A new genus and species of Polynoidae (Annelida: Polychaeta) from the Canary Islands, and update on taxa present in the Northeast Atlantic

Jorge NÚÑEZ 1,*, Ruth BARNICH 2 & Óscar MONTERROSO 3

1Laboratorio de Bentos, Departamento de Biología Animal, Edafología y Geología, Facultad de Ciencias, Universidad de La Laguna, 38200 La Laguna, Tenerife, Canary Islands, Spain.
2Senckenberg, Forschungsinstitut und Naturmuseum Frankfurt, Marine Evertebraten II, Senckenberganlage 25, D-60325 Frankfurt, Germany.
3Thomson Environmental Consultants, Compass House, Surrey Research Park, Guildford, GU2 7AG, United Kingdom.
3Centro de Investigaciones Medioambientales del Atlántico, S.L. (CIMA), Avenida Los Majuelos 115, 38107, Santa Cruz de Tenerife, Canary Islands, Spain.

*Corresponding author: janunez@ull.edu.es 
2Email: ruth.barnich@senckenberg.de, ruth.barnich@thomsonec.com 
3Email: oscar@cimacanarias.com

Abstract. A new polynoid, Webbnesia maculata gen. et sp. nov., was discovered during benthic surveys conducted around the Canary Islands. Its generic characters (absence of cephalic peaks, ventrally inserted lateral antennae, reduced notopodium and chaetae all stout) place it close to Antinoe Kinberg, 1856, Hermadion Kinberg, 1856 and Malmgrenia McIntosh, 1874, but the combination is unique and justifies the erection of a new genus. The new genus and species are described, figured and discussed in detail. An updated list of taxa and an identification key to all genera of Polynoinae Kinberg, 1856 sensu lato currently reported from the extended Northeast Atlantic are given.

Keywords. Taxonomy, subfamilies, identification key, biodiversity.

Núñez J., Barnich R. & Monterroso Ó. 2022. A new genus and species of Polynoidae (Annelida: Polychaeta) from the Canary Islands, and update on taxa present in the Northeast Atlantic. European Journal of Taxonomy 846: 55–74. https://doi.org/10.5852/ejt.2022.846.1965

Introduction

During benthic surveys conducted around the Canary Islands, several specimens of an unknown scale worm were discovered. A closer investigation revealed that they belong to an undescribed genus and species of Polynoidae Kinberg, 1856.
Polynoid scale worms present in the extended Northeast Atlantic (incl. the Mediterranean Sea) have been covered in a number of comprehensive works, such as Hartmann-Schröder (1996), Chambers & Muir (1997), Barnich & Fiege (2003), Gil (2011) and Núñez et al. (2015).

Due to the large number of species and genera (about 900 species and 167 genera, cf. Bonifácio & Menot 2019), the family is subdivided into several subfamilies, which have been controversially discussed in the past (Wehe 2006; Norlinder et al. 2012; among others). To date, members of the following subfamilies are reported from the extended Northeast Atlantic: Polynoinae Kinberg, 1856; Lepidonotinae Willey, 1902; Macellicephalinae Hartmann-Schröder, 1971; Lepidastheniinae Pettibone, 1989; Arctonoinae Hanley, 1989. As summarised by Wehe (2006) the distinguishing characters established by Hanley (1989) for Arctonoinae do not allow for an unambiguous subfamily classification and several genera which were initially assigned to this subfamily have been subsequently moved to Polynoinae (for example Adyte Saint-Joseph, 1899, Subadyte Pettibone, 1969 and Malmgrenia McIntosh, 1874, see Barnich & Fiege 2001, 2003). Arctonoinae is currently under revision by one of us (RB) in collaboration with Robin Wilson (Museum Victoria, Melbourne, Australia). This revision is still at an early stage and it is not clear yet, if Arctonoinae can be maintained and if so, which genera will be assigned to this subfamily. In the current study, we therefore follow Barnich & Fiege (2003) and, for the time being, we include genera previously assigned to Arctonoinae in Polynoinae sensu lato.

The main distinguishing characters of the different subfamilies are:

Macellicephalinae with median antenna absent or present and lateral antennae absent (subfamily recently revised by Bonifácio & Menot 2019).

Lepidastheniinae with median antenna present and lateral antennae inserted terminally; neuropodia deeply incised (i.e., acicular lobe of similar length than postchaetal lobe, both lobes prominent).

Lepidonotinae with median antenna present and lateral antennae inserted terminally; neuropodia not deeply incised (i.e., acicular lobe elongate and postchaetal lobe usually shorter, less prominent).

Polynoinae sensu lato with median antenna present and lateral antennae inserted ventrally or terminoventrally.

Due to the presence of a median antenna and lateral antennae being inserted ventrally, the new genus and species from the Canary Islands can be assigned to the subfamily Polynoinae. Currently, 24 genera and 77 species of Polynoinae sensu lato (incl. the new genus and species) are recognised in the area. Table 1 gives an updated list of taxa together with details on distribution, depth and references.

Below, we present a detailed morphological description and justification for the new polynoid genus and species. We discuss and compare the diagnostic characters of the new genus (see also Tables 2 and 3) and we provide an updated identification key to all genera of Polynoinae sensu lato found in the area. The material, being preserved in formaldehyde, is unfortunately not suitable for molecular analysis.

**Material and methods**

The type specimens were collected during routine monitoring in the sublittoral off the east and south coast of Gran Canaria in 2019 and 2020, and off the south coast of Tenerife in 2013 (Fig. 1). One of the objectives of these surveys is the characterisation of soft bottoms as part of the environmental monitoring and management of mariculture facilities in the open sea (the environmental companies TRAGSA and CIMA S.L.).
Table 1 (continued on next two pages). Updated list of species of Polynoinae sensu lato present in the extended NE Atlantic (*). Based on Barnich & Fiege (2003, 2009, 2010), Barnich (2011) (*), Barnich et al. (2017), Chambers & Muir (1997), Charles et al. (2014), Fiege & Barnich (2009), Hartmann-Schröder (1996), Jourde et al. (2015), Núñez et al. (2015), Pettibone (1963), Ravara & Cunha (2016), Taboada et al. (2019) and this study.

| Species | Distribution | Depth (m) |
|---------|--------------|-----------|
| **Acholoe squamosa** (Delle Chiaje, 1827) (**) | Channel to W Africa and Mediterranean | 5 to 160 |
| **Acanthicolepis asperrima** (M. Sars, 1861) | Norway to Azores and Mediterranean; with corals | 15 to 1360 |
| **Acanthicolepis zibrowii** Barnich & Fiege, 2010 | Bay of Biscay; with corals | 1250 |
| **Adyte hyalina** (G.O. Sars, 1873) | NE Atlantic, North Sea to Mediterranean | 10 to 290 |
| **Australaugeneria iberica** Ravara & Cunha, 2016 | Gulf of Cadiz | 2200 |
| **Austrolaenilla mollis** (M. Sars, 1872) | Arctic, NW & NE Atlantic | 40 to 860 |
| **Bathy noe nodulosa** Ditlevsen, 1917 | S Iceland | 2000 |
| **Bylgides acutisetis** Loshamn, 1981 | Norway | 350 to 500 |
| **Bylgides an nenkova e Pettibone, 1993** | Arctic, NE Atlantic | 1 to 55 |
| **Bylgides elegans** (Théel, 1879) | Arctic, NW & NE Atlantic | 9 to 380 |
| **Bylgides groenlandicus** (Malmgren, 1867) | Arctic, NW & NE Atlantic, Norway to Skagerrak | 9 to 1270 |
| **Bylgides sarsi** (Malmgren, 1866) | North Sea to Baltic Sea | 1 to 180 |
| **Bylgides promamme** (Malmgren, 1867) | Arctic, NW & NE Atlantic | 9 to 245 |
| **Enipo el isabethae** McIntosh, 1900 | N & W of British Isles to Celtic Sea sublittoral |  |
| **Enipo kinbergi** Malmgren, 1866 | Irish Sea, North Sea, Skagerrak to Baltic sublittoral to 100 |  |
| **Enipo tore lli** (Malmgren, 1866) | Arctic, N Pacific, N Atlantic sublittoral to 1625 |  |
| **Eucranta vil losa** Malmgren, 1866 | Arctic, NW & NE Atlantic 15 to 1100 |  |
| **Eunoe bathy domus** (Ditlevsen, 1917) | Arctic, N Atlantic, Mid-Atlantic Ridge 2000 to 3500 |  |
| **Eunoe laemogonesis** Kirkegaard & Billett, 1980 | SW Ireland, Porcupine Seabight; with holothurian 800 to 1400 |  |
| **Eunoe nodosa** (M. Sars, 1861) | Arctic, N Pacific, N Atlantic, North Sea to Mediterranean sublittoral to 1250 |  |
| **Eunoe oerstedi** (Malmgren, 1866) | Arctic, N Pacific, N Atlantic sublittoral to 940 |  |
| **Gattyana am ondse n** Malmgren, 1867 | Arctic, NE Pacific, NW & NE Atlantic sublittoral to 700 |  |
| **Gattyana cirrhosa** (Pallas, 1766) | Arctic, NE Pacific to Mediterranean 1 to 1150 |  |
| **Gorgoniapolynoe caeciliae** (Fauvel, 1913) | NW & NE Atlantic; with gorgonarians 500 to 1500 |  |
| **Harmothoe abyssicola** Bidenkap, 1894 | Arctic, Norway to Skagerrak 360 to 550 |  |
| **Harmothoe aequespin a** (Langerhans, 1884) | Madeira to W Africa, Mediterranean 10 to 120 |  |
| **Harmothoe anoculata** Hartmann-Schröder, 1975 | Off Portugal 5260 |  |
| **Harmothoe antilopa es** McIntosh, 1876 | Around British Isles, North Sea to Mediterranean 4 to 540 |  |
Table 1 (continued). Updated list of species of Polynoinae sensu lato present in the extended NE Atlantic.

| Species                          | Distribution                                                                 | Depth (m)       |
|----------------------------------|-----------------------------------------------------------------------------|-----------------|
| *Harmothoe areolata* (Grube, 1860) | Channel to Cape Verde, Mediterranean                                         | 1 to 100        |
| *Harmothoe aspera* (Hansen, 1879) | Arctic, N Pacific, N Atlantic, North Sea, Mediterranean                      | 200 to 1000     |
| *Harmothoe bellani* Barnich & Fiege, 2000 | Bristol Channel (pers. obs. RB), Mediterranean                              | 1 to 10         |
| *Harmothoe benthaliana* McIntosh, 1885 | NW & NE Atlantic, Bay of Biscay to Canaries                                | 1300 to 2275    |
| *Harmothoe clavigera* (M. Sars, 1863) | North Sea to Mediterranean                                                   | 1 to 200        |
| *Harmothoe evei* Kirkegaard, 1980 | Off Brittany                                                                | 4250            |
| *Harmothoe extenuata* (Grube, 1840) | North Sea, Skagerrak to Mediterranean                                        | 1 to 100        |
| *Harmothoe fernandi* Barnich & Fiege, 2009 | Arctic (pers obs. RB), N Norway                                             | 25 to 410       |
| *Harmothoe fragilis* Moore, 1910 | Arctic, N Pacific, N Atlantic to Skagerrak and Kattegatt to Mediterranean | 20 to 300       |
| *Harmothoe fraserthomsoni* McIntosh, 1897 | Faroe Channel to Canaries, Mediterranean                                    | 50 to 930       |
| *Harmothoe gilchristi* Day, 1960 | Canaries to South Africa, Mediterranean, SW Atlantic, often with corals    | sublittoral to 845 |
| *Harmothoe glabra* (Malmgren, 1866) | Arctic, NE Atlantic, North Sea to Channel                                  | intertidal to 1400 |
| *Harmothoe globifera* (G.O. Sars, 1873) | Arctic, NE Atlantic                                                       | 250 to 3400     |
| *Harmothoe imbricata* (Linnaeus, 1767) | Arctic, N Pacific, NW & NE Atlantic, North Sea to Baltic and to Mediterranean | intertidal to 300 |
| *Harmothoe impar* (Johnston, 1839) | North Sea to W Baltic and Mediterranean                                      | intertidal to sublittoral |
| *Harmothoe ingolfiana* Ditlevsen, 1917 | N Atlantic, S of Iceland to New England; with wood-boring bivalves | 1830 to 3500    |
| *Harmothoe longisetis* (Grube, 1863) | Norway (RB pers. obs.), Bay of Biscay, Mediterranean; on hard substrates, often with corals | 70 to 200       |
| *Harmothoe mariannae* Barnich & Fiege, 2009 | N Norway, North Sea to Mediterranean                                       | 30 to 280       |
| *Harmothoe oculinarum* (Storm, 1879) | Norway; with corals                                                          | 50 to 500       |
| *Harmothoe pokoui* Intês & Le Loeuff, 1975 | W Africa, Mediterranean                                                    | 50 to 85        |
| *Harmothoe rarispina* (M. Sars, 1861) | Arctic, NW & NE Atlantic                                                   | 5 to 1770       |
| *Harmothoe serrata* Day, 1963 | S Africa, Mediterranean                                                    | intertidal to 140 |
| *Harmothoe spinifera* (Ehlers, 1864) | North Sea to W Africa and Mediterranean                                    | intertidal to 35 |
| *Harmothoe vesiculosa* Ditlevsen, 1917 | SW Ireland to Bay of Biscay, Mediterranean; with corals                    | 540 to 1180     |
| *Harmothoe viridis* Loshann, 1981 | Norway to Skagerrak                                                         | 30 to 120       |
| *Leucia nivea* (M. Sars, 1863) | Norway to Madeira; with corals                                              | 8 to 300        |
NÚÑEZ J. et al., A new polynoid scale worm from the Canary Islands

Table 1 (continued). Updated list of species of Polynoinae sensu lato present in the extended NE Atlantic.

| Species                        | Distribution                                                                 | Depth (m)         |
|--------------------------------|------------------------------------------------------------------------------|-------------------|
| *Leucia violacea* (Storm, 1879) | Norway to Bay of Biscay; with corals                                        | 30 to 1260        |
| *Malmgrenia andreapolis* McIntosh, 1874 | Around Ireland and British Isles to Mediterranean                          | sublittoral to 100 |
| *Malmgrenia arenicolae* (Saint-Joseph, 1888) | Around Ireland and British Isles                                            | littoral to 220   |
| *Malmgrenia bicki* Barnich, Dietrich, Hager & Fiege, 2017 | North Sea                                                                  | sublittoral        |
| *Malmgrenia castanea* McIntosh, 1876 | Around Ireland and British Isles to Mediterranean; with echinoderms         | sublittoral to 200 |
| *Malmgrenia darbouxi* (Pettibone, 1993) | Mediterranean                                                               | 20 to 70          |
| *Malmgrenia lilianae* (Pettibone, 1993) | Mediterranean and SW Atlantic (Brazil)                                      | 1 to 70           |
| *Malmgrenia ljungmani* (Malmgren, 1867) | Norway to W Africa and Mediterranean                                        | 10 to 90          |
| *Malmgrenia lousiae* Jourde, Sampaio, Barnich et al., 2015 | Bay of Biscay to Mediterranean                                               | 35 to 110         |
| *Malmgrenia lunulata* (Delle Chiaje, 1830) | Bay of Biscay to Mediterranean                                              | intertidal to 90  |
| *Malmgrenia marphysae* (McIntosh, 1876) | Around Ireland and British Isles to Iberian Peninsula                       | sublittoral        |
| *Malmgrenia mcintoshi* (Tebble & Chambers, 1982) | Shetlands, Irish Sea, Celtic Sea to Brittany                                 | 10 to 110         |
| *Malmgrenia polypapillata* (Barnich & Fiege, 2001) | W Africa and Mediterranean                                                  | 10 to 85          |
| *Malmgrenia thomsonae* Barnich, Dietrich, Hager & Fiege, 2017 | Irish Sea & Celtic Sea                                                      | sublittoral        |
| *Melaenis loveni* Malmgren, 1866 | Arctic, N Pacific & N Atlantic                                              | 3 to 200          |
| *Neolagisca jeffreysi* (McIntosh, 1876) | W of Ireland to Mediterranean; with corals                                  | 260 to 1250       |
| *Neopolyne chondrocladiae* (Fauvel, 1943) (***) | Iberian Peninsula to NW Africa; with sponges                               | 735 to 2590       |
| *Neopolyne paradoxa* (Storm, 1888) | Norway, Iceland; with corals                                                | 70 to 960         |
| *Pettibonesia furcosetosa* (Loshamn, 1981) | Irish Sea, North Sea to Mediterranean                                        | 1 to 370          |
| *Polynoe scolopendrina* Savigny, 1822 | NE Atlantic, North Sea to Mediterranean                                      | 0 to 120          |
| *Robertianella synphthalma* McIntosh, 1885 | NW Africa, Mediterranean; with sponges                                       | 660 to 2910       |
| *Subadyte pellucida* (Ehlers, 1864) | British Isles to Mediterranean; often with echinoderms                     | 0 to 100          |
| *Webbnesia maculata* gen. et spec. nov. | Canary Islands                                                              | 20 to 60          |

(*) The key in Barnich (2011) includes *Arcteobia anticostiensis* (McIntosh, 1874) and *Gattyana nutti* Pettibone, 1955 which, so far, are confirmed only from the NW Atlantic, and not further considered here.

(**) In several of our previous publications (e.g., Barnich & Fiege 2003, Barnich 2011 and Núñez et al. 2015), we listed this species as *Acholoe astericola* (Delle Chiaje, 1841) following the revision by Pettibone (1996). However, as highlighted in WoRMS by Read & Fauchald (2022a), this name is an unnecessary replacement for *Acholoe squamosa* (Delle Chiaje, 1827).

(***) Bock et al. (2010) listed *Polynoe antillicola chondrocladiae* Fauvel, 1943 as a synonym of *Neopolyne acanellae*; recent research by Taboada et al. (2019) provided evidence that the two species are distinct, with *N. chondrocladiae* present in the NE and *N. acanellae* in the NW Atlantic.
The samples were collected at subtidal depths ranging from 22 to 60 m, using a Van Veen grab and trawl-type dredges. The sediment obtained was sieved over a mesh size of 0.5 mm. After extraction of the specimens, these were fixed in 10% formaldehyde-sea water and later preserved in a 70% ethanol solution.

Preserved specimens were examined using Leica MS5 and Olympus SZX12 stereo microscopes and Leica DMLB (equipped with differential interference contrast), Nikon Eclipse 80i and Olympus BX41 compound light microscopes. Semi-permanent glycerine slides were used for morphological examination of parapodia, elytrae and chaetae.

Drawings were made using a camera lucida and complimented by digital photography. Digital images were captured with an OLYMPUS DP70 camera mounted on Leica DMLB and Olympus BX41 microscopes. The photographs were processed with the DP Controller and Combine ZM software.

The type specimens are deposited at the Museum of Natural Sciences of Tenerife (TFMC, holotype and paratypes) and at the Senckenberg Natural History Museum Frankfurt (SMF, paratype).

**Fig. 1.** Map of the Canary Islands with type localities. Gran Canaria: 1. East coast, off Tufía (holotype, TFMCBM-AN/246). 2–3. South coast, off Castillo del Romeral (paratypes, TFMCBM-AN/247 and AN/248). Tenerife: 4. South coast, off Granadilla (paratype, SMF 32262).
Table 2. Diagnostic generic characters of *Webbnesia* gen. nov., *Hermadion* Kinberg, 1856, *Antinoe* Kinberg, 1856 and *Malmgrenia* McIntosh, 1874.

| Character / Genus | *Webbnesia* gen. nov. | *Hermadion* | *Antinoe* | *Malmgrenia* |
|-------------------|----------------------|-------------|-----------|--------------|
| **Prostomium**    |                      |             |           |              |
| Cephalic peaks    | Absent               | Absent      | Absent    | Absent       |
| Lateral antennae | Ventral              | Ventral     | Terminoventral | Terminoventral |
| **Parapodia**     |                      |             |           |              |
| Notopodium        | Reduced              | Prominent   | Reduced   | Reduced      |
| Neuropodium       | Elongate             | Elongate    | Elongate  | Elongate     |
| Neuropodial supra-acicular process | Present, reduced | Absent | Present (not reduced) | Present (not reduced) or absent |
| **Chaetae**       |                      |             |           |              |
| Notochaetae       | Very few (2–3), stout with faint rows of spines and entire tip | Few, stout with distinct rows of spines and entire tip | Numerous, stout with faint rows of spines and entire tip | Few, stout or fine, with distinct rows of spines and entire or bidentate tip |
| Neurochaetae      | Numerous, stout with distinct rows of spines and falcate entire tip | Numerous, stout with distinct rows of spines and straight or falcate entire tip | Numerous, stout with distinct rows of spines and straight, entire tip | Numerous, stout with distinct rows of spines and straight or falcate entire or bidentate tip |

**Results**

**Taxonomy**

Phylum Annelida Lamarck, 1809
Class Polychaeta Grube, 1850
Family Polynoidae Kinberg, 1856
Subfamily Polynoinae Kinberg, 1856

Genus *Webbnesia* gen. nov.
urn:lsid:zoobank.org:act:33FB3584-DCFC-4B0E-9D1D-ED8AF67F15E9

Tables 2–3

**Type species**

*Webbnesia maculata* gen. et sp. nov. designated herein.

**Diagnosis**

Body. Flattened dorsoventrally, short, with fewer than 40 segments, more or less covered by elytra dorsally.

Elytra. 15 pairs on segments 2, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 26, 29 and 32.
**Prostomium.** Bilobed, without cephalic peaks, with three antennae. Median antenna inserted in anterior notch, lateral antennae inserted ventrally. Two pairs of eyes.

**Parapodia.** Biramous, notopodium reduced and neuropodium elongate. Notopodium with aciculum penetrating distally. Neuropodium with elongate prechaetal lobe and shorter postchaetal lobe; prechaetal acicular lobe with minute (i.e., reduced) supra-acicular process, aciculum penetrating subdistally.

**Chaetae.** Notochaetae and neurochaetae stout, with rows of spines and entire tip.

**Etymology**

The genus name is a combination of the name Webb and the Greek word 'nes' (= ‘island’); gender feminine. ‘Webnnesia’ refers to a new ecoregion defined by Freitas *et al.* (2019) and co-authored by one of us (JN) which includes the Canary, Savage and Madeira Islands.
Remarks
Among the genera currently attributed to Polynoinae sensu lato, only *Hermadion* Kinberg, 1856, *Antinoe* Kinberg, 1856 and *Malmgrenia* McIntosh, 1874 (see Pettibone 1993; Bock et al. 2010 and Barnich et al. 2017) share the following diagnostic characters with *Webbnesia* gen. nov.: 15 pairs of elytra, fewer than 50 segments (i.e., short-bodied), cephalic peaks absent, noto-and neurochaetae all of same type, stout, without semi-lunar pockets.

*Webbnesia* and *Hermadion* have ventrally inserted lateral antennae, but the shape of their parapodia is different. The notopodium of *Hermadion* is prominent, nearly as long as the neuropodium, while the new genus is characterised by a minute, reduced notopodium (see Tables 2–3).

In *Malmgrenia* and *Antinoe* the parapodia are similar to those of *Webbnesia*, but the main difference is the insertion of the lateral antennae, which is ventral in *Webbnesia* and terminoventral in the two other genera.

Among the polynoid genera sharing the diagnostic characters listed above, the combination of ventrally inserted antennae and a reduced notopodium is unique and justifies the erection of a new genus (see Table 2).

*Webbnesia maculata* gen. et sp. nov.
ur:n:lsid:zoobank.org:act:3128B356-28DC-4072-BC95-7DC8454AC1D3
Figs 2–6, Tables 2–3

Diagnosis
**Prostomium.** Without cephalic peaks. Lateral antennae inserted ventrally. Two pairs of eyes, anterior pair dorsolateral, posterior pair dorsal.

**Elytra.** With smooth margins, surface with scattered, conical microtubercles and pigmented patches.

**Antennae and Cirri.** Tapering, papillate.

**Parapodia.** With reduced notopodium and prominent neuropodium; neuropodium with minute (i.e., reduced) supra-acicular process, aciculum penetrating subdistally.

**Chaetae.** Notochaetae stout with faint rows of spines and entire tip. Neurochaetae stout with distinct rows of spines and falcate, entire tip.

Etymology
The species epithet refers to the characteristic pigmented patches on the elytra, described by the Latin word ‘maculatus’ in its female form.

Material examined
**Holotype**
CANARY ISLANDS • ovigerous ♀ (complete, with 33 segments); NE Atlantic, east coast of Gran Canaria, off Tufia; 27°57.91’ N, 15°22.63’ W; 27 m depth; Feb. 2019; fine sands; TFMCBM-AN/246.

**Paratypes**
CANARY ISLANDS • 1 spec. (anterior fragment of 11 segments); NE Atlantic, south coast of Gran Canaria, off Castillo del Romeral; 27°47.79’ N, 15°24.40’ W; 39 m depth; Oct. 2020; coarse sands; TFMCBM-AN/247 • 1 spec. (posterior fragment of 12 segments); NE Atlantic, south coast of Gran Canaria, off Playa de Amadores; 27°57.91’ N, 15°22.63’ W; 27 m depth; Feb. 2019; fine sands; TFMCBM-AN/248.
Fig. 2. *Webbnesia maculata* gen. et sp. nov., holotype (TFMCBM-AN/246). **A**. Anterior end, elytra removed and left dorsal cirrus of segment 3 missing. **B**. Right elytron of segment 21. **C**. Right cirrigerous parapodium of segment 20, posterior view. **D**. Left elytrigerous parapodium of segment 21, posterior view. **E**. Notochaetae. **F**. Upper, middle and lower neurochaetae. Scale bar: **A** = 1.3 mm; **B** = 1.9 mm; **C**–**D** = 0.4 mm; **E**–**F** = 40 µm.
Fig. 3. *Webbesia maculata* gen. et sp. nov., holotype (TFMCBM-AN/246). A. Complete specimen, dorsal view. B. Anterior end, dorsal view. C. Complete specimen, ventral view. D. Posterior end, ventral view. Scale bar: A, C = 2 mm; B = 0.6 mm; D = 0.8 mm.
Canaria, off Castillo del Romeral; 27°47.73′ N, 15°23.49′ W; 60 m depth; Oct. 2020; coarse sands; TFMCBM-AN/248 • 1 spec. (anterior fragment of 16 segments); NE Atlantic, south coast of Tenerife, off Granadilla; 28°3.56′ N, 16°30.20′ W; 22 m depth; 18 Sep. 2013; coarse sands; SMF 32262.

**Description of holotype**

**Measurements.** Holotype, complete specimen of 8 mm length and 2 mm width in anterior body region.

**Body.** Flattened dorsoventrally, short, with 33 segments, dorsum covered by elytra (Fig. 3A); ovigerous female (Fig. 4C–D).

**Prostomium.** Cephalic peaks absent, lobes anteriorly rounded. Median antenna with ceratophore in anterior notch, style tapering, papillate; lateral antennae with ceratophores inserted ventrally, styles tapering, papillate. Anterior pair of eyes dorsolateral in front of widest part of prostomium, posterior pair dorsal near posterior margin (Figs 2A, 3B).

---

![Fig. 4. Webbnesia maculata gen. et sp. nov., holotype (TFMCBM-AN/246). A. Left elytron of segment 21. B. Elytral margin with part of pigmented patch. C. Eggs within parapodium. D. Right cirrigerous parapodium of segment 20, with eggs in basal part. Scale bar: A = 1.6 mm; B–C = 200 μm; D = 0.5 mm.](image-url)
Tentaculophores. Inserted laterally to prostomium, with a pair of dorsal and ventral tentacular cirri; styles tapering, papillate (Figs 2A, 3B).

Elytra. Fifteen pairs on segments 2, 4, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 26, 29 and 32. Elytral margins smooth; surface with scattered, conical microtubercles and five pigmented patches (Figs 2B, 3A–B, 4A–B).

Cirri. Dorsal cirri from segment 3 on segments without elytra; cirrophore inserted dorsally on notopodium; style tapering, papillate (Figs 2A, C, 3A–D, 4D). Ventral cirri from segment 2 on all segments; first pair distinctly larger than following; style tapering, papillate (Figs 2C, 3D). Pair of pygidial cirri similar to dorsal cirri.

Dorsal tubercles. Conical, one pair present on all cirrigerous segments, situated on dorsum in line with elytrophores of adjacent segments (Fig. 2A, C).

Parapodia. Notopodium reduced, with notoaciculum penetrating distally (may be withdrawn). Neuropodium more prominent, with elongate, conical prechaetal lobe and shorter, rounded postchaetal lobe; prechaetal lobe acicular with minute (i.e., reduced) supra-acicular process and neuroaciculum penetrating subdistally (Figs 2C–D, 4D, 5).

Fig. 5. **Webbnesia maculata** gen. et sp. nov., holotype (TFM-CBM-AN/246). Distal part of neuropodium (posterior view), showing shorter rounded postchaetal lobe and elongate prechaetal acicular lobe with minute supra-acicular process (arrow). Scale bar = 70 µm.
Chaetae. Notochaetae few (2–3), stout, with faint rows of spines and blunt, entire tip (Figs 2C–E, 6A). Neurochaetae more numerous (up to 18), stout, with falcate, entire (i.e., unidentate) tip; upper neurochaetae distally rather straight and spinose region elongate with pronounced rows of spines; middle and lower neurochaetae distally more curved and spinose region shorter with less marked rows of spines (Figs 2C–D, F, 4D, 6B–D).

Pigmentation (animals preserved) (Figs 2A–B, 3A–D, 4A)

Body dorsally mostly white with brown patches; ventrally with 13 intersegmental, incomplete transverse bands in posterior body region. Prostomial lobes with diffuse pigmentation; basal part of median antenna and all of lateral antennae darkly pigmented. Tentacular cirri unpigmented. Dorsal and ventral cirri pigmented basally throughout body, also pygidial cirri similarly pigmented. Elytra usually with

Fig. 6. Webbnesia maculata gen. et sp. nov., holotype (TFMCBM-AN/246). A. Notochaetae. B. Upper, middle and lower neurochaetae. C. Distal part of upper and middle neurochaetae. D. Distal part of lower neurochaetae. Scale bar: A, C–D = 40 µm; B = 20 µm.
five pigmented patches: one circular above place of attachment to elytrophore, the others irregularly-shaped, two on the inner lateral part and two on the posterior part.

**Distribution and habitat**

NE Atlantic, Canary Islands: E and S of Gran Canaria and S of Tenerife; in 22 to 60 m depth.

The substrate at the Tufía station is characterised by areas of fine sand and poorly consolidated maerl. The faunal composition is dominated by the polychaetes *Paradoneis armata* Glémarec, 1966 and *Aponuphis ornata* (Fauvel, 1928) and the crustaceans *Apsedopsis rogi* Esquete, 2016 and *Urothoe marina* (Spence Bate, 1857).

At the Castillo del Romeral stations the substrate is characterised by gravel and coarse organogenic sand. The dominant polychaetes are *Pisone guanche* San Martín, López & Núñez, 1999 and *Syllis gerundensis* (Alós & Campoy, 1981); the most abundant species are the bivalve *Gouldia minima* (Montagu, 1803) and the amphipod *Photis longicaudata* (Spence Bate & Westwood, 1862).

At the Granadilla station the substrate is characterised by maerl and coarse sand. The faunal composition is dominated by the amphipod *Animoceradocus semiserratus* (Spence Bate, 1862) and the polychaetes *Chone filicaudata* Southern, 1914 and *Aponuphis bilineata* (Baird, 1870).

**Updated key to genera of Polynoinae sensu lato present in the Northeast Atlantic incl. the Mediterranean Sea**

Based on Barnich & Fiege (2003, 2009, 2010), Barnich (2011), Barnich et al. (2017), Chambers & Muir (1997), Charles et al. (2014), Fiege & Barnich (2009), Hartmann-Schröder (1996), Jourde et. al (2015), Núñez et al. (2015), Pettibone (1963), Ravara & Cunha (2016), Taboada et al. (2019) and this study.

In order to allow for identification of anterior fragments, the current key avoids, where possible, the use of numbers of elytra and segments as main distinguishing character.

1. Dorsal tubercles T-shaped. (Cephalic peaks absent. Lateral antennae terminoventral. More than 15 pairs of elytra. More than 50 segments) .......................................................... Acholoe Claparède, 1870
   – Dorsal tubercles nodular ......................................................................................................................... 2

2. First three pairs of elytra modified, with translucent central area. (Cephalic peaks absent or present. Lateral antennae ventral. 15 pairs of elytra. Fewer than 50 segments) .............................................................. Gorgoniapolynoe Pettibone, 1991
   – First three pairs of elytra not modified ..................................................................................................... 3

3. Dorsum with one or more median nodules per segment, starting from segment 2. (Cephalic peaks absent. Lateral antennae ventral. 18 pairs of elytra. Fewer than 50 segments) ................................................. Bathynoe Ditlevsen, 1917
   – Dorsum without median nodules in anterior segments (may start later) .............................................. 4

4. Prostomium with cephalic peaks (can be small or masked when prostomium in bad condition) .... 5
   – Prostomium without cephalic peaks ........................................................................................................... 18

5. Notochaetae with two kinds of tips. Lateral antennae ventral or terminoventral ............................. 6
   – Notochaetae all with similar, stout tip. Lateral antennae ventral ............................................................... 9
6. Some notochaetae with slender furcate tip, most others with stout, entire tip. Cephalic peaks small. Lateral antennae terminoventral (15 pairs of elytra. Fewer than 50 segments) ................................................................. Pettibonesia Nemésio, 2006
   - Notochaetae different. Cephalic peaks obvious. Lateral antennae ventral .................................................. 7

7. Long notochaetae with stout, blunt tip, short notochaetae abruptly tapering to sharp, pointed tip (15 pairs of elytra. Fewer than 50 segments) ............................................................... Neolagisca Barnich & Fiege, 2000
   - Most notochaetae with elongate, capillary tip ................................................................. 8

8. Neurochaetae all with short, unidentate tip. Notochaetae numerous. Elytra large, covering dorsum. Dorsum without median nodules (15 pairs of elytra. Fewer than 50 segments) ................................................................. Gattyana McIntosh, 1897
   - Neurochaetae with two types of tip: short, bi- or unidentate or elongate, capillary. Notochaetae few. Elytra small, leaving mid-dorsum uncovered. Dorsum with or without small median nodule starting in mid-body (15 pairs of elytra. More than 50 segments) .............................................. Enipo Malmgren, 1866

9. Dorsum with large median nodule starting in mid-body. Cephalic peaks small. (15 pairs of elytra. More than 50 segments) ................................................................. Polynoe Lamarck, 1818
   - Dorsum without median nodules. Cephalic peaks obvious ................................................................. 10

10. Neurochaetae distally bill-shaped. Neuropodia elongate, without supra-acicular process (15 pairs of elytra. Fewer than 50 segments) ................................................................. Robertianella McIntosh, 1885
    - Neurochaetae otherwise. Neuropodia with supra-acicular process ................................................................. 11

11. Some neurochaetae with hairy, penicillate tip. (15–16 pairs of elytra. Fewer than 50 segments) ................. ........................................................................................................... Austroelaenilla Bergström, 1916
    - Neurochaetae otherwise ......................................................................................................................... 12

12. Some neurochaetae slender with furcate tip. (15 pairs of elytra. Fewer than 50 segments) ......................... ........................................................................................................... Eucranta Malmgren, 1866
    - Neurochaetae otherwise ......................................................................................................................... 13

13. All neurochaetae with unidentate tip ......................................................................................................... 14
    - Neurochaetae with bi- and unidentate tip ................................................................................................. 15

14. Neurochaetae all with stout tip (15 pairs of elytra. Fewer than 50 segments) ................................................................. Eunoe Malmgren, 1866
    - At least some neurochaetae with elongate, capillary tip (15 pairs of elytra. Fewer than 50 segments) .......................................................................................................... Bylgides Chamberlin, 1919

15. Notopodium prominent. More than 50 segments, long tail uncovered by elytra. 15 pairs of elytra .......... ........................................................................................................... Neopolynoe Loshamn, 1981
    - Notopodium reduced. Fewer than 50 segments, dorsum covered by elytra or at most short tail uncovered ................................................................................................................................. 16

16. Elytra 18 pairs (elytral characters distinctive) ................................................................. Acanthicolepis McIntosh, 1900
    - Elytra 16 or 15 pairs ................................................................................................................................. 17

17. Elytra 16 pairs (elytral characters distinctive) ........................................................................ Leucia Malmgren, 1867
    - Elytra 15 pairs (elytral characters distinctive) ............................................................................... Harmothoe Kinberg, 1856
18. Neurochaetae with semilunar pockets. Lateral antennae ventral .................................................... 19
   Neurochaetae without semilunar pockets. Lateral antennae ventral or terminoventral .............. 20

19. Neuropodial acicular lobe rounded, neuroaciculum not penetrating epidermis. Notochaetae with
   few, scattered rows of spines (15 pairs of elytra. More than 50 segments) ......................................
   Adyte Saint-Jospeh, 1899
   Neuropodial acicular lobe pointed, neuroaciculum penetrating epidermis. Notochaetae with numerous
   rows of spines (15–16 pairs of elytra. Fewer than 50 segments) .............. Subadyte Pettibone, 1969

20. Anteriormost neuropodia with stout hooks. Lateral antennae ventral or terminoventral (15 pairs
    of elytra. Fewer than 50 segments) .................................................. Australaugeneria Pettibone, 1969
   Anteriormost neuropodia without hooks (15 pairs of elytra. Fewer than 50 segments) .............. 21

21. Lateral antennae terminoventral. Neurochaetae all stout. (Notopodium reduced) ........................................
   Lateral antennae ventral. Neurochaetae with stout or capillary tip ............................................. 22

22. Notopodium reduced. Neurochaetae all with stout, entire tip. Notochaetae very few (2-3), stout with
    faint rows of spines ................................................................. Webbnnesia gen. nov.
   Notopodium prominent. Most neurochaetae with slender, capillary tip, some with stout, furcate tip.
   Notochaetae few, very stout, acicular, smooth ............................................. Melaenis Malmgren, 1866

Discussion

Webbnnesia gen. nov. differs from all other polynoids by its unique combination of characters. With its
short body (fewer than 50 segments), absence of cephalic peaks and all chaetae being stout, it is similar
to Hermadion Kinberg, 1856, Antinoe Kinberg, 1856 and Malmgrenia McIntosh, 1874. However,
as discussed above, it can be differentiated from Hermadion by its reduced notopodium, and from
Malmgrenia and Antinoe by its ventrally inserted lateral antennae.

So far, no species attributed to Hermadion or Antinoe are reported from the Northeast Atlantic. The
genus Hermadion is currently represented by one valid species, i.e., Hermadion magalhaensis Kinberg,
1856, which occurs only in Sub-antarctic waters (Bock et al. 2010). According to Read & Fauchald
(2022b), six species of Antinoe are considered valid. The genus was only partly revised by Pettibone
(1993) and included the type species A. microps Kinberg, 1856 (from the Southwest Atlantic) and
A. uschakovi (Ibarzábal, 1988) from the Caribbean Sea. The generic attribution of the remaining four
species still needs revising: Antinoe epitoca (Monro, 1930) is reported from the Southeast Atlantic and
from the Southwest Pacific (see Monro 1930, Glasby et al. 2009), A. kermadecensis (McIntosh, 1885)
and A. purpureus Knox, 1960 from the Southwest Pacific, and finally A. lactea Day, 1953 from South
Africa (see McIntosh 1885; Knox 1960; Day 1953).

In the Northeast Atlantic Webbnnesia maculata gen. et sp. nov. could be superficially confused with some
species of Malmgrenia (see Barnich et al. 2017). However, the lateral antennae of the new species are
inserted ventrally and not terminoventrally as defined for the genus Malmgrenia. Additionally, there is
currently no other polynoid species known to have a neuropodium with a reduced supra-acicular process
and neurochaetae being all stout with a simple, unidentate tip. All of this justifies the erection of a new
genus and species for these remarkable animals found in the waters around the Canary Islands.

With the key to genera (see above) and the list of valid species (see Table 1), we present here a first
update of genera and species for the entire Northeast Atlantic (incl. the Mediterranean Sea).
Acknowledgments

Our thanks go to the technicians of the Centro de Investigaciones Medioambientales del Atlántico S.L. (CIMA) for the collection and sorting of the samples, especially Myriam Rodríguez and Eva Ramos, coordinators of the campaigns, as well as Óscar Pérez for his help in preparing the maps. We are also grateful to Isabel T. Brito Izquierdo of TRAGSA, who provided details on one of the sampling localities. We thank Dieter Fiege, Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt, and Julio Parapar, Departamento de Biología, Universidade da Coruña, for reviewing the manuscript and providing valuable comments.

References

Barnich R. 2011. Identification of scale worms in British and Irish waters. NMBAQC 2010 taxonomic workshop, Dove Marine Laboratory: 1–52.

Barnich R. & Fiege D. 2001. The Mediterranean species of Malmgreniella Hartman, 1967 (Polychaeta: Polynoidae: Polynoinae), including the description of a new species. Journal of Natural History 35: 1119–1142. https://doi.org/10.1080/00222930152434463

Barnich R. & Fiege D. 2003. The Aphroditoidea (Annelida, Polychaeta) of the Mediterranean Sea. Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft 559: 1–167.

Barnich R. & Fiege D. 2009. Revision of the genus Harmothoe Kinberg, 1856 (Polychaeta: Polynoidae) in the Northeast Atlantic. Zootaxa 2104: 1–76. https://doi.org/10.11646/zootaxa.2104.1.1

Barnich R. & Fiege D. 2010. On the distinction of Harmothoe globifera (G.O. Sars, 1873) and some other easily confused polynoids in the NE Atlantic, with the description of a new species of Acanthicolepis Norman in McIntosh, 1900 (Polychaeta, Polynoidae). Zootaxa 2525: 1–18. https://doi.org/10.11646/zootaxa.2525.1.1

Barnich R., Dietrich A., Hager T. & Fiege D. 2017. On the genera Malmgrenia McIntosh, 1874 and Pettibonesia Nemésio, 2006 in the Northeast Atlantic and Mediterranean Sea, with descriptions of two new species (Polychaeta: Polynoidae). Marine Biodiversity 49: 315–324. https://doi.org/10.1007/s12526-017-0802-4

Bock G., Fiege D. & Barnich R. 2010. Revision of Hermadion Kinberg, 1856, with a redescription of Hermadion magalhaensi Kinberg, 1856, Adyte hyalina (G.O. Sars, 1873) n. comb. and Neopolyne acanellae (Verrill, 1881) n. comb. (Polychaeta: Polynoidae). Zootaxa 2554: 45–61. https://doi.org/10.11646/zootaxa.2554.1.4

Bonifácio P. & Menot L. 2019. New genera and species from the Equatorial Pacific provide phylogenetic insights into deep-sea Polynoidae (Annelida). Zoological Journal of the Linnean Society 185: 555–635. https://doi.org/10.1093/zoolinnean/zly063

Chambers S.J. & Muir A.I. 1997. Polychaetes: British Chrysopetaloidea, Pisionoidea and Aphroditoidea. Synopses of the British Fauna 54: 1–202.

Charles F., Guarini J.M. & Fanfard S. 2014. First record of Harmothoe mariannae Barnich & Fiege, 2009 (Polychaeta: Polynoidae) in the Mediterranean Sea, France. Check List 10 (3): 607–608. https://doi.org/10.15560/10.3.607

Day J.H. 1953. The polychaete fauna of South Africa. Part 2. Errant species from Cape shores and estuaries. Annals of the Natal Museum 12 (3): 397–441.

Fiege D. & Barnich R. 2009. Polynoidae (Annelida, Polychaeta) associated with cold-water coral reefs of the Northeast Atlantic and the Mediterranean Sea. Zoosymposia 2: 149–164. https://doi.org/10.11646/zoosymposia.2.1.13
NÚÑEZ J. et al., A new polynoid scale worm from the Canary Islands

Freitas R., Romeiras M., Silva L., Cordeiro R., Madeira P., González J.A., Wirtz P., Falcón J.M., Brito A., Floeter S.R., Afonso P., Porteiro F., Viera-Rodríguez M.A., Neto A.I., Haroun R., Farinhão J.N.M., Rebelo A.C., Baptista L., Melo C.S., Martínez A., Núñez J., Berning B., Johnson M.E. & Ávila S.P. 2019. Restructuring of the ‘Macaronesia’ biogeographic unit: a marine multi-taxon biogeographical approach. *Scientific Reports* 9: 15792. https://doi.org/10.1038/s41598-019-51786-6

Gil J.C. 2011. *The European Fauna of Annelida Polychaeta. Vol. 2*. PhD thesis. University of Lisbon, Portugal.

Glasby C.J., Read G.B., Lee K.E., Blakemore R.J., Fraser P.M., Pinder A.M., Erséus C., Moser W.E., Burreson E.M., Govedich F.R., Davies R.W. & Dawson E.W. 2009. Phylum Annelida: bristleworms, earthworms, leeches. In: Gordon D.P. (ed.) *New Zealand Inventory of Biodiversity: 1. Kingdom Animalia: Radiata, Lophotrochozoa, Deuterostomia* chap 17: 312–358. Canterbury University Press, Christchurch.

Hanley R. 1989. Revision of the scaleworm genera *Arctonoe* Chamberlin and *Gastrolepida* Schmarda (Polychaeta: Polynoidae) with the erection of a new subfamily Arctonoinae. *The Beagle. Records of the Northern Territory Museum of Arts and Sciences* 6 (1): 1–34. https://doi.org/10.5962/p.262835

Hartmann-Schröder G. 1996. Annelida, Borstenwürmer, Polychaeta [Annelida, bristleworms, Polychaeta]. 2nd revised Ed. *The Fauna of Germany and Adjacent Seas with their Characteristics and Ecology* 58. Gustav Fischer, Jena, Germany.

Jourde J., Sampaio L., Barnich R., Bonifácio P., Labrune C., Quintino V. & Sauriau P.G. 2015. *Malmgrenia louiseae* sp. nov., a new scale worm species (Polychaeta: Polynoidae) from southern Europe with a key to European *Malmgrenia* species. *Journal of the Marine Biological Association of the United Kingdom* 95 (5): 947–952. https://doi.org/10.1017/S0025315414001878

Knox G.A. 1960. Biological results of the Chatham Islands 1954 Expedition. Part 3. Polychaeta errantia. *New Zealand Department of Scientific and Industrial Research Bulletin* 139 (3): 77–143.

McIntosh W.C. 1885. Report on the Annelida Polychaeta collected by H.M.S. Challenger during the years 1873–76. *Report on the Scientific Results of the Voyage of H.S.M. “Challenger”, Zoology* 12: 1–554.

Monro CCA. 1930. Polychaete worms. *Discovery Reports* 2: 1–222.

Norlinder E., Nygren A., Wiklund H. & Pleijel F. 2012. Phylogeny of scale-worms (Aphroditiformia, Annelida), assessed from 18SrRNA, 28SrRNA, 16SrRNA, mitochondrial cytochrome c oxidase subunit I (COI), and morphology. *Molecular Phylogenetics and Evolution* 65: 490–500. https://doi.org/10.1016/j.ympev.2012.07.002

Núñez J., Barnich R., Brito M. del C. & Fiege D. 2015. Familia Polynoidae Kinberg, 1855. In: Ramos et al. (eds) *Annelida Polychaeta IV*. Parapar J., Moreira J., Núñez J., Barnich R., Brito M. del C., Fiege D., Capaccioni-Azzati R. & El-Haddad M. *Fauna Iberica, Vol. 41*: 216–251. Museo Nacional de Ciencias Naturales, CSIC, Madrid.

Pettibone M.H. 1963. Marine polychaete worms of the New England region. 1. Aphroditidae through Trochochaetidae. *U.S. National Museum Bulletin* 227 (1): 1–356. https://doi.org/10.5479/si.03629236.227.1

Pettibone M.H. 1993. Revision of some species referred to *Antinoe, Antinoella, Antinoana, Bylgides*, and *Harmothoe* (Polychaeta: Polynoidae: Harmothoinae). *Smithsonian Contributions to Zoology* 545: 1–41. https://doi.org/10.5479/si.00810282.545

Pettibone M.H. 1996. Revision of the scaleworm genera *Acholoe* Claparède, *Arctonoella* Buzhinskaja, and *Intoshella* Darboux (Polychaeta: Polynoidae) with the erection of the new subfamily Acholoinae. *Proceedings of the Biological Society of Washington* 109 (4): 629–644.
Ravara A. & Cunha M.R. 2016. Two new species of scale worms (Polychaeta: Aphroditiformia) from deep-sea habitats in the Gulf of Cadiz (NE Atlantic). *Zootaxa* 4097 (3): 442–450. 
https://doi.org/10.11646/zootaxa.4097.3.12

Read G. & Fauchald K. (eds) 2022a. World Polychaeta database. *Acholoe squamosa* (Delle Chiaje, 1827). Available from http://www.marinespecies.org/polychaeta/aphia.php?p=taxdetails&i=146474 [accessed 30 Jun. 2022].

Read G. & Fauchald K. (eds.) 2022b. World Polychaeta database. *Antinoe* Kinberg, 1856. Available from http://www.marinespecies.org/polychaeta/aphia.php?p=taxdetails&id=146496 [accessed 17 Apr. 2022].

Taboada S., Silva A.S., Neal L., Cristobo J., Rios P., Álvarez-Campos P., Hestetun J.T., Koutsouveli V., Sherlock E. & Riesgo A. 2019. Insights into the symbiotic relationship between scale worms and carnivorous sponges (Cladorhizidae, Chondrocladia). *Deep-Sea Research Part I: Oceanographic Research Papers* 156 (103191): 1–14. https://doi.org/10.1016/j.dsr.2019.103191

Wehe T. 2006. Revision of the scale worms (Polychaeta: Aphroditoida) occurring in the seas surrounding the Arabian Peninsula. Part I. Polynoidae. *Fauna of Arabia* 22: 23–197.

*Manuscript received: 11 May 2022*
*Manuscript accepted: 6 September 2022*
*Published on: 1 November 2022*
*Topic editor: Tony Robillard*
*Desk editor: Pepe Fernández*

Printed versions of all papers are also deposited in the libraries of the institutes that are members of the *EJT* consortium: Muséum national d’histoire naturelle, Paris, France; Meise Botanic Garden, Belgium; Royal Museum for Central Africa, Tervuren, Belgium; Royal Belgian Institute of Natural Sciences, Brussels, Belgium; Natural History Museum of Denmark, Copenhagen, Denmark; Naturalis Biodiversity Center, Leiden, the Netherlands; Museo Nacional de Ciencias Naturales-CSIC, Madrid, Spain; Leibniz Institute for the Analysis of Biodiversity Change, Bonn – Hamburg, Germany; National Museum, Prague, Czech Republic.