

ONLINE RESOURCES

Biodiversity and biogeography of hydroids in southern South America and Antarctica: an approach using marine ecoregions and provinces – Polar Biology

Miranda, T.P.^{1*}, Fernandez, M.O.², Genzano, G.N.³, Peña Cantero, A.L.⁴, Collins, A.G.⁵ & Marques, A.C.²

¹Departamento de Biologia Animal e Vegetal, Centro de Ciências Biológicas, Universidade Estadual de Londrina, PR, Brazil, ²Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, São Paulo, SP, Brazil, ³Estación Costera J.J. Nagera, Universidad Nacional de Mar del Plata, Funes 3350, 7600 Mar del Plata, Argentina. Instituto de Investigaciones Marinas y Costeras, Consejo Nacional de Investigaciones Científicas y Técnicas (IIMyC-CONICET), Argentina., ⁴Instituto Cavanilles de Biodiversidad y Biología Evolutiva/Departamento de Zoología, Universidad de Valencia, Valencia, Spain, ⁵National Systematics Laboratory of NOAA's Fisheries Service, National Museum of Natural History, Smithsonian Institution, Washington, DC, USA.

*Corresponding author: thaispmir@gmail.com

Table S1 List of species of hydroids studied, latitudinal range recorded, distribution in literature, category of endemicity and provenance of the records.¹According to Blanco (1994), Calder (1988, 1991, 1997), Svoboda & Stepanjants (2001), Peña Cantero & Vervoort (2003), Vervoort & Watson (2003), Calder & Cairns (2009), El Beshbeeshy & Jarms (2011), Oliveira et al. (2016), Peña Cantero (2014), Calder & Choong (2018), Cunha et al. (2017, 2020), Schuchert (2021); ²Endemic species of southern South America and Antarctica and their range of endemicity in the area; ³DZOO-UFPR: Departamento de Zoologia-Universidade Federal do Paraná; FCNyM-UNLP: Facultad de Ciencias Naturales y Museo-Universidad Nacional de La Plata; MCN-FZB: Museu de Ciências Naturais-Fundação Zoobotânica do Rio Grande do Sul; MNHNU: Museo Nacional de Historia Natural del Uruguay; MHNG: Muséum d'Histoire Naturelle de la Ville Genève; MNRJ: Museu Nacional, Universidade Federal do Rio de Janeiro; MZUSP: Museu de Zoologia, Universidade de São Paulo; UNMdP: Universidad Nacional Mar del Plata; USNM: National Museum of Natural History, Smithsonian Institution; UV: Universidad de Valencia; ZMH: Zoologisches Museum Hamburg.

| Species | Latitudinal range | Distribution in literature ¹ | Category of endemicity | Provenance ³ |
|---|-------------------|---|------------------------|-----------------------------------|
| CLASS HYDRÖZOA OWEN, 1843 | | | | |
| Hydrozoan not identified | 22°S to 77°S | – | – | MNHNU, MNRJ, USNM |
| SUBCLASS HYDROIDOLINA COLLINS, 2000 | | | | |
| “SUPERORDER ANTHOATHECATA” CORNELIUS, 1992 – NOT MONOPHYLETIC | | | | |
| Anthoathecata not identified | 20°S to 64°S | – | – | MCN-FZB, MNRJ, MZUSP, USNM |
| ORDER APLANULATA COLLINS, WINKELMANN, HADRYNS & SCHIERWATER, 2005 | | | | |
| FAMILY CORYMORPHIDAE ALLMAN, 1872 | | | | |
| <i>Corymorpha januarii</i> Steenstrup, 1855 | 39°S to 43°S | Endemic ² (22°S to 43°S) | Tropical+subtropical | UNMdP |
| <i>Corymorpha microrhiza</i> (Hickson & Gravelly, 1907) | 64°S to 78°S | Endemic (71°S to 78°S) | Antarctic | USNM; Svoboda & Stepanjants, 2001 |
| <i>Zyzyzus parvula</i> (Hickson & Gravelly, 1907) | 63°S to 79°S | Endemic (64°S to 77°S) | Antarctic | USNM; Svoboda & Stepanjants, 2001 |

| FAMILY TUBULARIIDAE FLEMING, 1828 | | | | | |
|--|--------------|--------------------------------|--------------------|---|-------------------------|
| <i>Bouillonia denhartogi</i> Svoboda, Stepanjants & Ljubenkov, 2006 | 66°S to 67°S | Endemic (56°S to 72°S) | Magellan+Antarctic | – | USNM |
| <i>Ectopleura crocea</i> (L. Agassiz, 1862) | 22°S to 53°S | Worldwide | – | – | DZOO-UFPR, UNMdp, MZUSP |
| <i>Ectopleura obypa</i> Migotto & Marques, 1999 | 23°S to 24°S | Endemic (23°S to 24°S) | Tropical | – | MZUSP |
| <i>Ectopleura</i> sp. | 22°S to 23°S | Worldwide | – | – | MZUSP |
| <i>Hybocodon chilensis</i> Hartlaub, 1905 | 53°S to 55°S | SE Pacific, SW Atlantic | – | – | MZUSP, UNMdp, UV |
| ? <i>Hybocodon chilensis</i> Hartlaub, 1905 | 54°S to 55°S | SE Pacific, SW Atlantic | – | – | UV |
| <i>Zyzyzus warreni</i> Calder, 1988 | 23°S to 28°S | Atlantic, NW Pacific, W Indian | – | – | MZUSP |
| ORDER CAPITATA KÜHN, 1913 | | | | | |
| FAMILY CLADOCORYNIDAE ALLMAN, 1872 | | | | | |
| <i>Cladocoryne floccosa</i> Rotch, 1871 | 23°S to 28°S | Worldwide | – | – | DZOO-UFPR, MZUSP |
| FAMILY CLADONEMATIDAE GEGENBAUR, 1856 | | | | | |
| <i>Cladonema radiatum</i> Dujardin, 1843 | 23°S to 24°S | Worldwide | – | – | MZUSP |
| FAMILY CORYNIDAE JOHNSTON, 1836 | | | | | |
| <i>Coryne eximia</i> Allman, 1859 | 28°S to 54°S | Worldwide | – | – | MNRJ, MZUSP, UNMdp |
| <i>Stauridiosarsia reesi</i> (Vannucci, 1956) | 40°S to 41°S | Atlantic, Mediterranean Sea | – | – | UNMdp |
| FAMILY PENNARIIDAE MCCRADY, 1859 | | | | | |
| <i>Pennaria disticha</i> Goldfuss, 1820 | 23°S to 28°S | Worldwide | – | – | DZOO-UFPR, MZUSP |
| FAMILY SPHAEROCORYNIDAE PRÉVOT, 1959 | | | | | |
| <i>Sphaerocoryne</i> sp. | 27°S to 28°S | Worldwide | – | – | MZUSP |
| "ORDER FILIFERA" KÜHN, 1913 – NOT MONOPHYLETIC | | | | | |
| Filifera not identified | 22°S to 54°S | – | – | – | MCN-FZB, MNRJ, MZUSP |
| FAMILY CLATHROZOELLIDAE PEÑA CANTERO, VERVOORT & WATSON, 2003 | | | | | |
| <i>Clathrozoella abyssalis</i> Peña Cantero, Vervoort & Watson, 2003 | 58°S to 59°S | Endemic (58°S to 59°S) | Magellan | – | USNM |
| <i>Clathrozoella medeae</i> Peña Cantero, Vervoort & Watson, 2003 | 60°S to 64°S | Endemic (60°S to 64°S) | Antarctic | – | USNM |
| FAMILY CORDYLOPHORIDAE VON LENDENFELD, 1885 | | | | | |
| <i>Cordylophora caspia</i> (Pallas, 1771) | 34°S to 35°S | Worldwide | – | – | MZUSP |
| FAMILY EUDENDRIIDAE L. AGASSIZ, 1862 | | | | | |
| Eudendriidae not identified | 32°S to 63°S | – | – | – | MCN-FZB, USNM, UV |

| | | | | |
|---|--------------|---|--------------------|--|
| <i>Eudendrium capillare</i> Alder, 1856 | 23°S to 24°S | Worldwide | – | MZUSP |
| <i>Eudendrium caraiuru</i> Marques & Oliveira, 2003 | 22°S to 39°S | SW Atlantic | – | DZOO-UFPR, MZUSP, UNMdP |
| <i>Eudendrium carneum</i> Clarke, 1882 | 23°S to 29°S | Worldwide | – | DZOO-UFPR, MZUSP |
| <i>Eudendrium merulum</i> Watson, 1985 | 27°S to 28°S | N Atlantic, Mediterranean, SE Indian, SW Pacific | – | MZUSP |
| <i>Eudendrium pocaruquarum</i> Marques, 1995 | 23°S to 24°S | SW Atlantic | – | MZUSP |
| <i>Eudendrium ramosum</i> (Linnaeus, 1758) | 22°S to 42°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, UNMdP |
| <i>Eudendrium</i> sp. | 22°S to 68°S | Worldwide | – | DZOO-UFPR, MCN- FZB, MNRJ, MZUSP, USNM |
| <i>Eudendrium tottoni</i> Stechow, 1932 | 64°S to 65°S | Endemic (54°S to 78°S) | Magellan+Antarctic | USNM |
| FAMILY HYDRACTINIDAE L. AGASSIZ, 1862 | | | | |
| Hydractinidae not identified | 52°S to 55°S | – | – | UV |
| <i>Hydractinia</i> sp. | 25°S to 26°S | Worldwide | – | DZOO-UFPR, MZUSP |
| <i>Hydractinia uniformis</i> Stampar, Tronolone & Morandini, 2006 | 23°S to 24°S | Endemic (23°S to 24°S) | Tropical | MZUSP |
| SUPERORDER LEPTOTHECATA CORNELIUS, 1992 | | | | |
| Leptothecata not identified | 53°S to 73°S | – | – | USNM |
| ORDER INCERTAE SEDIS | | | | |
| FAMILY HEBELLIDAE FRASER, 1912 | | | | |
| Hebellidae not identified | 54°S to 55°S | – | – | UV |
| <i>Halisiphonia</i> sp. | 53°S to 54°S | Artic, Atlantic, W Pacific, SE Indian, Southern Ocean | – | UV |
| <i>Hebella scandens</i> (Bale, 1888) | 23°S to 38°S | Worldwide | – | DZOO-UFPR, MZUSP, UNMdP |
| <i>Hebella</i> sp. | 53°S to 57°S | Worldwide | – | USNM, UV |
| <i>Hebella striata</i> Allman, 1888 | 52°S to 55°S | SW Atlantic, S Pacific | – | UV |
| <i>Hebella ?striata</i> Allman, 1888 | 54°S to 55°S | SW Atlantic, S Pacific | – | UV |
| <i>Scandia mutabilis</i> (Ritchie, 1907) | 23°S to 28°S | Worldwide | – | DZOO-UFPR, MZUSP |
| FAMILY INCERTAE SEDIS | | | | |
| <i>Billardia subrufa</i> (Jäderholm, 1904) | 62°S to 78°S | Endemic (52°S to 78°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM, UV |

| | | | | |
|--|--------------|--|--------------------|--|
| <i>Billardia</i> sp. | 61°S to 65°S | S Atlantic, S Pacific, Southern Ocean | – | MCN-FZB, MZUSP |
| FAMILY MELICERTIDAE L. AGASSIZ, 1862 | | | | |
| <i>Stegella lobata</i> (Vanhöffen, 1910) | 61°S to 78°S | Endemic (54°S-78°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM |
| ORDER LAFOEIDA BOUILLON, 1984, <i>SENSU NOVUM</i> | | | | |
| FAMILY LAFOEIDAE A. AGASSIZ, 1865 | | | | |
| Lafoeidae not identified | 31°S to 32°S | – | – | MCN-FZB, MZUSP |
| <i>Acryptolaria conferta</i> (Allman, 1877) | 22°S to 57°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Acryptolaria crassicaulis</i> (Allman, 1888) | Not recorded | N Atlantic, SW Pacific | – | USNM |
| <i>Acryptolaria ?encarnae</i> Peña Cantero & Vervoort, 2010 | 53°S to 54°S | SW Pacific | – | UV |
| <i>Acryptolaria ?flabellum</i> (Allman, 1888) | 54°S to 55°S | NW Atlantic | – | UV |
| <i>Acryptolaria longithecata</i> (Allman, 1877) | 48°S to 49°S | N Atlantic, Mediterranean Sea, SW Pacific | – | USNM |
| <i>Acryptolaria minuta</i> Watson, 2003 | 57°S to 58°S | SW Pacific | – | USNM |
| <i>Acryptolaria operculata</i> Stepanjants, 1979 | 53°S to 57°S | Endemic (38°S to 43°S) | Subtropical | UV |
| <i>Acryptolaria</i> sp. | 54°S to 65°S | Worldwide | – | MNRJ, MZUSP, USNM, UV |
| <i>Cryptolarella abyssicola</i> (Allman, 1888) | Not recorded | Worldwide (scattered records) | – | MNRJ, MZUSP |
| ? <i>Filellum annulatum</i> (Watson, 1973) | 72°S to 73°S | SW Pacific | – | USNM |
| <i>Filellum antarcticum</i> (Hartlaub, 1904) | 52°S to 53°S | SE Atlantic, Southern Ocean | – | UV |
| <i>Filellum bouvetensis</i> Marques, Peña Cantero, Miranda & Migotto, 2011 | Not recorded | Bouvet Island | – | UNMdP |
| <i>Filellum</i> sp. | 22°S to 78°S | Worldwide | – | DZOO-UFPR, MCN-FZB, MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Grammaria abietina</i> (M. Sars, 1851) | 36°S to 55°S | Arctic, N, SW Atlantic, SE Pacific | – | UNMdP, UV |
| <i>Grammaria</i> sp. | 38°S to 56°S | Arctic, Atlantic, N Pacific | – | MCN-FZB, MZUSP, UV |
| <i>Lafoea coalescens</i> Allman, 1877 | 22°S to 23°S | W Atlantic | – | MNRJ, MZUSP |
| <i>Lafoea dumosa</i> (Fleming, 1820) | 31°S to 73°S | Atlantic, North Sea, Mediterranean Sea, SW Pacific | – | MCN-FZB, MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Lafoea gaussica</i> Vanhöffen, 1910 | 77°S to 78°S | Endemic (77°S to 78°S) | Antarctic | USNM |

| | | | | |
|--|--------------|---|--------------------|---------------------------------|
| <i>Lafoea</i> sp. | 22°S to 63°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, USNM, UV |
| <i>Zygophylax infundibulum</i> Millard, 1958 | Not recorded | SW Atlantic, SW Pacific | – | MNRJ, MZUSP |
| <i>Zygophylax sibogae</i> Billard, 1918 | 22°S to 23°S | N, SW Atlantic, S Pacific | – | MZUSP |
| <i>Zygophylax</i> sp. | Not recorded | Worldwide | – | MNRJ, MZUSP |
| FAMILY SYNTHECIIDAE MARKTANNER-TURNERETSCHER, 1890 | | | | |
| Syntheциidae not identified | 22°S to 23°S | – | – | MNRJ, MZUSP |
| <i>Hincksella cylindrica</i> (Bale, 1888) | 22°S to 28°S | Atlantic, SW Pacific | – | MNRJ, MZUSP |
| <i>Syntheциum protectum</i> Jäderholm, 1903 | 35°S to 55°S | SW Atlantic, SW Pacific | – | UNMDP, USNM, UV |
| <i>Syntheциum</i> sp. | 22°S to 55°S | Worldwide | – | MNRJ, MZUSP, UV |
| <i>Syntheциum tubithecum</i> (Allman, 1877) | 22°S to 23°S | Atlantic | – | MNRJ, MZUSP |
| ORDER LAODICEIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| FAMILY TIARANNIDAE RUSSELL, 1940 | | | | |
| <i>Stegolaria irregularis</i> Totton, 1930 | 29°S to 74°S | SW Pacific | – | MNRJ, MZUSP, UNMDP, USNM |
| ORDER MACROCOLONIA LECLÈRE, SCHUCHERT, CRUAUD, COULOUX & MANUEL, 2009 | | | | |
| SUBORDER HALECIIDA BOUILLON, 1984 <i>SENSU NOVUM</i> | | | | |
| FAMILY HALECIIDAE HINCKS, 1868 | | | | |
| Haleciidae not identified | 22°S to 28°S | – | – | MNRJ, MZUSP |
| <i>Halecium antarcticum</i> Vanhöffen, 1910 | 62°S to 63°S | Endemic (54°S to 63°S) | Magellan+Antarctic | MCN-FZB, MZUSP |
| <i>Halecium ?antarcticum</i> Vanhöffen, 1910 | 54°S to 55°S | S Atlantic, Southern Ocean | – | MZUSP |
| <i>Halecium beanii</i> (Johnston, 1838) | 35°S to 54°S | N, SW Atlantic, North Sea, Mediterranean Sea, Red Sea, SE Pacific | – | MNRJ, MZUSP, UNMDP, USNM, UV |
| <i>Halecium bermudense</i> Congdon, 1907 | 22°S to 28°S | W Atlantic, E Pacific | – | MNRJ, MZUSP |
| <i>Halecium delicatulum</i> Coughtrey, 1876 | 23°S to 78°S | Atlantic, Mediterranean Sea, Indian, SW Pacific | – | MCN-FZB, MZUSP, UNMDP, USNM, UV |
| <i>Halecium dichotomum</i> Allman, 1888 | 23°S to 36°S | S Atlantic | – | MCN-FZB, MZUSP |
| <i>Halecium dyssymetrum</i> Billard, 1929 | 23°S to 28°S | W Atlantic, Indian, W Pacific | – | DZOO- UFPR, MZUSP |
| <i>Halecium ?dyssymetrum</i> Billard, 1929 | 22°S to 34°S | W Atlantic, Indian, W Pacific | – | MCN-FZB, MNRJ, MZUSP |
| <i>Halecium interpolatum</i> Ritchie, 1907 | 54°S to 77°S | Endemic (54°S to 75°S) | Magellan+Antarctic | MNRJ, MZUSP, USNM |
| <i>Halecium jaederholmi</i> Vervoort, 1972 | 60°S to 78°S | Endemic (41°S to 78°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM |

| | | | | |
|--|--------------|--|----------------------|-----------------------------------|
| <i>?Halecium jaederholmi</i> Vervoort, 1972 | 62°S to 64°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP |
| <i>Halecium lightbourni</i> Calder, 1991 | 23°S to 28°S | W Atlantic | – | MNRJ, MZUSP |
| <i>Halecium pallens</i> Jäderholm, 1904 | 60°S to 78°S | Endemic (53°S to 78°S) | Magellan+Antarctic | USNM |
| <i>Halecium secundum</i> Jäderholm, 1904 | Not recorded | Endemic (64°S to 74°S) | Antarctic | USNM |
| <i>Halecium</i> sp. | 27°S to 75°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, USNM, UV |
| <i>Halecium tenellum</i> Hincks, 1861 | 23°S to 53°S | Worldwide | – | MZUSP, USNM |
| <i>Hydrodendron arboreum</i> (Allman, 1888) | 60°S to 63°S | Endemic (54°S to 68°S) | Magellan+Antarctic | USNM |
| <i>Hydrodendron</i> sp. | 23°S to 24°S | N, SW Atlantic, Mediterranean Sea, Black Sea, Indian, S Pacific | – | MNRJ, MZUSP |
| <i>Nemalium lighti</i> (Hargitt, 1924) | 22°S to 24°S | SW Atlantic, Indian, W Pacific | – | MNRJ, MZUSP |
| SUBORDER PLUMUPHENIIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| INFRAORDER AGLAOPHENIIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| FAMILY AGLAOPHENIIDAE MARKTANNER-TURNERETSCHER, 1890 | | | | |
| <i>Aglaophenia acacia</i> Allman, 1883 | 34°S to 43°S | W Atlantic, Mediterranean Sea | – | MCN-FZB, MNHNU, MNRJ, UNMdP |
| <i>Aglaophenia latecarinata</i> Allman, 1877 | 22°S to 29°S | Atlantic, Red Sea, Indian, W Pacific | – | DZOO-UFPR, MZUSP |
| <i>Aglaophenia rhynchocarpa</i> Allman, 1877 | 26°S to 27°S | W Atlantic | – | DZOO-UFPR, MZUSP |
| <i>Aglaophenia trifida</i> L. Agassiz, 1862 | 22°S to 24°S | W Atlantic | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Gymnangium allmani</i> (Marktanner-Turneretscher, 1890) | 22°S to 23°S | W Atlantic | – | DZOO-UFPR, MZUSP |
| <i>Lytocarpia canepa</i> Blanco & Bellusci de Miralles, 1971 | 38°S to 57°S | Endemic (37°S to 56°S) | Subtropical+Magellan | UNMdP, UV |
| <i>Lytocarpia ?canepa</i> Blanco & Bellusci de Miralles, 1971 | 53°S to 55°S | SW Atlantic | – | UV |
| <i>Lytocarpia tridentata</i> (Versluys, 1899) | 23°S to 29°S | W Atlantic | – | MZUSP |
| <i>Macrorhynchia grandis</i> (Clarke, 1879) | 22°S to 23°S | W Atlantic | – | DZOO-UFPR, MZUSP |
| <i>Macrorhynchia philippina</i> Kirchenpauer, 1872 | 23°S to 28°S | Worldwide | – | DZOO-UFPR, MZUSP |
| INFRAORDER PLUMULARIIDA BOUILLON, 1984 <i>SENSU NOVUM</i> | | | | |
| FAMILY HALOPTERIDIDAE MILLARD, 1962 | | | | |
| Halopterididae not identified | 23°S to 63°S | – | – | MZUSP, USNM |
| <i>Antemella secundaria</i> (Gmelin, 1791) | 27°S to 28°S | N, SW Atlantic, North Sea, | – | MZUSP |

| | | | | |
|---|--------------|--|----------------------|---------------------------|
| <i>Antennella</i> sp. | 53°S to 54°S | Mediterranean Sea, Red Sea, SW Pacific | – | UV |
| <i>Halopteris alternata</i> (Nutting, 1900) | 23°S to 24°S | Worldwide | – | MNRJ, MZUSP |
| <i>Halopteris carinata</i> Allman, 1877 | 26°S to 27°S | N, SW, Atlantic | – | DZOO-UFPR, MZUSP |
| <i>Halopteris ?catharina</i> (Johnston, 1833) | 53°S to 54°S | W Atlantic | – | UV |
| <i>Halopteris diaphana</i> (Heller, 1868) | 23°S to 27°S | N, SW Atlantic, North Sea, Mediterranean Sea | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Halopteris minuta</i> (Trebilcock, 1928) | 41°S to 43°S | N, SW Atlantic, Mediterranean Sea | – | UNMdP |
| <i>Halopteris plumosa</i> Galea & Schories, 2012 | 52°S to 54°S | SW Atlantic, Indian Endemic (29°S, 39°S to 40°S) | Tropical+Subtropical | UV |
| <i>Halopteris polymorpha</i> (Billard, 1913) | 22°S to 54°S | S Atlantic, S Pacific | – | DZOO-UFPR, MZUSP, UV |
| <i>Halopteris</i> sp. | 53°S to 54°S | Worldwide | – | USNM, UV |
| <i>Halopteris tenella</i> (Verrill, 1874) | 52°S to 53°S | N, SW Atlantic, E Pacific | – | USNM |
| <i>Monostaechas quadridens</i> (McCrary, 1859) | 22°S to 39°S | N, SW Atlantic, Indian, N, SW Pacific | – | MNRJ, MZUSP, UNMdP |
| FAMILY KIRCHENPAUERIIDAE STECHOW, 1921 | | | | |
| <i>Oswaldella antarctica</i> (Jäderholm, 1904) | 60°S to 78°S | Endemic (60°S to 78°S) | Antarctic | USNM |
| <i>Oswaldella bifurca</i> (Hartlaub, 1904) | 67°S to 77°S | Endemic (67°S to 77°S) | Antarctic | USNM |
| <i>Oswaldella billardi</i> Briggs, 1938 | 65°S to 76°S | Endemic (65°S to 76°S) | Antarctic | USNM |
| <i>Oswaldella blanconae</i> Peña Cantero, 2017 | 63°S to 73°S | Endemic (63° to 73°S) | Antarctic | USNM |
| <i>Oswaldella crassa</i> Peña Cantero & Vervoort, 1998 | 62°S to 63°S | Endemic (62°S to 63°S) | Antarctic | USNM |
| <i>Oswaldella curiosa</i> Peña Cantero & Vervoort, 1998 | 62°S to 63°S | Endemic (62°S to 63°S) | Antarctic | USNM |
| <i>Oswaldella delicata</i> Peña Cantero, Svoboda & Vervoort, 1997 | 62°S to 79°S | Endemic (62°S to 79°S) | Antarctic | USNM |
| <i>Oswaldella elongata</i> Peña Cantero, García Carrascosa & Vervoort, 1995 | 54°S to 55°S | Endemic (54°S to 55°S) | Magellan | UV |
| <i>Oswaldella encarnae</i> Peña Cantero, Svoboda & Vervoort, 1997 | 76°S to 78°S | Endemic (76°S to 78°S) | Antarctic | USNM |
| <i>Oswaldella erratum</i> Peña Cantero & Vervoort, 1997 | 54°S to 78°S | Endemic (54°S to 78°S) | Magellan+Antarctic | USNM |
| <i>Oswaldella frigida</i> Peña Cantero & Vervoort, 2004 | 62°S to 64°S | Endemic (62°S to 64°S) | Antarctic | USNM |

| | | | | |
|--|--------------|--|--------------------|----------------------|
| <i>Oswaldella garciacarrascosai</i> Peña Cantero, Svoboda & Vervoort, 1997 | 76°S to 77°S | Endemic (76°S to 77°S) | Antarctic | UV |
| <i>Oswaldella gracilis</i> Peña Cantero, Svoboda & Vervoort, 1997 | 75°S to 76°S | Endemic (75° to 76°S) | Antarctic | UV |
| <i>Oswaldella grandis</i> Peña Cantero, Svoboda & Vervoort, 1997 | 61°S to 77°S | Endemic (61°S to 77°S) | Antarctic | USNM |
| <i>Oswaldella ?grandis</i> Peña Cantero, Svoboda & Vervoort, 1997 | 62°S to 63°S | – | – | USNM |
| <i>Oswaldella herwigi</i> El Beshbeeshy, 2011 | 52°S to 54°S | Endemic (52°S to 54°S) | Magellan | USNM |
| <i>Oswaldella incognita</i> Peña Cantero, Svoboda & Vervoort, 1997 | 58°S to 67°S | Endemic (58°S to 67°S) | Magellan+Antarctic | USNM |
| <i>Oswaldella laertesii</i> Peña Cantero, 2007 | 71°S to 72°S | Endemic (71°S to 72°S) | Antarctic | UV |
| <i>Oswaldella medeae</i> Peña Cantero & Vervoort, 2004 | 62°S to 75°S | Endemic (62°S to 75°S) | Antarctic | USNM |
| <i>Oswaldella monomammillata</i> Peña Cantero & Vervoort, 2004 | 62°S to 63°S | Endemic (62°S to 63°S) | Antarctic | USNM |
| <i>Oswaldella niobae</i> Peña Cantero & Ramil, 2006 | 62°S to 63°S | Endemic (62°S to 63°S) | Antarctic | UV |
| <i>Oswaldella obscura</i> Peña Cantero, Svoboda & Vervoort, 1997 | 70°S to 77°S | Endemic (70°S to 77°S) | Antarctic | UV |
| <i>Oswaldella rigida</i> Peña Cantero, Svoboda & Vervoort, 1997 | 70°S to 77°S | Endemic (70°S to 77°S) | Antarctic | UV |
| <i>Oswaldella shetlandica</i> Stepanjants, 1979 | 58°S to 66°S | Endemic (58°S to 66°S) | Magellan+Antarctic | USNM |
| <i>Oswaldella ?shetlandica</i> Stepanjants, 1979 | 62°S to 63°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP |
| <i>Oswaldella</i> sp. | 54°S to 78°S | SW Atlantic, SE Pacific, Southern Ocean | – | MCN-FZB, MZUSP, USNM |
| <i>Oswaldella</i> sp. 1 | 62°S to 67°S | SW Atlantic, SE Pacific, Southern Ocean | – | USNM |
| <i>Oswaldella</i> sp. 2 | 66°S to 67°S | SW Atlantic, SE Pacific, Southern Ocean | – | USNM |
| <i>Oswaldella terranova</i> Peña Cantero & Vervoort, 1996 | 62°S to 77°S | Endemic (62°S to 77°S) | Antarctic | USNM |
| <i>Oswaldella totoni</i> Peña Cantero & Vervoort, 1996 | 61°S to 77°S | Endemic (61°S to 77°S) | Antarctic | USNM |
| <i>Oswaldella vervoorti</i> Peña Cantero & García Carrascosa, 1998 | 54°S to 55°S | Endemic (54°S to 55°S) | Magellan | USNM |
| <i>Pycnotheca mirabilis</i> (Allman, 1888) | 23°S to 29°S | SW Atlantic, Red Sea, Indian, N, SW Pacific, | – | DZOO-UFPR, MZUSP |

| | | | | |
|---|--------------|---|--------------------|---------------------------------------|
| <i>Ventromma halecioides</i> (Alder, 1859) | 22°S to 54°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP, UV |
| FAMILY PLUMULARIIDAE MCCRADY, 1859 | | | | |
| Plumulariidae not identified | 27°S to 54°S | – | – | MZUSP, UV |
| <i>Dentitheca bidentata</i> (Jäderholm, 1920) | 25°S to 27°S | S Atlantic, Indian | – | DZOO-UFPR, MZUSP |
| <i>Monothecha margaretta</i> Nutting, 1900 | 23°S to 28°S | Atlantic, Mediterranean Sea, E Pacific | – | DZOO-UFPR, MZUSP |
| <i>Monothecha pulchella</i> (Bale, 1882) | 38°S to 43°S | N Atlantic, Mediterranean Sea, SW Pacific | – | UNMdP |
| <i>Nemertesia antennina</i> (Linnaeus, 1758) | 33°S to 35°S | N, SW Atlantic, North Sea, Mediterranean Sea, N Pacific | – | MNHNU, MZUSP |
| ? <i>Nemertesia ciliata</i> Bale, 1914 | 23°S to 24°S | SW Atlantic, Pacific | – | DZOO-UFPR, MZUSP |
| <i>Nemertesia cymodocea</i> (Busk, 1851) | 52°S to 54°S | SW Atlantic, SW Pacific | – | UV |
| <i>Nemertesia ramosa</i> (Lamarck, 1816) | 26°S to 43°S | N, SW Atlantic, North Sea, Mediterranean Sea, Red Sea | – | DZOO-UFPR, MZUSP, UNMdP |
| <i>Nemertesia</i> sp. | 43°S to 54°S | Worldwide | – | MNRJ, MZUSP, UV |
| <i>Nemertesia vervoorti</i> El Beshbeeshy, 2011 | 53°S to 55°S | Endemic (30°S to 55°S) | Magellan | UV |
| <i>Plumularia floridana</i> Nutting, 1900 | 23°S to 26°S | Worldwide | – | MNRJ, MZUSP |
| <i>Plumularia insignis</i> Allman, 1883 | 35°S to 44°S | SW Atlantic, SW Pacific | – | UNMdP |
| <i>Plumularia setacea</i> (Linnaeus, 1758) | 23°S to 55°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Plumularia strictocarpa</i> Pictet, 1893 | 23°S to 47°S | Atlantic, Indian, W Pacific | – | DZOO-UFPR, MCN-FZB, MNRJ, MZUSP |
| FAMILY SCHIZOTRICHIDAE PEÑA CANTERO, SENTANDREU & LATORRE, 2010 | | | | |
| <i>Schizotricha anderssoni</i> Jäderholm, 1904 | 53°S to 73°S | Endemic (53°S to 73°S) | Magellan+Antarctic | USNM |
| <i>Schizotricha crassa</i> Peña Cantero & Vervoort, 2004 | 56°S to 63°S | Endemic (56°S to 63°S) | Magellan+Antarctic | USNM |
| <i>Schizotricha ?crassa</i> Peña Cantero & Vervoort, 2004 | Not recorded | SW Atlantic, Southern Ocean | – | MZUSP |
| <i>Schizotricha falcata</i> Peña Cantero, 1998 | 63°S to 65°S | Endemic (63°S to 65°S) | Antarctic | USNM |

| | | | | |
|--|--------------|-----------------------------|--------------------|----------------------|
| <i>Schizotricha jaederholmi</i> Peña Cantero & Vervoort, 1996 | 54°S to 55°S | Endemic (54°S to 55°S) | Magellan | USNM |
| <i>Schizotricha multifurcata</i> Allman, 1883 | 57°S to 60°S | Endemic (57°S to 60°S) | Magellan | USNM |
| <i>Schizotricha nana</i> Peña Cantero, Svoboda & Vervoort, 1996 | 56°S to 78°S | Endemic (56°S to 78°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM |
| <i>Schizotricha ?nana</i> Peña Cantero, Svoboda & Vervoort, 1996 | 71°S to 72°S | Southern Ocean | – | USNM |
| <i>Schizotricha southgeorgiae</i> Peña Cantero & Vervoort, 2004 | 66°S to 67°S | Endemic (66°S to 67°S) | Antarctic | USNM |
| <i>Schizotricha</i> sp. | 61°S to 64°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP |
| <i>Schizotricha trinematotheca</i> Peña Cantero & Vervoort, 2005 | 66°S to 67°S | Endemic (66°S to 67°S) | Antarctic | USNM |
| <i>Schizotricha turqueti</i> Billard, 1906 | 57°S to 78°S | Endemic (57°S to 78°S) | Magellan+Antarctic | USNM |
| <i>Schizotricha unifurcata</i> Allman, 1883 | 53°S to 63°S | Endemic (53°S to 63°S) | Magellan+Antarctic | USNM |
| <i>Schizotricha verwoorti</i> Peña Cantero, 1998 | 54°S to 69°S | Endemic (54°S to 69°S) | Magellan+Antarctic | USNM |
| <i>Schizotricha ?verwoorti</i> Peña Cantero, 1998 | 62°S to 63°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP |

SUBORDER SERTULARIIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016

FAMILY SERTULARELLIDAE MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016

| | | | | |
|---|--------------|--|-----------------------------------|---|
| <i>Sertularella antarctica</i> Hartlaub, 1900 | 43°S to 64°S | Endemic (43°S to 64°S) | Magellan+Antarctic | FCNyM-UNLP, MCN-FZB, MHNG, MNRJ, MZUSP, USNM, UV, ZMH |
| <i>Sertularella areyi</i> Nutting, 1904 | 23°S to 28°S | W Atlantic, N, SW Pacific | – | MZUSP |
| <i>Sertularella clausa</i> (Allman, 1888) | 43°S to 55°S | Endemic (40°S to 55°S) | Subtropical+Magellan | FCNyM-UNLP, ZMH |
| <i>Sertularella conica</i> Allman, 1877 | 22°S to 57°S | Atlantic, Indian, E Pacific | – | DZOO-UFPR, MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Sertularella cruzensis</i> El Beshbeeshy, 2011 | 39°S to 54°S | Endemic (39°S to 54°S) | Subtropical+Magellan | MHNG, ZMH |
| <i>Sertularella fuegonensis</i> El Beshbeeshy, 2011 | 29°S to 55°S | Endemic (29°S to 55°S) | Southern South America+Antarctica | MHNG, MNRJ, MZUSP, USNM, UV, ZMH |
| <i>Sertularella gaudichaudi</i> (Lamouroux, 1824) | 29°S to 63°S | N, SW Atlantic, North Sea, Mediterranean Sea, Southern Ocean | – | FCNyM-UNLP, MCN-FZB, MZUSP, UNMdP, USNM, UV, ZMH |

| | | | | |
|---|--------------|--|----------------------|--|
| <i>Sertularella gayi</i> (Lamouroux, 1821) | 41°S to 64°S | N, SW Atlantic, North Sea, Mediterranean Sea, SW Pacific | – | FCNyM-UNLP, MHNG, MNRJ, MZUSP, USNM, UV, ZMH |
| <i>Sertularella ?implexa</i> (Allman, 1888) | 53°S to 54°S | SW Atlantic | – | MHNG |
| <i>Sertularella valdiviae</i> Stechow, 1923 | 48°S to 57°S | Endemic (41°S to 53°S) | Magellan | FCNyM-UNLP, MHNG, UV |
| <i>Sertularella leiocarpa</i> (Allman, 1888) | 29°S to 30°S | SW Atlantic | – | MCN-FZB, MZUSP |
| <i>Sertularella mixta</i> Galea & Schories, 2012 | 29°S to 30°S | Endemic (29°S to 30°S) | Tropical | MHNG |
| <i>Sertularella polyzonias</i> (Linnaeus, 1758) | 29°S to 65°S | N, SW Atlantic, North Sea, Mediterranean Sea, Red Sea | – | FCNyM-UNLP, MCN-FZB, MNRJ, MZUSP, USNM, UV |
| <i>Sertularella ?polyzonias</i> (Linnaeus, 1758) | 22°S to 23°S | N, SW Atlantic, North Sea, Mediterranean Sea, Red Sea | – | MNRJ, MZUSP |
| <i>Sertularella robusta</i> Coughtrey, 1876 | 29°S to 56°S | S Atlantic, Mediterranean Sea, S Pacific | – | FCNyM-UNLP, MHNG, MNRJ, MZUSP, UV |
| <i>Sertularella sanmatiasensis</i> El Beshbeeshy, 2011 | 42°S to 64°S | Endemic (40°S to 64°S) | Magellan+Antarctic | MCN-FZB, MZUSP, ZMH |
| <i>Sertularella ?sanmatiasensis</i> El Beshbeeshy, 2011 | 61°S to 62°S | SW Atlantic | – | MCN-FZB, MZUSP |
| <i>Sertularella</i> sp. | 29°S to 64°S | Worldwide | – | MCN-FZB, MHNG, MZUSP, UV |
| <i>Sertularella</i> sp. 9 | 29°S to 55°S | Worldwide | – | MNRJ, MZUSP, UV |
| <i>Sertularella</i> sp. 12 | 51°S to 53°S | Worldwide | – | UV |
| <i>Sertularella</i> sp. 13 | 29°S to 55°S | Worldwide | – | MNRJ, MZUSP, UV |
| <i>Sertularella patagonica</i> (D'Orbigny, 1846) | 34°S to 43°S | S Atlantic, SW Indian | – | MZUSP, UNMdP |
| <i>Sertularella tenella</i> (Alder, 1856) | 22°S to 54°S | N, SW Atlantic, Mediterranean Sea, S Pacific | – | FCNyM-UNLP, MCN-FZB, MNRJ, MZUSP, USNM |
| <i>Sertularella mediterranea</i> Hartlaub, 1901 | Not recorded | Endemic (34°S to 35°S) | Subtropical | MNHNU |
| <i>Sertularella vervoortii</i> El Beshbeeshy, 2011 | 41°S to 42°S | Endemic (41°S to 55°S) | Subtropical+Magellan | ZMH |
| FAMILY SERTULARIIDAE LAMOUROUX, 1812 | | | | |
| Sertulariidae not identified | 22°S to 63°S | – | – | MCN-FZB, MNRJ, MZUSP |
| <i>Abietinella operculata</i> (Jäderholm, 1903) | 52°S to 74°S | Endemic (52°S to 74°S) | Magellan+Antarctic | USNM, UV |
| ? <i>Abietinella operculata</i> (Jäderholm, 1903) | 53°S to 54°S | S Atlantic | – | UV |

| | | | | |
|--|--------------|--|-----------|-------------------------------------|
| <i>Amphisbetia operculata</i> (Linnaeus, 1758) | 27°S to 58°S | N, SW Atlantic, North Sea, Mediterranean Sea, SW Pacific | – | MNHNU, MNRJ, MZUSP, UNMdp, USNM, UV |
| <i>Amphisbetia</i> sp. | Not recorded | N Atlantic, North Sea, Mediterranean Sea, S Pacific | – | USNM |
| ? <i>Diphasia crassa</i> Fraser, 1940 | 51°S to 52°S | SW Atlantic, SE Pacific | – | USNM |
| <i>Diphasia digitalis</i> (Busk, 1852) | 23°S to 24°S | W Atlantic, Mediterranean Sea, Red Sea | – | MZUSP |
| <i>Diphasia tropica</i> Nutting, 1904 | 23°S to 28°S | Atlantic | – | MZUSP |
| <i>Dynamena crisioides</i> Lamouroux, 1824 | 23°S to 28°S | Worldwide | – | DZOO-UFPR, MZUSP |
| ? <i>Dynamena crisioides</i> Lamouroux, 1824 | 27°S to 28°S | Worldwide | – | MZUSP |
| <i>Dynamena dalmasi</i> (Versluys, 1899) | 22°S to 28°S | Atlantic, Pacific | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Dynamena disticha</i> (Bosc, 1802) | 22°S to 39°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP, UNMdp |
| <i>Dynamena ?disticha</i> (Bosc, 1802) | 27°S to 28°S | Worldwide | – | DZOO-UFPR, MZUSP |
| <i>Dynamena quadridentata</i> (Ellis & Solander, 1786) | 23°S to 28°S | Worldwide | – | DZOO-UFPR, MZUSP |
| <i>Idiellana pristis</i> (Lamouroux, 1816) | 23°S to 26°S | Worldwide | – | DZOO-UFPR, MZUSP |
| <i>Mixoscyphus antarcticus</i> Peña Cantero & Vervoort, 2005 | 62°S to 64°S | Endemic (62°S to 64°S) | Antarctic | USNM, UV |
| <i>Salacia desmoides</i> (Thorrey, 1902) | 27°S to 28°S | N, SW Atlantic, Mediterranean Sea, SW Pacific | – | MZUSP |
| <i>Sertularia rugosissima</i> Thornely, 1904 | 23°S to 27°S | S Atlantic, SW Indian | – | DZOO-UFPR, MZUSP |
| <i>Sertularia</i> sp. | 27°S to 28°S | Worldwide | – | MZUSP |
| <i>Tridentata distans</i> (Lamouroux, 1816) | 22°S to 28°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Tridentata loculosa</i> (Busk, 1852) | 23°S to 28°S | SW Atlantic, Red Sea, S Pacific | – | DZOO-UFPR, MZUSP |
| <i>Tridentata marginata</i> (Kirchenpauer, 1864) | 23°S to 28°S | N, SW Atlantic, Mediterranean Sea, SW Pacific | – | DZOO-UFPR, MNRJ, MZUSP |
| ? <i>Tridentata marginata</i> (Kirchenpauer, 1864) | 27°S to 28°S | N, SW Atlantic, Mediterranean Sea, SW Pacific | – | MZUSP |

| | | | | |
|--|--------------|---|----------------------|----------------------------------|
| <i>Tridentata tumida</i> Allman, 1877 | 25°S to 28°S | Atlantic, Indian, W Pacific | – | DZOO-UFPR, MZUSP |
| <i>Tridentata turbinata</i> (Lamouroux, 1816) | 23°S to 28°S | Atlantic, Mediterranean Sea, Indian, W Pacific | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Thuiaria polycarpa</i> Kirchenpauer, 1884 | 29°S to 34°S | Endemic (29°S to 34°S) | Tropical+Subtropical | MNRJ, MZUSP |
| FAMILY THYROSCYPHIDAE STECHOW, 1920 | | | | |
| Thyroscyphidae not identified | 23°S to 54°S | – | – | MNRJ, MZUSP, UV |
| <i>Parascyphus repens</i> (Jäderholm, 1904) | 42°S to 55°S | Endemic (42°S to 55°S) | Magellan | MZUSP, UNMdP, UV |
| <i>Thyroscyphus marginatus</i> (Allman, 1877) | 23°S to 24°S | Atlantic, SW Pacific | – | MZUSP |
| <i>Thyroscyphus ramosus</i> Allman, 1877 | 23°S to 24°S | NW, S Atlantic | – | MZUSP |
| <i>Thyroscyphus</i> sp. | 35°S to 36°S | Atlantic, Mediterranean Sea, Red Sea, S Pacific | – | MCN-FZB, MZUSP |
| SUBORDER STAUROTHECIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| FAMILY STAUROTHECIDAE MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| <i>Staurotheca abyssalis</i> Peña Cantero & Vervoort, 2003 | 55°S to 57°S | Endemic (55°S to 57°S) | Magellan | USNM |
| <i>Staurotheca affinis</i> (Jäderholm, 1904) | 54°S to 55°S | Endemic (54°S to 55°S) | Magellan | UV |
| <i>Staurotheca amphorophora</i> Naumov & Stepanjants, 1962 | 53°S to 55°S | Endemic (53°S to 55°S) | Magellan | USNM |
| <i>Staurotheca antarctica</i> Hartlaub, 1904 | 52°S to 78°S | Endemic (52° to 78°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca australis</i> Peña Cantero, Svoboda & Vervoort, 1997 | 69°S to 70°S | Endemic (69°S to 70°S) | Antarctic | UV |
| <i>Staurotheca compressa</i> Briggs, 1938 | 56°S to 75°S | Endemic (56°S to 75°S) | Magellan+Antarctic | FCNyM-UNLP, MCN-FZB, MZUSP, USNM |
| <i>Staurotheca cornuta</i> Peña Cantero, García Carrascosa & Vervoort, 1999 | 60°S to 62°S | Endemic (60°S to 62°S) | Antarctic | USNM |
| <i>Staurotheca densa</i> Peña Cantero & Vervoort, 2003 | 61°S to 74°S | Endemic (61°S to 74°S) | Antarctic | USNM |
| <i>Staurotheca dichotoma</i> Allman, 1888 | 53°S to 77°S | Endemic (53°S to 77°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca echinocarpa</i> (Allman, 1888) | 49°S to 50°S | Indian | | Peña Cantero & Vervoort, 2003 |
| <i>Staurotheca frigida</i> Peña Cantero, Svoboda & Vervoort, 1997 | 53°S to 77°S | Endemic (53°S to 77°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca glomulosa</i> Peña Cantero, Svoboda & Vervoort, 1997 | 54°S to 78°S | Endemic (54°S to 78°S) | Magellan+Antarctic | USNM |

| | | | | |
|--|--------------|---|--------------------|-------------|
| <i>Staurotheca jaederholmi</i> Stechow, 1920 | 50°S to 62°S | Endemic (50°S to 62°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca multifurcata</i> Peña Cantero, García Carrascosa & Vervoort, 1999 | 53°S to 59°S | Endemic (53°S to 59°S) | Magellan | MZUSP, USNM |
| <i>Staurotheca nonscripta</i> Peña Cantero, Svoboda & Vervoort, 1997 | 53°S to 79°S | Endemic (53°S to 79°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca pachyclada</i> (Jäderholm, 1904) | 56°S to 77°S | Endemic (56°S to 77°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca plana</i> Peña Cantero, Svoboda & Vervoort, 1997 | 70°S to 72°S | Endemic (70°S to 72°S) | Antarctic | UV |
| <i>Staurotheca polarsterni</i> Peña Cantero, Svoboda & Vervoort, 1997 | 63°S to 77°S | Endemic (63°S to 77°S) | Antarctic | UV |
| <i>Staurotheca profunda</i> Peña Cantero & Vervoort, 2003 | 54°S to 55°S | Endemic (54°S to 55°S) | Magellan | UV |
| <i>Staurotheca</i> sp. | 62°S to 70°S | S Atlantic, S Indian, S Pacific, Southern Ocean | – | USNM |
| <i>Staurotheca stolonifera</i> (Hartlaub, 1904) | 70°S to 71°S | Endemic (70°S to 71°S) | Antarctic | UV |
| <i>Staurotheca undosiparietina</i> (Stepanjants, 1979) | 53°S to 63°S | Endemic (53°S to 63°S) | Magellan+Antarctic | USNM |
| <i>Staurotheca vanhoeffeni</i> (Peña Cantero & García Carrascosa, 1994) | 60°S to 73°S | Endemic (60°S to 73°S) | Antarctic | USNM |
| <i>Staurotheca vervoorti</i> (Antsulevich & Vervoort, 1993) | 53°S to 55°S | Endemic (53°S to 55°S) | Magellan | USNM |

FAMILY SYMPLECTOSCYPHIDAE MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016

| | | | | |
|---|--------------|-----------------------------|--------------------|--------------------------|
| <i>Antarctoscyphus admirabilis</i> Peña Cantero, Svoboda & Vervoort, 1999 | 70°S to 71°S | Endemic (70° S to 71°S) | Antarctic | UV |
| <i>Antarctoscyphus asymmetricus</i> Peña Cantero, García Carrascosa & Vervoort, 1997 | 53°S to 73°S | Endemic (53°S to 73°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM, UV |
| <i>Antarctoscyphus ?asymmetricus</i> Peña Cantero, García Carrascosa & Vervoort, 1997 | 56°S to 63°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP, UV |
| <i>Antarctoscyphus elongatus</i> (Jäderholm, 1904) | 49°S to 79°S | Endemic (49°S to 79°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM, UV |
| ? <i>Antarctoscyphus elongatus</i> (Jäderholm, 1904) | 62°S to 63°S | SW Atlantic, Southern Ocean | – | USNM |
| <i>Antarctoscyphus ?elongatus</i> (Jäderholm, 1904) | 56°S to 63°S | SW Atlantic, Southern Ocean | – | UV |
| <i>Antarctoscyphus encarnae</i> Peña Cantero, García Carrascosa & Vervoort, 1997 | 61°S to 63°S | Endemic (61°S to 63°S) | Antarctic | UV |
| <i>Antarctoscyphus fragilis</i> Peña Cantero, Svoboda & Vervoort, 1999 | 74°S to 75°S | Endemic (74°S to 75°S) | Antarctic | UV |
| <i>Antarctoscyphus grandis</i> (Blanco, 1977) | 54°S to 78°S | Endemic (54°S to 78°S) | Magellan+Antarctic | FCNyM-UNLP, USNM, UV |

| | | | | |
|---|--------------|-----------------------------|----------------------|--------------------------------------|
| <i>Antarctoscyphus ?grandis</i> (Blanco, 1977) | 56°S to 74°S | SW Atlantic, Southern Ocean | – | UV |
| <i>Antarctoscyphus gruzovi</i> (Stepanjants, 1979) | 60°S to 62°S | Endemic (60°S to 62°S) | Antarctic | UV |
| <i>Antarctoscyphus ?gruzovi</i> (Stepanjants, 1979) | 62°S to 63°S | Southern Ocean | – | USNM |
| <i>Antarctoscyphus mawsoni</i> (Briggs, 1938) | 56°S to 74°S | Endemic (56°S to 74°S) | Magellan+Antarctic | UV |
| <i>Antarctoscyphus</i> sp. | 62°S to 63°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP, UV |
| <i>Antarctoscyphus spiralis</i> (Hickson & Gravelly, 1907) | 54°S to 78°S | Endemic (54°S to 78°S) | Magellan+Antarctic | FCNyM-UNLP, MCN-FZB, MZUSP, USNM, UV |
| ? <i>Antarctoscyphus spiralis</i> (Hickson & Gravelly, 1907) | 39°S to 40°S | SW Atlantic, Southern Ocean | – | MNRJ, MZUSP |
| <i>Symplectoscyphus anae</i> Peña Cantero, Svoboda & Vervoort, 2002 | 62°S to 77°S | Endemic (62°S to 77°S) | Antarctic | MCN-FZB, MZUSP, USNM |
| <i>Symplectoscyphus bathyalis</i> Vervoort, 1972 | 54°S to 55°S | SW Atlantic, Southern Ocean | – | UV |
| <i>Symplectoscyphus curvatus</i> (Jäderholm, 1917) | 61°S to 64°S | Endemic (61°S to 64°S) | Antarctic | MCN-FZB, MZUSP, USNM |
| <i>Symplectoscyphus exochus</i> Blanco, 1982 | 52°S to 64°S | Endemic (52°S to 64°S) | Magellan+Antarctic | MCN-FZB, MZUSP, USNM, UV |
| <i>Symplectoscyphus flexilis</i> (Hartlaub, 1901) | 45°S to 46°S | Endemic (42°S to 46°S) | Magellan | UNMdP |
| <i>Symplectoscyphus frigidus</i> Peña Cantero, Svoboda & Vervoort, 2002 | 52°S to 55°S | Endemic (52°S to 55°S) | Magellan | UV |
| <i>Symplectoscyphus glacialis</i> (Jäderholm, 1904) | 42°S to 78°S | Endemic (42°S to 78°S) | Magellan+Antarctic | MCN-FZB, MNRJ, MZUSP, USNM, UV |
| <i>Symplectoscyphus ?hero</i> Blanco, 1977 | 60°S to 61°S | Southern Ocean | | USNM |
| <i>Symplectoscyphus interruptus</i> (Pfeffer, 1889) | 53°S to 54°S | Endemic (53°S to 55°S) | Magellan | MHNG |
| <i>Symplectoscyphus leloupi</i> El Beshbeeshy, 2011 | 43°S to 55°S | Endemic (43°S to 55°S) | Magellan | MHNG, UV |
| <i>Symplectoscyphus liouvillei</i> (Billard, 1914) | 72°S to 73°S | Endemic (53°S to 77°S) | Magellan+Antarctic | USNM |
| <i>Symplectoscyphus ?liouvillei</i> (Billard, 1914) | 63°S to 65°S | SW Atlantic, Southern Ocean | – | MCN-FZB, MZUSP, USNM |
| ? <i>Symplectoscyphus liouvillei</i> (Billard, 1914) | 66°S to 69°S | SW Atlantic, Southern Ocean | – | USNM |
| <i>Symplectoscyphus Magellanus</i> (Marktanner-Turneretscher, 1890) | 36°S to 55°S | Endemic (36°S to 56°S) | Subtropical+Magellan | MCN-FZB, MNRJ, MZUSP, UV |
| <i>Symplectoscyphus ?Magellanus</i> (Marktanner-Turneretscher, 1890) | 53°S to 54°S | SW Atlantic | – | MHNG |
| <i>Symplectoscyphus milneanus</i> (d'Orbigny, 1842) | 41°S to 55°S | Endemic (41°S to 56°S) | Magellan | MZUSP, UNMdP, USNM, UV |

| | | | | |
|---|--------------|--|-----------------------------------|---------------------------------|
| <i>Symplectoscyphus naumovi</i> Blanco, 1969 | 62°S to 78°S | Endemic (54°S to 78°S) | Magellan+Antarctic | MZUSP, USNM |
| <i>Symplectoscyphus nesioticus</i> Blanco, 1987 | 62°S to 73°S | Endemic (62°S to 73°S) | Antarctic | MCN-FZB, MZUSP, USNM |
| <i>Symplectoscyphus paraglacialis</i> El Beshbeeshy, 2011 | 53°S to 55°S | Endemic (40°S to 55°S) | Magellan | UV |
| <i>Symplectoscyphus ?paraglacialis</i> El Beshbeeshy, 2011 | 53°S to 54°S | SW Atlantic | – | MHNG |
| <i>Symplectoscyphus paulensis</i> Stechow, 1923 | 77°S to 78°S | SW Pacific, Southern Ocean | – | USNM |
| <i>Symplectoscyphus plectilis</i> (Hickson & Gravelly, 1907) | 62°S to 78°S | Endemic (62°S to 78°S) | Antarctic | MCN-FZB, MZUSP, USNM |
| <i>Symplectoscyphus sofiae</i> Peña Cantero, Svoboda & Vervoort, 2002 | 61°S to 78°S | Endemic (61°S to 78°S) | Antarctic | USNM |
| <i>Symplectoscyphus</i> sp. | 49°S to 72°S | Atlantic, SW Indian, Pacific, Southern Ocean | – | MCN-FZB, MNRJ, MZUSP, USNM, UV |
| <i>Symplectoscyphus subdichotomus</i> (Kirchenpauer, 1884) | 29°S to 73°S | SW Atlantic, N, SW Pacific | – | MCN-FZB, MZUSP, UNMdP, USNM, UV |
| <i>Symplectoscyphus vanhoeffeni</i> (Totton, 1930) | 62°S to 67°S | Endemic (60°S to 67°S) | Antarctic | USNM |
| <i>Symplectoscyphus vervoorti</i> El Beshbeeshy, 2011 | 53°S to 54°S | Endemic (41°S to 54°S) | Magellan | UV |
| ORDER STATOCYSTA LECLÈRE, SCHUCHERT, CRUAUD, COULOUX & MANUEL, 2009 | | | | |
| SUBORDER INCERTAE SEDIS | | | | |
| FAMILY INCERTAE SEDIS | | | | |
| <i>Lovenella gracilis</i> Clarke, 1882 | 27°S to 28°S | Atlantic, Mediterranean Sea | – | MZUSP |
| SUBORDER CAMPANULINIDA BOUILLON, 1984 <i>SENSU NOVUM</i> | | | | |
| FAMILY CAMPANULINIDAE HINCKS, 1868 | | | | |
| Campanulinidae not identified | 23°S to 64°S | – | – | DZOO-UFPR, MCN-FZB, MZUSP |
| <i>Cirrholovenia tetranema</i> Kramp, 1959 | 22°S to 28°S | SW Atlantic, SW Pacific | – | MNRJ, MZUSP |
| <i>Cuspidella</i> sp. | 22°S to 28°S | Arctic, N Atlantic, Mediterranean Sea, Red Sea | – | MNRJ, MZUSP |
| FAMILY PHIALELLIDAE RUSSELL, 1953 | | | | |
| <i>Phialella belgicae</i> (Hartlaub, 1904) | 38°S to 78°S | Endemic (22°S to 78°S) | Southern South America+Antarctica | MNRJ, MZUSP, UNMdP, UV |
| <i>Phialella chilensis</i> (Hartlaub, 1905) | 35°S to 54°S | Endemic (34°S to 55°S) | Subtropical+Magellan | MZUSP, UNMdP, UV |
| ? <i>Phialella chilensis</i> (Hartlaub, 1905) | 52°S to 55°S | SE Pacific, SW Atlantic | – | UV |
| SUBORDER EIRENIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |

| FAMILY EIRENIDAE HAECKEL, 1879 | | | | |
|---|--------------|---|----------------------|--------------------------------|
| <i>Eutima sapinhoa</i> Narchi & Hebling, 1975 | 23°S to 24°S | Endemic (23°S to 24°S) | Tropical | MZUSP |
| FAMILY LOVENELLIDAE RUSSELL, 1953 | | | | |
| Lovenellidae not identified | 22°S to 23°S | – | – | MNRJ, MZUSP |
| SUBORDER PROBOSCOIDA BROCH, 1910 | | | | |
| INFRAORDER CAMPANULARIIDA BOUILLON, 1984 <i>SENSU NOVUM</i> | | | | |
| FAMILY CAMPANULARIIDAE JOHNSTON, 1836 | | | | |
| Campanulariidae not identified | 22°S to 64°S | – | – | MCN-FZB, MNRJ, MZUSP |
| <i>Campanularia agas</i> Cornelius, 1982 | 37°S to 55°S | Endemic (37°S to 55°S) | Subtropical+Magellan | UNMdP, UV |
| <i>Campanularia hincksii</i> Alder, 1856 | 27°S to 39°S | N, SW Atlantic, North Sea, Mediterranean Sea | – | MZUSP, UNMdP |
| <i>Campanularia ?hincksii</i> Alder, 1856 | 71°S to 72°S | N, SW Atlantic, North Sea, Mediterranean Sea | – | USNM |
| <i>Campanularia hincksoni</i> Totton, 1930 | 66°S to 67°S | SW Atlantic, SW Pacific | – | USNM |
| <i>Campanularia</i> sp. | 22°S to 78°S | Worldwide | – | MNRJ, MZUSP, UNMdP, USNM, UV |
| <i>Campanularia subantarctica</i> Millard, 1971 | 41°S to 55°S | Endemic (38°S to 55°S) | Subtropical+Magellan | MZUSP, UNMdP, UV |
| <i>Campanularia ?subantarctica</i> Millard, 1971 | 51°S to 52°S | SW Atlantic, SE Pacific | – | UV |
| <i>Hartlaubella gelatinosa</i> (Pallas, 1766) | 39°S to 52°S | N, SW Atlantic, North Sea, Mediterranean Sea, S Pacific | – | MZUSP, UNMdP |
| <i>Orthopyxis caliculata</i> (Hincks, 1853) | 25°S to 50°S | SW Atlantic, SW Indian | – | DZOO-UFPR, MNHNU, MZUSP, UNMdP |
| <i>Orthopyxis crenata</i> (Hartlaub, 1901) | 27°S to 29°S | Atlantic, Mediterranean Sea, Indian, S Pacific | – | MZUSP |
| <i>Orthopyxis hartlaubi</i> El Beshbeeshy, 2011 | 54°S to 55°S | Endemic (48°S to 55°S) | Magellan | UV |
| <i>Orthopyxis sargassicola</i> (Nutting, 1915) | 27°S to 28°S | SW Atlantic | – | MZUSP |
| <i>Orthopyxis ?sargassicola</i> (Nutting, 1915) | 23°S to 27°S | SW Atlantic | – | DZOO-UFPR, MZUSP |
| <i>Orthopyxis</i> sp. | 23°S to 55°S | Worldwide | – | DZOO-UFPR, MCN-FZB, MZUSP, UV |

| | | | | |
|---|--------------|--|----------|---|
| <i>Orthopyxis tincta</i> (Hincks, 1861) | 52°S to 53°S | Endemic (52°S to 53°S) | Magellan | USNM |
| <i>Silicularia rosea</i> Meyen, 1834 | 47°S to 54°S | SW Atlantic, W Pacific | – | MZUSP, UNMdP, UV |
| <i>Tulpa tulipifera</i> (Allman, 1888) | 41°S to 55°S | SW Atlantic | – | UNMdP, UV |
| INFRAORDER OBELIIDA MARONNA, MIRANDA, PEÑA CANTERO, BARBEITOS & MARQUES, 2016 | | | | |
| FAMILY CLYTIIDAE COCKERELL, 1911 SENSU NOVUM | | | | |
| <i>Clytia gracilis</i> (M. Sars, 1851) | 22°S to 55°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP, UNMdP, USNM |
| <i>Clytia ?gracilis</i> (M. Sars, 1851) | 23°S to 43°S | Worldwide | – | MNRJ, MZUSP |
| <i>Clytia hemisphaerica</i> (Linnaeus, 1767) | 53°S to 54°S | Worldwide | – | USNM |
| <i>Clytia hummelincki</i> (Leloup, 1935) | 23°S to 26°S | Atlantic, Mediterranean Sea, SW Indian | – | DZOO-UFPR, MZUSP |
| <i>Clytia linearis</i> (Thornely, 1900) | 23°S to 35°S | Worldwide | – | DZOO-UFPR, MNHNU, MZUSP |
| <i>Clytia noliformis</i> (McCrary, 1859) | 23°S to 28°S | Atlantic, Mediterranean Sea, Indian, E Pacific | – | DZOO-UFPR, MZUSP |
| <i>Clytia ?reloncavia</i> Galea & Schories, 2012 | 42°S to 43°S | SE Pacific | – | MNRJ, MZUSP |
| <i>Clytia</i> sp. | 23°S to 64°S | Worldwide | – | MCN-FZB, MNRJ, MZUSP, USNM, UV |
| FAMILY OBELIIDAE HAECKEL, 1879 SENSU NOVUM | | | | |
| <i>Gonothyræa loveni</i> (Allman, 1859) | 38°S to 39°S | N, SW Atlantic, North Sea, Mediterranean Sea, Baltic Sea | – | UNMdP |
| <i>Obelia bidentata</i> Clark, 1875 | 22°S to 61°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP, UNMdP, USNM |
| <i>Obelia dichotoma</i> (Linnaeus, 1758) | 22°S to 50°S | Worldwide | – | DZOO-UFPR, MCN-FZB, MNHNU, MNRJ, MZUSP, UAC |
| <i>Obelia ?dichotoma</i> (Linnaeus, 1758) | 35°S to 36°S | Worldwide | – | MZUSP |
| ? <i>Obelia dichotoma</i> (Linnaeus, 1758) | 23°S to 44°S | Worldwide | – | MNRJ, MZUSP |
| <i>Obelia geniculata</i> (Linnaeus, 1758) | 23°S to 55°S | N, SW Atlantic, North Sea, Mediterranean Sea, SW Indian | – | DZOO-UFPR, MZUSP, UAC, UNMdP |
| <i>Obelia ?geniculata</i> (Linnaeus, 1758) | 49°S to 50°S | N, SW Atlantic, North Sea, Mediterranean Sea, SW Indian | – | UNMdP, MZUSP |

| | | | | |
|--|--------------|--------------------------------------|---|---|
| <i>Obelia longissima</i> (Pallas, 1766) | 34°S to 69°S | Worldwide | – | MNHNU, MZUSP, UNMdP, USNM |
| <i>Obelia</i> sp. | 43°S to 45°S | Worldwide | – | MNRJ, MZUSP |
| SUPERORDER PSEUDOTHECATA MENDOZA-BECERRIL, JAIMES-BECERRA, COLLINS & MARQUES, 2018 | | | | |
| FAMILY BOUGAINVILLIIDAE LÜTKEN, 1850 | | | | |
| Bougainvilliidae not identified | 22°S to 53°S | – | – | MNRJ, MZUSP |
| <i>Bimeria</i> sp. | 23°S to 26°S | Worldwide | – | MZUSP |
| <i>Bimeria vestita</i> Wright, 1859 | 23°S to 43°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP, UNMdP |
| <i>Bougainvillia rugosa</i> Clarke, 1882 | 26°S to 27°S | N Atlantic, North Sea, Baltic Sea | – | DZOO-UFPR, MZUSP |
| <i>Bougainvillia</i> sp. | 22° to 73°S | Worldwide | – | DZOO-UFPR, MCN- FZB, MNRJ, MZUSP, UNMdP, USNM |
| <i>Parawrightia robusta</i> Warren, 1908 | 26°S to 30°S | S Atlantic, Indian | – | DZOO-UFPR, MZUSP |
| FAMILY OCEANIIDAE ESCHSCHOLTZ, 1829 | | | | |
| <i>Corydendrium parasiticum</i> (Linnaeus, 1767) | Not recorded | Worldwide | – | MZUSP |
| <i>Rhizogeton nudus</i> Broch, 1910 | 38°S to 39°S | Arctic, N, SW Atlantic | – | UNMdP |
| <i>Turritopsis nutricula</i> McCrady, 1857 | 22°S to 28°S | Worldwide | – | DZOO-UFPR, MNRJ, MZUSP |
| <i>Turritopsis</i> sp. | 26°S to 27°S | Worldwide | – | MZUSP |

Table S2 Internal similarity within the assemblages of ecoregions found by SIMPER, and their respective number of species and species composition. The less inclusive assemblages shown by the Bray-Curtis analysis are also listed with their number of species and species composition. *The number of endemic species for each assemblage is between parenthesis (see the level of endemcity in Table S1); **Percentage of contribution of each species to the internal similarity of the assemblages of ecoregions is between parenthesis.

| Assemblage | Internal similarity (%) | Number of species* | Species composition** |
|------------|-------------------------|--------------------|---|
| E2 | 36.36 | 2 (2) | <i>Antarctoscyphus spiralis</i> (50%), <i>Staurotheca dichotoma</i> (50%) |
| 226 | – | 9 (9) | <i>Oswaldella erratum</i> , <i>Staurotheca antarctica</i> , <i>S. australis</i> , <i>S. dichotoma</i> , <i>S. frigida</i> , <i>S. glomulosa</i> , <i>S. nonscripta</i> , <i>S. polarsteni</i> , <i>S. vanhoeffeni</i> |
| E5 | 48.48 | 6 (6) | <i>Antarctoscyphus asymmetricus</i> (12.50%), <i>A. elongatus</i> (12.50%), <i>A. grandis</i> (12.50%), <i>A. spiralis</i> (12.50%), <i>Staurotheca dichotoma</i> (12.50%), <i>S. frigida</i> (12.50%) |
| E7 | 60.93 | 15 (15) | <i>Antarctoscyphus elongatus</i> (4.84%), <i>A. grandis</i> (4.84%), <i>A. spiralis</i> (4.84%), <i>Billardia subrufa</i> (4.84%), <i>Corymorpha parvula</i> (4.84%), <i>Halecium jaederholmi</i> (4.84%), <i>H. pallens</i> (4.84%), <i>Oswaldella antarctica</i> (4.84%), <i>O. bifurca</i> (4.84%), <i>O. stepanjantsae</i> (4.84%), <i>Staurotheca antarctica</i> (4.84%), <i>S. frigida</i> (4.84%), <i>S. glomulosa</i> (4.84%), <i>Stegella lobata</i> (4.84%), <i>Symplectoscyphus glacialis</i> (4.84%) |
| 221 | – | 25 (23) | <i>Antarctoscyphus asymmetricus</i> , <i>A. elongatus</i> , <i>A. grandis</i> , <i>A. spiralis</i> , <i>Clathrozoella medeae</i> , <i>Halecium jaederholmi</i> , <i>H. pallens</i> , <i>Hydrodendron arboreum</i> , <i>Lafoea dumosa</i> , <i>Obelia bidentata</i> , <i>Oswaldella antarctica</i> , <i>O. erratum</i> , <i>O. incognita</i> , <i>O. shetlandica</i> , <i>O. vervoorti</i> , <i>Schizotricha crassa</i> , <i>S. turqueti</i> , <i>Staurotheca antarctica</i> , <i>S. cornuta</i> , <i>S. dichotoma</i> , <i>S. frigida</i> , <i>S. glomulosa</i> , <i>Symplectoscyphus exochus</i> , <i>S. glacialis</i> , <i>S. sofiae</i> |
| E9 | 78.13 | 35 (32) | <i>Abietinella operculata</i> (2%), <i>Antarctoscyphus asymmetricus</i> (2%), <i>A. elongatus</i> (2%), <i>A. grandis</i> (2%), <i>A. mawsoni</i> (2%), <i>A. spiralis</i> (2%), <i>Billardia subrufa</i> (2%), <i>Clathrozoella medeae</i> (2%), <i>Halecium antarcticum</i> (2%), <i>H. interpolatum</i> (2%), <i>H. jaederholmi</i> (2%), <i>H. pallens</i> (2%), <i>Lafoea dumosa</i> (2%), <i>Mixoscyphus antarcticus</i> (2%), <i>Oswaldella antarctica</i> (2%), <i>O. delicata</i> (2%), <i>O. erratum</i> (2%), <i>O. grandis</i> (2%), <i>O. incognita</i> (2%), <i>O. medeae</i> (2%), <i>O. monomammillata</i> (2%), <i>O. shetlandica</i> (2%), <i>O. stepanjantsae</i> (2%), <i>O. totoni</i> (2%), <i>O. vervoorti</i> (2%), <i>Schizotricha crassa</i> (2%), <i>S. nana</i> (2%), <i>S. turqueti</i> (2%), <i>S. vervoorti</i> (2%), <i>Sertularella antarctica</i> (2%), <i>S. gayi</i> (2%), <i>S. polyzonias</i> (2%), <i>S. sanmatiasensis</i> (2%), <i>Staurotheca antarctica</i> (2%), <i>S. compressa</i> (2%) |
| E11 | 35.19 | 14 (0) | <i>Aglaophenia latecarinata</i> (5.26%), <i>A. trifida</i> (5.26%), <i>Clytia gracilis</i> (5.26%), <i>Dynamena dalmasi</i> (5.26%), <i>D. disticha</i> (5.26%), <i>Eudendrium carneum</i> (5.26%), <i>E. ramosum</i> (5.26%), <i>Gymnangium allmani</i> (5.26%), <i>Halecium bermudense</i> (5.26%), <i>Halopteris polymorpha</i> (5.26%), <i>Hincksella cylindrica</i> (5.26%), <i>Lafoeina amirantensis</i> (5.26%), <i>Macrorhynchia grandis</i> (5.26%), <i>Monostaechas quadridens</i> (5.26%) |

| | | | |
|-----|-------|---------|---|
| E13 | 29.83 | 3 (0) | <i>Plumularia setacea</i> (40.77%), <i>Obelia dichotoma</i> (24.94%), <i>Coryne eximia</i> (12.93%) |
| 186 | – | 20 (13) | <i>Abietinella operculata</i> , <i>Acryptolaria operculata</i> , <i>Lytocarpia canepa</i> , <i>Nemertesia vervoorti</i> , <i>Oswaldella herwigi</i> , <i>Sertularella fuegonensis</i> , <i>S. jorgensis</i> , <i>Staurotheca jaederholmi</i> , <i>S. profunda</i> , <i>S. vervoorti</i> , <i>Symplectoscyphus frigidus</i> , <i>S. leloupi</i> , <i>S. vervoorti</i> |
| E16 | 69.90 | 26 (12) | <i>Abietinella operculata</i> (2.78%), <i>Acryptolaria operculata</i> (2.78%), <i>Amphisbetia operculata</i> (2.78%), <i>Campanularia agas</i> (2.78%), <i>C. subantarctica</i> (2.78%), <i>Clytia gracilis</i> (2.78%), <i>Coryne eximia</i> (2.78%), <i>Halecium delicatulum</i> (2.78%), <i>H. interpolatum</i> (2.78%), <i>Hebella striata</i> (2.78%), <i>Hybocodon chilensis</i> (2.78%), <i>Lafoea dumosa</i> (2.78%), <i>Obelia bidentata</i> (2.78%), <i>O. dichotoma</i> (2.78%), <i>O. geniculata</i> (2.78%), <i>Orthopyxis hartlaubi</i> (2.78%), <i>Parascyphus repens</i> (2.78%), <i>Phialella belgicae</i> (2.78%), <i>Plumularia setacea</i> (2.78%), <i>Sertularella antarctica</i> (2.78%), <i>S. clausa</i> (2.78%), <i>S. fuegonensis</i> (2.78%), <i>S. gaudichaudi</i> (2.78%), <i>S. gayi</i> (2.78%), <i>S. jorgensis</i> (2.78%), <i>S. polyzonias</i> (2.78%) |
| E17 | 60.98 | 19 (5) | <i>Aglaophenia acacia</i> (4%), <i>Amphisbetia operculata</i> (4%), <i>Bimeria vestita</i> (4%), <i>Campanularia agas</i> (4%), <i>Clytia gracilis</i> (4%), <i>Corymorpha januarii</i> (4%), <i>Eudendrium ramosum</i> (4%), <i>Halecium beanii</i> (4%), <i>Hartlaubella gelatinosa</i> (4%), <i>Lytocarpia canepa</i> (4%), <i>Monothecha pulchella</i> (4%), <i>Nemertesia ramosa</i> (4%), <i>Obelia bidentata</i> (4%), <i>O. dichotoma</i> (4%), <i>O. longissima</i> (4%), <i>Orthopyxis calculata</i> (4%), <i>Phialella belgicae</i> (4%), <i>P. chilensis</i> (4%) |

Table S3 Internal similarity within the assemblages of provinces found by SIMPER, and their respective number of species and species composition. The less inclusive assemblages shown by the Bray-Curtis analysis are also listed with their number of species and species composition. *The number of endemic species for each assemblage is between parenthesis (see the level of endemism in Table S1); **Percentage of contribution of each species to the internal similarity of the assemblages of ecoregions is between parenthesis.

| Assemblage | Internal similarity (%) | Number of species* | Species composition** |
|------------|-------------------------|--------------------|---|
| WTSEP | – | 14 (4) | <i>Halecium interpolatum</i> , <i>Sertularella fuegonensis</i> , <i>S. mixta</i> , <i>Thuiaria polycarpa</i> . |
| P2 | 27.48 | 13 (0) | <i>Aglaophenia latecarinata</i> (5.56%), <i>A. trifida</i> (5.56%), <i>Clytia gracilis</i> (5.56%), <i>Eudendrium carneum</i> (5.56%), <i>E. ramosum</i> (5.56%), <i>Gymnangium allmani</i> (5.56%), <i>Halecium bermudense</i> (5.56%), <i>Halopteris polymorpha</i> (5.56%), <i>Hincksella cylindrica</i> (5.56%), <i>Lafoeina amirantensis</i> (5.56%), <i>Macrorhynchia grandis</i> (5.56%), <i>Monostaechas quadridens</i> (5.56%), <i>Nemalecium lighti</i> (5.56%) |
| SI | – | 7 (6) | <i>Oswaldella erratum</i> , <i>O. vervoorti</i> , <i>Schizotricha vervoorti</i> , <i>Staurotheca dichotoma</i> , <i>S. echinocarpa</i> , <i>S. vanhoeffeni</i> |
| P5 | 53.47 | 23 (23) | <i>Antarctoscyphus elongatus</i> (3.11%), <i>A. grandis</i> (3.11%), <i>A. spiralis</i> (3.11%), <i>Billardia subrufa</i> (3.11%), <i>Halecium jaederholmi</i> (3.11%), <i>H. interpolatum</i> (3.11%), <i>Oswaldella antarctica</i> (3.11%), <i>O. stepanjantsae</i> (3.11%), <i>Schizotricha nana</i> (3.11%), <i>S. turqueti</i> (3.11%), <i>Staurotheca antarctica</i> (3.11%), <i>S. compressa</i> (3.11%), <i>S. densa</i> (3.11%), <i>S. dichotoma</i> (3.11%), <i>S. frigida</i> (3.11%), <i>S. glomulosa</i> (3.11%), <i>S. nonscripta</i> (3.11%), <i>S. pachyclada</i> (3.11%), <i>S. polarsteni</i> (3.11%), <i>Stegella lobata</i> (3.11%), <i>Symplectoscyphus glacialis</i> (3.11%), <i>S. nesioticus</i> (3.11%), <i>S. plectilis</i> (3.11%) |
| APF | – | 15 (11) | <i>Acryptolaria minuta</i> , <i>A. operculata</i> , <i>Amphisbetia operculata</i> , <i>Antarctoscyphus elongatus</i> , <i>Clathrozoella abyssalis</i> , <i>Oswaldella elongata</i> , <i>Schizotricha vervoorti</i> , <i>Sertularella gaudichaudi</i> , <i>S. jorgensis</i> , <i>Staurotheca abyssalis</i> , <i>S. jaederholmi</i> , <i>S. pachyclada</i> , <i>S. profunda</i> , <i>S. vervoorti</i> , <i>Symplectoscyphus bathyalis</i> |
| P7 | 41.51 | 16 (9) | <i>Abietinella operculata</i> (4.51%), <i>Acryptolaria conferta</i> (4.51%), <i>Lafoea dumosa</i> (4.51%), <i>Lytocarpia canepa</i> (4.51%), <i>Nemertesia ramosa</i> (4.51%), <i>Orthopyxis hartlaubi</i> (4.51%), <i>Oswaldella herwigi</i> (4.51%), <i>Parascyphus repens</i> (4.51%), <i>Sertularella argentinica</i> (4.51%), <i>S. gaudichaudi</i> (4.51%), <i>S. gayi</i> (4.51%), <i>S. jorgensis</i> (4.51%), <i>S. robusta</i> (4.51%), <i>S. sanmatiasensis</i> (4.51%), <i>S. tenella</i> (4.51%), <i>S. vervoorti</i> (4.51%) |

Table S4 Percentage of dissimilarity between the assemblages of ecoregions found by SIMPER analysis.

| Assemblage | E2 | 226 | E5 | E7 | 221 | E9 | E11 | E13 | 186 | E16 | E17 |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| E2 | – | | | | | | | | | | |
| 226 | 79.05 | – | | | | | | | | | |
| E5 | 70.32 | 68.62 | – | | | | | | | | |
| E7 | 84.98 | 75.77 | 68.87 | – | | | | | | | |
| 221 | 70.43 | 70.59 | 56.56 | 56.93 | – | | | | | | |
| E9 | 84.87 | 82.20 | 71.87 | 49.42 | 49.34 | – | | | | | |
| E11 | 100 | 100 | 100 | 99.45 | 99.09 | 99.35 | – | | | | |
| E13 | 100 | 100 | 100 | 98.23 | 98.16 | 96.27 | 87.37 | – | | | |
| 186 | 100 | 100 | 97.30 | 96.10 | 95.56 | 90.58 | 96.72 | 91.52 | – | | |
| E16 | 99.02 | 96.66 | 99.33 | 89.38 | 89.69 | 81.89 | 84.39 | 78.41 | 65.38 | – | |
| E17 | 97.84 | 100 | 100 | 97.87 | 95.56 | 91.57 | 77.42 | 78.50 | 85.26 | 56.42 | – |

Table S5 Percentage of dissimilarity between the assemblages of provinces found by SIMPER analysis.

| Assemblage | WTSEP | P2 | SI | P5 | APF | P7 |
|------------|-------|-------|-------|-------|-------|-------|
| WTSEP | – | 87.72 | 100 | 93.92 | 100 | 85.86 |
| P2 | | – | 99.15 | 96.78 | 98.41 | 82.84 |
| SI | | | – | 89.82 | 90.91 | 92.61 |
| P5 | | | | – | 88.75 | 87.34 |
| APF | | | | | – | 77.71 |
| P7 | | | | | | – |

Table S6 Results of the ANOSIM test with the different grouped ecoregions. Significant groups are highlighted in bold.

| Groups | R Statistic | Significance level % | Possible permutations | Actual permutations | Number ≥ observed |
|-----------------|--------------|-------------------------|--------------------------|------------------------|----------------------|
| 76, 176 | 0.079 | 37.9 | 66 | 66 | 25 |
| 76, 177 | 0.283 | 0.1 | 646646 | 999 | 0 |
| 76, 178 | 0.219 | 0.2 | 3003 | 999 | 1 |
| 76, 180 | 0.083 | 12 | Very large | 999 | 119 |
| 76, 181 | -0.003 | 46.6 | 20030010 | 999 | 465 |
| 76, 182 | 0.151 | 0.5 | 92378 | 999 | 4 |
| 76, 183 | 0.216 | 0.1 | Very large | 999 | 0 |
| 76, 184 | 0.11 | 0.9 | Very large | 999 | 8 |
| 76, 185 | 0.247 | 0.1 | Very large | 999 | 0 |
| 76, 186 | 0.174 | 0.1 | 131128140 | 999 | 0 |
| 76, 187 | 0.229 | 0.1 | Very large | 999 | 0 |
| 76, 188 | 0.088 | 5.7 | 348330136 | 999 | 56 |
| 76, 217 | 0.294 | 0.1 | 1001 | 999 | 0 |
| 76, 218 | 0.252 | 0.2 | 646646 | 999 | 1 |
| 76, 219 | 0.209 | 0.1 | Very large | 999 | 0 |
| 76, 220 | 0.43 | 0.1 | Very large | 999 | 0 |
| 76, 221 | 0.164 | 0.1 | 635745396 | 999 | 0 |
| 76, 222 | 0.178 | 0.1 | Very large | 999 | 0 |
| 76, 223 | 0.157 | 0.1 | Very large | 999 | 0 |
| 76, 224 | 0.205 | 0.1 | Very large | 999 | 0 |
| 76, 226 | 0.32 | 0.1 | 352716 | 999 | 0 |
| 76, 227 | 0.137 | 0.1 | Very large | 999 | 0 |
| 76, 229 | 0.178 | 0.1 | Very large | 999 | 0 |
| 176, 177 | -0.021 | 64.8 | 91 | 91 | 59 |
| 176, 178 | -0.118 | 100 | 21 | 21 | 21 |
| 176, 180 | 0.187 | 12.5 | 14535 | 999 | 124 |
| 176, 181 | -0.024 | 56.7 | 210 | 210 | 119 |
| 176, 182 | -0.042 | 74.2 | 66 | 66 | 49 |
| 176, 183 | 0.104 | 23.3 | 5995 | 999 | 232 |
| 176, 184 | 0.011 | 49.6 | 1081 | 999 | 495 |
| 176, 185 | 0.21 | 3 | 4095 | 999 | 29 |
| 176, 186 | 0.166 | 3.1 | 325 | 325 | 10 |
| 176, 187 | 0.209 | 3.8 | 6670 | 999 | 37 |
| 176, 188 | -0.066 | 69.5 | 406 | 406 | 282 |

| | | | | | |
|-----------------|--------------|-------------|-------------------|------------|-----------|
| 176, 217 | 0.429 | 6.7 | 15 | 15 | 1 |
| 176, 218 | 0.239 | 17.6 | 91 | 91 | 16 |
| 176, 219 | 0.203 | 0.5 | 561 | 561 | 3 |
| 176, 220 | 0.432 | 0.4 | 6216 | 999 | 3 |
| 176, 221 | 0.152 | 10.3 | 465 | 465 | 48 |
| 176, 222 | 0.178 | 0.2 | 18915 | 999 | 1 |
| 176, 223 | 0.157 | 0.1 | 11628 | 999 | 0 |
| 176, 224 | 0.201 | 0.3 | 741 | 741 | 2 |
| 176, 226 | 0.357 | 2.6 | 78 | 78 | 2 |
| 176, 227 | 0.135 | 0.2 | 5778 | 999 | 1 |
| 176, 229 | 0.177 | 0.5 | 2775 | 999 | 4 |
| 177, 178 | -0.01 | 47.4 | 6188 | 999 | 473 |
| 177, 180 | 0.302 | 0.1 | Very large | 999 | 0 |
| 177, 181 | 0.114 | 1.2 | 141120525 | 999 | 11 |
| 177, 182 | 0.121 | 1.9 | 646646 | 999 | 18 |
| 177, 183 | 0.111 | 2 | Very large | 999 | 19 |
| 177, 184 | 0.08 | 4.8 | Very large | 999 | 47 |
| 177, 185 | 0.171 | 0.1 | Very large | 999 | 0 |
| 177, 186 | 0.177 | 0.1 | Very large | 999 | 0 |
| 177, 187 | 0.162 | 0.2 | Very large | 999 | 1 |
| 177, 188 | 0.14 | 0.7 | Very large | 999 | 6 |
| 177, 217 | 0.361 | 0.1 | 1820 | 999 | 0 |
| 177, 218 | 0.295 | 0.1 | 1352078 | 999 | 0 |
| 177, 219 | 0.221 | 0.1 | Very large | 999 | 0 |
| 177, 220 | 0.43 | 0.1 | Very large | 999 | 0 |
| 177, 221 | 0.18 | 0.1 | Very large | 999 | 0 |
| 177, 222 | 0.173 | 0.1 | Very large | 999 | 0 |
| 177, 223 | 0.153 | 0.1 | Very large | 999 | 0 |
| 177, 224 | 0.207 | 0.1 | Very large | 999 | 0 |
| 177, 226 | 0.355 | 0.1 | 1352078 | 999 | 0 |
| 177, 227 | 0.138 | 0.1 | Very large | 999 | 0 |
| 177, 229 | 0.173 | 0.1 | Very large | 999 | 0 |
| 178, 180 | 0.318 | 0.1 | Very large | 999 | 0 |
| 178, 181 | 0.074 | 13.9 | 42504 | 999 | 138 |
| 178, 182 | 0.028 | 29.6 | 3003 | 999 | 295 |
| 178, 183 | 0.104 | 8.9 | 140364532 | 999 | 88 |
| 178, 184 | 0.088 | 10.9 | 2118760 | 999 | 108 |
| 178, 185 | 0.188 | 0.5 | 54891018 | 999 | 4 |
| 178, 186 | 0.141 | 0.1 | 118755 | 999 | 0 |
| 178, 187 | 0.177 | 0.7 | 182637273 | 999 | 6 |
| 178, 188 | 0.155 | 3.3 | 201376 | 999 | 32 |
| 178, 217 | 0.25 | 3.2 | 126 | 126 | 4 |
| 178, 218 | 0.224 | 1.2 | 6188 | 999 | 11 |
| 178, 219 | 0.202 | 0.1 | 435897 | 999 | 0 |
| 178, 220 | 0.431 | 0.1 | 153476178 | 999 | 0 |
| 178, 221 | 0.151 | 0.3 | 278256 | 999 | 2 |
| 178, 222 | 0.175 | 0.1 | Very large | 999 | 0 |
| 178, 223 | 0.157 | 0.1 | 721656936 | 999 | 0 |
| 178, 224 | 0.2 | 0.1 | 850668 | 999 | 0 |
| 178, 226 | 0.323 | 0.2 | 4368 | 999 | 1 |
| 178, 227 | 0.135 | 0.1 | 128164707 | 999 | 0 |
| 178, 229 | 0.177 | 0.1 | 21111090 | 999 | 0 |
| 180, 181 | 0.102 | 2.6 | Very large | 999 | 25 |
| 180, 182 | 0.26 | 0.1 | Very large | 999 | 0 |
| 180, 183 | 0.251 | 0.1 | Very large | 999 | 0 |
| 180, 184 | 0.239 | 0.1 | Very large | 999 | 0 |
| 180, 185 | 0.299 | 0.1 | Very large | 999 | 0 |
| 180, 186 | 0.342 | 0.1 | Very large | 999 | 0 |
| 180, 187 | 0.291 | 0.1 | Very large | 999 | 0 |
| 180, 188 | 0.221 | 0.1 | Very large | 999 | 0 |
| 180, 217 | 0.347 | 0.1 | 36041955 | 999 | 0 |
| 180, 218 | 0.346 | 0.1 | Very large | 999 | 0 |
| 180, 219 | 0.342 | 0.1 | Very large | 999 | 0 |
| 180, 220 | 0.372 | 0.1 | Very large | 999 | 0 |
| 180, 221 | 0.34 | 0.1 | Very large | 999 | 0 |
| 180, 222 | 0.251 | 0.1 | Very large | 999 | 0 |
| 180, 223 | 0.262 | 0.1 | Very large | 999 | 0 |
| 180, 224 | 0.34 | 0.1 | Very large | 999 | 0 |
| 180, 226 | 0.347 | 0.1 | Very large | 999 | 0 |
| 180, 227 | 0.287 | 0.1 | Very large | 999 | 0 |
| 180, 229 | 0.32 | 0.1 | Very large | 999 | 0 |
| 181, 182 | 0.035 | 18.6 | 20030010 | 999 | 185 |
| 181, 183 | 0.167 | 0.1 | Very large | 999 | 0 |
| 181, 184 | 0.087 | 0.4 | Very large | 999 | 3 |
| 181, 185 | 0.198 | 0.1 | Very large | 999 | 0 |

| | | | | | |
|-----------------|--------------|------------|-------------------|------------|----------|
| 181, 186 | 0.136 | 0.1 | Very large | 999 | 0 |
| 181, 187 | 0.189 | 0.1 | Very large | 999 | 0 |
| 181, 188 | 0.08 | 1 | Very large | 999 | 9 |
| 181, 217 | 0.169 | 0.3 | 8855 | 999 | 2 |
| 181, 218 | 0.181 | 0.1 | 141120525 | 999 | 0 |
| 181, 219 | 0.192 | 0.1 | Very large | 999 | 0 |
| 181, 220 | 0.424 | 0.1 | Very large | 999 | 0 |
| 181, 221 | 0.153 | 0.1 | Very large | 999 | 0 |
| 181, 222 | 0.174 | 0.1 | Very large | 999 | 0 |
| 181, 223 | 0.153 | 0.1 | Very large | 999 | 0 |
| 181, 224 | 0.191 | 0.1 | Very large | 999 | 0 |
| 181, 226 | 0.208 | 0.1 | 54627300 | 999 | 0 |
| 181, 227 | 0.136 | 0.1 | Very large | 999 | 0 |
| 181, 229 | 0.173 | 0.1 | Very large | 999 | 0 |
| 182, 183 | 0.06 | 15.8 | Very large | 999 | 157 |
| 182, 184 | -0.019 | 64 | Very large | 999 | 639 |
| 182, 185 | 0.154 | 0.5 | Very large | 999 | 4 |
| 182, 186 | 0.157 | 0.1 | 131128140 | 999 | 0 |
| 182, 187 | 0.177 | 0.2 | Very large | 999 | 1 |
| 182, 188 | 0.125 | 2.3 | 348330136 | 999 | 22 |
| 182, 217 | 0.216 | 0.3 | 1001 | 999 | 2 |
| 182, 218 | 0.209 | 0.2 | 646646 | 999 | 1 |
| 182, 219 | 0.201 | 0.1 | Very large | 999 | 0 |
| 182, 220 | 0.43 | 0.1 | Very large | 999 | 0 |
| 182, 221 | 0.155 | 0.1 | 635745396 | 999 | 0 |
| 182, 222 | 0.177 | 0.1 | Very large | 999 | 0 |
| 182, 223 | 0.157 | 0.1 | Very large | 999 | 0 |
| 182, 224 | 0.2 | 0.1 | Very large | 999 | 0 |
| 182, 226 | 0.28 | 0.1 | 352716 | 999 | 0 |
| 182, 227 | 0.136 | 0.1 | Very large | 999 | 0 |
| 182, 229 | 0.177 | 0.1 | Very large | 999 | 0 |
| 183, 184 | 0.069 | 0.3 | Very large | 999 | 2 |
| 183, 185 | 0.134 | 0.1 | Very large | 999 | 0 |
| 183, 186 | 0.231 | 0.1 | Very large | 999 | 0 |
| 183, 187 | 0.145 | 0.1 | Very large | 999 | 0 |
| 183, 188 | 0.211 | 0.1 | Very large | 999 | 0 |
| 183, 217 | 0.288 | 0.1 | 6210820 | 999 | 0 |
| 183, 218 | 0.269 | 0.1 | Very large | 999 | 0 |
| 183, 219 | 0.281 | 0.1 | Very large | 999 | 0 |
| 183, 220 | 0.36 | 0.1 | Very large | 999 | 0 |
| 183, 221 | 0.276 | 0.1 | Very large | 999 | 0 |
| 183, 222 | 0.197 | 0.1 | Very large | 999 | 0 |
| 183, 223 | 0.195 | 0.1 | Very large | 999 | 0 |
| 183, 224 | 0.277 | 0.1 | Very large | 999 | 0 |
| 183, 226 | 0.289 | 0.1 | Very large | 999 | 0 |
| 183, 227 | 0.213 | 0.1 | Very large | 999 | 0 |
| 183, 229 | 0.247 | 0.1 | Very large | 999 | 0 |
| 184, 185 | 0.099 | 0.1 | Very large | 999 | 0 |
| 184, 186 | 0.156 | 0.1 | Very large | 999 | 0 |
| 184, 187 | 0.124 | 0.1 | Very large | 999 | 0 |
| 184, 188 | 0.096 | 0.1 | Very large | 999 | 0 |
| 184, 217 | 0.198 | 0.1 | 211876 | 999 | 0 |
| 184, 218 | 0.197 | 0.1 | Very large | 999 | 0 |
| 184, 219 | 0.199 | 0.1 | Very large | 999 | 0 |
| 184, 220 | 0.397 | 0.1 | Very large | 999 | 0 |
| 184, 221 | 0.178 | 0.1 | Very large | 999 | 0 |
| 184, 222 | 0.172 | 0.1 | Very large | 999 | 0 |
| 184, 223 | 0.153 | 0.1 | Very large | 999 | 0 |
| 184, 224 | 0.19 | 0.1 | Very large | 999 | 0 |
| 184, 226 | 0.205 | 0.1 | Very large | 999 | 0 |
| 184, 227 | 0.144 | 0.1 | Very large | 999 | 0 |
| 184, 229 | 0.171 | 0.1 | Very large | 999 | 0 |
| 185, 186 | 0.115 | 0.2 | Very large | 999 | 1 |
| 185, 187 | 0.001 | 40.6 | Very large | 999 | 45 |
| 185, 188 | 0.178 | 0.1 | Very large | 999 | 0 |
| 185, 217 | 0.259 | 0.1 | 2919735 | 999 | 0 |
| 185, 218 | 0.263 | 0.1 | Very large | 999 | 0 |
| 185, 219 | 0.258 | 0.1 | Very large | 999 | 0 |
| 185, 220 | 0.356 | 0.1 | Very large | 999 | 0 |
| 185, 221 | 0.248 | 0.1 | Very large | 999 | 0 |
| 185, 222 | 0.175 | 0.1 | Very large | 999 | 0 |
| 185, 223 | 0.168 | 0.1 | Very large | 999 | 0 |
| 185, 224 | 0.249 | 0.1 | Very large | 999 | 0 |
| 185, 226 | 0.264 | 0.1 | Very large | 999 | 0 |
| 185, 227 | 0.186 | 0.1 | Very large | 999 | 0 |

| | | | | | |
|-----------------|--------------|------------|-------------------|------------|----------|
| 185, 229 | 0.208 | 0.1 | Very large | 999 | 0 |
| 186, 187 | 0.1 | 0.4 | Very large | 999 | 3 |
| 186, 188 | 0.141 | 0.1 | Very large | 999 | 0 |
| 186, 217 | 0.174 | 0.1 | 20475 | 999 | 0 |
| 186, 218 | 0.181 | 0.1 | Very large | 999 | 0 |
| 186, 219 | 0.19 | 0.1 | Very large | 999 | 0 |
| 186, 220 | 0.398 | 0.1 | Very large | 999 | 0 |
| 186, 221 | 0.153 | 0.1 | Very large | 999 | 0 |
| 1868, 222 | 0.162 | 0.1 | Very large | 999 | 0 |
| 186, 223 | 0.142 | 0.1 | Very large | 999 | 0 |
| 186, 224 | 0.186 | 0.1 | Very large | 999 | 0 |
| 186, 226 | 0.199 | 0.1 | 417225900 | 999 | 0 |
| 186, 227 | 0.137 | 0.1 | Very large | 999 | 0 |
| 186, 229 | 0.161 | 0.1 | Very large | 999 | 0 |
| 187, 188 | 0.167 | 0.1 | Very large | 999 | 0 |
| 187, 217 | 0.247 | 0.1 | 7673835 | 999 | 0 |
| 187, 218 | 0.251 | 0.1 | Very large | 999 | 0 |
| 187, 219 | 0.24 | 0.1 | Very large | 999 | 0 |
| 187, 220 | 0.312 | 0.1 | Very large | 999 | 0 |
| 187, 221 | 0.218 | 0.1 | Very large | 999 | 0 |
| 187, 222 | 0.165 | 0.1 | Very large | 999 | 0 |
| 187, 223 | 0.155 | 0.1 | Very large | 999 | 0 |
| 187, 224 | 0.217 | 0.1 | Very large | 999 | 0 |
| 187, 226 | 0.248 | 0.1 | Very large | 999 | 0 |
| 187, 227 | 0.191 | 0.1 | Very large | 999 | 0 |
| 187, 229 | 0.182 | 0.1 | Very large | 999 | 0 |
| 188, 217 | 0.21 | 0.2 | 31465 | 999 | 1 |
| 188, 218 | 0.211 | 0.1 | Very large | 999 | 0 |
| 188, 219 | 0.204 | 0.1 | Very large | 999 | 0 |
| 188, 220 | 0.415 | 0.1 | Very large | 999 | 0 |
| 188, 221 | 0.17 | 0.1 | Very large | 999 | 0 |
| 188, 222 | 0.161 | 0.1 | Very large | 999 | 0 |
| 188, 223 | 0.139 | 0.1 | Very large | 999 | 0 |
| 188, 224 | 0.183 | 0.1 | Very large | 999 | 0 |
| 188, 226 | 0.227 | 0.1 | Very large | 999 | 0 |
| 188, 227 | 0.138 | 0.1 | Very large | 999 | 0 |
| 188, 229 | 0.154 | 0.1 | Very large | 999 | 0 |
| 217, 218 | 0.003 | 41 | 1820 | 999 | 409 |
| 217, 219 | 0.056 | 18.5 | 58905 | 999 | 184 |
| 217, 220 | 0.326 | 0.4 | 6672876 | 999 | 3 |
| 217, 221 | 0.072 | 15.6 | 40920 | 999 | 155 |
| 217, 222 | -0.024 | 66.8 | 60862165 | 999 | 667 |
| 217, 223 | -0.086 | 93.4 | 23130030 | 999 | 933 |
| 217, 224 | 0.169 | 0.1 | 101270 | 999 | 0 |
| 217, 226 | 0.152 | 8.9 | 1365 | 999 | 88 |
| 217, 227 | -0.078 | 95.5 | 5773185 | 999 | 954 |
| 217, 229 | 0.066 | 13.2 | 1353275 | 999 | 131 |
| 218, 219 | 0.123 | 0.3 | Very large | 999 | 2 |
| 218, 220 | 0.363 | 0.1 | Very large | 999 | 0 |
| 218, 221 | 0.126 | 0.4 | Very large | 999 | 3 |
| 218, 222 | 0.104 | 0.2 | Very large | 999 | 1 |
| 218, 223 | 0.097 | 0.1 | Very large | 999 | 0 |
| 218, 224 | 0.19 | 0.1 | Very large | 999 | 0 |
| 218, 226 | 0.17 | 0.5 | 1352078 | 999 | 4 |
| 218, 227 | 0.105 | 0.1 | Very large | 999 | 0 |
| 218, 229 | 0.149 | 0.1 | Very large | 999 | 0 |
| 219, 220 | 0.245 | 0.1 | Very large | 999 | 0 |
| 219, 221 | 0.057 | 0.6 | Very large | 999 | 5 |
| 219, 222 | 0.047 | 1.2 | Very large | 999 | 11 |
| 219, 223 | 0.041 | 1.7 | Very large | 999 | 16 |
| 219, 224 | 0.132 | 0.1 | Very large | 999 | 0 |
| 219, 226 | 0.14 | 0.1 | Very large | 999 | 0 |
| 219, 227 | 0.087 | 0.1 | Very large | 999 | 0 |
| 219, 229 | 0.096 | 0.1 | Very large | 999 | 0 |
| 220, 221 | 0.174 | 0.1 | Very large | 999 | 0 |
| 220, 222 | 0.199 | 0.1 | Very large | 999 | 0 |
| 220, 223 | 0.212 | 0.1 | Very large | 999 | 0 |
| 220, 224 | 0.359 | 0.1 | Very large | 999 | 0 |
| 220, 226 | 0.328 | 0.1 | Very large | 999 | 0 |
| 220, 227 | 0.232 | 0.1 | Very large | 999 | 0 |
| 220, 229 | 0.278 | 0.1 | Very large | 999 | 0 |
| 221, 222 | 0.115 | 0.1 | Very large | 999 | 0 |
| 221, 223 | 0.091 | 0.1 | Very large | 999 | 0 |
| 221, 224 | 0.12 | 0.1 | Very large | 999 | 0 |
| 221, 226 | 0.084 | 4.6 | Very large | 999 | 45 |

| | | | | | |
|----------|--------|-----|------------|-----|-----|
| 221, 227 | 0.08 | 0.1 | Very large | 999 | 0 |
| 221, 229 | 0.082 | 0.1 | Very large | 999 | 0 |
| 222, 223 | 0.022 | 0.1 | Very large | 999 | 0 |
| 222, 224 | 0.097 | 0.1 | Very large | 999 | 0 |
| 222, 226 | 0.134 | 0.1 | Very large | 999 | 0 |
| 222, 227 | 0.099 | 0.1 | Very large | 999 | 0 |
| 222, 229 | 0.081 | 0.1 | Very large | 999 | 0 |
| 223, 224 | 0.06 | 0.1 | Very large | 999 | 0 |
| 223, 226 | 0.056 | 3.6 | Very large | 999 | 35 |
| 223, 227 | 0.046 | 0.1 | Very large | 999 | 0 |
| 223, 229 | 0.051 | 0.1 | Very large | 999 | 0 |
| 224, 226 | 0.117 | 0.2 | Very large | 999 | 1 |
| 224, 227 | 0.076 | 0.1 | Very large | 999 | 0 |
| 224, 229 | 0.067 | 0.1 | Very large | 999 | 0 |
| 226, 227 | -0.026 | 79 | Very large | 999 | 789 |
| 226, 229 | 0.051 | 8.5 | Very large | 999 | 84 |
| 227, 229 | 0.05 | 0.1 | Very large | 999 | 0 |

Table S7 Results of the ANOSIM test with the different grouped provinces. Significant groups are highlighted in bold.

| Groups | R Statistic | Significance level % | Possible permutations | Actual permutations | Number \geq observed |
|--------------------|--------------|-------------------------|--------------------------|------------------------|---------------------------|
| A, APF | 0.091 | 0.1 | Very large | 999 | 0 |
| A, CHA | 0.019 | 1.2 | Very large | 999 | 11 |
| A, M | 0.146 | 0.1 | Very large | 999 | 0 |
| A, S | 0.099 | 0.1 | Very large | 999 | 0 |
| A, SI | 0.002 | 50.6 | Very large | 999 | 505 |
| A, SS | 0.048 | 0.1 | Very large | 999 | 0 |
| A, TSWA | 0.102 | 0.1 | Very large | 999 | 0 |
| A, WTSEP | 0.098 | 0.1 | Very large | 999 | 0 |
| A, WTSWA | 0.195 | 0.1 | Very large | 999 | 0 |
| APF, CHA | 0.115 | 0.1 | Very large | 999 | 0 |
| APF, M | 0.12 | 0.1 | Very large | 999 | 0 |
| APF, S | -0.005 | 66.1 | 77520 | 999 | 660 |
| APF, SI | 0.081 | 0.6 | 77520 | 999 | 5 |
| APF, SS | 0.119 | 0.1 | Very large | 999 | 0 |
| APF, TSWA | 0.13 | 0.1 | 1144066 | 999 | 0 |
| APF, WTSEP | 0.163 | 0.1 | 67863915 | 999 | 0 |
| APF, WTSWA | 0.199 | 0.1 | Very large | 999 | 0 |
| CHA, M | 0.133 | 0.1 | Very large | 999 | 0 |
| CHA, S | 0.119 | 0.1 | Very large | 999 | 0 |
| CHA, SI | 0.025 | 24.8 | Very large | 999 | 247 |
| CHA, SS | 0.043 | 0.1 | Very large | 999 | 0 |
| CHA, TSWA | 0.121 | 0.1 | Very large | 999 | 0 |
| CHA, WTSEP | 0.119 | 0.1 | Very large | 999 | 0 |
| CHA, WTSWA | 0.174 | 0.1 | Very large | 999 | 0 |
| M, S | 0.122 | 0.2 | Very large | 999 | 1 |
| M, SI | 0.145 | 0.1 | Very large | 999 | 0 |
| M, SS | 0.116 | 0.1 | Very large | 999 | 0 |
| M, TSWA | 0.12 | 0.2 | Very large | 999 | 1 |
| M, WTSEP | 0.075 | 0.6 | Very large | 999 | 5 |
| M, WTSWA | 0.104 | 0.1 | Very large | 999 | 0 |
| S, SI | 0.097 | 6.8 | 1716 | 999 | 67 |
| S, SS | 0.117 | 0.1 | Very large | 999 | 0 |
| S, TSWA | 0.197 | 0.2 | 19448 | 999 | 1 |
| S, WTSEP | 0.234 | 0.2 | 245157 | 999 | 1 |
| S, WTSWA | 0.201 | 0.1 | Very large | 999 | 0 |
| SI, SS | 0.013 | 37.7 | Very large | 999 | 376 |
| SI, TSWA | 0.242 | 0.1 | 19448 | 999 | 0 |
| SI, WTSEP | 0.255 | 0.1 | 245157 | 999 | 0 |
| SI, WTSWA | 0.207 | 0.1 | Very large | 999 | 0 |
| SS, TSWA | 0.124 | 0.1 | Very large | 999 | 0 |
| SS, WTSEP | 0.122 | 0.1 | Very large | 999 | 0 |
| SS, WTSWA | 0.145 | 0.1 | Very large | 999 | 0 |
| TSWA, WTSEP | 0.221 | 0.2 | 5311735 | 999 | 1 |
| TSWA, WTSWA | 0.018 | 36.8 | Very large | 999 | 367 |
| WTSEP, WTSWA | 0.098 | 0.6 | Very large | 999 | 5 |