Schröder & Rosenfeldt, 1989 and *Myriochele terranovensensis* Cantone & Di Pietro, 1998. The original description of *M. scotiae* has been emended due to the confirmation that the specimen described is a broken animal, and the shape of its anterior end is an artifact due to a breakage process. *Galathowenia wilsoni* and *M. terranovensensis* are considered junior synonyms of *Galathowenia scotiae* (Hartman, 1978), new combination. *Myriochele joinvillensis* and *M. longicollaris* are regarded as valid species. Data are also given on the intraspecific variability of some body traits of high taxonomic relevancy in oweniids such as the shape of the head region, posterior end and anteroposterior variation of the hooked setae. The taxonomic status of the genus *Galathowenia* Kirkegard, 1959 is discussed, and a key to the species of the family Oweniidae recorded in Antarctic waters is provided.

Hartman (1978) described *Myriochele scotiae* from the Weddel Sea in Antarctica, with setigers 1 and 2 having notosetae only and with a unique feature which distinguished it from other oweniids—the greatly reduced, truncated prostomium with, on occasion, a partially everted proboscis. This species was also found and illustrated later by Blake (1984) from the Ross Sea and north of the Amundsen Sea. Blake also describes a new species from the same localities, *Galathowenia wilsoni*, with a well developed anterior end, truncated terminal ciliated mouth, and three thoracic setigers wider than long with notosetae only, as the only body characteristics that clearly separate it from *Myriochele scotiae*. *Galathowenia wilsoni* was later found by Imajima & Morita (1987) in the Japan Sea and by Hartmann-Schröder & Rosenfeldt (1989, 1991 as *Myriochele*) in South Shetland Islands

(Antarctica). Recently, Cantone & Di Pietro (1998) described a new oweniid species from Terra Nova Bay in the Ross Sea, *Myriochele terranovensensis*, with a characteristic deep constriction between the first and second setigers. Other oweniids described or reported from Antarctica are: *Owenia fusiformis* delle Chiaje 1842, *Myriochele heeri* Malmgren, 1867, *M. joinvillensis* Hartmann-Schröder & Rosenfeldt, 1989, *M. longicollaris* Hartmann-Schröder & Rosenfeldt, 1989 and *Myrioglobula antarctica* Hartman, 1967. Hartman (1967) reported *Myriochele* near *pygidialis* Hartman, 1960 from the Bransfield Strait area, a species originally described from off California, but the same author (Hartman 1978) later acknowledged it to be *M. scotiae*.

The present study of oweniid material collected during three Spanish Antarctic cruises known as Bentart94, Bentart95 and

Gebrap96, and specimens from different type collections, shows that *Myriochele scotiae* Hartman, 1978, *Galathowenia wilsoni* Blake, 1984 and *Myriochele terranovensensis* Cantone & Di Pietro, 1998 represent the same species. The original description of *M. scotiae* is emended, and this species is reassigned to the genus *Galathowenia* Kirkegaard, 1959. *Galathowenia wilsoni* and *M. terranovensensis* are qualified as junior synonyms of *G. scotiae*, while *M. joinvillensis* and *M. longicollaris* are recognized as valid species.

The Spanish Antarctic cruises Bentart94 and Bentart95 were carried out for the purpose of acquiring knowledge of the composition and dynamics of the benthic communities around the South Shetland Islands, while Gebrap96 was mainly geared towards obtaining information on marine geophysics in the Bransfield Strait (Antarctica). Field sampling methods, geographical location of the stations sampled and sediment parameters are described in Olaso (1994), Ramos (1995) and Sáiz-Salinas et al. (1997).

Data concerning general polychaete taxonomy and ecology of Bentart cruises are published in San Martín & Parapar (1997), Parapar & San Martín (1997) and San Martín et al. (2000); data concerning polychaetes collected in the Gebrap cruise are unpublished.

Materials and Methods

Samples from Bentart and Gebrap cruises were mostly collected in soft substrata (mud and muddy sand) by means of Van Veen grab, Anchor dredge and Rocky dredge in Feb 1994, Jan to Feb 1995 and Dec 1996 to Jan 1997. Specimens were fixed in formalin, preserved in 70% ethanol and deposited at the Museo Nacional de Ciencias Naturales de Madrid, Spain (MNCNM) and the Departamento de Biología Animal, Biología Vexetal e Ecoloxía of the Universidade da Coruña, Spain (DBA). For comparative purposes, type ma-

terial of *Myriochele scotiae* and *Galathowenia wilsoni*, loaned by the National Museum of Natural History, Washington DC, U.S.A. (USNM), *Myriochele terranovensensis*, loaned by the Università di Catania (Italy) (UDC) and *Myriochele longicollaris* and *Myriochele joinvillensis*, loaned by the Zoologisches Museum der Universität Hamburg, Germany (ZMH), were also examined. Specimens used for scanning electron microscopy (SEM) were prepared by critical point drying, coated with gold in a BAL-TEC SCD 004 evaporator and examined and photographed in a JEOL JSM-6400 scanning electron microscope.

Family Oweniidae Rioja, 1917

Genus *Galathowenia* Kirkegaard, 1959
Galathowenia scotiae (Hartman, 1978)
emended

Figs. 1, 2, Table 1

Myriochele near *pygidialis* Hartman, 1967: 148–149. Not Hartman, 1960. fide Hartman, 1978.

Myriochele scotiae Hartman, 1978:188–190, figs 32a–d. Blake, 1984:112–114, figs 1a–f.

Galathowenia wilsoni Blake, 1984:114–116, figs 2a–d. Imajima & Morita, 1987: 98, figs 7a–k and 8e–f.

Myriochele wilsoni Hartmann-Schröder & Rosenfeldt, 1989:81, fig. 36. Hartmann-Schröder & Rosenfeldt, 1991:81.

Myriochele terranovensensis Cantone & Di Pietro, 1998:421–423, fig. 1a–f.

Material examined.—Type material of *Myriochele scotiae*: USNM 46969, 27 Feb 1969, 77°19.8'S, 36°41.3'W, 1079 m, 1 specimen, holotype; USNM 47049, 26/02/69, 77°05.5'S, 35°04'W, 743 m, 100 spec.

Type material of *Galathowenia wilsoni*: USNM 96113, 29 Jan 1968, 76°23'S, 163°28'W, 509–510 m, 1 specimen, holotype; USNM 96114, 29 Jan 1968, 76°23'S, 163°28'W, 509–510 m, 3 spec., paratypes.

Type material of *Myriochele terranovensensis*: UDC: D1D, 1 specimen, holotype; D126, 7 spec., paratypes and syntypes,

rocky and sandy bottoms, South "Faraglione" transect (Terra Nova Bay, Ross Sea).

Type material of *Myriochele longicollaris*: ZMH: P-19614, 1 specimen, holotype; St. 207, 68 m, 12 Mar 1984, Bransfield Strait (62°59'S, 57°05'W).

Type material of *Myriochele joinvillensis*: ZMH: P-23059, 1 specimen: ANT XV-3, MG 48-356.

Material from Bentart94: Sta. 1, 6 Feb 1994, 62°39'S, 60°23'W, 48 m, 3 specimens; Sta. 9, 7 Feb 1994, 62°39'S, 60°27'W, 240 m, 2 spec.; Sta. 20, 8 Feb 1994, 62°40'S, 60°27'W, 245 m, 1 spec.; Sta. 36, 10 Feb 1994, 62°41'S, 60°32'W, 250 m, 1 spec.; Sta. 40, 10 Feb 1994, 62°42'S, 60°35'W, 122 m, 1 spec.; Sta. 47, 11 Feb 1994, 62°46'S, 60°24'W, 123 m, 1 spec.; Sta. 54, 12 Feb 1994, 62°45'S, 60°27'W, 231 m, 2 spec.; Sta. 58, 13 Feb 1994, 62°43'S, 60°22'W, 194 m, 1 spec.; Sta. 59, 13 Feb 1994, 62°44'S, 60°21'W, 85 m, 1 spec.; Sta. 70, 15 Feb 1994, 62°44'S, 60°24'W, 191 m, 1 spec.; Sta. 80, 17 Feb 1994, 62°44'S, 60°26'W, 170 m, 1 spec.; Sta. 84, 17 Feb 1994, 62°40'S, 60°37'W, 164 m, 1 spec.; Sta. 97, 19 Feb 1994, 62°43'S, 60°30'W, 104 m, 2 spec.

Material from Bentart95: Sta. 4, 17 Jan 1995, 62°38'S, 60°25'W, 182.5 m, 4 spec.; Sta. 7, 18 Jan 1995, 62°44'S, 60°28'W, 76.2 m, 1 spec.; Sta. 8, 18 Jan 1995, 62°44'S, 60°30'W, 114 m, 4 spec.; Sta. 12, 24 Jan 1995, 62°57'S, 60°36'W, 162.8 m, 1 spec.; Sta. 23, 30 Jan 1995, 63°57'S, 60°57'W, 103 m, 2 spec.; Sta. 24, 30 Jan 1995, 63°58'S, 60°52'W, 324 m, 1 spec.; Sta. 29, 2 Feb 1995, 62°05'S, 60°25'W, 239.5 m, 1 spec.

Material from Gebrap96: Sta. DR-1, 29 Dec 1996, 62°12'S, 57°14'W to 62°12'S, 57°10'W, 1407 to 1288 m, 7 spec.; Sta. DR-2, 30 Dec 1996, 62°14'S, 57°20'W to 62°13'S, 57°22'W, 1592 to 1269 m, 9 spec.; Sta. DR-7, 3 Jan 1997, 62°38'S, 59°06'W to 62°39'S, 59°04'W, 1416 to 1275 m, 13 spec.; Sta. DR-8, 3 Jan 1997, 62°42'S, 40°00'W to 62°41'S, 59°00'W, 1379 to 1192, 100+ spec.; Sta. DR-9, 3 Jan 1997,

62°41'S, 59°10'W to 62°42'S, 59°09'W, 1400 to 1182 m, 50+ spec.

Description.—Body cylindrical, long and thin, measuring from about 32 mm in length and 1.0 mm in width for 25 setigers in smaller entire specimens to 64 mm in length and 1.5 mm in width for 28 setigers in largest entire specimens. Body pale orange to dark brown pigmented with mid-ventral Y-line beginning just posterior to peristomium as two lines which converge and merge in setiger 2.

Anterior end truncated (Fig. 1A, D) with head region (prostomium and peristomium) with terminal ciliated mouth provided with two lips marking longitudinal mid-ventral slit on peristomium when closed (Fig. 1F). Surface of head region and buccal cavity densely covered with cilia (Fig. 1G, H). Eyespots absent. Thorax consisting of three setigers with notosetae only (Fig. 1A–C). On occasion, a fine transverse slit present between first and second setigers (arrows in Figs. 1A–D), becoming narrow body constriction in larger animals (Fig. 1D), which, in most, represents line of breakage, leaving anterior portion (comprising prostomium, peristomium and first setiger; Fig. 1F, G) completely separated from remainder of body (Fig. 1E). Fourth to eighth setigers greatly elongated, successively shorter. All setigers with notopodial capillary setae coated with minute spinules in distal half (Fig. 2C) and no acicular setae. Ventrolateral neuropodial uncinigerous tori starting from fourth setiger and comprising several transverse rows of hooked setae. Hooked setae bidentate, with curved teeth nearly equal in length and located one above the other or slightly offset from one another in anterior neuropodia (Fig. 2D, E) and progressively located more side by side in mid-body (Fig. 2F, G) and in oblique position in posterior neuropodia (Fig. 2H). On occasion, a double upper tooth present (Fig. 2F, arrow).

Posterior end of body more or less tapered with segments occasionally much compressed, splaying out large notopodial

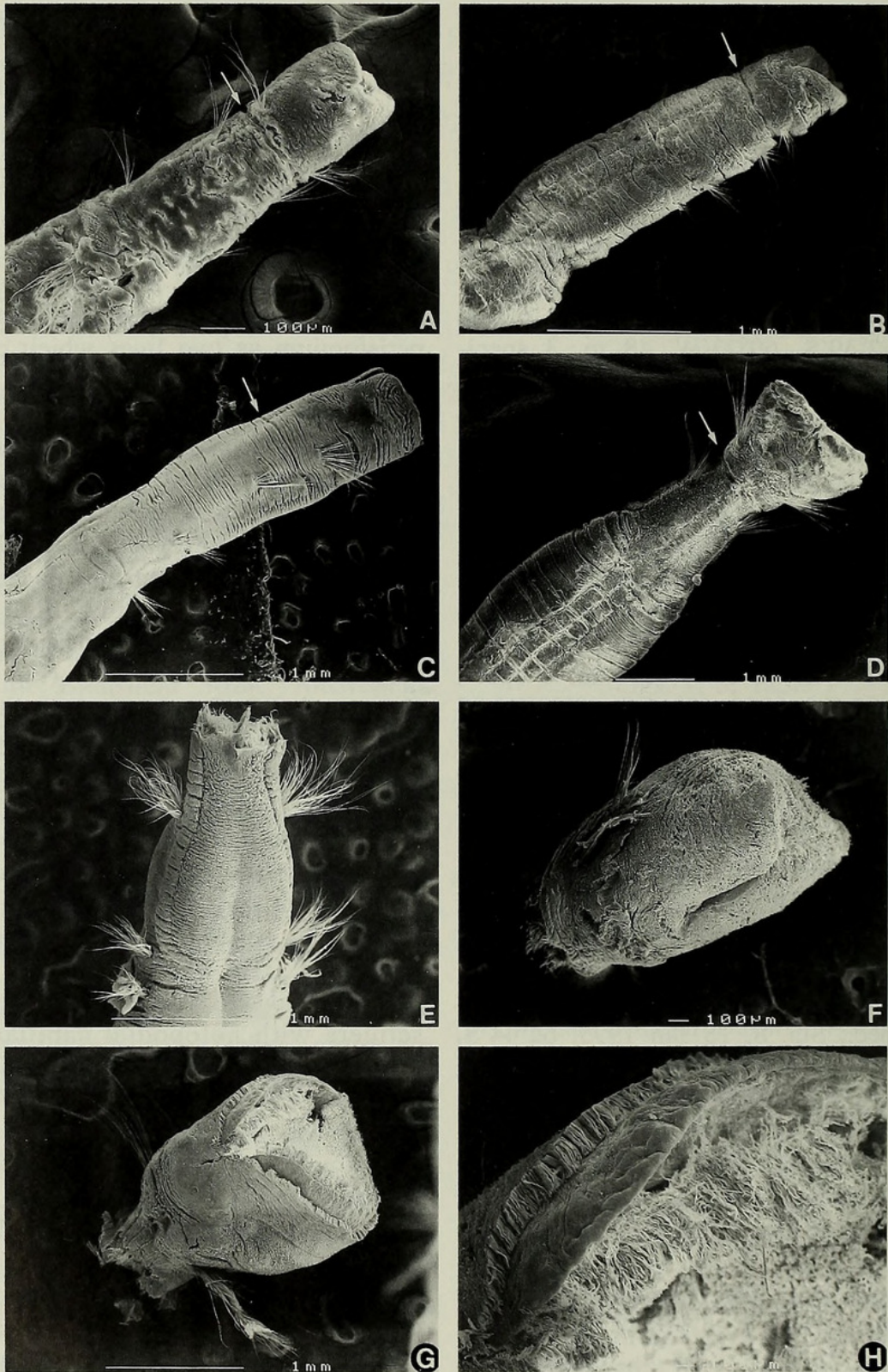


Fig. 1. *Galathowenia scotiae* new combination. A, anterior end from paratype of *M. terranovens* (D 126), ventral view; B, anterior end from paratype of *G. scotiae* (USNM 47049), ventral view; C, anterior end from Bentart, lateral view; D, anterior end from Gebrap, ventral view; E, anterior end without head region (Gebrap), ventral view; F, G, released head regions with closed and open mouth lips respectively (Gebrap), ventral view; H, Detail of prostomial lip ciliature (Gebrap). Arrows indicate position of transverse slit between first and second setigers.

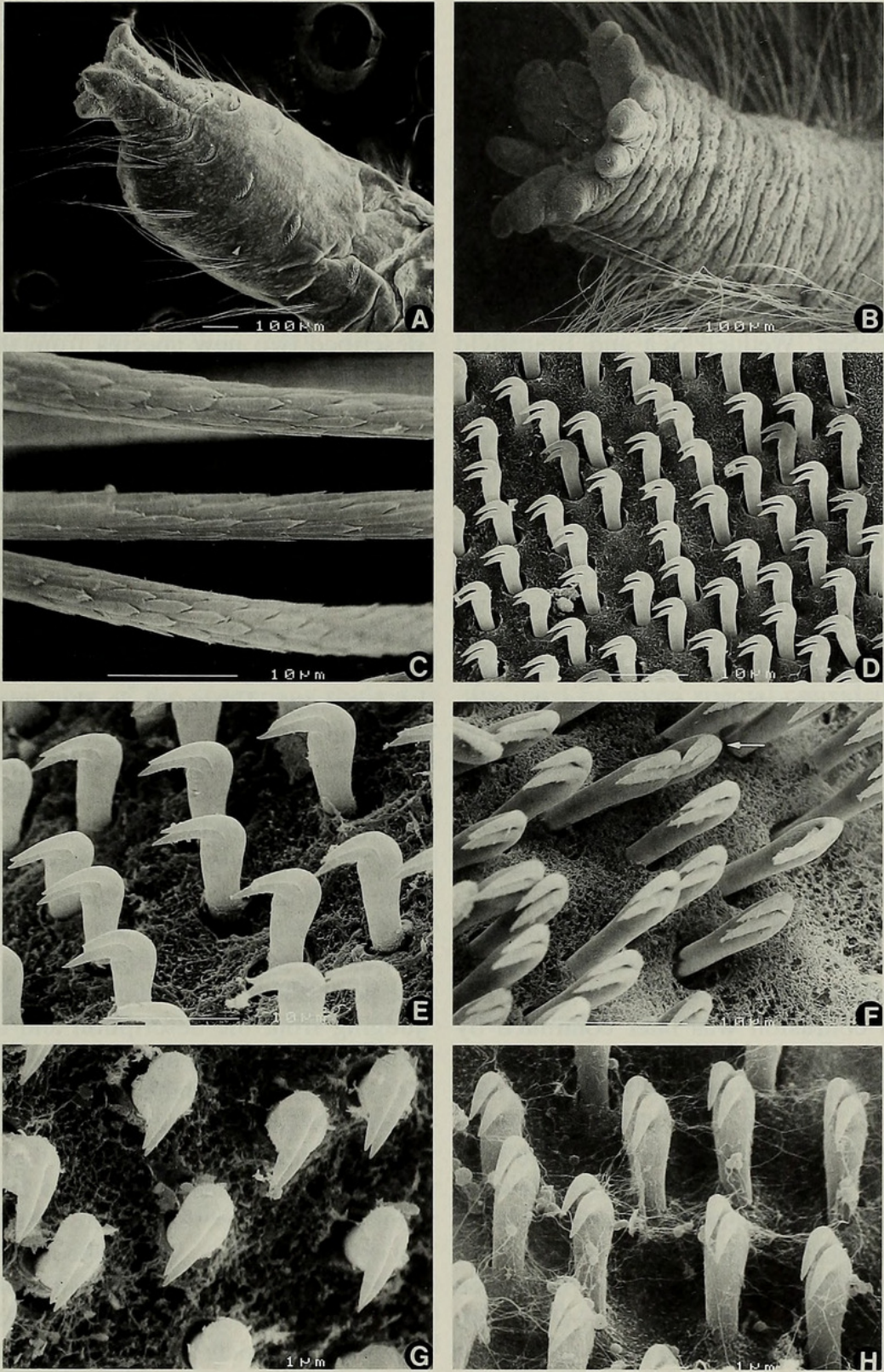


Fig. 2. *Galathowenia scotiae* new combination. A, posterior region and pygidium from Bentart95, ventral view; B, posterior region and pygidium from Gebrap, dorsal view; C, detail of spinules covering of first setiger capillary notosetae; D, E, hooked setae from first abdominal setiger from Bentart95 and Gebrap respectively in lateral view; F, G, hooked setae from midbody, frontal and upper view respectively, arrow indicate double upper tooth; H, hooked setae from posterior setiger, frontal view.

setae. Pygidium with about 5–11 irregular cirri, slightly petaloid, arranged around anus (Fig. 2A, B).

Tube long, cylindrical and rigid; with membranous inner lining, externally coated with black volcanic sand grains and occasional sponge spicules and foraminiferans.

Distribution.—*Galathowenia scotiae* new combination, seems to be widespread in Antarctic seas but mainly recorded from the Ross Sea, Weddell Sea and Bransfield Strait (see Table 1). The only record beyond Antarctic waters is from Japan by Imajima & Morita (1987) as *Galathowenia wilsoni*.

Remarks.—As stated by Nilsen & Holthe (1985), of all the polychaetes, the Oweniidae are possibly the most difficult family to remove undamaged from their tubes. This characteristic, together with their fragility and the existence of mobile, and shape variable body structures as the head region, has sometimes given rise to erroneous observations that result in false species descriptions. In the original description of *Galathowenia scotiae*, Hartman (1978) did not take into account the existence of specimens in their tubes with the anterior end still unbroken (USNM 47049, Fig. 1B) and interpreted the anterior end of the broken specimens as a characteristic reduced prostomium (Hartman, 1978:188, fig. 32a–b). This confusion was later continued by Blake (1984) in a study on Antarctic oweniids in which the author described a new species, *G. wilsoni*. The study of the type material of the two species shows no fundamental anatomical difference between them and, accordingly, both taxa represent the same species. Unlike most specimens of the *G. scotiae* type material, most of the type material belonging to *G. wilsoni* are complete animals, with no signs of anterior constriction or breakage (Blake, 1984:114–116, fig. 2a), although one of the paratypes (USNM 96114) was similarly broken between the first and second setigers.

The material of *Galathowenia wilsoni* from Japan (Imajima & Morita 1987) was not examined by the author, but the descrip-

tion and good illustrations as well as SEM micrographs do not appear to shed any doubt on their correct identification. Blake (1984), following Hartman (1978), synonymized *Myriochele* near *pygidialis* Hartman, 1967, recorded from the Weddell Sea, with *M. scotiae*. I also agree with this opinion, although I did not examine the material.

Hartmann-Schröder & Rosenfeldt (1989) described two new species from the South Shetland Islands: *Myriochele joinvillensis* and *M. longicollaris*. After examining only one specimen of the type series of both species, I consider that they are likely valid species, in spite of the fact that they exhibit close similarities to *Galathowenia scotiae*. Examination of a specimen of *M. joinvillensis* confirms the existence of two thoracic setigers and a short collar in this species, as the truncated anterior end shows no signs of breakage. However, in this specimen I did not observe the secondary annulation that the authors describe and illustrate in the collar and thoracic region of the holotype (Hartmann-Schröder & Rosenfeldt 1989, fig. 37). The uncini, which the authors compare with those of *M. oculata* Zachs, bear a strong resemblance to those of *G. scotiae*. It was not possible to observe the shape of the posterior region and pygidium, although judging from the description and the illustration, they would appear to be similar to *G. scotiae*. An analysis of the holotype seems to confirm the presence of an extremely long collar in the head region of *M. longicollaris*, consisting of two large anterior lateral lobes, which are much longer than in *G. scotiae*. This aspect can be observed in the original illustration (Hartmann-Schröder & Rosenfeldt 1989, figs. 40–41), in which there is, however, an error, as the deep transverse slit that is described as being between the second and third thoracic setigers is, in reality, located between the first and second as in *G. scotiae*. The hooks are again very similar to those in *G. scotiae*. The pygidium is unknown.

Cantone & Di Pietro (1998) recently described a new Antarctic species, *Myriochele terranovensensis*, characterising it by the combination of four features: a deep constriction between first and second setigers, the prostomium anteriorly enlarged, short collar and the presence in the pygidium of two dorsal lobes smaller than the others (5 in total). From the study of the type material, I did not find any significant differences with *Galathowenia scotiae*, which also has in common with this species the shape of the uncini, with the two teeth in a more or less variable slanted arrangement. This variable shape of the uncini led the authors to suggest an "apparently contemporary presence in the same chaetiger of uncini of two types."

The presence of a transverse slit between the first and second setigers posteriorly transformed into a body wall constriction in a large number of the specimens studied is a common trait in *Galathowenia scotiae*: type material of *Myriochele terranovensensis* (Fig. 1A), *M. longicollaris*, *G. wilsoni*, *G. scotiae* (Fig. 1B), and Bentart and Gebrap material (Fig. 1C). Its biological role could be interpreted as simply a particularly fragile spot in the body or as a breakage point closely related to seasonal body fragmentation during asexual reproduction—a biological strategy previously reported by Curtis (1977) for *Owenia fusiformis* in Greenland and Oliver (1984) for *Myriochele oculata* Zaks, 1922 in Alaskan waters and *M. cf. heeri* in Antarctica. That this fragmentation always occurs between the same setigers in my opinion makes this fact probably more related to a reproductive role than to accidental breakage during sample processing. In relation to this, Oliver (1984) reported that the breakage during asexual reproduction in *M. oculata* always occurs between setigers 6 to 8. In any case, only specific research on the biology of this species will reveal the true role of this structure.

Nielsen & Holthe (1985) described *Myriochele fragilis* from the Norwegian and

Arctic seas. This species is superficially very close to *Galathowenia scotiae*, especially in the presence of a pronounced constriction between the first and second setiger, which, in Eliason's manuscript, makes it "... impossible to secure an intact animal, although I have tried to open almost 100 tubes." Nielsen & Holthe (1985) admit the similarity between *M. fragilis* and *M. scotiae* sensu Hartman (1978), but qualifying it as superficial due to differences in the number of segments, anal lobes and particularly owing to the shape of hooked setae (with both teeth consistently in a vertical row in *M. fragilis*). Nevertheless, and despite of their very different geographical distribution, I consider both species as probably very closely related.

Due to the limited number of characteristics with taxonomic relevancy in oweniids, the possibility of intraspecific variability must be given special consideration. As a result of this study, and as shown in the above description, three of the most relevant structures in oweniid taxonomy demonstrated substantial variability between specimens in *Galathowenia scotiae*: the shape of the anterior and posterior body regions and relative position of the teeth in the neuropodial bidentate hooked setae. Depending on the degree of mouth opening, the shape of the anterior region could vary from truncate (with the mouth open) to almost rounded (closed mouth). Likewise, the number of pygidial cirri and the state of contraction of the segments of the hind part of the body could vary depending on the size of the animal and the fixation. In the case of the hooked setae, a slight antero-posterior variation in the relative position of the teeth could be observed, from one upper and one lower disposition in the anterior-most neuropodia to an oblique disposition in the remainder of the body. Some variation within a single neuropodium was also reported (see Fig. 2F). With regard to the hooks, the occasional occurrence of a second uppermost tooth, which could be interpreted following Meyer & Bartolomaeus

Table 1.—Comparison of some morphological characters, bathymetry and geographical distribution of *Myriochele scotiae* Hartman, 1978, *M. wilsoni* Blake, 1984 and *M. terranovensis* Cantone & Di Pietro, 1998. ES = Elongated setigers; TS = Transverse slit between thoracic setigers 1 and 2; TAHS = Teeth arrangement on hooked setae; MVYL = Mid-ventral Y-line; PC = Number of cirri on pygidium. Size (mm) in length/width. “—” means no data. Some bibliographic data have been slightly modified or completed by personal observations from type material.

Species	Reference	Size	Seti- gers	ES	TS	TAHS	MVYL	PC	Tube covering	Bathymetry	Area
<i>Myriochele</i> near <i>pygidialis</i>	Hartman (1967)	25/0.75	32	4–6	—	Bifid claw	—	7	Fine cindery gravel	311–1153	South Shetlands and South Orkney Is- lands, Barnsfield Strait (Antarctica)
<i>Myriochele scotiae</i>	Hartman (1978)	40/2.0	24+	4–8	Yes	Slightly offset from one another?	Yes	7	Small sand grains	40–1153	Weddell Sea (Antarctica)
<i>Myriochele scotiae</i>	Blake (1984)	20/0.75	24	4–6	Yes	One above the other	—	6–7	—	411–923	Ross Sea and N of Amundsen Sea (Antarctica)
<i>Galathowenia</i> <i>wilsoni</i>	Blake (1984)	35/1.0	21	4–7	Yes	Slightly offset from one another	Yes	8	Fine silt and sand particles	411–608	Ross Sea and N of Amundsen Sea (Antarctica)
<i>Galathowenia</i> <i>wilsoni</i>	Imajima & Mori- ta (1987)	32/0.9	20–30	5–7	Yes	Side by side at different levels or one above the other	Yes	8	Fine silt and sand grains, foraminifer- ans	56–1050	Japan
<i>Myriochele wilsoni</i>	Hartmann-Schröd- er & Rosen- feldt (1989)	32	27	—	—	Side by side at different levels	—	—	Sand grains	120–510	Bransfield Strait, King George and Elephant Islands (Antarctica)
<i>Myriochele wilsoni</i>	Hartmann-Schröe- der & Rosen- feldt (1991)	27	24	—	—	—	Yes	—	Black and white sand grains and sponge spicules	134–370	Elephant Island (Antarctica)
<i>Myriochele</i> <i>terranovensis</i>	Cantone & Di Pietro (1998)	10/0.3	17	5–6	Yes	Two types: upper and lower and side by side	Yes	5	Sand grains and sponge spicules	120–332	Terra Nova Bay (Antarctica)

Table 1.—Continued.

Species	Reference	Size	Seti- gers	ES	TS	TAHS	MVYL	PC	Tube covering	Bathymetry	Area
<i>Galathowenia scoitae</i>	This study	32/1.0 to 64/1.5	25	4–8	Yes	Variable, but mainly obliquely arranged	Yes	5–11	Black sand grains	48–1592	South Shetlands Is- lands and Barnsfield Strait (Antarctica)

(1996) as the third spine of a capitium of a hook in which the rostrum was reduced, was not previously documented in any other oweniid species. For the above reasons, in my opinion and as mentioned previously by other authors such as Martín (1989) with *Galathowenia oculata* (Zaks, 1922), the anatomical variability in the hooked setae, the different position of the lips of the mouth and the different degree of body contraction, must be included in every oweniid description and taken into account in every dichotomous key to avoid, as much as possible, multispecific descriptions and/or unclear species determinations.

Nilsen & Holthe (1985) included a key of Arctic and Scandinavian oweniid species in which the different species of *Myriochele* are distinguished only on the basis of the shape of the uncini and tube. In addition to the uncini, Imajima & Morita (1987) also used the presence or absence of eyes and the number of pygidial lobes. Lastly, Cantone & Di Pietro (1998) provided a key of the Antarctic oweniids based on structures, which the authors believe are easy to detect, such as the shape of the different structures related to the anterior end—the collar and prostomium—and posterior end, while ignoring other features such as the shape of the ventral hooks. Because body shape and certain meristic characteristics have shown, in this study, to exhibit some degree of variability, I believe that these characteristics should be avoided, where possible, in a dichotomous key, or at the very least, used with caution. In contrast, I consider the inclusion of the shape of the ventral hooks in the keys to be valid, and I agree with Nilsen & Holthe (1989) who consider them to be a crucial characteristic in the classification and identification of oweniids, although it is always necessary to take their slight intraspecific variability into account.

Authors such as Fauchald (1977), Kirkegaard (1983, 1996), Blake (1984) and Imajima & Morita (1987) regard the genus *Galathowenia* as valid and have used it to name this species. Nevertheless, as Mackie

& Pleijel (1990) have pointed out, there is no consensus on this matter, so other authors including Nilsen & Holthe (1985, 1989), Hartmann-Schröder & Rosenfeldt (1989, 1991), Hartmann-Schröder (1996) and Cantone & Di Pietro (1998) regard it as a junior synonym of *Myriochele*. In my opinion, this genus seems to be well defined by the truncated anterior end of the head region, terminal mouth and notopodial fascicle with capillary setae only. Nevertheless, the aim of this paper is to put forth the synonymy between *M. scotiae*, *G. wilsoni* and *M. terranovens*. A review of the genus *Myriochele* Malmgren, 1867 and *Galathowenia* Kirkegard, 1959 is beyond the scope of this paper.

The presence of abundant ciliature in the head region and anterior lips as the feeding apparatus of this species, an aspect previously emphasised by Imajima & Morita (1987), would appear to confirm the high level of sediment selectivity in oweniids as suggested by Fauchald & Jumars (1979). However, the animal feeding position is still unclear—whether it projects the anterior end to the water in an upright position like *Owenia fusiformis* or downwards like the maldanids, as proposed by those authors.

Key to Antarctic species of Oweniidae

- 1a. Cephalic region with tentacular crown
..... *Owenia fusiformis*
- 1b. Cephalic region without tentacular crown 2
- 2a. One thoracic setiger
..... *Myrioglobula antarctica*
- 2b. Two or three thoracic setigers 3
- 3a. Head region anteriorly rounded, abdominal notopodia with capillary and acicular setae, teeth of uncini arranged one above the other *Myriochele heeri*
- 3b. Head region anteriorly truncated, abdominal notopodia with capillary setae only, teeth of uncini more or less arranged in an oblique row 4
- 4a. Two thoracic setigers
..... *Galathowenia joinvillensis*
- 4b. Three thoracic setigers 5

- 5a. Collar about four times longer than wide *Galathowenia longicollaris*
- 5b. Collar about the same length than width
..... *Galathowenia scotiae*

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