Global checklist of species of *Grania* (Clitellata: Enchytraeidae) with remarks on their geographic distribution

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Abstract. A checklist of all currently accepted species of *Grania* Southern, 1913 (Annelida, Clitellata, Enchytraeidae) is presented. The genus is widespread over the world and comprises 81 species described to date. Remarks on their geographical distribution, habitat, synonymies and museum catalogue numbers are provided.

Keywords. Species list, Annelida, marine clitellates, geographic distribution, interstitial fauna.

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Introduction

*Grania* Southern, 1913 is a morphologically homogeneus and easily recognizable genus of marine Enchytraeidae Vejdovský, 1879 with a worldwide distribution. The worms are typically small, only a few mm long, with a filiform, nematode-like body and a characteristic pattern of few, stout chaetae (Fig.1). Most species live interstitially in intertidal or subtidal sands, but a few taxa are known from the deep sea.

The genus was originally established for specimens of *Grania maricola* Southern, 1913, sampled from the west coast of Ireland. Later on, Pierantoni (1915) regarded *Grania maricola* and his own species, *Enchytraeus macrochaetus* Pierantoni, 1901, at the time referred to *Michaelsenia* Ude, 1896 (Pierantoni 1903), as synonyms. Stephenson (1930) instead considered them as separate species within *Michaelsenia*. Nielsen & Christensen (1959) pointed out, however, that Stephenson’s concept of *Michaelsenia* was artificial, and they transferred both species to the genus *Enchytraeus* Henle, 1837.
Two authors independently re-established the genus *Grania* in 1966. Kennedy (1966) re-described *G. maricola* and *G. macrochaeta* and described *G. americana* Kennedy, 1966 from off the coast of Florida, while Lasserre (1966) transferred *Michaelsena postclitellochaeta* Knöllner, 1935 to *Grania*. One year later, considering the similarities among *G. maricola*, *G. macrochaeta* and *G. americana*, Lassserre (1967) proposed to divide *G. macrochaeta* into four subspecies, *G. m. macrochaeta*, *G. m. americana*, *G. m. maricola* and *G. m. roscoffensis* Lasserre, 1967. This situation lasted for about a decade, after which many additional species of *Grania* were described from different parts of the world (Erséus & Lasserre 1976; Erséus 1977, 1980, 1990; Jamieson 1977; Coates & Erséus 1985; Coates 1990; Rota & Erséus 1996, 1997; Locke & Coates 1998, 1999; De Wit & Erséus 2007; Rota et al. 2007; De Wit et al. 2009; Prantoni et al. 2016), bringing a better understanding of species-specific characters and raising the subspecies proposed by Lasserre (1967) back to species status (Coates 1984; De Wit 2010). More recently, Prantoni et al. (2016) updated the phylogeny of the genus together with the descriptions and genetic data of nine new species, for the first time including species from Africa and the east coast of South America (Brazil) (see Discussion).

The genus is morphologically and genetically well separated from other enchytraeid genera (Erséus et al. 2010; De Wit et al. 2011; Prantoni et al. 2016).

To provide a global taxonomic overview of *Grania*, the present checklist summarizes historical and recently published data, including all valid species described to date. Moreover, the general geographical distribution patterns of the various species are briefly discussed.

**Material and methods**

The checklist is arranged in chronological order and based on a bibliographic survey. All records of *Grania* from published papers and monographs were reviewed. When available, additional information on habitat, geographical distribution and museum catalogue numbers is included.

![Specimen of *Grania chilensis* Prantoni, De Wit & Erséus, 2016. Photograph by Pierre De Wit.](image-url)
Results

We report 81 currently accepted species of *Grania*, of which 49 are known from the Southern and 32 from the Northern Hemisphere. The only species found in both hemispheres (Atlantic Ocean) is the deep-sea *Grania atlantica* Coates & Erséus, 1985. Almost half of the known southern species (24) occur in Australia. On the other hand, 15 of the 32 species described from the Northern Hemisphere to date are European (Fig. 1).

List of all described species of *Grania* in the World

Phylum Annelida Lamarck, 1809  
Class Clitellata Michaelsen, 1919  
Order Enchytraeida Vejdovský, 1879  
Family Enchytraeidae Vejdovský, 1879

Genus *Grania* Southern, 1913

1. *Grania monochaeta* (Michaelsen, 1888)

*Enchytraeus monochaetus* Michaelsen, 1888: 66–68, figs 6a–c.

*Enchytraeus monochaetus* – Beddard 1895: 339. — Michaelsen 1900: 91.  
*Marionina monochaeta* – Nielsen & Christensen 1959: 109.  
*Grania monochaeta* – Lasserre 1967: 279–280. — Rota & Erséus 1997: 29–34, fig. 2, tab. 1 (lectotype designation).  
*Hemigrania monochaeta* – Lasserre 1971: 454.
non *Michaelsena monochaeta* – Michaelsen 1921: 3. — Stephenson 1932: 263, fig. 14 (see Rota & Erséus 1997).

non *Grania monochaeta* – Erséus & Lasserre 1977: 299–300, figs 1a–d.

**Type material**

**Lectotype**
UNITED KINGDOM: South Georgia (MZUT 123.1).

**Paralectotypes**
UNITED KINGDOM: South Georgia (MZUT Olig. Coll. 123.2–123.4).

**Other material**
UNITED KINGDOM: South Georgia (SMNH 362).

**Type locality**
UNITED KINGDOM: South Georgia, SW Atlantic Ocean.

**Habitat**
Intertidal, subtidal to 20 m, shelly detritus, among the roots of seaweeds and in the canal system of sponges.

**Distribution**
Only known from the type locality.

2. *Grania macrochaeta* (Pierantoni, 1901)

*Enchytraeus macrochaetus* Pierantoni, 1901: 201–202.

*Michaelsena macrochaeta* – Pierantoni 1903: 409–444, figs 1–28; 1915: 48–50. — Stephenson 1930: 776–777.

*Enchytraeus macrochaetus* – Nielsen & Christensen 1959: 89–91, tab. 9.

*Grania macrochaeta* – Kennedy 1966: 403–404 (redescription). — Lasserre 1966: 312–314 (redescription). — Erséus 1974: 90–93, tab. 1. — Rota 1995: tab. 2.

*Grania macrochaeta macrochaeta* – Lasserre 1967: 280. — Erséus & Lasserre 1976: 122, fig. 1, tab. 1.

**Type material**
Not designated.

**Other material**
ITALY: Bay of Naples (MNHM AH 61–63). This refers to three specimens collected in June, 1967 by J. Renaud-Mornant and examined by Erséus & Lasserre (1976).

**Type locality**
ITALY: Bay of Naples.

**Habitat**
Subtidal, 4–13 m, coarse sand.

**Distribution**
Only known from the type locality.
3. *Grania paucispina* (Eisen, 1904)

*Michaelsena paucispina* Eisen, 1904: 74, fig. 43.

*Michaelsena paucispina* – Michaelsen 1907: 130.
*Marianina paucispina* – Nielsen & Christensen 1959: 109. — Lasserre 1971: 454.
*Grania paucispina* – Erséus & Lasserre 1976: 127. — Coates & Erséus 1980: 1037–1038, fig. 1. — Coates & Ellis 1981: 2134.

**Type material**
*TYPUS PERDITUSS — SPECIMEN DISSOLUTUS.* According to Coates & Erséus (1980), the type material deposited in the California Academy of Science in San Francisco was destroyed during the earthquake and fire in 1906.

**Other material**
UNITED STATES: California (USNM 58906–58907).
CANADA: British Columbia (USNM 58907).

**Type locality**
UNITED STATES: Santa Barbara, California.

**Habitat**
In muddy sand, 2–6 m, with much organic material, brackish water.

**Distribution**
California, USA and British Columbia, Canada.

4. *Grania principissae* (Michaelsen, 1907)

*Michaelsena principissae* Michaelsen, 1907: 129–131, pl. 1, figs 1–2.

*Hemigrania principissae* – Lasserre 1971: 454.
*Grania principissae* – Erséus & Lasserre 1976: 128. — Coates 1990: 28–30, figs 2, 8.

**Type material**
*TYPUS AMISSUS.*

**Other material**
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 69–89, ROMIZ 11277).

**Type locality**
AUSTRALIA: Princess Royal Harbour, Albany area, Western Australia.

**Habitat**
Intertidal, sand with organic debris accumulated in mussel bed.

**Distribution**
Only known from the type locality.
5. *Grania maricola* Southern, 1913

*Grania maricola* Southern, 1913: 14, figs 1–7.

*Michaelsena macrochaeta* – Pierantoni 1915 (part): 48–50.

*Michaelsena maricola* – Stephenson 1930: 776–777.

*Enchytraeus maricolus* – Nielsen & Christensen 1959: 89–91, tab. 9.

*Grania maricola* – Kennedy 1966: 400–402, fig. 2 (redescription). — Lasserre 1966: 312–314 (redescription). — Erståeus 1974: 90–93; 1976: 35, tab. 3. — Erståeus & Lasserre 1976: 124–125, figs 4–5, tab. 1. — Bonomi & Erståeus 1984: 209, tab. 1. — Coates 1984: 40, fig. 7a, tab. 1. — Rodriguez 1986: 82–83, fig. 2. — Rota 1995: tab. 2. — Locke & Coates 1998: 1111–1112, tab. 1. — De Wit 2006: 25. — van Haaren 2016: 140–141, figs 20, 56.

*Grania macrochaeta maricola* – Lasserre 1967: 280.

**Type material**

*Holotype*

IRELAND: County Kerry (NMINH 1913.415).

*Paratypes*

IRELAND: County Kerry (NMINH 1909.151, NMINH 1914.313).

**Type locality**

IRELAND: County Kerry.

**Habitat**

Subtidal, 8–80 m, coarse shell sand and shell gravel.

**Distribution**

Ireland, Iberian Peninsula, Italy, the Netherlands, Norway and Sweden.

6. *Grania postclitellochaeta* (Knöllner, 1935)

*Michaelsena postclitellochaeta* Knöllner, 1935: 449–455, figs 19–25, tab. 1.

*Michaelsena postclitellochaeta* – Hagen 1954: 12–13.

*Marionina postclitellochaeta* – Nielsen & Christensen 1959: 109–110, tab. 11.

*Grania postclitellochaeta postclitellochaeta* – Lasserre 1966: 299–300, 312–314, tabs 1–2. — Erståeus 1976: 35, tab. 3. — Erståeus & Lasserre 1976: 124, tab. 1.

*Hemigrania postclitellochaeta* – Lasserre 1971: 454–456, fig. 3c.

*Grania postclitellochaeta* – Kossmagk-Stephan 1983: 598. — Rota & Erståeus 2003: 232–234, figs 10c–d. — van Haaren 2016: 141–143, figs 21, 23, 25–26, 57.

**Type material**

Not designated.

**Other material**

FRANCE: Bassin d’Arcachon (SMNH 45646–45651, MCZR Oligochaeta 0116–0117); Gulf of Biscay (MNHM AH 66–68; see Erståeus & Lasserre 1976).

NORTH SEA: SMNH 45652–45654, MCZR Oligochaeta 0118.

ICELAND: Hafnafjörður (SMNH 45655–45660, MCZR Oligochaeta 0119; see Rota & Erståeus 2003).
NORWAY: Tromsø (SMNH 45661–45665, MCZR Oligochaeta 0120; see Rota & Erséus 2003); Bergen (SMNH 107746–107749; see De Wit & Erséus 2010).

SWEDEN: Koster Islands (SMNH 107730, 107736, 107738–107745, 108220; see De Wit & Erséus 2010).

**Type locality**

GERMANY: Kiel Bay.

**Habitat**

Intertidal, subtidal, 20–100 m in coarse shell sand, shell gravel, sometimes in brackish water (Baltic Sea), tolerating a wide range of salinity (11–35 ppt).

**Distribution**

Baltic Sea, Iceland (see Rota & Erséus 2003), North Sea (Germany, the Netherlands and Belgium), France, Norway and Sweden.

**Remarks**

According to van Haaren (2016), it is not possible to distinguish *Grania postclitellochaeta* from *G. occulta* De Wit & Erséus, 2010 and *G. ovitheca* Erséus, 1977 on morphological grounds only.

7. *Grania americana* Kennedy, 1966

*Grania americana* Kennedy, 1966: 404–405, fig. 3.

*Grania macrochaeta americana* — Lasserre 1967: 78–280.

*Grania americana* — Erséus 1974: 90–93, tab. 1. — Healy & Coates 1999: 111, 114, tab. 1. — Locke & Coates 1999: 598–623, figs 16–20 (redescription); 2000: 619–620, 625–626, figs 4a, 5. — Locke 2000: 83–93, figs 1–14.

*Grania americana* — Erséus & Lasserre 1976: p. 123 (*nomen dubium*, see Erséus & Lasserre 1976; Locke & Coates 1999).

**Type material**

**Holotype**

BAHAMAS: North Bimini (USNM 33005).

**Paratype**

BAHAMAS: North Bimini (USNM 33039).

**Other material**

BAHAMAS: Pearl Island (BMAZ 1999 180 009).

BERMUDA: Ferry Reach (USNM 185957).

UNITED STATES: Hutchinson Island (USNM 185958).

BELIZE: Carrie Bow Cay (USNM 185959–185960).

**Type locality**

BAHAMAS: North Bimini.
Habitat
Intertidal, subtidal to 10 m, fine to coarse sand.

Distribution
Belize, Bermuda, Bahamas, Florida.

8. *Grania roscoffensis* Lasserre, 1967

*Grania macrochaeta roscoffensis* Lasserre, 1967: 277–280.

*Grania roscoffensis* – Erséus 1974: 90–93, tab. 1. — Erséus & Lasserre 1976: 125, fig. 6, tab. 1 (amended). — Coates 1984: 49. — Rota & Erséus 2003: 218–221, figs 3a–c, 4.

non *Grania roscoffensis* — Erséus 1977: 294, tab. 1 (see Rota & Erséus 2003).

Type material

Holotype
FRANCE: Roscoff, harbour (MNHM AH 64).

Paratype
The originally designated paratype AH 65 belongs to another species (see Rota & Erséus 2003).

Other material

FRANCE: Roscoff, harbour (SMNH 45614).

SPAIN: Canary Islands (SMNH 45615, ZMAV.OL 9345).

Type locality
FRANCE: Roscoff, harbour.

Habitat
Intertidal, coarse sand and gravel.

Distribution
France, Sweden and Canary Islands.

9. *Grania pusilla* Erséus, 1974

*Grania pusilla* Erséus, 1974: 87–94, figs 1–6, tab. 1.

*Grania pusilla* – Erséus 1976: 34, tab. 3. — De Wit et al. 2011: 513, figs 1–5, tab. 1.

*Grania macrochaeta pusilla* – Erséus & Lasserre 1976: 122, fig. 2. — Erséus 1977: 294, tab. 1. — Coates 1984: 49. — Kossmagk–Stephan 1985: 77–78.

non *Grania pusilla* – Locke & Coates 1998: 1107–1112, figs 6–12 (see Rota & Erséus 2003).

Type material

Holotype
NORWAY: Vågegrunnen (ZMUB 55050).

Paratype
NORWAY: Vågegrunnen (ZMUB 55051).
Other material
SWEDEN: Koster Islands (SMNH 107775–107788).
NORWAY: Bergen (SMNH 107789–107796).

Type locality
NORWAY: Vågegrunnen, Hjeltefjorden.

Habitat
Subtidal, 35–500 m, fine to coarse shelly sand.

Distribution
West coasts of Norway and Sweden, Morocco.

10. *Grania bermudensis* Erséus & Lasserre, 1976

*Grania macrochaeta bermudensis* Erséus & Lasserre, 1976: 122–124, fig. 3 tab. 1.

*Grania macrochaeta bermudensis* – Erséus & Lasserre 1976: 453. — Coates 1984: 49, fig. 8a.
*Grania bermudensis* – Locke & Coates 1999: 609–614, figs 6, 12–15, tab. 1; 2000: 619–621, 626, fig. 6c.

Type material

Holotype
BERMUDA: Castle Island (USNM 53202).

Paratype
BERMUDA: Castle Island (USNM 53203).

Type locality
BERMUDA: Castle Island.

Habitat
Subtidal, 8–15 m, medium to coarse coral sand and gravel.

Distribution
Only known from Bermuda.

11. *Grania longiducta* Erséus & Lasserre, 1976

*Grania postclitellochaeta longiducta* Erséus & Lasserre, 1976: 127, fig. 7, tab. 1.

*Hemigrania postclitellochaeta* – Lasserre 1971: 454–456, fig 3a–b, d.
*Grania postclitellochaeta longiducta* – Erséus 1977: 296–297. — Coates 1984: 49.
*Grania longiducta* – Coates & Erséus 1985: 113–114, fig. 8. — Diaz *et al.* 1987: tab. 1, 3. — Locke & Coates 2000: 619, 625.

Type material

Holotype
UNITED STATES: Massachusetts, Cape Cod Bay (USNM 43482).

Paratype
UNITED STATES: Massachusetts, Cape Cod Bay (USNM 53201).
12. *Grania monospermatheca* Erséus & Lasserre, 1976

*Grania monospermatheca* Erséus & Lasserre, 1976: 127, fig. 9, tab. 1.

*Grania monospermatheca* – Coates 1984: 49, fig. 8b. — Coates & Erséus 1985: 114–115, fig. 9. — Diaz *et al.* 1987: tab. 1–3. — Locke & Coates 2000: 619, 626–628.

**Type material**

**Holotype**

UNITED STATES: Massachusetts, Cape Cod Bay (USNM 53204).

**Paratype**

UNITED STATES: Massachusetts, Cape Cod Bay (USNM 53205).

13. *Grania variochaeta* Erséus & Lasserre, 1976

*Grania variochaeta* Erséus & Lasserre, 1976: 125–126, figs 10–11, tab. 1.

*Grania variochaeta* – Erséus 1976: 35, tab. 3; 1977: 297–298, tab. 1. — Coates 1984: 46, fig. 6. — Rota & Erséus 2003: 211, 234–235, fig. 11. — van Haaren 2016: 143–144, fig. 58.

**Type material**

**Holotype**

SWEDEN: Kosterfjorden (SMNH 3132).

**Paratypes**

SWEDEN: Kosterfjorden (SMNH 3133–3136).
Habitat
Subtidal, 20–140 m, heterogeneous sand.

Distribution
West coast of Norway and Sweden, the Netherlands.

14. *Grania ovitheca* Erséus, 1977

*Grania ovitheca* Erséus, 1977: 125, figs 5–7.

*Grania ovitheca* – Bonomi & Erséus 1984: 209, tab. 1. — Rota 1995: tab. 2. — Rota & Erséus 2003: 230–233, figs 10a–b. — De Wit & Erséus 2010: 286–291.

Type material
Holotype
SWEDEN: Kosterfjorden (SMNH 3071).

Paratypes
SWEDEN: Kosterfjorden (SMNH 3072–3073).

Other material
SWEDEN: off Gullmar Fjord (SMNH 107753, 107755–107758, 107760–107768).

Type locality
SWEDEN: Kosterfjorden, Bohuslän.

Habitat
Subtidal, 15–30 m, shell sand with gravel and pebbles or coarse sand with stones, pebbles and shells.

Distribution
West coasts of Norway and Sweden, Italy.

15. *Grania trichaeta* Jamieson, 1977

*Grania macrochaeta trichaeta* Jamieson, 1977: 345–347, fig. 5, pl. 1g.

*Grania macrochaeta trichaeta* – Coates 1984: 46, fig. 5a.
*Grania trichaeta* – De Wit et al. 2009: 28–30, figs 8–9, 10a–e (redescription).

Type material
Holotype
AUSTRALIA: Queensland, Wistari Reef (QM 8863).

Paratypes
AUSTRALIA: Queensland, Wistari Reef (QM 8866, BNMH 1976.1.21–23, BJ 1975.7.76–78); Queensland, Heron Reef (BJ 1975.7.74–75, BJ 1975.7.84).

Other material
AUSTRALIA: Queensland, Lizard Island (AMS W.35554–W.35559, SMNH 105540–105559); Queensland, Heron Island (SMNH 105560–105584).
Type locality
AUSTRALIA: Wistari Reef, Great Barrier Reef, Queensland.

Habitat
Intertidal, subtidal to 7 m, fine to medium heterogeneous sand.

Distribution
Lizard Island, Heron Island and Wistari Reef, Great Barrier Reef, Queensland, Australia.

16. *Grania pacifica* Shurova, 1979

*Grania pacifica* Shurova, 1979: 84–86, fig. 6.

Type material

Holotype
RUSSIA: Iturup Island, Sea of Okhotsk (MIMB 16017).

Type locality
RUSSIA: Sea of Okhotsk, Iturup Island.

Habitat
Subtidal, 15–20 m, gravelly sediment.

Distribution
Only known from the type locality.

17. *Grania incerta* Coates & Erséus, 1980

*Grania incerta* Coates & Erséus, 1980: 1038–1040, fig. 2.

*Grania incerta* – Coates & Ellis 1981: 2134–2135. — Coates 1984: 46, fig. 4.

Type material

Holotype
UNITED STATES: California, Santa Barbara (USNM 58908).

Paratypes
UNITED STATES: California, Santa Barbara (USNM 58909).

CANADA: British Columbia, Rennison Island (USNM 58910).

Type locality
UNITED STATES: Santa Barbara, California.

Habitat
Subtidal, 3–17 m, well-sorted fine sand.

Distribution
California, USA and British Columbia, Canada.
18. *Grania parvitheca* Erséus, 1980

*Grania parvitheca* Erséus, 1980: 27–28, fig. 1.

**Type material**

**Holotype**
UNITED KINGDOM: Ascension Island (USNM 58738).

**Paratype**
UNITED KINGDOM: Ascension Island (USNM 58739).

**Type locality**
UNITED KINGDOM: Ascension Island, S Atlantic Ocean.

**Habitat**
Intertidal, among rocks and clumps of tubes of Sabellariidae.

**Distribution**
Only known from the type locality.

19. *Grania atlantica* Coates & Erséus, 1985

*Grania atlantica* Coates & Erséus, 1985: 112–113, fig. 7.

*Grania atlantica* – Diaz *et al.* 1987: 222–224, tabs 1, 3–4. — Locke & Coates 2000: 619, 626. — Rota & Erséus 1996: 182; 2003: 210–211, 235–237, fig. 10e. — Erséus & Rota 2003: 898, tab. 1.

**Type material**

**Holotype**
UNITED STATES: off Massachusetts (USNM 96503).

**Paratypes**
UNITED STATES: off Massachusetts (USNM 96504–96508).

**Type locality**
UNITED STATES: off Massachusetts.

**Habitat**
Continental slope, 744–1796 m, fine ooze to silty deep-sea sediments.

**Distribution**
Widely distributed in the Atlantic Ocean from 48°35.4’ N to 09°05’ S in the east and from 39°51.2’ N to 70°40.8’ S in the west.

20. *Grania levis* Coates & Erséus, 1985

*Grania levis* Coates & Erséus, 1985: 111–112, fig. 6.

*Grania levis* – Diaz *et al.* 1987: tabs 1, 4. — Locke & Coates 2000: 626.

?*Grania cf. levis* – Prantoni *et al.* 2016: 502.
Type material

Holotype
UNITED STATES: Georges Bank (USNM 96509).

Paratypes
UNITED STATES: Georges Bank (USNM 96510); off New Jersey (USNM 96511).

Other material
UNITED STATES: off North Carolina (USNM 1283176; immature specimen, see Prantoni et al. 2016).

Type locality
UNITED STATES: Georges Bank, SE of Massachusetts, NW Atlantic Ocean.

Habitat
Intertidal, subtidal to 79 m (probably to 492 m, see Prantoni et al. 2016), medium to coarse sand.

Distribution
Georges Bank SE of Massachusetts, on the continental shelf (and slope?) off New Jersey and North Carolina, USA.

21. *Grania reducta* Coates & Erséus, 1985

*Grania reducta* Coates & Erséus, 1985: 110–111, fig. 5.

*Grania reducta* – Diaz et al. 1987: tabs 3–4. — Locke & Coates 2000: 626, 628.

Type material

Holotype
AUSTRALIA: Western Australia, Baker Bay (WAM 69.89).

Paratype
AUSTRALIA: Western Australia, Baker Bay (ROMIZ I2880).

Habitat
Intertidal, subtidal to 65 m, medium to coarse sand.

Distribution
Continental shelf off New Jersey, Maryland and Delaware, USA.

22. *Grania ascophora* Coates, 1990

*Grania ascophora* Coates, 1990: 23–25, fig. 5.
Type locality
AUSTRALIA: Baker Bay, King George Sound, Western Australia.

Habitat
Subtidal, 4 m, fine sand with shells and seagrass.

Distribution
Barker Bay and Princess Royal Harbour, Albany area, Western Australia.

23. *Grania bykane* Coates, 1990

*Grania bykane* Coates, 1990: 21–23, figs 2, 4a–d.

*Grania bykane* – Rota et al. 2007: 1001–1004, figs 1a–g, 2a.

Type material

Holotype
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 55.8).

Paratype
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 56.89).

Type locality
AUSTRALIA: Princess Royal Harbour, Albany area, Western Australia.

Habitat
Intertidal, subtidal to at least 6 m, fine to coarse sand and in sediments under boulders and in seagrass beds.

Distribution
Southern coast of Western Australia (Albany and Esperance areas), Australia.

24. *Grania crassiducta* Coates, 1990

*Grania crassiducta* Coates, 1990: 20–21, figs 2, 3a–d.

*Grania crassiducta* – Coates & Stacey 1993: 404–406, fig. 9a–f. — Rota et al. 2007: 1004–1006, figs 2b, 3a–f.

Type material

Holotype
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 51.89).

Paratypes
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 53.89, ROMIZ I1279).

Type locality
AUSTRALIA: Princess Royal Harbour, Albany area, Western Australia.

Habitat
Intertidal, muddy coarse sand, gravel and mixed sand with pebbles and coral.
Distribution
Southern (Albany and Esperance areas) and western (Rottnest Island) coasts of Western Australia.

25. *Grania ersei* Coates, 1990

*Grania ersei* Coates, 1990: 17–20, figs 1a–d, 2.

*Grania ersei* – Coates & Stacey 1993: 406–408, figs 10a–f. — Rota et al. 2007: 1008–1011, figs 4d–g, 5a.

**Type material**

**Holotype**
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 61.89).

**Paratypes**
AUSTRALIA: Western Australia, Princess Royal Harbour (WAM 62.68–68.89, ROMIZ I1273-I1276).

**Type locality**
AUSTRALIA: Princess Royal Harbour, Albany area, Western Australia.

**Habitat**
Intertidal, subtidal to 26 m, sand among boulders and pebbles, and with algal debris.

**Distribution**
South (Albany, Esperance) and west (Rottnest Island) coasts of Western Australia.

26. *Grania hastula* Coates, 1990

*Grania hastula* Coates, 1990: 26–28, fig. 7.

**Type material**

**Holotype**
AUSTRALIA: Western Australia, Middleton Beach (USNM 120714).

**Type locality**
AUSTRALIA: Middleton Beach, Albany area, Western Australia.

**Habitat**
Intertidal, sand among rocks in algal wash.

**Distribution**
Only known from the type locality.

27. *Grania hyperoadenia* Coates, 1990

*Grania hyperoadenia* Coates, 1990: 25–26, fig. 6.

*Grania hyperoadenia* – De Wit et al. 2009: 30–31, fig. 9.

**Type material**

**Holotype**
AUSTRALIA: Western Australia, Baker Bay (WAM 54.85).
Other material
AUSTRALIA: Queensland, Lizard Island (AMS W.35560).

Type locality
AUSTRALIA: Baker Bay, King George Sound, Western Australia.

Habitat
Subtidal, 1.5–4 m in sand.

Distribution
Albany area, Western Australia and Lizard Island, Great Barrier Reef, Queensland, Australia.

28. *Grania hongkongensis* Erséus, 1990

*Grania hongkongensis* Erséus, 1990: 311–12, fig. 22.

Type material

Holotype
CHINA: Hong Kong (New Territories), Crooked Island (BMNH 1987.3.39).

Paratypes
CHINA: Hong Kong (New Territories), Crooked Island (BMNH 1987.3.40, SMNH 3717).

Type locality
CHINA: Mirs Bay, Crooked Island, Hong Kong (New Territories).

Habitat
Intertidal, subtidal to 15 m, shelly sand.

Distribution
Only known from the type locality.

29. *Grania inermis* Erséus, 1990

*Grania inermis* Erséus, 1990: 314–315, fig. 24.

Type material

Holotype
CHINA: Hong Kong (New Territories), Crooked Island (BMNH 1987.3.42).

Paratypes
CHINA: Hong Kong (New Territories), Crooked Island (BMNH 1987.3.43, SMNH 3719).

Type locality
CHINA: Mirs Bay, Crooked Island, Hong Kong (New Territories).

Habitat
Shelly sand, 7–14 m.

Distribution
Only known from the type locality.
30. *Grania stilifera* Erséus, 1990

*Grania stilifera* Erséus, 1990: 312–314, fig. 23.

**Type material**

- **Holotype**
  CHINA: Hong Kong (New Territories), Crooked Island (BMNH 1987.3.41).

- **Paratype**
  CHINA: Hong Kong (New Territories), Crooked Island (SMNH 3718).

**Type locality**

CHINA: Mirs Bay, Crooked Island, Hong Kong (New Territories).

**Habitat**

Subtidal, 5–8 m, shelly sand.

**Distribution**

Only known from the type locality.

31. *Grania alliata* Coates & Stacey, 1993

*Grania alliata* Coates & Stacey, 1993: 397–399, figs 3–4.

**Type material**

- **Holotype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 192-92).

**Type locality**

AUSTRALIA: Rottnest Island, Western Australia.

**Habitat**

Intertidal, gravelly sand.

**Distribution**

Only known from the type locality.

32. *Grania conjuncta* Coates & Stacey, 1993

*Grania conjuncta* Coates & Stacey, 1993: 402–404, figs 7–8.

**Type material**

- **Holotype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 193-92).

**Type locality**

AUSTRALIA: Rottnest Island, Western Australia.

**Habitat**

Subtidal, 2 m, medium to coarse sand.
Distribution
Only known from the type locality.

33. *Grania longistyla* Coates & Stacey, 1993

*Grania longistyla* Coates & Stacey, 1993: 394–397, figs 1–2.

Type material
- **Holotype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 194-92).
- **Paratype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 195-92).

Type locality
AUSTRALIA: Rottnest Island, Western Australia.

Habitat
Intertidal, gravelly sand.

Distribution
Only known from the type locality.

34. *Grania vacivasa* Coates & Stacey, 1993

*Grania vacivasa* Coates & Stacey, 1993: 400–402, figs 5–6.

*Grania vacivasa* – Rota et al. 2007: 1018–1020, figs 8c, 9a–e.

Type material
- **Holotype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 196-92).
- **Paratype**
  AUSTRALIA: Western Australia, Rottnest Island (WAM 197-92).

Type locality
AUSTRALIA: Rottnest Island, Western Australia.

Habitat
Subtidal, 1 m, in coarse sand.

Distribution
South (Esperance) and west (Rottnest Island) coasts of Western Australia.

35. *Grania acanthochaeta* Rota & Erséus, 1996

*Grania acanthochaeta* Rota & Erséus, 1996: 174–175, fig. 4, tab. 1.

Type material
- **Holotype**
  ANTARCTICA: Ross Island (USNM 172142).
Paratype
ANTARCTICA: Ross Island (USNM 172193).

Other material
ANTARCTICA: Ross Island (USNM 172194–172397).

Type locality
ANTARCTICA: Ross Island.

Habitat
Subtidal, 38 m, greyish brown gravelly mud with sponge spicules and valves of *Limatula*.

Distribution
Only known from the type locality.

36. *Grania algida* Rota & Erséus, 1996

*Grania algida* Rota & Erséus, 1996: 179–181, fig. 8, tab. 1.

Type material

Holotype
ANTARCTICA: Ross Island (USNM 172398).

Paratype
ANTARCTICA: Ross Island (MZR Oligochaeta 0065).

Type locality
ANTARCTICA: Ross Island.

Habitat
Subtidal, 14–40 m, volcanic gravel and cobble.

Distribution
Only known from the type locality.

37. *Grania angustinasus* Rota & Erséus, 1996

*Grania angustinasus* Rota & Erséus, 1996: 177–178, figs 3b, 6, tab. 1.

Type material

Holotype
ANTARCTICA: Ross Island (MCZR Oligochaeta 0059).

Paratypes
ANTARCTICA: Ross Island (MCZR 0060–0063, SMNH 4759–4761).

Type locality
ANTARCTICA: Ross Island.

Habitat
Subtidal, 35–126 m, fine sand.
38. *Grania antarctica* Rota & Erséus, 1996

*Grania antarctica* Rota & Erséus, 1996: 178–179, figs 3c, 7, tab. 1.

**Type material**

**Holotype**
ANTARCTICA: Ross Island (USNM 172400).

**Paratype**
ANTARCTICA: Ross Island (USNM 172402, MCZR Oligochaeta 0059).

**Type locality**
ANTARCTICA: Ross Island.

**Habitat**
Subtidal, 14–31 m, volcanic gravel and cobble.

**Distribution**
Only known from the type locality.

39. *Grania carchinii* Rota & Erséus, 1996

*Grania carchinii* Rota & Erséus, 1996: 175–177, fig. 5, tab. 1.

**Type material**

**Holotype**
ANTARCTICA: Ross Island (MCZR Oligochaeta 0057).

**Paratype**
ANTARCTICA: Ross Island (MCZR Oligochaeta 0058).

**Type locality**
ANTARCTICA: Ross Island.

**Habitat**
Subtidal, 35 m, fine sand with mica shale, shell debris and some pebbles.

**Distribution**
Only known from the type locality.

40. *Grania hirsuticauda* Rota & Erséus, 1996

*Grania hirsuticauda* Rota & Erséus, 1996: 175–177, fig. 5, tab. 1.

**Type material**

**Holotype**
ANTARCTICA: Ross Island (USNM 172136).

**Paratypes**
ANTARCTICA: Ross Island (USNM 172137–172138).
Type locality
ANTARCTICA: Ross Island.

Habitat
Subtidal, 5–585 m, volcanic gravel, sandy mud, small rocks, ectoproct and sponge debris.

Distribution
Only known from the type locality.

41. *Grania darwinensis* (Coates & Stacey, 1997)

*Randidrilus darwinensis* Coates & Stacey, 1997: 70–72, fig. 1.

*Grania darwinensis* – Rota *et al.* 2003: 504–509, fig. 3.

Type material

**Holotype**
AUSTRALIA: Northern Territory, Darwin (NTM Wo 0084).

**Paratypes**
AUSTRALIA: Northern Territory, Darwin (NTM Wo 0085–0087, ROMIZ I2457–I2458).

Type locality
AUSTRALIA: Darwin, Northern Territory.

Habitat
Intertidal, subtidal to 16 m, medium to coarse sand, clay or silty sediments.

Distribution
Northern Territory and Western Australia.

42. *Grania eurystila* Coates & Stacey, 1997

*Grania eurystila* Coates & Stacey, 1997: 73–74, fig. 2.

Type material

**Holotype**
AUSTRALIA: Northern Territory, Darwin (NTM Wo 0081).

**Paratypes**
AUSTRALIA: Northern Territory, Darwin (NTM Wo 0082–0083, ROMIZ I2479).

Type locality
AUSTRALIA: Darwin, Northern Territory.

Habitat
Intertidal rockpool.

Distribution
Only known from two locations in the inner part of Darwin Harbour, Northern Territory, Australia.
43. *Grania integra* Coates & Stacey, 1997

*Grania integra* Coates & Stacey, 1997: 74–76, fig. 3.

*Grania integra* – Rota et al. 2003: 499–501, fig. 1.

**Type material**

**Holotype**

AUSTRALIA: Northern Territory, Darwin (NTM Wo 0079).

**Paratype**

AUSTRALIA: Northern Territory, Darwin (NTM Wo 0080).

**Type locality**

AUSTRALIA: Darwin, Northern Territory.

**Habitat**

Intertidal crevices with sand gravel, pebbles and heterogeneous sediments.

**Distribution**

Darwin Harbour, Northern Territory and Nickol Bay, Dampier area, Western Australia.

44. *Grania lasserrei* Rota & Erséus, 1997

*Grania lasserrei* Rota & Erséus, 1997: 34–37, fig. 3, tab.1.

*Enchytraeus monochaetus* – Michaelsen 1888: 66, figs 6A–C; part., pl. 2.  
*Michaelsena monochaeta* – Michaelsen 1921: 3, part.  
*Grania monochaeta* – Erséus & Lasserre 1977: 299–300, figs 1A–D.

**Type material**

**Holotype**

UNITED KINGDOM: South Georgia (SMNH 4803).

**Paratypes**

UNITED KINGDOM: South Georgia (SMNH 48044806, MZUT 1078, BMNH 1996:916).

**Type locality**

UNITED KINGDOM: South Georgia, SW Atlantic Ocean.

**Habitat**

Intertidal, subtidal to 20 m.

**Distribution**

Only known from the type locality.

45. *Grania stephensoniana* Rota & Erséus, 1997

*Grania stephensoniana* Rota & Erséus, 1997: 37–39, figs 4–5, tab. 1.

*Michaelsena monochaeta* – Stephenson 1932: 263, fig. 14.
Type material

Holotype
UNITED KINGDOM: South Georgia (BMNH 1931.6.23.78).

Paratypes
UNITED KINGDOM: South Georgia (BMNH 1933.2.23.946–1933.2.23.948).

Type locality
UNITED KINGDOM: South Georgia, SW Atlantic Ocean.

Habitat
60 m, rocky bottom.

Distribution
Only known from the type locality.

46. *Grania mira* Locke & Coates, 1998

*Grania mira* Locke & Coates, 1998: 1103–1107, figs 1–5.

*Grania* sp. – Healy 1996a: 53, 56–57, fig. 1, tabs 1–2; 1996b: 1287.

Type material

Holotype
IRELAND: Carnsore Point (NMI 4.1998).

Paratypes
IRELAND: Carnsore Point (NMI 5.1998–6.1998).

Type locality
IRELAND: Carnsore Point, County Wexford.

Habitat
Intertidal, sediments trapped in dense turf of *Corallina officinalis* on horizontal or gently sloping rock.

Distribution
Only known from the type locality.

47. *Grania hylae* Locke & Coates, 1999

*Grania hylae* Locke & Coates, 1999: 605–609, figs 6–7, 11, tab. 1.

*Grania hylae* – Locke & Coates 2000: 619–621, 626, fig. 4b.

Type material

Holotype
BERMUDA: Paget Island (USNM 185954).

Paratypes
UNITED STATES: Florida, Fowey Rocks (USNM 185955).

BERMUDA: Castle Island (USNM 185956, BAMZ 199 180 007).
**Type locality**
BERMUDA: Paget Island.

**Habitat**
Intertidal, subtidal to 17 m, medium to coarse sand with rocks.

**Distribution**
Rocky Hill Park, Castle Island and Paget Island, Bermuda, and Fowey Rocks, Miami, Florida, USA.

48. *Grania laxartus* Locke & Coates, 1999

*Grania laxartus* Locke & Coates, 1999: 602–605, figs 2–6, 11, tab. 1.

*Grania laxartus* – Locke & Coates 2000: 619–621, 626–627, figs 4c, 6a.

**Type material**

**Holotype**
BERMUDA: Ferry Point Bridge (USNM 185951).

**Paratypes**
BERMUDA: Ferry Reach (USNM 185952, BAMZ 199 180 006).
BELIZE: Carrie Bow Cay (USNM 185953).

**Type locality**
BERMUDA: Ferry Point Bridge.

**Habitat**
Intertidal pools with accumulation of sand and fine to medium-coarse calcareous sand.

**Distribution**
Ferry Point Bridge, Whalebone Bay, Pearl Island, Ferry Reach and Smith’s Sound, Bermuda, and Carrie Bow Cay, Belize.

49. *Grania dolichura* Rota & Erséus, 2000

*Grania dolichura* Rota & Erséus, 2000: 249–252, fig. 3.

*Grania dolichura* – Rota et al. 2007: 1006–1008, figs 4a–c.

**Type material**

**Holotype**
AUSTRALIA: Tasmania, Little Musselroe (QVM 14: 3889).

**Paratypes**
AUSTRALIA: Tasmania, Little Musselroe (QVM 14:3890–14:3897, SMNH 5203–5206, MCZ Oligochaeta 0085–0088).

**Type locality**
AUSTRALIA: Little Musselroe, Tasmania.
Habitat
Intertidal, silt-clay sediments.

Distribution
Widespread around Tasmania, Australia.

50. *Grania tasmaniae* Rota & Ersèus, 2000

*Grania tasmaniae* Rota & Ersèus, 2000: 247–249, fig. 2.

Type material

 Holotype
AUSTRALIA: Tasmania, Low Head (QVM 14: 3887).

 Paratype
AUSTRALIA: Tasmania, Low Head (QVM 14: 3888).

Type locality
AUSTRALIA: Low Head, Tamar Estuary, Tasmania.

Habitat
Intertidal, silt-clay sediments.

Distribution
Only known from the type locality.

51. *Grania aquitana* Rota & Ersèus, 2003

*Grania aquitana* Rota & Ersèus, 2003: 226–229, fig. 7, tab. 1.

Type material

 Holotype
FRANCE: Bassin d’Arcachon (SMNH 5729).

 Paratypes
FRANCE: Bassin d’Arcachon (SMNH 5730–5733).

Type locality
FRANCE: Bassin d’Arcachon.

Habitat
Subtidal, 2–5 m, fine sand.

Distribution
Only known from the type locality.

52. *Grania canaria* Rota & Ersèus, 2003

*Grania canaria* Rota & Ersèus, 2003: 213–215, fig. 1, tab. 1.
Type material

Holotype
SPAIN: Tenerife (ZMA VOL 9344).

Paratypes
SPAIN: Tenerife (SMNH 5710–5711).

Type locality
SPAIN: Tenerife, Canary Islands.

Habitat
Intertidal, sand and gravel.

Distribution
Only known from the type locality.

53. *Grania fortunata* Rota & Erséus, 2003

*Grania fortunata* Rota & Erséus, 2003: 215–218, fig. 2, tab. 1.

Type material

Holotype
SPAIN: Tenerife (SMNH 5712).

Paratype
SPAIN: Tenerife (SMNH 5713, MCZR Oligochaeta 0103–0104).

Type locality
SPAIN: Tenerife, Canary Islands.

Habitat
Subtidal, 12–17 m, fine and muddy sands associated with beds of the seagrass *Cymodocea nodosa*.

Distribution
Only known from the type locality.

54. *Grania mauretanica* Rota & Erséus, 2003

*Grania mauretanica* Rota & Erséus, 2003: 224–226, fig. 6, tab. 1.

Type material

Holotype
MOROCCO: off Casablanca (SMNH 5718).

Paratypes
MOROCCO: off Casablanca (SMNH 5719–5720, MCZR Oligochaeta 0107).

Type locality
MOROCCO: off Casablanca.
Habitat
Subtidal, 173 m, mud with shell debris.

Distribution
Only known from the type locality.

55. *Grania papillinasus* Rota & Erséus, 2003

*Grania papillinasus* Rota & Erséus, 2003: 239–240, fig. 13.

Type material

Holotype
FRANCE: Gulf of Gascogne (SMNH 5726).

Paratypes
FRANCE: Gulf of Gascogne (SMNH 5727–5728, MCZR Oligochaeta 0124–0126).

Type locality
FRANCE: Gulf of Gascogne, lower continental slope.

Habitat
Deep sea, 2630–2885 m, most likely very fine sediments.

Distribution
Gulf of Gascogne, off France and off the eastern USA (i.e., both sides of the North Atlantic) (see Erséus & Rota 2003).

56. *Grania torosa* Rota & Erséus, 2003

*Grania torosa* Rota & Erséus, 2003: 237–239, fig. 12.

Type material

Holotype
NE ATLANTIC OCEAN: Rockall Trough (SMNH 5721).

Paratypes
NE ATLANTIC OCEAN: Rockall Trough (SMNH 5722–5725, MCZR Oligochaeta 0123).

Type locality
NE ATLANTIC OCEAN: Rockall Trough, off Scotland.

Habitat
Continental slope, 1170–1800 m, fine sandy and hemi-pelagic ooze.

Distribution
Northern Rockall Trough, off the coast of Scotland, to near the entrance to the English Channel (NE Atlantic Ocean).

57. *Grania vikinga* Rota & Erséus, 2003

*Grania vikinga* Rota & Erséus, 2003: 222–224, fig. 5.
GRANIA ROSCOFFENSIS (part) – sensu Erséus 1977: 294, tab. 1.
GRANIA VIKINGA – van Haaren 2016: 144–145, figs 22, 24, 27–28, 59.

Type material

Holotype
SWEDEN: Skagerrak (SMNH 5714).

Paratypes
SWEDEN: Skagerrak (SMNH 5716–5717, MCZR Oligochaeta 0105–0106).

Type locality
SWEDEN: Skagerrak, Bohuslän.

Habitat
Subtidal, 10–46 m, sand.

Distribution
West coast of Sweden, the Netherlands.

58. GRANIA OCARINA Rota, Erséus & Wang, 2003

GRANIA OCARINA Rota, Erséus & Wang, 2003: 502–504, fig. 2.

Type material

Holotype
AUSTRALIA: Western Australia, Withnell Bay (WAM V 4351).

Paratype
AUSTRALIA: Western Australia, Withnell Bay (WAM V 4352, SMNH 5868, MCZR Oligochaeta 0128).

Type locality
AUSTRALIA: Withnell Bay, Dampier Area, Western Australia.

Habitat
Barely subtidal, 0.5 m, medium to coarse sand.

Distribution
Only known from the type locality.

59. GRANIA CINCTURA De Wit & Erséus, 2007

GRANIA CINCTURA De Wit & Erséus, 2007: 33–36, fig. 3, tab. 1.

Type material

Holotype
FRANCE: New Caledonia, Lifou (SMNH 6559).

Paratypes
FRANCE: New Caledonia, Lifou (SMNH 6560–6564); New Caledonia, Touho (SMNH 6565–6568, 6572).
Type locality
FRANCE: Lifou, Loyalty Islands, New Caledonia.

Habitat
Intertidal, subtidal to 6 m, fine to coarse sand.

Distribution
Touho and Nouméa areas, and Loyalty Islands, New Caledonia.

60. *Grania curta* De Wit & Erséus, 2007

*Grania curta* De Wit & Erséus, 2007: 38–40, fig. 5, tab. 1.

Type material

Holotype
FRANCE: New Caledonia, Lifou (SMNH 6583).

Paratypes
FRANCE: New Caledonia, Lifou (SMNH 6584–6588).

Type locality
FRANCE: Lifou, Loyalty Islands, New Caledonia.

Habitat
Barely subtidal, 0.5 m, heterogeneous sand.

Distribution
Only known from the type locality.

61. *Grania fiscellata* De Wit & Erséus, 2007

*Grania fiscellata* De Wit & Erséus, 2007: 45–47, fig. 9, tab. 1.

Type material

Holotype
FRANCE: New Caledonia, Touho (SMNH 6610).

Paratypes
FRANCE: New Caledonia, Touho (SMNH 6611–6613); New Caledonia, Lifou (SMNH 6617).

Type locality
FRANCE: Touho, Loyalty Islands, New Caledonia.

Habitat
Intertidal, subtidal to 3 m, heterogeneous sand.

Distribution
Touho area and Lifou (Loyalty Islands), New Caledonia.
62. **Grania fustata** De Wit & Erséus, 2007

*Grania fustata* De Wit & Erséus, 2007: 40–42, fig. 6, tab. 1.

**Type material**

**Holotype**
FRANCE: New Caledonia, Touho (SMNH 6589).

**Paratypes**
FRANCE: New Caledonia, Touho (SMNH 6590–6598).

**Type locality**
FRANCE: Touho, Loyalty Islands, New Caledonia.

**Habitat**
Intertidal and barely subtidal, coarse sand and gravel.

**Distribution**
Only known from the type locality.

63. **Grania galbina** De Wit & Erséus, 2007

*Grania galbina* De Wit & Erséus, 2007: 36–38, fig. 4, tab. 1.

**Type material**

**Holotype**
FRANCE: New Caledonia, Lifou (SMNH 6573).

**Paratypes**
FRANCE: New Caledonia, Lifou (SMNH 6574–6582).

**Type locality**
FRANCE: Lifou, Loyalty Islands, New Caledonia.

**Habitat**
Intertidal, subtidal to 13 m, heterogeneous sand.

**Distribution**
Nouméa area and Lifou (Loyalty Islands), New Caledonia.

64. **Grania novacaledonia** De Wit & Erséus, 2007

*Grania novacaledonia* De Wit & Erséus, 2007: 31–33, fig. 2, tab. 1.

**Type material**

**Holotype**
FRANCE: New Caledonia, Touho (SMNH 6549).

**Paratypes**
FRANCE: New Caledonia, Touho (SMNH 6550–6558).
Type locality
FRANCE: Touho, Loyalty Islands, New Caledonia.

Habitat
Intertidal, subtidal to 21 m, heterogeneous sand.

Distribution
Touho and Nouméa areas, New Caledonia.

65. *Grania papillata* De Wit & Erséus, 2007

*Grania papillata* De Wit & Erséus, 2007: 42–45, figs 7–8, tab. 1.

Type material

Holotype
FRANCE: New Caledonia, Lifou (SMNH 6599).

Paratypes
FRANCE: New Caledonia, Lifou (SMNH 6600–6602); New Caledonia, Touho (SMNH 6603–6609).

Type locality
FRANCE: Lifou, Loyalty Islands, New Caledonia.

Habitat
Intertidal, subtidal to 22 m, heterogeneous sand.

Distribution
Touho area and Lifou (Loyalty Islands), New Caledonia.

66. *Grania quaerens* Rota, Wang & Erséus, 2007

*Grania quaerens* Rota, Wang & Erséus, 2007: 1011–1013, figs 5b–d, 6a–i.

Type material

Holotype
AUSTRALIA: Western Australia, New Island (WAM V 7315).

Paratypes
AUSTRALIA: Western Australia, New Island (WAM V 7316–7319, SMNH 6803–6808, MCZR Oligochaeta 0146–0149).

Type locality
AUSTRALIA: New Island, Western Australia.

Habitat
Intertidal, medium to coarse sand.

Distribution
South coast of Western Australia.
67. *Grania sperantia* Rota, Wang & Erséus, 2007

*Grania sperantia* Rota, Wang & Erséus, 2007: 1014–1017, figs 7a–h, 8a–b.

**Type material**

**Holotype**
AUSTRALIA: Western Australia, Lucky Bay (WAM V 7320).

**Paratypes**
AUSTRALIA: Western Australia, Lucky Bay (WAM V 7321–7326, SMNH 6809–6817, MCZR Oligochaeta 0150–0155).

**Type locality**
AUSTRALIA: Lucky Bay, Western Australia.

**Habitat**
Barely subtidal, 0.5–2 m, medium to coarse sand.

**Distribution**
South coast of Western Australia.

68. *Grania breviductus* De Wit, Rota & Erséus, 2009

*Grania breviductus* De Wit, Rota & Erséus, 2009: 19–21, figs 2, 10a.

**Type material**

**Holotype**
AUSTRALIA: Queensland, Heron Island (AMS W.35536).

**Paratypes**
AUSTRALIA: Queensland, Heron Island (AMS W.35537–35542, SMNH 7761–7766).

**Type locality**
AUSTRALIA: Heron Island, Great Barrier Reef, Queensland, Australia.

**Habitat**
Intertidal, coarse sand.

**Distribution**
Only known from the type locality.

69. *Grania regina* De Wit, Rota & Erséus, 2009

*Grania regina* De Wit, Rota & Erséus, 2009: 21–23, figs 3–4, 10b.

**Type material**

**Holotype**
AUSTRALIA: Queensland, Heron Island (AMS W.35543).

**Type locality**
AUSTRALIA: Heron Island, Great Barrier Reef, Queensland, Australia.
Habitat
Subtidal, 15 m, fine sand.

Distribution
Only known from the type locality.

70. *Grania homochaeta* De Wit, Rota & Erséus, 2009

*Grania homochaeta* De Wit, Rota & Erséus, 2009: 23–25, figs 5, 10c.

Type material

Holotype
AUSTRALIA: Queensland, Heron Island (AMS W.35544).

Paratype
AUSTRALIA: Queensland, Heron Island (MNH 7767).

Type locality
AUSTRALIA: Heron Island, Great Barrier Reef, Queensland, Australia.

Habitat
Subtidal, 18 m, gravelly fine sand.

Distribution
Only known from the type locality.

71. *Grania colorata* De Wit, Rota & Erséus, 2009

*Grania colorata* De Wit, Rota & Erséus, 2009: 25–27, figs 6–7, 10d.

Type material

Holotype
AUSTRALIA: Queensland, Heron Island (AMS W.35545).

Paratypes
AUSTRALIA: Queensland, Heron Island (AMS W.35546–35553, SMNH 7768–7772).

Type locality
AUSTRALIA: Heron Island, Great Barrier Reef, Queensland, Australia.

Habitat
Subtidal, 7 m, in heterogeneous sand.

Distribution
Only known from the type locality.

72. *Grania occulta* De Wit & Erséus, 2010

*Grania occulta* De Wit & Erséus, 2010: 287–289, fig. 3.
Type material
Holotype
SWEDEN: Gullmar Fjord (SMNH 7844).

Type locality
SWEDEN: Gullmar Fjord, Bohuslän.

Habitat
Subtidal, 10–25 m, shell sand with some mud.

Distribution
Only known from the type locality.

73. *Grania brasiliensis* Prantoni, De Wit & Erséus, 2016

*Grania brasiliensis* Prantoni, De Wit & Erséus, 2016: 489–491, fig. 1.

Type material
Holotype
BRAZIL: Paraná State, Paranaguá Bay (ZUEC CLI 04).

Paratypes
BRAZIL: Paraná State, Paranaguá Bay (ZUEC CLI 05); São Paulo State, São Paulo (ZUEC CLI 06–07).

Type locality
BRAZIL: Paranaguá Bay, Paraná State.

Habitat
Intertidal, subtidal to 7 m, medium to coarse sand with some mud and lots of mollusc and barnacle shells.

Distribution
Coasts of Paraná and São Paulo States, Brazil.

74. *Grania bekkouchei* Prantoni, De Wit & Erséus, 2016

*Grania bekkouchei* Prantoni, De Wit & Erséus, 2016: 491–492, figs 2, 4a–c.

Type material
Holotype
SOUTH AFRICA: Western Cape (SAMC A82466).

Type locality
SOUTH AFRICA: Western Cape.

Habitat
Intertidal, coarse sand in rock crevice.

Distribution
Only known from the type locality.
Grania cryptica Prantoni, De Wit & Erséus, 2016

Type material

Holotype
SOUTH AFRICA: Western Cape (SAMC A82473).

Type locality
SOUTH AFRICA: Western Cape.

Habitat
Lower intertidal, rockpool.

Distribution
Only known from the type locality.

Grania capensis Prantoni, De Wit & Erséus, 2016

Type material

Holotype
SOUTH AFRICA: Western Cape (SAMC A82474).

Paratype
SOUTH AFRICA: Western Cape (SAMC A82475).

Type locality
SOUTH AFRICA: Western Cape.

Habitat
Lower intertidal, rockpool.

Distribution
Only known from the type locality.

Grania simonae Prantoni, De Wit & Erséus, 2016

Type material

Holotype
SOUTH AFRICA: Western Cape (SAMC A82476).

Paratypes
SOUTH AFRICA: Western Cape (SAMC 82477–82482).

Type locality
SOUTH AFRICA: Western Cape.
Habitat
Intertidal, crevice between rocks.

Distribution
Only known from the type locality.

78. *Grania hinojosai* Prantoni, De Wit & Erséus, 2016

*Grania hinojosai* Prantoni, De Wit & Erséus, 2016: 497–498, fig. 7.

*Grania* sp. Chile 1– De Wit *et al*. 2011: 513.

Type material

Holotype
CHILE: Coquimbo (ZUEC CLI 08).

Paratypes
CHILE: Coquimbo (ZUEC CLI 09–12).

Type locality
CHILE: Coquimbo, Elqui.

Habitat
Intertidal, sand among rocks.

Distribution
Puerto Aldea to Pampilla Point, Coquimbo, Elqui, Chile.

79. *Grania chilensis* Prantoni, De Wit & Erséus, 2016

*Grania chilensis* Prantoni, De Wit & Erséus, 2016: 498–500, fig. 8.

*Grania* sp. Chile 2 – De Wit *et al*. 2011: 513, 517.

Type material

Holotype
CHILE: Valdivia (ZUEC CLI 13).

Paratypes
CHILE: Valdivia (ZUEC CLI 14–19).

Type locality
CHILE: Valdivia.

Habitat
Intertidal, sand among rocks and heterogeneous sand with organic material.

Distribution
Along coast of Chile, from about 30.3° to 39.8° S.
80. *Grania unitheca* Prantoni, De Wit & Erséus, 2016

*Grania unitheca* Prantoni, De Wit & Erséus, 2016: 500–501, fig. 9.

**Type material**

**Holotype**
UNITED STATES: off North Carolina (USNM 1283175).

**Type locality**
UNITED STATES: off North Carolina.

**Habitat**
Subtidal, 17 m, sand.

**Distribution**
Only known from the type locality.

81. *Grania carolinensis* Prantoni, De Wit & Erséus, 2016

*Grania carolinensis* Prantoni, De Wit & Erséus, 2016: 501–502, fig. 10.

**Type material**

**Holotype**
UNITED STATES: off North Carolina (USNM 1283174).

**Type locality**
UNITED STATES: off North Carolina.

**Habitat**
Continental shelf slope, 492 m, sand.

**Distribution**
Only known from the type locality.

**Discussion**

Despite the many species of *Grania* described from the Australian continent and a few other southern regions of the globe (e.g., New Caledonia and Antarctica, see Fig. 2), taxa from the African and South American continents have been completely ignored until recently. This situation changed with the seven new species recently described from Brazil (1), Chile (2) and South Africa (4 spp.) (Prantoni *et al.* 2016).

The geographical distribution of the various species of *Grania* is strongly concordant with the phylogeny of the genus, as estimated by analyses of molecular data (De Wit *et al.* 2011; Prantoni *et al.* 2016). Most of the individual species appear to be endemic to rather small geographical areas, which suggests a limited capability of dispersion. However, as a whole, the genus is divided into at least three distinct evolutionary lineages, each with a broad, but geographically coherent distribution in the world; this is based on a sample of 28 genetically analyzed species (Prantoni *et al.* 2016). The first lineage (green numbers on Fig. 2) comprises species from the Atlantic Ocean (including a sublineage of four species from South Africa). The second (blue numbers) are species from Australia and southern Asia (Hong...
PRANTONI A. et al., Global checklist of \textit{Grania}

Kong), and the third are species from the South Pacific and Atlantic regions (red numbers). An interesting aspect is the phylogenetic placement of \textit{G. americana} in the North Atlantic and \textit{G. brasiliensis} in the South Atlantic. These two species belong to an otherwise Pacific group (the third lineage), and it is suggested that they share a common ancestor that migrated from the Pacific region before the closing of the Isthmus of Panama 3 Ma (De Wit \textit{et al.} 2011; Prantoni \textit{et al.} 2016). However, as most Neotropical coasts remain unexplored, additional species of \textit{Grania} from both sides of South America are needed to corroborate (or refute) this hypothesis.

In conclusion, more intense sampling efforts in many parts of the world are crucial to enable further studies of the evolutionary and biogeographical history of \textit{Grania}. The 81 species described to date is a high number for a marine genus of Enchytraeidae, and yet, this number certainly does not represent the actual diversity of the genus \textit{Grania}. Overall, our systematic knowledge of marine clitellates (oligochaetes and leeches) is poor, with perhaps only about 10\% of the species diversity known (Appeltans \textit{et al.} 2012). The lack of specialists around the world is evidently one of the reasons for this (Prantoni \textit{et al.} 2014), but it is also a threat to any rapid improvement of the situation. As a partial solution, the combined efforts of taxonomists and ecologists may come as a first and necessary step towards a better understanding of the group as well as of marine clitellate species diversity as a whole.

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![Fig. 2. World map showing the description localities, and the three evolutionary lineages (color-marked) of \textit{Grania} spp. genetically analyzed by Prantoni \textit{et al.} (2016: clades A, B and C). Green numbers = Atlantic species (clade A); red numbers = South Pacific and Atlantic species (clade B); blue numbers = Australian and Asian species (clade C); black numbers = species presently without molecular data, i.e., not yet allocated to any particular lineage.](image-url)
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40
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42
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Artikel/Article: Global checklist of species of Grania (Clitellata: Enchytraeidae) with remarks on their geographic distributio 1-44