Octocorallia (Cnidaria: Anthozoa) from Brazilian reefs

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Supplementary Online Material

Subclass **OCTOCORALLIA**

Order **ALCYONACEA**

Suborder **STOLONIFERA**

Family **CLAVULARIIDAE**

Genus *Carijoa*

Carijoa riisei (Duchassaing and Michelotti, 1860)

Material

USA: **Florida**, off Miami (USNM 49691); **Texas**, Port Isabel (USNM 51966). Puerto Rico (USNM 42597). Curaçao: Caracas Baai (USNM 51273). Suriname (USNM 51478). Brazil: **Pará**, off the Amazon River (USNM 50581–50582); **Maranhão**, Cedral – Oiteiro (MNRJ 00396), São Luís (MNRJ 03979); **Paraíba**, Cabedelo – mouth of Paraíba do Norte River (UFPb 295, 300), João Pessoa – Seixas Point (UFPb 299, 301, MNRJ 00156, 00397), João Pessoa – Tambaú (UFPb 297); **Pernambuco**, Tamandaré (MNRJ 00381, 00398); **Alagoas**, Coruripe – Dom Rodrigo Reef (MNRJ 03385); **Bahia**, Camaçari – Praia do Forte (MNRJ 03150), Todos os Santos Bay – ‘Coroa de Pedra’ (MNRJ 02101, 02774), Morro de São Paulo (MNRJ 01394), off Ilhéus (MNRJ 04711, 20 m), Porto Seguro – Fora Reef (MNRJ 03993), ‘Alto de Cumuruxatiba’ (MNRJ 01838), Barra de Caravelas (USNM 50377), Lixa Reef (MNRJ 02952, 10 m; MNRJ 02953, 10 m; MNRJ 01843, 16 m), Parcel das Paredes – Pontas Sul (MNRJ 03162), Coroa Vermelha Reef, (MNRJ 02834), Viçosa Reef (MNRJ 02198), Popa Verde Reef (MNRJ 02583, 02750), California Reef (MNRJ 04148, 30 m), south of Abrolhos Bank (MNRJ 02521, c. 35–40 m); **Espírito Santo**, off Itaúnas (MNRJ 02520, 28 m), off Conceição da Barra (MNRJ 04154, 25 m), ‘Pontal da Regência’ (MNRJ 00395), off Nova Almeida (MNRJ 02517, 36 m), Vitória Seamount (off Vitória) (MNRJ 03997), Guarapari (MNRJ 00382, 3 m; MNRJ 00632; MNRJ 00642, 20 m), Anchieta – Sul Beach (MNRJ 01972), Piúma – Cabritos Island (MNRJ 01140); **Rio de Janeiro**, off São Tomé Cape (MNRJ 04884), Armação dos Búzios (MNRJ 00153, 5 m), Cabo Frio – Forte Beach (MNRJ 03963), Arraial do Cabo (MNRJ 00393, 4–5 m; MNRJ 01701, 01970, MNRJ 04734, 5 m), Niterói – Itaipu Beach (MNRJ 01971), Guanabara Bay – off Paquetá Island (USNM 50376), City of Rio de Janeiro – ‘Laje de Santo Antonio’ (Ipanema) (MNRJ 00385, 8–13 m; MNRJ 01978, 03189, MNRJ 04534, 16 m; MNRJ 04553, 16 m), City of Rio de Janeiro – offshore sewage tubes (Ipanema) (MNRJ 00383, MNRJ 00384, 5–8 m), Sepetiba Bay (SB) – Saí Island (MNRJ 00388, 2 m), SB – Águas Lindas Island (MNRJ 00378, MNRJ 01737), SB – Jaguanum Island (MNRJ 00386), Mangaratiba – Cruz Beach (MNRJ 00389, 3 m), Angra dos Reis (MNRJ 01967, 01968, 01485), Grande Island (GI) – Abraão Beach (MNRJ 00150 [under rocks], 00870, 00873), GI – Ponta Grossa do Sítio Forte (MNRJ 00427, 1–12 m; MNRJ 1738), GI – Curisco Beach (MNRJ 01969), Ilha Grande Bay (IGB) – Arpuá Point (MNRJ 00391, 1–3 m), IGB – Porcos Pequena Island (MNRJ 00387), IGB – Pingo d’Água Island (MNRJ 00151, c. 3 m; MNRJ 00629, 1 m; MNRJ 01974), IGB – Araçatiba de Dentro

Island (MNRJ 01061), Parati-Mirim Cove (MNRJ 00390, 1 m); **São Paulo**, Ubatuba – Flamengo Cove (MNRJ 00154), São Sebastião Channel (MNRJ 00155, 00392, 9–13 m; MNRJ 02798, 2 m); **Paraná**, Mel Island (MNRJ 01980); **Santa Catarina**, Laranjeiras Island – off Tapera Beach (MNRJ 01094), Florianópolis – Bombinhas Beach (MNRJ 00394), Campeche Island (MNRJ 01462). China: Shangai (USNM 49554).

Suborder **ALCYONIINA**

Family **NEPHTHEIDAE** Gray, 1859a

Genus *Neospongodes* Kükenthal, 1903

Neospongodes atlantica Kükenthal, 1903

Material

Brazil: ‘Norte’ [North] (MNRJ 00335); **Rio Grande do Norte**, off Natal (MNRJ 00334, 05°33.4’ S, 035°00.2’ W); **Bahia**, off Parupe (identified by F.M. Bayer as *Neospongodes atlantica* Kükenthal) (USNM 55655), ‘Punta da Torque’ (identified by F.M. Bayer as *N. atlantica* Kükenthal) (USNM 56678), Salvador (MNRJ 02678, 03390, 03818), Todos os Santos Bay – Itaparica Island (MNRJ 02475), Morro de São Paulo (MNRJ 01393, 01960, 01961), Itacolomis Reefs – ‘Pedra do Silva’ (MNRJ 04305), Timbebas Reefs (MNRJ 02848, 04304), Lixa Reef (MNRJ 01842, 01962, 02948), Paredes Reef (MNRJ 03062), Parcel dos Abrolhos (MNRJ 04877), Abrolhos Archipelago (MNRJ 02738), west of Abrolhos Archipelago (MNRJ 02238, MNRJ 02763, 10 m).

Comparative material

Neospongodes portoricensis (Hargitt; in Hargitt and Rogers 1901) – Cuba: off Havana (identified by F.M. Bayer) (USNM 7184); Puerto Rico? (identified by E. Deichmann) (USNM 43777); Barbados: northwest of ‘Pelican Island’ (identified by F.M. Bayer) (USNM 49521), west coast of Barbados, (identified by F.M. Bayer) (USNM 52525); Surinam: off Paramaribo (identified as *Neospongodes* sp. by F.M. Bayer) (USNM 55649).

Siphonogorgia caribaea (Deichmann, 1936) – Barbados: west coast (identified by F.M. Bayer) (USNM 52532); northwest of Gulf of Mexico, edge of continental shelf (identified by F.M. Bayer) (USNM 51592).

Siphonogorgia agassizi (Deichmann, 1936) – 27°02’ N, 082°32’ W, Gulf of Mexico [identified by F.M. Bayer (1953) as *Neospongodes agassizi* Deichmann (see Remarks)] (USNM 51015).

Suborder **HOLAXONIA**

Family **PLEXAURIDAE** Gray, 1959a

Genus *Heterogorgia* Verrill, 1868b

Heterogorgia uatumani Castro, 1990b

Material

Brazil: **Espírito Santo**, Santa Cruz (MNRJ 03214), Vila Velha – Sapo Island (MNRJ 4517, 15 m), off mouth of Doce River (19°45’00” S, 039°31’38” W) [MNRJ 4909, MNRJ 5075, MNRJ 6021, (these three lots 66–68 m)]; **Rio de Janeiro**, Maricás Islands (MNRJ 02779), Niterói – off Itaipu Beach (MNRJ 00380), Rio de Janeiro – Redonda Island (MNRJ 00504), Rio de Janeiro City – ‘Laje de Santo Antonio’

(Ipanema) (MNRJ 01977, 03986), Grande Island – ‘Ponta Grossa de Sítio Forte’ (MNRJ 00508, 8 m; MNRJ 01233, USNM 73432, 8–15 m), Ilha Grande Bay (IGB) – Pingo d’Água Island (MNRJ 00631, 6 m; USNM 73569, approximately 6 m; MNRJ 01975), IGB – Portogalo (MNRJ 02746), **São Paulo**, São Sebastião Channel, ‘Laje dos Moleques’ (MNRJ 00507, 9 m; USNM 73431, 9–13 m), **Santa Catarina**, Amendoin Island (MNRJ 01460, 7 m), Arvoredo Island (MNRJ 01459, 33 m).

Comparative material

Heterogorgia papillosa Verrill, 1870b – Mexico, Gulf of California, La Paz (YPM 8609 – Type specimen).

Heterogorgia tortuosa Verrill, 1868b – Panama, off ‘Pearl Islands’ (YPM 1555 – Syntypes).

Heterogorgia verrucosa Verrill, 1868b – Mexico, Gulf of California (identified by F.M. Bayer) (USNM 56566, 18 m); Panama, off ‘Pearl Islands’ (YPM 1554 – Syntypes).

Genus *Muricea* Lamouroux, 1821

Muricea flamma Marques and Castro, 1995

Material

Brazil: **Bahia**: off south of Jiquirica River, near Guaibim (MNRJ 02929), off Caravelas – Parcel das Paredes, Pedra Grande Reefs (MNRJ 01869, approx. 17°45’ S, 038°55’ W, 12–16 m, holotype; MNRJ 01835, 12 m, USNM 89263), ‘Alto de Cumuruxatiba’ (MNRJ 01836, approx. 17°00’ S, 039°05’ W, 15–20 m, paratype; USNM 89264, BM 1992.4.9.1); east of Parcel das Paredes (MNRJ 4032, 17°49’ S, 038°55’ W), 6 miles off Prado – ‘Buraco do Bicho’ (MNRJ 01384, approx. 17°20’ S, 039°05’ W, 16 m, paratype); California Reef (MNRJ 04145, 18°07’ S, 38°34’ W, 30 m), Abrolhos Bank (AB) [MNRJ 00878, 18°27.4’ S, 037°49.4’ W, 77 m (actually probably less than 50 m), paratype], AB – Popa Verde Reefs (MNRJ 02749), AB – Lixa Reef, ‘Vigilante’ (MNRJ 03107), Abrolhos Channel (MNRJ 4341, 17°59’ S, 38°51’ W); **Espírito Santo**: off Regência Point (MNRJ 4718, 19°30’ S, 038°46’ W, 65 m), off mouth of Doce River (19°43.857’ S, 039°26.372’ W) [MNRJ 04342, MNRJ 05959, (both lots 100–417 m)], (19°45.36’ S, 039°31.6’ W) (MNRJ 04738, 60 m), (19°45’36” S, 039°31’05” W) [MNRJ 04939, MNRJ 04940 (both lots 85–100 m)], (19°45’36” S, 039°31’36” W) [MNRJ 04129, MNRJ 05464, MNRJ 05980 (these three lots, 60 m)], off Itapemirim (MNRJ 02983, 21°09’ S, 040°16’ W, 82 m).

Genus *Muriceopsis* Aurivillius, 1931

Muriceopsis sulphurea (Donovan, 1825)

Material

Puerto Rico: Vega Baja Beach (identified by F.M. Bayer) (USNM 51931, 2–10 feet; USNM 52031, 4 feet; USNM 52193, USNM 52194). Santa Lucia (Antilles): ‘Gros Inlet’ (identified by F.M. Bayer) [USNM 51416 – Smithsonian Bredin Expedition, Station 64–59 (10–12 feet)]. Brazil: **Paraíba**, Cabedelo – Poço Beach (MNRJ 00455, 00457, UFPb 296), Tambaú – Seixas Point (MNRJ 00456, 0.5 m, UFPb 396);

Alagoas, Maragogi (MNRJ 00520); **Bahia**, Mata de São João – Forte Beach (MNRJ 02788), Mar Grande [identified by R. Rathbun as *Muricea humilis* (Milne-Edwards and Haime, 1857) and by F.M. Bayer as *Muriceopsis sulphurea* (Donovan, 1825)] (USNM 5289, 5290, 5301, YPM 4510 – holotype of *Muricea acropora* Verrill, 1912), Morro de São Paulo (MSP) – ‘Costão do Forte’ (MNRJ 01989, 01990), MSP – Caitá Island, off Terceira Praia (MNRJ 01395), Abrolhos Reefs [identified by A.E. Verrill, in 1912, as *Muricea humilis* (Milne-Edwards and Haime, 1857) variety *humilis*] (YPM 1515a-b) [identified by A.E. Verrill, in 1912, as *Muricea humilis* (Milne-Edwards and Haime, 1857) variety *mutans* – used to describe the ‘new variety’] (YPM 1515c) [identified by A.E. Verrill, in 1912, as *Muricea humilis* (Milne-Edwards and Haime, 1857) variety *macra* – used to describe the ‘new variety’] (YPM 1515d), Popa Verde Reef (MNRJ 02585), Parcel das Paredes (UFPb 277, 288), Abrolhos Archipelago (AA) (MNRJ 02739, 10 m), AA – Santa Bárbara Island (MNRJ 00450), AA – off east side of Sueste Island (UFPb 293), AA – off south side of Sueste Island (UFPb 281), AA – off south side of Redonda Island (UFPb 284), AA – ‘chapeirão’ 4 miles west of Redonda Island (MNRJ 02236, 14 m), Parcel dos Abrolhos (PA) (MNRJ 04588, 04591, 04592, 04594, 04597, all lots 17°58’ S, 038°39’ W), PA – nearby ‘Rosalinda’ (MNRJ 00451, 4–6 m; UFPb 285), PA – Sebastião Gomes Reef (MNRJ 04593, 04595, 04596), Nova Viçosa – Coroa Vermelha Reef (MNRJ 02725, 02835, MNRJ 04310, 17°57’ S, 39°13’ W), Viçosa Reef (MNRJ 02197, 02200); **Espírito Santo**, Vila Velha – Costa Beach (MNRJ 00458, 2 m), Guarapari (G) (MNRJ 00449, MNRJ 00452, 0.5 m), G – ‘Três Ilhas’ (MNRJ 00447, 3 m; MNRJ 00453, 3 m), G – Setiba Beach (MNRJ 00459, 1–2 m), G – ‘Três Praias’ (MNRJ 00454, 2–3 m), G – Castanheiras Beach (MNRJ 00448, 1 m; MNRJ 00637), Meaípe (MNRJ 00640), Ubú – Parati Beach (MNRJ 01144), Piúma – Francês Island (MNRJ 01143), Itapemirim (MNRJ 02262, 21°18’ S, 040°28’ W, 20 m); **Rio de Janeiro**, São João da Barra – ‘Baixio dos Moleques’, off the mouth of Itabapoana River (MNRJ 00460, 1.5–4 m).

Comparative material

Muriceopsis petila Bayer, 1961 – USA: **Florida**, off Fernandina (USNM 50382, 30°58’30” N, 079°38’30” W – Holotype, ‘Albatross’, Sta. 2668).

Muriceopsis metaclados sp. nov.

Material

Holotype. Brazil: **Ceará**: off Iguapé Point and Maceió Point (NOAS #1693, 03°30’ S, 037°56.5’ W, 49 m, August–December 1967 one colony plus five fragments) (MNRJ 03281) (Figure 3).

Paratypes. Brazil: **Ceará** – off Acaraú (identified by F.M. Bayer as *Muriceopsis* sp.) (USNM 55799, 44 m), **Bahia**, off Todos os Santos Bay (13°04’30” S, 038°23’30” W) (MNRJ 05086, 91 m), off Boipeba Island (13°36.67’ S, 038°47.212’ W) (MNRJ 05082, 40–45.2 m), California Reef (18°07’ S, 038°34’ W) (MNRJ 04147, 20–30 m), Hotspur Seamount (18°01’22” S, 035°53’28” W) (MNRJ 04131, 60 m); **Espírito Santo**, Vitória Seamount (off Vitória – 20°34.37’ S, 038°03.53’ W (MNRJ 04869,

55 m); **Rio de Janeiro**, off São João da Barra (21°30' S, 040°18' W) (MNRJ 04872, 52 m), (21°31'00" S, 040°18'00" W) [MNRJ 4127, MNRJ 4128 (both lots 52 m)] (Figure 3).

Other Specimens:

Brazil: **Maranhão** – off Mangabeira Island (NOAS #1750, 00°04' S, 044°33.5' W, 52 m, August–December/1967, two fragments, UFPE-DO), off Santana Island (NOAS #1875, 00°56' S, 043°41.5' W, 49 m, 23 April 1968, two fragments, UFPE-DO), off Tubarão Bay (NOAS N-NEII #1872, 01°0' S, 043°33.5' W, 50 m, 23 April 1968, two fragments, UFPE-DO); **Ceará** – off Mundaú Point (NOAS #1711, 02°25' S, 039°30.5' W, 49 m, two fragments, UFPE-DO), off Paracuru Point (CN #66, 02°41' S, 039°10' W, 63 m, two fragments, UFPE-DO), off Cumicuará Point (CN #61, 02°59' S, 038°58' W, 60 m, more than 10 fragments, UFPE-DO), off Pecém Cove (CN #15, 01°30' S, 038°48' W, 45–49 m, one colony + three fragments, UFPE-DO), off Iguapé Cape (CN #23 and #26, 02°15' S, 038°15' W, 69–72 m; CN #73, 03°18' S, 038°14' W, 80 m – three lots, more than 70 fragments – UFPE-DO); off Iguapé Point and Maceió Point (NOAS #1693, 03°30' S, 037°56.5' W, 49 m, August–December 1967, one colony + five fragments, UFPE-DO; CN #52, 03°40' S, 037°54' W, 54 m, June 1965 to February 1966, more than 10 fragments, UFPE-DO), off Maceió Point (CN #19, 01°56' S, 037°51' W, 47–49 m, June 1965 to February 1966, more than 50 fragments, UFPE-DO; NOAS #1701^A, 01°57' S, 037°46' W, c. 50 m, more than 10 fragments, UFPE-DO); **Rio Grande do Norte** – off Três Irmãos Point (NOAS #1684, 03°59.5' S, 035°53.7' W, 75 m, three fragments, UFPE-DO; NOAS #1684^A, 03°59.5' S, 035°53.7' W, 140 m, six fragments, UFPE-DO; NOAS #1684B, 03°59.5' S, 035°53.7' W, 73 m, four fragments, UFPE-DO); **Paraíba** – off Lucena Point (NOAS N-NEII #1858, 06°50' S, 034°44' W, 36 m, 17 April 68, three fragments, UFPE-DO).

Comparative material

Muriceopsis sulphurea (Donovan, 1825) – see list of studied material under the species heading.

Muriceopsis flavida (Lamarck, 1815) – Saint John, Virgin Islands, USA (4.6 m), identified by F.M. Bayer (MNRJ 1262).

Muriceopsis petila Bayer, 1961, (Paratype) – Tongue of the Ocean, Bahamas (66 m), identified by F.M. Bayer (USNM 50384).

Genus *Plexaurella*

Plexaurella dichotoma (Esper, 1788)

Material

USA: **Florida**, Biscayne Bay, Soldier Key (identified by F.M. Bayer) [MNRJ 1269 (ex-USNM 50319)]. Brazil: **Maranhão**, Parcel do Manuel Luiz (MNRJ 01534, MNRJ 01541); **Rio Grande do Norte**, outer side of Atol das Rocas (MNRJ 00443, 4–10 m); **Pernambuco**, Fernando de Noronha (YPM 4509 – holotype of *Plexaurella obesa* Verrill, 1912, USNM 5278 – identified by F.M. Bayer, MNRJ 00980).

Plexaurella grandiflora Verrill, 1912

Material

Brazil: **Paraíba**, ‘Parahyba do Norte’ (MNRJ 01273), João Pessoa – Tambaú, Picãozinho Reef (MNRJ 00446), Cabo Branco – Seixas Point [UFPb 397 (just below ebb tide level)]; **Pernambuco**, Candeias (YPM 4503 – holotype of *Plexaurella verrucosa* Verrill, 1912), Porto de Galinhas – Rasinho do Coiceiro (MNRJ 02754, 30 m); **Alagoas**, Maragogi (MNRJ 00445), Marechal Deodoro – Frances Beach (MNRJ 02752); **Bahia**, Mapele (MNRJ 01274), Salvador – Todos os Santos Bay, Monteserrat Point (MNRJ 04002, 12°55′ S, 038°31′ W), Morro de São Paulo (MSP) – ‘Costão do Forte’ (MNRJ 01988), MSP – left side of ‘Costão do Forte’ (MNRJ 01397), Mar Grande (YPM 4501 – holotype of *Plexaurella* (*Pseudoeuni-cea*) *grandiflora* Verrill, 1912), Periperi Point (YPM 4502 – holotype of *Plexaurella pumila* Verrill, 1912), Santa Cruz de Cabrália – Coroa Vermelha Point (UFPb 298), Prado – 5 km to the north of Cumuruxatiba (MNRJ 00157, 0.5 m), Abrolhos Reefs (YPM 1597 – holotype of *Plexaurella cylindrica* Verrill, 1912; YPM 1598 – holotype of *Plexaurella braziliiana* Verrill, 1912), Parcel das Paredes (PP) – Lixa Reef (MNRJ 00435, 3–7 m, UFPb 289), PP – ‘chapeirão’ on the northern border of Lixa Reef (UFPb 278), PP – “chapeirão” on the southern border of Lixa Reef (UFPb 275), PP – Ponta Sul (MNRJ 04342, 17°52′ S, 38°58′ W), Abrolhos Archipelago (AA) – east border of Sueste Island (UFPb 294), AA – south of Sueste Island (UFPb 282), AA – between Siriba and Redonda Islands (MNRJ 01182), Parcel dos Abrolhos (PA) (MNRJ 00436, 5–8 m), PA – Popa Verde Reef (MNRJ 02584, MNRJ 04586, 18°01′ S, 038°59′ W), PA – Sebastião Gomes Reef (MNRJ 04584, 04585, 04587), Viçosa Reef (MNRJ 02199), Nova Viçosa – Coroa Vermelha Reef (MNRJ 02726, 02861); **Espírito Santo**, Santa Cruz (MNRJ 00431), Vila Velha – Costa Beach (MNRJ 00442, 2 m), Guarapari (G) – Três Ilhas (MNRJ 00438, 3 m), G – Três Praias (MNRJ 00439, 2–3 m), G – Setiba Beach (MNRJ 00441, 1–2 m, MNRJ 00432, 1 m), G – Castanheiras Beach (MNRJ 00433, 1 m, MNRJ 00437, 0.5 m, MNRJ 00635, 01344), G – Meaípe (MNRJ 00639), G – Três Praias, Meio Beach (MNRJ 03961, 3 m), Piúma – Francês Island (MNRJ 01148, 2 m), Piúma – Cabrito Island (MNRJ 01149), Ubú – Parati Beach (MNRJ 01987), off Itapemirim (MNRJ 02260, 21°18′ S, 040°28′ W, 22 m); off between Regência (Espírito Santo) and Regência (Rio de Janeiro) (MNRJ 04589); **Rio de Janeiro**, São João da Barra – off mouth of Itabapoana River, Baixio dos Moleques (MNRJ 00444, 1.5–4 m).

Plexaurella regia Castro, 1989

Material

Brazil: **Bahia**, Parcel das Paredes (PP) (MNRJ 02748), PP – fringe of Lixa Reef (MNRJ 00440 – Holotype, 6 m, USNM 73399, 6 m, paratype), PP – ‘Vigilante’ of Lixa Reef (UFPb 290), Abrolhos Archipelago (AA) – south side of Sueste Island (UFPb 279 – paratype), AA – Redonda Island (MNRJ 01176), Abrolhos Bank – Popa Verde Reef (MNRJ 2751), Parcel dos Abrolhos (PA) (MNRJ 04580, 04581, 04582, 04583,

17°58' S, 038°39' W), PA – 1 mile east of Santa Bárbara Island [MNRJ 00434, Paratype (4–6 m)], north of Parcel dos Abrolhos (USNM 73735, paratype).

Family **GORGONIIDAE** Lamouroux, 1812

Genus *Leptogorgia* Milne-Edwards and Haime, 1857

Leptogorgia punicea (Milne-Edwards and Haime, 1857)

Material

Brazil: **Bahia**, Porto Seguro – Fora Reef, ‘Pedra do Tassepocu’ (MNRJ 03994), Parcel das Paredes – Pedra de Leste (MNRJ 04307, 17°47' S, 039°02' W), Guaratibas – channel between North and South Guaratiba (MNRJ 04333), Abrolhos – Popa Verde Reefs (MNRJ 02575); **Espírito Santo**, Vila Velha – Sapo Island (MNRJ 04511, 20°19' S, 040°16' W), Guarapari (G) – Castanheiras Beach (MNRJ 00633), G – Três Ilhas Archipelago (MNRJ 03967, 6 m); **Rio de Janeiro**, ‘Rio de Janeiro’ (fragments from syntypes of *Gorgonia pumicea* Milne-Edwards and Haime, 1857 – MNHN), northern coast of Rio de Janeiro State (MNRJ 00369), Armação dos Búzios (AB) (MNRJ 00423), AB – Praia de João Fernandes (MNRJ 00139, 00140, 00141, 00142, 00144), vicinities of Feia Island (MNRJ 00430, c. 15 m), Cabo Frio (CB) – Oratório Point (MNRJ 01982), CB – Forte Beach (MNRJ 03399, 6 m), Arraial do Cabo (AC) – Grande Beach (MNRJ 03675, 30 m), AC – beach on the Cabo Frio Island (MNRJ 00377, c. 5 m), Maricás Islands (MNRJ 00372, c. 10 m), Niterói – Itaipu Beach (MNRJ 00379), Rio de Janeiro (Rio) (USNM 633 – identified by F.M. Bayer), Rio – rocks off Ipanema Beach (Laje de Santo Antônio) (MNRJ 00362, 8–15 m; MNRJ 04536, 16 m; MNRJ 04552, 16 m), Rio – Barra de Guaratiba (MNRJ 00257), Sepetiba Bay (SB) – Itacuruçá Island, Gamboa (MNRJ 00367, 1.7 m), SB – Águas Lindas Island (MNRJ 00378), SB – Jaguanum Island (MNRJ 00143, UFPb 394), Barra de Mangaratiba (MNRJ 00373), Mangaratiba – Figueira Point (MNRJ 00371, 3 m), Ilha Grande Bay – Arpuá Point (MNRJ 00375, 1–3 m), Grande Island – ‘Ponta Grossa do Sítio Forte’ (MNRJ 00428, 3–12 m; MNRJ 00262), Parati-Mirim Cove (MNRJ 00374, 1–3 m), Angra dos Reis (AR), Pingo d’Água Beach (MNRJ 00630, 6 m), AR – Pingo d’Água Island (MNRJ 01976); **São Paulo**, Caraguatatuba (USNM 57452 – identified by F.M. Bayer), São Sebastião Channel – ‘Laje dos Moleques’ (MNRJ 00376, 4–13 m.); **Paraná**, Paranaguá [?] (MNRJ 00370); **Santa Catarina**, Arvoredo Island (MNRJ 2691, 3 m); **Rio Grande do Sul**, ‘Parcel do Carpinteiro’ (MNRJ 04522, 32°36' S, 051°47' W, 22 m).

Comparative material

The following specimens were identified as *Lophogorgia punicea* (Milne-Edwards and Haime, 1857) by F.M. Bayer: USNM 44228 (off Rebecca Shoal, Florida, USA); USNM 49713 (off Palm Beach, Florida, USA); USNM 51477 (off Surinam). The following specimens were identified as *Lophogorgia hebes* (Verrill, 1869) by F.M. Bayer: USNM 49589, 50448 (off New River, North Carolina, USA); USNM 50260 (off Longboat Pass, Manatee District, Florida, USA); USNM 44226, 44227, 50053, 50812 (Gulf of Mexico, off Florida, USA); USNM 50531 (off Freeport, Texas, USA); USNM 50412 [(?) Aruba, Antilles].

Leptogorgia violacea (Pallas, 1766)

Material

Brazil: **Espírito Santo**, Cações Beach (MNRJ 02715, 02722), Guarapari (G) – Três Ilhas Archipelago (MNRJ 00368, 3 m; MNRJ 03969), G – Castanheiras Beach (MNRJ 00634); **Rio de Janeiro**, off south of São Tomé Cape (22°19'07" S, 040°49'34" W) [MNRJ 5067, MNRJ 5073, MNRJ 5076, MNRJ 5081 (these three lots 57–60 m)]; Guanabara Bay – Paquetá Island (identified by F.M. Bayer) (USNM 17329, 5–7 m), Rio de Janeiro (identified by F.M. Bayer) (USNM 50225).

Leptogorgia pseudogracilis sp. nov.

Material

Holotype. Brazil: **Rio de Janeiro**, off north of São Tomé Cape (21°38'57" S, 040°10'47" W) (MNRJ 05083, 100–180 m) (Figure 3).

Paratypes. Brazil: **Bahia**, one specimen, Abrolhos Reefs (YPM 1516 specimen **c** – former syntype of *Pterogorgia gracilis* Verrill, 1868a); **Espírito Santo**, four specimens, off mouth of Doce River (19°45'00" S, 039°31'38" W) (MNRJ 04910, 66–68 m).

Genus *Olindagorgia* Bayer, 1981c

Olindagorgia gracilis (Verrill, 1868a) comb. nov.

Material

Brazil: **Paraíba**, 'Parahyba do Norte', 06°59'30" S, 034°47'00" W (USNM 50228 – holotype of *Pseudopterogorgia marcgravii* Bayer, 1961, USNM 50229 – paratypes of *p. marcgravii* Bayer, 1961, 'Albatross' Sta. 2758, 37 m); **Bahia**, Abrolhos Bank (MNRJ 04308), Abrolhos Reefs (YPM 1516a,b,d syntypes of *Pterogorgia gracilis* Verrill, 1868a), Parcel das Paredes (PP) (MNRJ 02753), west of Parcel das Paredes (MNRJ 04306, 17°48' S, 039°00' W), PP – Lixa Reef (MNRJ 04316, 17°42' S, 039°00' W, MNRJ 01837), PP – Lixa Reef, 'Vigilante' (UFPb 291), PP – south of Lixa Reef (MNRJ 04315, 17°45' S, 038°58' W), PP – Areia Reef (MNRJ 04309, 17°36' S, 039°03' W), Sebastião Gomes (MNRJ 04317, 17°54' S, 039°08' W, 4 m); **Espírito Santo**, Capuba Beach (between Vitória and Vila Velha) (MNRJ 00499, 1 m), Guarapari (G) – Três Ilhas Archipelago (MNRJ 00496, 00497, up to 3 m; MNRJ 03983, 6 m), G – Setiba Beach (MNRJ 00494, ± 2 m), G – Três Praias (MNRJ 00495, ± 3.5m), G – Meaípe (MNRJ 00641), Ubú – Parati Beach (MNRJ 01142), Piúma – Frances Beach (MNRJ 01141), **Rio de Janeiro**, off São Tomé Cape (MNRJ 04827, 22°00' S, 040°50' W, 100 m).

Comparative material

Pterogorgia bipinnata Verrill, 1864 – Venezuela, Cumaná (MCZ 5080 – type material).

Genus *Phyllogorgia* Milne-Edwards and Haime, 1850
Phyllogorgia dilatata (Esper, 1806)

Material

Brazil: **Maranhão**, Parcel do Manuel Luis (MNRJ 02710, 03279), **Ceará**, Mucuripe Beach (MNRJ 00461); **Rio Grande do Norte**: off Atol das Rocas (MNRJ 00477, 5–12 m); **Pernambuco**, Fernando de Noronha (FN) (identified as *Phyllogorgia quercifolia* Dana by R. Rathbun) (USNM 5258, 5307, 5308), FN – Leão Beach (MNRJ 00979), Rio Formoso (identified as *Phyllogorgia quercifolia* Dana by R. Rathbun) (USNM 5305); **Bahia**, Periperí (USNM 5304 and 5248 – identified as *Phyllogorgia quercifolia* Dana by R. Rathbun, YPM 4505 – specimen used to describe a new variety – *Phyllogorgia quercifolia* Dana variety *lacerata* Verrill, 1912, YPM 4506 – specimen used by Verrill, 1912, to illustrate *Phyllogorgia quercifolia* Dana variety *quercifolia*), Morro de São Paulo (MSP) (MNRJ 03152), MSP – Tinharé Island, Prainha (MNRJ 00886), MSP – Caitá Island, off Terceira Praia (MNRJ 01396), Porto Santa Cruz de Cabralia – off Coroa Vermelha Point (UFPb 273), Porto Seguro – Fora Reef (MNRJ 01688, 01981), Arraial da Ajuda – Mucuri Beach (MNRJ 01687), ‘Abrolhos Reefs’ (YPM 1514 – types of *Phyllogorgia frondosa* Verrill, 1912), Parcel das Paredes (PP) (MNRJ 02740), PP – ‘chapeirão’ off the northern border of Lixa Reef (UFPb 276), PP – Lixa Reef (MNRJ 00466), PP – Lixa Reef, ‘Vigilante’ (UFPb 287), Abrolhos Archipelago (AA) (MNRJ 02724, 17°46’ S, 039°02’ W), AA – northern shore of Sueste Island (UFPb 292), AA – southern shore of Sueste Island (UFPb 280), AA – southern shore of Redonda Island (UFPb 283), AA – between Siriba and Redonda Island (MNRJ 01185), Parcel dos Abrolhos – near a wreck indicated in the Brazilian Nautical Chart n. 1300 (MNRJ 00462, 4–7 m), Nova Viçosa – Coroa Vermelha Reef (MNRJ 02727), Viçosa Reef (MNRJ 02202); **Espírito Santo**, Guarapari (G) – Três Ilhas (MNRJ 00463 [$\pm$ 3 m]), G – Setiba Beach (MNRJ 00493), G – Castanheiras Beach (MNRJ 00636, 02709); G – Meaípe (MNRJ 00638), Ubú – Parati Beach (MNRJ 01145), Piúma – Cabritos Island (MNRJ 01146), Trindade Island – Portugueses Beach (MNRJ 02513); **Rio de Janeiro**, São João da Barra – ‘Baixio dos Moleques’, off the mouth of the Itabapoana River (MNRJ 00478, 1.5–4 m), Armação dos Búzios (AB) – João Fernandes Beach (MNRJ 00464, 04336), AB – Tartaruga Beach (MNRJ 03991), Cape Frio (MNRJ 00465), Arraial do Cabo (AC) – Saco do Cherno (MNRJ 00468, 4 m), AC – Forno Beach (MNRJ 00185 and 00186, 3–4 m), AC – Cabo Frio Island (MNRJ 00467, 4 m).

Family **ELLISELLIDAE** Gray, 1859b

Genus *Ellisella* Gray, 1857

Ellisella elongata (Pallas, 1766)

Material

Haiti: 19°10’05” N, 069°21’25” W [MNRJ 1250 (= USNM 74917) – ‘Caroline’ Sta. 52 (26–40 m)]. Brazil: **Amapá**, off Caciporé Cape, 04°02’ N, 050°33’ W [identified by F.M. Bayer) (USNM 50899 – ‘Oregon’, Sta. 2049 (70 m)] **Pará**, off mouth of Amazon River, 02°40’ N, 047°55’ W (identified by F.M. Bayer) [MNRJ 01249 (= USNM 50904) ‘Oregon’, Sta. 2066 (201 m), USNM 50902 – ‘Oregon’, Sta. 2066 (201 m)]; **Bahia**: ‘Alto de Cumuruxatiba’, Laje dos Aprofundados (MNRJ

01841); **Espírito Santo**, off Regência, 19°37'48" S, 38°41'90" W (MNRJ 04801, 04802), off Conceição da Barra, 18°37' S, 38°41' S [MNRJ 04825 (65 m)], off between Regência and Atafona (MNRJ 05002), Jaseur Seamount, 20°36'15" S, 035°51'35" W, [MNRJ 4132 (110 m)]; Columbia Seamount, 20°44' S, 031°49' W [MNRJ 04779 (80 m)]; off Martin Vaz Island, 20°30' S, 028°50' W [MNRJ 04814 (180 m)]; **Rio de Janeiro**, off Campos, 22°00'24" S, 40°05'15" W [MNRJ 04816 (100 m)], Almirante Saldanha Seamount, 22°22' S, 037°35' W [MNRJ 04900 (240 m), MNRJ 04904 (500 m), MNRJ 04900, 05934, 05975 (these three lots 240–300 m)]; Maricás Islands [MNRJ 01357, MNRJ 01525 ($\pm$ 20 m)], Rio de Janeiro, Rasa Island [MNRJ 01466 (21 m)], Grande Island, Ponta Grossa de Sítio Forte, 23°06.8' S, 044°17.6' W [MNRJ 00503 (8 m)], Ilha Grande Bay, between 23°11.5' S, 044°28.3' W and 23°13.2' S, 044°34.9' W (MNRJ 00501); **São Paulo**, São Sebastião Channel, Laje dos Moleques [MNRJ 00502 (= USNM 73427) (9–13 m)], **Rio Grande do Sul**, off Torres, 29°50' S, 048°30' W [MNRJ 01523, MNRJ 01524 (150 m)].

Comparative material

Scirpearia grandis Verrill, 1901 – 'TYPE' – off North Rock, Bermudas [MCZ 4740 (66 m)].

Family **CHRYSOGORGIIDAE** Verrill, 1883
Genus *Stephanogorgia* Bayer and Muzik, 1976
Stephanogorgia rattoi sp. nov.

Material

Holotype. Brazil: **Bahia**, Pedra Grande, Parcel das Paredes, 17°44'44.1" S, 038°55'08.7" W, c. 16 m, collected by B. Segal and C. B. Castro, 19 February 2000 (MNRJ 06071) (Figure 3).

Paratypes. Brazil: **Bahia**, Off Itacolomis Reefs, 16°56'29" S, 039°00'24" W, 14–22 m (MNRJ 03684); 'Salteado de Timbebas', 17°25'34.3" S, 038°58'16.6" W, 23 m (MNRJ 04323); south of Parcel de Timbebas, 17°30'22.4" S, 039°00'47.5" W, 3.5–13 m (MNRJ 04324); Parcel de Timbebas, 17°30.057' S, 039°00.776' W (MNRJ 02844, 02845); Pedra Grande, Parcel das Paredes, 17°44'44.1" S, 038°55'08.7" W, c. 16 m (MNRJ 04319 – 14 paratypes); Lixa Reef, Parcel das Paredes, 17°46.54' S, 039°01.58' W, 12 m (MNRJ 02954); Lixa Reef, Vigilante, Parcel das Paredes (MNRJ 03064); Parcel das Paredes, 17°52'37.83" S, 038°58'34.15" W (MNRJ 03169); Popa Verde Reef, Abrolhos Bank, 18–20 m (MNRJ 02967); Califórnia Reef, 18°06'07.8" S, 038°35'26.0" W, 15–32 m (MNRJ 04071 – seven specimens; 04318 – 24 specimens); Califórnia Reef, 18°07' S, 038°34' W, 20–30 m (MNRJ 04146 – 16 specimens; MNRJ 06000); south-east of Califórnia Reef, 18°34'00" to 18°39'48" S, 038°04'00" to 037°52'13" W, 65 m (MNRJ 04823, MNRJ 05994); **Espírito Santo**, off Doce River, 19°42.626' to 19°43.857' S, 039°26.321' to 039°26.372' W, 100–417 m (MNRJ 04221) (Figure 3).

Genus *Trichogorgia* Hickson, 1904
Trichogorgia brasiliensis sp. nov.

Material

Holotype. Brazil: **Bahia**, Lixa Reef, Parcel das Paredes, 12 m, collected by C.C. Ratto, 8 June 1996 (MNRJ 03191) (Figure 3).

Paratypes. Brazil: **Bahia**, Califórnia Reef, Parcel dos Abrolhos, 18°06'07.8" S, 038°35'26.0" W, 15–32 m (MNRJ 04312) (Figure 3).