

## Checklist of Stomatopoda (Malacostraca: Hoplocarida) deposited in the MOUFPE collection, with a new record from Brazil

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### Abstract

A total of 39 species of Stomatopoda were previously reported from marine and estuarine habitats of Brazilian waters. The present checklist is based on material deposited in the crustacean collection of Museu de Oceanografia Petrônio Alves Coelho, Universidade Federal de Pernambuco, city of Recife, Brazil (MOUFPE). The collection, deriving primarily from the northern and northeastern coast of Brazil, includes 667 samples and 1.301 specimens, distributed in four superfamilies, seven families, 14 genera and 33 species, including one holotype and two paratype. Apparent distribution gaps for five-species were filled. Two Brazilian endemic species had their southern geographical ranges increased (*Neogonodactylus moraisi* (Fausto Filho & Lemos de Castro, 1973) and *Nannosquilla dacostai* Manning, 1970) and one was recorded for the first time from northeast Brazilian waters [*Alima neptuni* (Linnaeus, 1768)]. There are now 42 species of Stomatopoda recorded from the Brazilian coast.

Key words: Biodiversity, Gonodactyloidea, Lysiosquilloidea, northern and northeastern Brazil, Squilloidea.

### Introduction

The crustaceans of the order Stomatopoda, commonly known as mantis shrimps, are among the most aggressive crustacean predators and those with the most complex behavior (Ahyong and Harling, 2000). They are cryptic, benthic animals that are most abundant in marine depths less than about 200 m, although some occur in shallow brackish habitats, and others to 1500 m depth in soft or hard substrates (Ahyong *et al.*, 2008).

Ahyong *et al.* (2011) considered for the

extant Stomatopoda to include one suborder, Unipeltata Latreille, 1825, with seven superfamilies: Bathysquilloidea Manning, 1967; Gonodactyloidea Giesbrecht, 1910; Erythrosquilloidea Manning and Bruce, 1984; Lysiosquilloidea Giesbrecht, 1910; Squilloidea Latreille, 1802; Eurysquilloidea Manning, 1977; and Parasquilloidea Manning, 1995. These taxa comprise 115 genera and 460 species.

Among these seven superfamilies recognized by Ahyong *et al.* (2011), six are recorded in Brazil: Bathysquilloidea, with Bathysquillidae

Manning, 1967; Gonodactyloidea, including the families Hemisquillidae Manning, 1980, Gonodactylidae Giesbrecht, 1910, Odontodactylidae Manning, 1980 and Pseudosquillidae Manning, 1977; Lysiosquilloidea, including Lysiosquillidae Giesbrecht, 1910 and Nannosquillidae Manning, 1980; Squilloidea with Squillidae Latreille, 1802; Eurysquilloidea comprising Eurysquillidae Manning, 1977 and Parasquilloidea with Parasquillidae Manning, 1995 (Gomes Corrêa, 1998; Schram, 2010). In the last decades few studies were published in Brazil, dealing with distribution, diversity and systematic issues (Barreto *et al.*, 2003; Coelho and Santos, 2003; Silva *et al.*, 2003; Rodrigues and Young, 2005; Almeida *et al.*, 2007a; 2007b; 2008; Bento *et al.*, 2008; Albuquerque and Coelho, 2009; Bento and Melo, 2010; Lucatelli *et al.*, 2012). Nevertheless, these are check-lists for restricted areas or papers dealing with new species. Thus, additional study would be useful in order to achieve a more thorough knowledge of the group in Brazil. The scientific collections are important sources to improve these issues and answer some taxonomic, phylogenetic and biogeographic questions.

There are three most important carcinological collections in Brazil that represent the Brazilian stomatopod fauna: Museu de Zoologia of Universidade de São Paulo (MZUSP), Museu Nacional of Rio de Janeiro (MNRJ) and Museu de Oceanografia Petrônio Alves Coelho of Universidade Federal de Pernambuco (MOUFPE). This paper reviews the identification of species deposited in the Museu de Oceanografia Petrônio Alves Coelho, Universidade Federal de Pernambuco, city of Recife, Brazil (MOUFPE, previously DOUFPE) and provides new records of Stomatopoda from Brazilian waters.

## Material and Methods

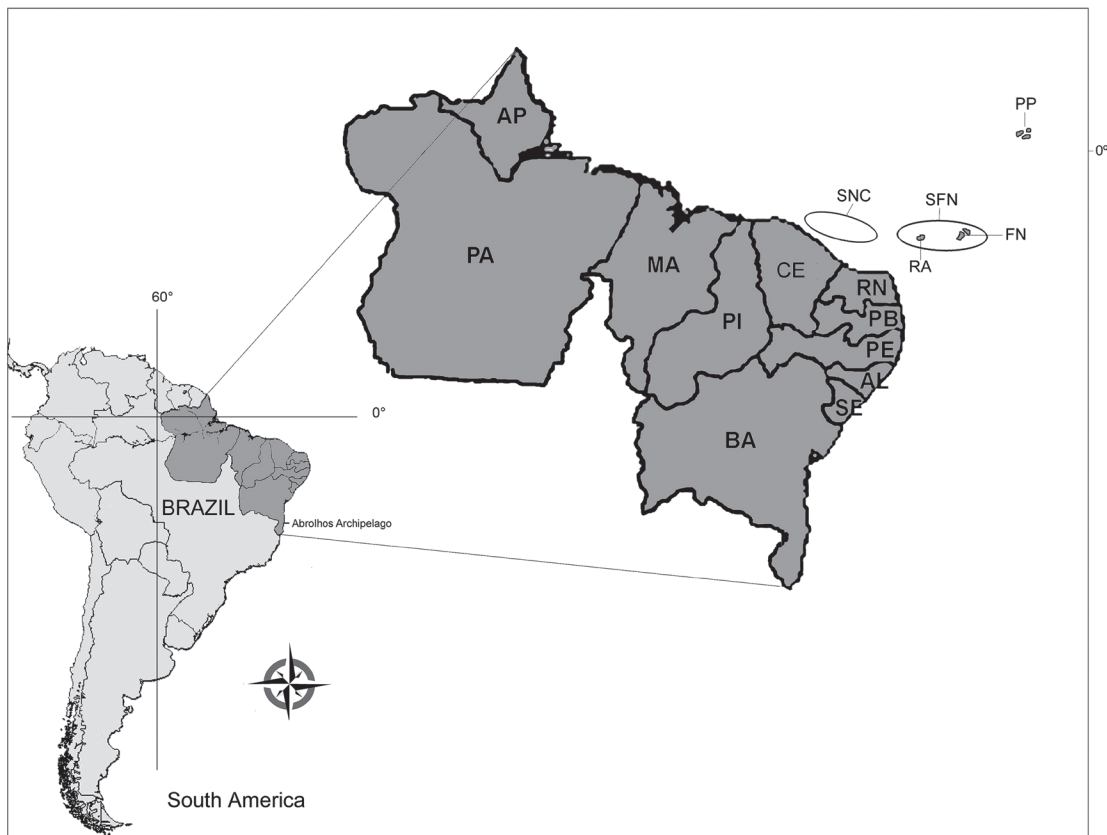
The present checklist includes species found from the Cape Orange, northern Amapá State (04°17'N / 51°32'W) to the Abrolhos

Archipelago, Southern Bahia State (18°19'S / 39°40'W). Oceanic areas include the Fernando de Noronha Archipelago (03°51'S / 35°25'W), located 345 km east of the coast of Rio Grande do Norte State, and São Pedro and São Paulo Archipelago (0°55'N / 29°20'W), located about 500 km northeast of Fernando de Noronha Archipelago (Fausto Filho, 1974; Holthuis *et al.*, 1980; Leão and Dominguez, 2000). It also includes species from the Rocas Atoll (03°45'–03°56'S / 33°37'–33°56'W), 260 km east of Natal city, Rio Grande do Norte (Kikuchi, 2000), the only atoll in the Southwestern Atlantic, as well as from the seamounts of the North chain (*i.e.*, = seamounts of Ceará) (01°00'–04°00'S / 37°00'–39°00'W) and of Fernando de Noronha (*i.e.*, = seamounts of Fernando de Noronha) (03°00'–4°30'S / 32°00'–37°00'W), where the homonym archipelago and the Rocas Atoll are located (Coelho Filho, 2006) (Fig. 1).

Material deposited in the crustacean collection of the MOUFPE was mainly identified by Petronio A. Coelho, and reviewed by Débora Lucatelli. This collection was started in the late 1950s and presently is the third largest carcinological collection in Brazil, with more than 14,000 samples (Coelho *et al.*, 2008). The collection contains Stomatopoda mostly obtained during surveys along the continental shelf and littoral areas. Several oceanographic expeditions, however, also collected samples on the upper continental slope. The MOUFPE collection includes almost all Brazilian species and all species known from north and northeast regions.

The following information is included for each species: the type material (when available), the list of material examined (number of specimens, station, date, geographical coordinates, depth, voucher/catalogue number), distribution, habitat and remarks (when necessary). The synonymies are limited to original papers (containing species description) and the first author list of references.

Classification of the species in families and higher taxa was based on Ahyong *et al.* (2011). The families within each superfamily



**Figure 1.** The study area. Abbreviations: Amapá (AP), Pará (PA), Maranhão (MA), Piauí (PI), Ceará (CE), Rio Grande do Norte (RN), Paraíba (PB), Pernambuco (PE), Alagoas (AL), Sergipe (SE), Bahia (BA); Oceanic Islands and Seamounts: seamounts of north chain (SNC), seamounts of Fernando de Noronha (SFN), Fernando de Noronha Archipelago (FN), São Pedro and São Paulo Archipelago (PP), Rocas Atoll (RA) (modified from Coelho *et al.* 2008).

and the species within each family follow Ahyong *et al.* (2011). Morphological terminology used for species descriptions follows Ahyong (2001).

Abbreviations: north region states: Amapá (AP) and Pará (PA); northeast region states: Maranhão (MA), Piauí (PI), Ceará (CE), Rio Grande do Norte (RN), Paraíba (PB), Pernambuco (PE), Alagoas (AL), Sergipe (SE) and Bahia (BA); oceanic islands and seamounts: seamounts of north chain (SNC), seamounts of Fernando de Noronha (SFN), Fernando de Noronha Archipelago (FN), São Pedro and São Paulo Archipelago (PP) and Rocas Atoll (RA). Oceanographic expeditions: Akaroa (AKA), Almirante Saldanha (SALD), Camamu Bay (BCAM), Petrobrás Bacia Potiguar first expedition (BPot I), Petrobrás Bacia Potiguar second expedition (BPot II), Petrobrás Bacia Potiguar third expedition (BPot III), Petrobrás Bacia Potiguar fourth expedition (BPot IV), Petrobrás Bacia

Potiguar Regional Grid (MR), Petrobrás Bacia Potiguar - Programa de Avaliação de Impacto (BPot-PAI), Petroleum drillings on Potiguar Basin (RRN, RNS, CES), Canopus (CAN), Agência Estadual de Planejamento e Pesquisa de Pernambuco Projetc (CONDEPE/Suape); Geomar (GM), Itamaracá (ITA), Manati petroleum drillings - Camamu basin - Bahia (MANATI), Pesquisador IV program – Maranhão (PESQ. IV), Programa de Avaliação dos Recursos Vivos da Zona Econômica Exclusiva (REVIZEE ), REVIZEE program score Northeast first expedition (NE I), REVIZEE program score Northeast second expedition (NE II), REVIZEE program score Northeast third expedition (NE III), REVIZEE program score Northeast fourth expedition (NE IV), Recife (REC) and Pavasas expedition (PAVASAS). Museum collections: Australian Museum (AM); Laboratório de Ciências do Mar, Universidade Federal do Ceará, Fortaleza, Brazil (LABOMAR);

Muséum National d'Histoire Naturelle, Paris, France (MNHN); National Museum of Natural History, Smithsonian Institution, Washington DC, United States of America (USNM).

## Results

The Stomatopoda collection includes 667 samples and 1,301 specimens, distributed in four superfamilies (Gonodactyloidea, Lysiosquilloidea, Squilloidea and Eurysquilloidea), seven families (Gonodactylidae, Odontodactylidae, Pseudosquillidae, Lysiosquillidae, Nannosquillidae, Squillidae and Eurysquillidae), 14 genera and 33 species, including one holotype and two paratypes.

### Systematics

Subclass Hoplocarida Calman, 1904

Order Stomatopoda Latreille, 1817

Suborder Unipeltata Latreille, 1825

Superfamily Gonodactyloidea Giesbrecht, 1910

Family Gonodactylidae Giesbrecht, 1910

Genus *Neogonodactylus* Manning, 1995

*Neogonodactylus austrinus* (Manning, 1969)

*Gonodactylus austrinus* Manning, 1969: 338, fig. 91 – Coelho and Koenig, 1972: 251.

*Neogonodactylus austrinus* – Manning, 1995: 80; Gomes-Corrêa, 1998: 293; Schram, 2010: 59.

*Material examined*: Holotype (Abrolhos, Brazil; 2–5 m) (MNHN-St 198) 28 November 1961; 2 paratypes (03°50'30"S / 33°50'40"W; 28 m) (MNHN-St 188) 17 November 1961; 2 paratypes (Calypso, South America; 7–8 m) (MNHN-St 187) 17 November 1961; 1 paratype (03°49'25"S / 32°24'25"W; 24 m) (MNHN-St 190), 18 November 1961; 4 specimens (FN; 03°51'S / 32°25'W) (MOUFPE 978) 31 July 1963; 1 specimen, (REC 3; 08°09'S / 34°49'W; 22 m) (MOUFPE 979) 23 July 1967; 3 specimens (PE 27A; 07°50'08"S / 34°42'00"W; 30

m) (MOUFPE 981) 06 February 1969; 3 specimens (ITA 81; 07°38'S / 34°47'W; 2 m) (MOUFPE 982); 2 specimens (CAN 14; 01°30'S / 38°48'W) (MOUFPE 983) 12 July 1965; 2 specimens (REC 19; 08°16'S / 34°52'W; 23 m) (MOUFPE 984); 1 specimen (ITA 87; 07°37'S / 34°47'W; 0.7 m) (MOUFPE 985) 06 February 1969; 1 specimen (Porto de Galinhas beach-PE; 08°30'S / 35°00'W; reef), (MOUFPE 986) 01 August 1975; 1 specimen (MA 24; 01°53'S / 42°48'W; 43 m) (MOUFPE 987); 1 specimen (Ponta das Pedras Pretas beach-PE; 08°17'S / 34°56'W; subtidal zone) (MOUFPE 988) 14 September 1962; 4 specimens, (AKA 42; 09°32'S / 35°20'W; 31 m) (MOUFPE 989); 5 specimens (ITA 46; 07°43'S / 34°48'W; 3.7 m) (MOUFPE 990); 1 specimen (SALD 1647A; 07°30'00"S / 34°34'07"W; 37 m) (MOUFPE 991) 06 October 1967; 6 specimens (ITA 73; 07°41'S / 34°48'W; 4 m) (MOUFPE 992); 2 specimens (CAN 109; 04°45'S / 36°25'W; 45 m) (MOUFPE 993) 15 January 1966; 3 specimens (REVIZEE-NE III 40; 4°05'38"S / 37°25'34"W; 50 m) (MOUFPE 12346) 15 May 1998; 1 specimen (REVIZEE-NE III 77); 1°37'30"S / 38°06'29"W; 43 m) (MOUFPE 12555) 07 June 1998; 1 specimen (REVIZEE-NE III 93; 03°45'04"S / 32°19'58"W; 70 m) (MOUFPE 12559) 02 June 1998; 1 specimen (BPot IV 38-dredge; 04°47.50'S 36°50.22'W; 15 m) (MOUFPE 14055) 29 May 2004.

*Distribution*: Western Atlantic – Caribbean Coast of Honduras, Nicaragua, Panama and Brazil (Fernando de Noronha and Abrolhos Archipelago, São Pedro and São Paulo Archipelago, Rocas Atoll and Maranhão to Espírito Santo) (Gomes-Corrêa, 1998).

*Habitat*: It was found among calcareous algae, rocks and in coral reefs, at depths from shallow subtidal to 70 m. These records are in agreement with Manning (1969), who reported this species to 73 m depth.

*Remarks*: The specimens agree with holotype description. The number of antennal articles was analysed, but it is highly variable and can not be used as a diagnostic character, the same was observed by Manning (1969). The number of movable spines varied from 11



to 12 on the specimens analysed, a similar range was found in other species of *Neogonodactylus*.

*Neogonodactylus lacunatus* (Manning, 1966)

*Gonodactylus lacunatus* Manning, 1966: 374, fig. 6c – Manning, 1969: 311, fig. 86; Coelho and Koenig, 1972: 251; Gomes-Corrêa, 1998: 119.

*Neogonodactylus lacunatus* – Manning, 1995: 80; Rodrigues and Young, 2005: 243; Almeida *et al.*, 2008: 25; Schram, 2010: 63.

*Material examined*: 2 paratypes (USNM 113251) (Abrolhos Archipelago, Brazil, 18°00'S / 38°18'W; 48 m) 28 November 1961; 3 paratypes (Abrolhos Archipelago, Bahia, Brazil, 18°18'S / 38°53'W; 38 m) (USNM 113252) 29 November 1961; 2 specimens (Gaibú-PE; 08°18'S / 34°56'W; subtidal zone) (MOUFPE 1044) 24 July 1993; 2 specimens (ITA 17; 07°51'S / 34°49'W; 4 m) (MOUFPE 1069); 4 specimens (REC 3; 08°09'S / 34°49'W; 22 m) (MOUFPE 1070); 11 specimens (REC 119; 08°13'S / 34°49'W; 26 m) (MOUFPE 1071); 8 specimens (ITA 43; 07°44'S / 34°49'W; 2 m) (MOUFPE 1073); 1 specimen (CONDEPE/Suape 2-PE) (08°21'S / 34°57'W) (MOUFPE 1074) 02 March 1978; 1 specimen (Santa Cruz Cabralia-BA; 16°17'S / 39°02'W) (MOUFPE 1075) 21 October 1962; 1 specimen (Tambaú beach-PB; 07°07'S / 34°52'W) (MOUFPE 1076) 27 September 1971; 1 specimen (Piedade-PE; 08°10'S / 34°56'W) (MOUFPE 1077) 02 September 1960; 3 specimens (SALD 1732A; 02°13'S / 41°51'W; 69 m) (MOUFPE 1079); 1 specimen (SALD 1719A; 02°21'S / 40°29'W; 37 m) (MOUFPE 1080); 1 specimen (PB/PE 28B; 07°41'S / 34°35'W) (MOUFPE 1081); 2 specimens (PE 34); 07°40'S / 34°43'W; 19 m) (MOUFPE 1082) 04 March 1969; 6 specimens (Fortaleza-CE; 03°43'S / 38°30'W; subtidal zone) (MOUFPE 1083) 04 July 1965; 1 specimen (REC 2; 08°09'S / 34°50'W; 18 m) (MOUFPE 1084); 2 specimens damaged (AKA 3; 08°56'S / 34°57'W; 36 m) (MOUFPE 1085); 4 specimens (Tambaú-PB; 07°07'S / 34°52'W; subtidal zone) (MOUFPE 1086) 13 April 1968; 5 specimens (AKA 48; 09°37'S /

35°25'W; 30 m) (MOUFPE 1087); 1 specimen (Porto de Galinhas-PE; 08°30'S / 35°00'W; subtidal zone) (MOUFPE 1088) 06 April 1973; 13 specimens (ITA 74; 07°41'S / 34°47'W; 5 m) (MOUFPE 1089); 1 specimen (AKA 85; 10°12'S / 36° 00'W; 21 m) (MOUFPE 1090); 1 specimen (CAN 21; 03°21'S / 38°38'W; 25 m) (MOUFPE 1091) 16 July 1965; 7 specimens (PE 15B; 08°20'S / 34°46'W; 35 m) (MOUFPE 1093); 1 specimen (REC 94; 08°08'S / 34°46'W; 26 m) (MOUFPE 1094); 4 specimens damaged (PE 34A; 07°40'S / 34°43'W; 19 m) (MOUFPE 1095) 04 March 1969; 7 specimens (REC 136; 08°02'S / 34°43'W; 31 m) (MOUFPE 1096); 6 specimens (PE 29B; 07°44'S / 34°46'W; 14 m) (MOUFPE 1097) 25 February 1969; 1 specimen (SALD 1721A; 02°20'S / 40°47'W; 35 m) (MOUFPE 1098); 2 specimens (SALD 1656; 05°41'S / 35°05'W; 23 m) (MOUFPE 1099); 4 specimens (PE 35; 07°39'S / 34°37'W; 32 m) (MOUFPE 1100) 07 March 1969; 3 specimens (AKA 100; 10°28'55"S / 36°15'30"W; 25 m) (MOUFPE 1102); 3 specimens (PE 31; 07°44'S / 34°37'W; 33 m) (MOUFPE 1103) 07 March 1969; 1 specimen, (AKA several trawls) (MOUFPE 1104); 2 specimens (ITA 82; 07°38'S / 34°47'W; 2.5 m) (MOUFPE 1105); 8 specimens (REC 140; 08°19'S / 34°53'W; 19 m) (MOUFPE 1106); 2 specimens (CAN 12; 03°13'S / 38°31'W; 45 m) (MOUFPE 1107) 01 July 1965; 4 specimens (CAN 109; 04°45'S / 36°25'W; 45 m) (MOUFPE 1108) 15 January 1966; 2 specimens (Pina River-dredging-PE; 08°04'S / 34°54'W; subtidal zone) (MOUFPE 1109) 28 March 1964; 7 specimens (AKA 37; 09°27'S / 35°17'W; 32 m) (MOUFPE 1110); 2 specimens damaged (AKA 43; 09°32'S / 35°15'W; 36 m) (MOUFPE 1111); 1 specimen (REC 82; 08°10'S / 34°51'W; 15 m) (MOUFPE 1112); 3 specimens (PESQ. IV 22; 02°09'S / 42°52'W) (MOUFPE 1113); 1 specimen (AKA 41; 09°32'S / 35°25'W; 26 m) (MOUFPE 1114); 1 specimen (AKA 40; 09°32'S / 35°30'W; 16 m) (MOUFPE 1115); 4 specimens (PE 29A; 07°44'S / 34°46'W; 14 m) (MOUFPE 1116) 25 February 1969; 7

specimens (SALD 1655; 06°04'S / 34°59'W; 25 m) (MOUFPE 1117); 1 specimen (AKA 71; 09°58'S / 35°47'W; 34 m) (MOUFPE 1118); 1 specimen (AKA 53; 09°41'S / 5°28'W; 36 m) (MOUFPE 1119); 3 specimens (REC 144; 08°20'S / 34°48'W; 33 m) (MOUFPE 1120); 1 specimen (ITA 14; 07°51'S / 34°49'W; 2 m) (MOUFPE 1121); 13 specimens (PE 29D; 07°44'S / 34°46'W; 14 m) (MOUFPE 1122) 25 February 1969; 2 specimens (PE 29; 07°45'S / 34°46'W; 14 m) (MOUFPE 1123) 25 February 1969; 2 specimens (AKA 93; 10°21'S / 36°05'W; 27 m) (MOUFPE 1124); 2 specimens (ITA 10; 07°50'S / 34°49'W; 4 m) (MOUFPE 1126); 4 specimens (REC 47/13; 08°09'S / 34°51'W; 15 m) (MOUFPE 1127) 13 June 1966; 5 specimens (CONDEPE/Suape 2; 08°21'S / 34°57'W) (MOUFPE 1128) 28 February 1978; 6 specimens (REC 127; 08°05'S / 34°45'W; 23 m) (MOUFPE 1129); 8 specimens (AKA 49; 09°37'S / 35°30'W; 23 m) (MOUFPE 1130); 8 specimens (ITA 91; 07°35'S / 34°48'W; 1.5 m) (MOUFPE 1131); 4 specimens (ITA 16A; 07°51'S / 34°49'W; 4 m) (MOUFPE 1133); 1 specimen (REC 109; 07°58'S / 34°42'W; 29 m) (MOUFPE 1134) 24 February 1967; 2 specimens (ITA 44; 07°44'S / 34°49'W; 1.5 m) (MOUFPE 1135); 1 specimen (MA 24; 01°53'S / 42°48'W; 43 m) (MOUFPE 1136); 13 specimens (SALD 1647A; 07°30'S / 34°34.7'W; 37 m) (MOUFPE 1138) 06 October 1967; 25 specimens (SALD 1730; 02°37'S / 41°27'W; 21 m) (MOUFPE 1139); 2 specimens (Ponta Verde-AL; 09°40'S / 35°43'W; subtidal zone) (MOUFPE 1140), 11 August 1972; 4 specimens (SALD 1751; 00°37'S / 44°40'W; 44 m) (MOUFPE 1141); 14 specimens (Olinda-PE; 08°01'S / 34°51'W, subtidal zone) (MOUFPE 1142) 01 June 1964; 1 specimen (Fortaleza-CE; 03°43'S / 38°30'W; subtidal zone) (MOUFPE 1143) 02 July 1965; 2 specimens (SALD 1722; 02°13'30"S / 40°43'30"W; 53 m) (MOUFPE 1144) 29 October 1967; 1 specimen (AKA 117; 10°42'45"S / 36°31'45"W; 27 m) (MOUFPE 1145) 10 August 1965; 3 specimens (CAN 95; 05°45'S / 34°58'W; 45 m) (MOUFPE 1146) 13 January 1966; 4 specimens (AKA 32; 09°24'15"S / 35°14'10"W; 27 m) (MOUFPE 1147) 08 September 1965; 1 specimen (Porto de Galinhas-PE; 08°30'S / 35°00'W; subtidal zone) (MOUFPE 1148) 09 August 1975; 6 specimens (PB/PE 13; 07°04'S / 34°45'W) (MOUFPE 1149); 1 specimens (Jaguaribe-ITA-PE; 07°43'S / 34°50'W; subtidal zone) (MOUFPE 1150) 12 December 1970; 1 specimen damaged (Tamandaré-PE; 08°44'S / 35°06'W; subtidal zone) (MOUFPE 1151) 01 July 1972; 5 specimens (PE 35; 07°39'S / 34°37'W; 32 m) (MOUFPE 1152) 07 March 1969; 3 specimens (SALD 1662A; 03°53'50"S / 33°46'40"W; 25 m) (MOUFPE 1276) 09 October 1967; 3 specimens (REC 63; 08°09'S / 34°48'W; 23 m) (MOUFPE 5394); 1 specimen (PE 17B; 08°10'S / 34°51'W; 15 m) (MOUFPE 8438) 22 January 1969; 1 specimen (REC 95; 08°10'S / 34°45'W; 31 m) (MOUFPE 8440); 1 specimen (Santo Aleixo Island-PE 01; 8°36'42.37"S / 35°01'27.64"W; subtidal zone) (MOUFPE 13509) 06 February 2007; 2 specimens (PAVASAS I 03-dredge; 02°46'S / 39°30'W; 25 m) (MOUFPE 13579) 19 July 1987; 19 specimens (Bpot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14051) 29 May 2004; 3 specimens (Bpot IV 35-dredge; 04°47.48'S / 36°44.81'W; 19.7 m) (MOUFPE 14059) 28 May 2004; 1 specimen (Bpot IV 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14081) 27 May 2004; 1 specimen (Bpot IV A8N; 4°44'30.5"S / 36°33'44.6"W; 30.36 m) (MOUFPE 14082) 21 June 2004; 1 specimen juvenile (Bpot IV 17-dredge; 04°57.67'S / 36°25.93'W; 13.7 m) (MOUFPE 14083) 27 May 2004; 6 specimens (Bpot IV A2N; 4°58'06.8"S / 36°12'37.3"W; 11 m) (MOUFPE 14084) 20 June 2004; 2 specimens (Bpot IV 30-dredge; 04°47.46'S / 36°39.38'W; 22.5 m) (MOUFPE 14085) 28 May 2004; 1 specimen (Bpot IV 38-VanVeen A; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14086) 20 May 2004; 1 specimen-juvenile (Bpot IV 21-dredge; 04°58.30'S / 36°33.94'W; 11 m) (MOUFPE 14088) 28 May 2004; 7 specimens (Bpot IV A10; 4°48'38.40"S / 36°42'15"W;

17 m) (MOUFPE 14089) 22 May 2004; 1 specimen (Bpot IV 15-dredge; 04°52.87'S / 36° 28.55'W; 14.6 m) (MOUFPE 14097) 27 May 2004; 2 specimens (BPot IV A1N; 4°58'08.3"S / 36°17'25.8"W; 10.2 m) (MOUFPE 14098) 20 June 2004; 1 specimen (Bpot IV A11; 4°47'41.6"S / 36°47'46.04"W; 13.6 m) (MOUFPE 14099) 22 May 2004; 1 specimen juvenile (Bpot IV 12-dredge; 04°52.84'S / 36°23.17'W; 18.5 m) (MOUFPE 14100) 26 May 2004; 7 specimens (BPot IV A5N; 4°37'33.83"S / 36°50'11.4"W; 84.9 m) (MOUFPE 14102) 21 June 2004; 1 specimen (Bpot IV 38-Van Veen C; 04°47.50'S 36°50.22'W; 15 m) (MOUFPE 14103) 29 May 2004; 2 specimens (BPot IV A2N; 4°58'06.8"S / 36°12'37.3"W; 11 m) (MOUFPE 14104) 20 June 2004; 1 specimen (Bpot IV A7; 4°44'54"S / 36°52'25"W; 12.2 m) (MOUFPE 14105) 20 June 2004; 2 specimens (Bpot IV E24; 05°02.27'S / 36°23.13'W; 6 m) (MOUFPE 14106) 22 May 2004; 1 specimen (Bpot IV A3A; 4°49'58"S / 36°12'12"; 41.7 m) (MOUFPE 14111) 23 May 2004; 3 specimens (Bpot III 42-dredge; 04°42'09"S / 36°55.63'W; 20.2 m) (MOUFPE 14125) 24 November 2003; 2 specimens (Bpot III 35-dredge; 04°47.48'S / 36°44.81'W; 15 m) (MOUFPE 14126) 24 November 2003; 4 specimens (Bpot III 14-dredge; 04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14127) 23 November 2003; 1 specimen (Bpot III 17-dredge; 04°57.67'S / 36°25.93'W; 11.2) (MOUFPE 14128) 22 November 2003; 7 specimens (Bpot III 30-dredge; 04°47.46'S / 36°39.38'W; 18 m) (MOUFPE 14129) 23 November 2003; 1 specimen (Bpot III MF 29; 5°00'19.1"S / 36°26'55"W; 5.1 m) (MOUFPE 14160) 23 November 2003; 3 specimens (Bpot III MF 35; 5°00'19.1"S / 36°26'55"W; 5.1 m) (MOUFPE 14161) 22 November 2003; 2 specimens (Bpot III 09; 05°04.75'S / 36°18.93'W; 1.6 m) (MOUFPE 14162) 16 November 2003; 2 specimens (Bpot III MF 37; 5°01'54.5"S / 36°31'08.1"W; 5.3 m) (MOUFPE 14163) 21 November 2003; 1 specimen (Bpot III MF 31; 5°00'56.5"S / 36°24'18.4"W; 5.7 m) (MOUFPE 14164) 22 November 2003; 3 specimens (Bpot III MF 39; 5°01'55.4"S / 36°31'52.1"W; 4.9 m) (MOUFPE 14165) 21 November 2003; 1 specimen (Bpot III MF 32; 5°00'08.4"S / 36°24'16.3"W; 5.9 m) (MOUFPE 14167) 22 November 2003; 2 specimens (Bpot II 21B; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14186); 1 specimen (Bpot II 35B-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14187); 1 specimen (Bpot II MF 15-trawl; 4°05'23.3"S / 36°40'11.5"W; 21.4 m) (MOUFPE 14188) 28 May 2003; 7 specimens (Bpot II 14C-dredge; 04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14190); 4 specimens (Bpot II 07-trawl; 04°58.23'S / 36°17.73'W; 10.5 m) (MOUFPE 14191) 27 May 2003; 1 specimen (Bpot II 17-trawl; / 04°57.67'S 36°25.93'W; 9.9 m) (MOUFPE 14192) 29 May 2003; 1 specimen (Bpot II 30-Van Veen A; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14193) 20 May 2003; 1 specimen (BPot II 03-dredge; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14194) 22 May 2003; 1 specimen (Bpot II MF 14-trawl; 4°57'50.6"S / 36°36'18.3"W; 7.5 m) (MOUFPE 14197) 28 May 2003; 1 specimen (Bpot II 15C-dredge; 04°52.87'S / 36°28.55'W; 11.8 m) (MOUFPE 14198) 22 May 2003; 2 specimen (Bpot II 15-dredge; 04°52.87'S / 36°28.55'W; 11.8 m) (MOUFPE 14199) 22 May 2003; 4 specimens (BPot II 39-dredge; 04°42.08'S / 36°50.23'W; 15.1 m) (MOUFPE 14216) 19 May 2003; 1 specimen (BPot II MF 10-trawl; 4°48'38.40"S / 36°42'15"W; 17 m) (MOUFPE 14217) 28 May 2003; 2 specimens (Bpot II 22-dredge; 04°52.88'S / 36°33.98'W; 13.3 m) (MOUFPE 14218) 23 May 2003; 2 specimens (BPot II 18A-dredge; 04°58.29'S / 36°28.53'W; 8.6 m) (MOUFPE 14222); 2 specimens (Bpot II 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14223) 19 May 2003; 3 specimens (Bpot II 14-dredge; 04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14225) 23 May 2003; 1 specimen (Bpot II 13C-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14226); 2 specimens (BPot II 24-dredge; 04°41.09'S / 36°34.03'W; 67.1 m) (MOUFPE 14228) 24



May 2003; 6 specimens (BPot II 40-dredge; 04°36.66'S / 36°50.25'W; 79.1 m) (MOUFPE 14230) 19 May 2003; 1 specimen (BPot II 11A; 04°58.25'S / 36°27.14'W; 10.2 m) (MOUFPE 14232); 1 specimen (BPot II 11C-dredge; 04°58.25'S / 36°27.14'W; 10.2 m) (MOUFPE 14233); 1 specimen (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14237) 23 May 2003; 1 specimen (BPot II 21-dredge; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14239) 21 May 2003; 1 specimen (BPot II 35-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14241) 20 May 2003; 1 specimen (BPot II 14B-dredge; 04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14242); 6 specimens (BPot II 17B-trawl; 04°57.67'S / 36°25.93'W; 9.9 m) (MOUFPE 14243); 1 specimen (BPot I 29A-dredge; 04°53.66'S / 36°40.44'W; 12 m) (MOUFPE 14244); 1 specimen (BPot I 29C-dredge; 04°53.66'S / 36°40.44'W; 12 m) (MOUFPE 14245); 5 specimens (BPot I 35B-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14246); 10 specimens (BPot I 37A-dredge; 04°57.83'S / 36°44.24'W; 8 m) (MOUFPE 14247) August 2002; 1 specimen (BPot I 21B-dredge with algae; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14248); 2 specimens (BPot I 29-dredge; 04°53.66'S / 36°40.44'W; 12 m) (MOUFPE 14249); 6 specimens (BPot I 18C-dredge; 04°58.29'S / 36°28.53'W; 8.6 m) (MOUFPE 14251) August 2002; 1 specimen (BPot I 35C-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14252); 1 specimen (BPot I 22B-dredge; 04°52.88'S / 36°33.98'W; 13.3 m) (MOUFPE 14254); 1 specimen (BPot I 13B; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14255); 1 specimen (BPot I 13A-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14256); 1 specimen (BPot I 21C-dredge; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14.257); 1 specimen (BPot I 30C-dredge; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14260) August 2002; 1 specimen (BPot I 14C-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14262); 1 specimen (BPot I 30; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14263)

August 2002; 1 specimen (BPot I 22A-dredge; 04°52.88'S / 36°33.98'W; 13.3 m) (MOUFPE 14264); 1 specimen (BPot I 30B-dredge with algae; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14267) August 2002; 1 specimen (BPot I 37C-dredge; 04°57.83'S / 36°44.24'W; 8 m) (MOUFPE 14269) July-August 2002; 2 specimens (BPot MF 35; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14878) 22 November 2003; 1 specimen damaged (BPot MF 31; 5°00'56.5"S / 36°24'18.4"W; 5.7 m) (MOUFPE 14879) 22 November 2003; 1 specimen juvenile (BPot MF 24; 5°02'00.3"S / 36°14'09.4"W; 8.4 m) (MOUFPE 14880) 23 November 2003; 15 specimens (BPot III 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14881) 24 November 2003; 2 specimens (Carneiros beach 03 with rocks and Porifera; 08°42'45"S / 35°04'33"W, coral reefs) (MOUFPE 14882) 15 June 2007; 2 specimens (PE 03; 08°47'05"S / 34°55'W; 36 m) (MOUFPE 14883) 24 August 2004.

*Distribution:* Western Atlantic – Mexico (Yucatan), Nicaragua, Virgin Islands, Colombia (Santa Marta area: Bahía Concha; Punta Ancón), Brazil (Fernando de Noronha and Abrolhos Archipelago, Maranhão to Rio de Janeiro) (Gomes-Corrêa, 1998).

*Habitat:* It was found in coral reef locations, calcareous algae and seagrass beds from shallow subtidal to 85 m (Manning, 1969). Our records are in agreement with Manning (1969), and the lower depth limit is slightly increased from 80 to 85 m.

*Remarks:* The uropodal endopod outline of type series and additional material studied herein are almost straight instead of sinuous as Manning (1969) reported. Furthermore, most of specimens analysed in this study do not bear a movable apex on submedian tooth of telson, but in some the apex was present, including the female paratype (TL 16 – 28 mm), changing the diagnosis given by Manning (1969).

*Neogonodactylus minutus* (Manning, 1969)

*Gonodactylus minutus* Manning, 1969: 304–307, fig. 84 – Coelho and Koenig, 1972: 251; Gomes-Corrêa, 1998: 294.



*Neogonodactylus minutus* – Manning, 1995: 80; Schram, 2010: 64.

*Material examined:* Holotype (Recife, Brazil; 52 m) (USNM 113247); 1 paratype (03°48'35"S / 32°24'50"W; 52 m) (MNHN-St 182) 18 November 1961; 1 specimen (AKA 04; 08°56'15"S / 34°52'40"W; 44 m) (MOUFPE 1265) September 1965; 1 specimen (AKA 16; 09°11'S / 35°02'W; 41 m) (MOUFPE 1266); 2 specimens (AKA 05; 09°01'00"S / 34°51'10"W; 46 m) (MOUFPE 1267) 10 September 1965; 4 specimens (REC 155; 08°13'08"S / 34°53'06"W; 15.5 m) (MOUFPE 1268) 07 March 1967; 1 specimen (SALD 1701A; 01°57'00"S / 37°46'00"W; 57 m) (MOUFPE 1269) 21 October 1967; 1 specimen (AKA 44; 09°32'05"S / 35°10'35"W; 40 m) (MOUFPE 1270) 08 September 1965; 1 specimen (REC 149; 07°56'07"S / 34°37'02"W; 38 m) (MOUFPE 1271) May 1967; 2 specimens (CAN 39; 04°33'S / 37°00'W) (MOUFPE 1272); 1 specimen (SALD 1722; 02°13'30"S / 40°43'30"W; 53 m) (MOUFPE 1273) 30 October 1967; 1 specimen (AKA 35; 09°27'S / 35°07'W; 32 m) (MOUFPE 6794); 1 specimen (SALD 1647A; 07°30'S / 34°34.7'W; 37 m) (MOUFPE 6795) 06 October 1967; 3 specimens (CAN 81; 08°10'S / 34°35'W) (MOUFPE 6796); 1 specimen (CAN 19; 01°56'S 37°51'W) (MOUFPE 6797); 2 specimens damaged (PE 15B; 08°13'04"S / 34°51'07"W; 21.5 m) (MOUFPE 6798) 10 May 1966; 3 specimens (REVIZEE-NE II 112/111; 3°50'17"S / 33°41'13"W; 28 m) (MOUFPE 12332) 03 March 1997; 1 specimen (BPot MF 33; 05°00'04.7"S / 36°25'07.4"W; 6 m) (MOUFPE 14896) 22 November 2003.

*Distribution:* Western Atlantic - Brazil (Fernando de Noronha and Trindade Archipelago, Ceará to Rio de Janeiro) (Manning, 1969).

*Habitat:* Shallow water to 95 m (Gomes-Corrêa 1998), among calcareous algae and on sandy bottoms.

*Remarks:* The specimens analysed in this study agree very well with the description given by Manning (1969).

*Neogonodactylus moraisi* (Fausto Filho and Lemos de Castro, 1973)

*Gonodactylus moraisi* Fausto Filho and Lemos de Castro, 1973: 61, fig. 1A–D. – Fausto Filho and Sampaio Neto, 1976: 66; Schotte and Manning, 1993: 567; Gomes-Corrêa, 1998: 294.

*Neogonodactylus moraisi* – Manning, 1995: 80; Schram, 2010: 64.

*Material examined:* 1 specimen (REVIZEE-NE III 40; 4°05'38"S / 37°25'34"W; 50 m) (MOUFPE 12348) 15 May 1998; 1 specimen (BPot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14054) 29 May 2004.

*Distribution:* Western Atlantic – Brazil (Amapá, Ceará) (Fausto Filho and Lemos de Castro, 1973). The species is herein reported from Rio Grande do Norte State, extending its southernmost distribution limit within Brazil.

*Habitat:* Sandy bottoms, between 15–76 m depth. The previous depth range (50–76 m; Fausto Filho and Lemos de Castro, 1973), is extended to 15 m.

*Remarks:* The holotype is now lost, but the paratype is in MNRJ (MNRJ 5547) and should be checked to confirm some characters that were not figured in the original account. The specimens agree well with description provided by Fausto Filho and Lemos de Castro (1973).

*Neogonodactylus oerstedii* (Hansen, 1895)

*Gonodactylus oerstedii* Hansen, 1895: 65 – Rathbun, 1935: 113; Holthuis, 1941: 38; Manning, 1961: 43, pl. 11, figs. 5–6; 1963: 422, tabs. 3–4; 1969: 325, fig. 89; 1977: 282; Schotte and Manning, 1993: 571; Gomes-Corrêa, 1998: 294.

*Neogonodactylus oerstedii* – Manning, 1995: 80; Hendrickx and Salgado-Barragán, 2002: 393; Schram, 2010: 64.

*Material examined:* 3 specimens (PE 35A; 07°39'S / 34°37'W; 32 m) (MOUFPE 994) 07 March 1969; 3 specimens (SALD 1944; 20°37'S / 34°42'W; 80–131 m)

(MOUFPE 1233); 4 specimens (SALD 1718; 02°07'S / 40°36'W; 71 m) (MOUFPE 1234) 28 October 1967; 1 specimen (SALD 1667B; 03°50.8'S / 32°27.5'W; 55 m) (MOUFPE 1235) 10 October 1967; 1 specimen (SALD 1946; 20°32'S / 35°46'W; 70 m) (MOUFPE 1236) 08 September 1968; 1 specimen (AKA 32; 09°24'S / 35°14'W; 27 m) (MOUFPE 1237) 08 September 1965; 1 specimen (ITA 92; 07°35'S / 34°08'W; 1.5 m) (MOUFPE 1238) 20 February 1969; 1 specimen (Piedade-PE; 08°09'51"S / 34°54'41"W; subtidal zone) (MOUFPE 1239) 12 November 1960; 2 specimens (CAN 19; 01°56'S / 37°51'W; 48 m) (MOUFPE 1242); 1 specimen (CAN 41; 04°27'S / 37°04'W; 58 m) (MOUFPE 1243) 23 August 1965; 1 specimen (CAN 48; 04°01'S / 37°33'W) (MOUFPE 1244) August 1965; 2 specimens (SALD 1767A; 01°57.5'N / 47°13.5'W; 93 m) (MOUFPE 1245) 13 November 1967; 1 specimen (SALD 1662B; 03°50'03"S / 33°45'60"W; 47 m) (MOUFPE 1246) 09 October 1967; 1 specimen (Pina-PE; 08°04'S / 34°54'W; subtidal zone) (MOUFPE 1247) 14 September 1962; 3 specimens (Paripe-Bahia; 12°59'S / 38°31'W; subtidal zone) (MOUFPE 1248); 1 specimen (REVIZEE-NE III 93; 3°45'04"S / 32°19'58"W; 70 m) (MOUFPE 12597) 02 June 1998; 2 specimens (BPot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14052) 29 May 2004; 1 specimen (BPot IV 35-dredge; 04°47.48'S / 36°44.81'W; 19.7 m) (MOUFPE 14056) 28 May 2004; 1 specimen (BPot IV E22; 05°02.39'S / 36°23.12'W; 7.4 m) (MOUFPE 14061) 23 May 2004; 1 specimen (BPot IV 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14115) 27 May 2004; 1 specimen (BPot III 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14143) 24 November 2003; 1 specimen (BPot III MF 24; 05°02'00.3"S / 36°14'09.4"W; 8.4 m) (MOUFPE 14172) 23 November 2003; 2 specimens (BPot II 705) (MOUFPE 14221); 1 specimen (BPot III MF 31; 5°00'56.5"S / 36°24'18.4"W; 5.7 m) (MOUFPE 14871) 22 November 2003; 1 specimen (BPot MF 39; 5°01'55.4"S / 36°31'52.1"W; 4.9 m) (MOUFPE 14872) 21 November 2003; 1

specimen (Bioincrustação-P2 10B R1 C2; 12°57'S / 38°30'W; biofouling) (MOUFPE 14873) December 2008; 1 specimen (Bioincrustação-P4 5S R1 C2; 12°57'S / 38°30'W; biofouling) (MOUFPE 14874) December 2008; 3 specimens (BPot-PAI 121 RNS 31 Extra; 04°46.8399'S / 36°25.4041'W; 46.6 m) (MOUFPE 14875) 13 July 2009; 1 specimen (BPot-PAI 121 RNS 22 Extra; 04°46'58"S / 36°25'21"W; 43 m) (MOUFPE 14876) 15 July 2009; 1 specimen (BPot-Regional MR 42 R1 Extra; 04°45'54"S / 36°25'49"W; 52 m) (MOUFPE 14977) 25 October 2009; 1 specimen (BPot-Regional MR 25 R3; 04°52'17"S / 36°45'58"W; 12 m) (MOUFPE 14978).

*Distribution:* Western Atlantic – Bermuda, Bahamas, Florida, Mexico, Aruba, Bonaire, Curaçao, Venezuela, Trinidad, Brazil (Rocas Atoll and Fernando de Noronha Archipelago, Amapá to São Paulo) (Holthuis, 1941; Schotte and Manning, 1993; Gomes-Corrêa, 1998).

*Habitat:* Coral reef and seagrass, at depths from less than 5 m to 131 m. The lower distribution limit provided by Gomes-Corrêa (1998: 120 m) is increased to 131 m.

*Neogonodactylus spinulosus* (Schmitt, 1924)

*Gonodactylus oerstedii* var. *spinulosus* Schmitt, 1924: 96, pl. 5, fig. 5.

*Gonodactylus spinulosus* – Manning, 1961: 41, pl. 11, figs. 3–4; 1969: 299, fig. 83; Schotte and Manning, 1993: 570; Gomes-Corrêa, 1998: 294.

*Neogonodactylus spinulosus* – Manning, 1995: 80; Hendrickx and Salgado-Barragán, 2002: 393; Rodrigues and Young, 2005: 241; Schram, 2010: 66.

*Material examined:* Holotype (off Castle, east side Barbados) (USNM 68945); 3 specimens (SALD 1662A; 03°53'S / 33°46'W; 25 m) (MOUFPE 1252) 09 October 1967; 5 specimens (SALD 1662B; 03°50'03"S / 33°45'60"W; 47 m) (MOUFPE 1253) 09 October 1967; 3 specimens (SALD 1944; 20°37'00"S / 34°42'00"W; 80-131 m) (MOUFPE 1254) 07 September 1968; 6

specimens (CAN 90; 06°35'S / 34°44'W; 54 m) (MOUFPE 1256) 21 December 1965; 1 specimen (SALD 1668A; 03°53'S / 32°37.2'W; 60 m) (MOUFPE 1257) 10 October 1967; 3 specimens (SALD 1663; 03°49.6'S / 33°49.2'W; 53 m) (MOUFPE 1258) 09 October 1967; 1 specimen (CAN 78; 08°34'S / 34°44'W) (MOUFPE 1260); 1 specimen (SALD 1682; 03°28'S / 35°06.5'W; 61 m) (MOUFPE 1261) 17 October 1967; 2 specimens (CAN 18; 01°56'S / 37°51'W) (MOUFPE 1262); 1 specimen (SALD 1667B; 03°50.8'S / 32°27.5'W; 55 m) (MOUFPE 1263) 10 October 1967; 4 specimens (SALD 1667A; 03°50.7'S / 32°28.1'W; 65 m) (MOUFPE 1264) 10 October 1967; 3 specimens (REVIZEE-NE III 81A; 37°07'16"S / 1°43'48"W; 55 m) (MOUFPE 12344) 06 June 1998; 1 specimen (REVIZEE-NE III 88; 03°49'37"S / 34°42'47"W; 55 m) (MOUFPE 12551) 04 June 1998; 1 specimen (REVIZEE-NE III 77A; 1°37'30"S / 38°06'29"W; 43 m) (MOUFPE 12554) 07 June 1998; 1 specimen (REVIZEE-NE III 85; 3°28'01"S / 35°03'40"W; 62 m) (MOUFPE 12556) 04 June 1998; 6 specimens (REVIZEE-NE III 93; 3°45'04" / 32°19'58"W; 70 m) (MOUFPE 12560) 02 June 1998; 1 specimen (REVIZEE-NE III 96; 4°15'32"S / 33°14'35"W; 49 m) (MOUFPE 12562) 01 June 1998; 3 specimens (REVIZEE-NE III 28; 7°27'11"S / 34°31'30"W; 43 m) (MOUFPE 12590) 10 May 1998; 1 specimen (REVIZEE-NE III 90A; 3°48'29"S / 33°40'58"W; 70 m) (MOUFPE 12901) 03 June 1998.

*Distribution:* Western Atlantic – Mexico, Bermuda and southern Florida, Tobago, Bahamas, Belize, Haiti, Puerto Rico, Virgin Islands, St. Martin, Barbuda, St. Eustatius, Antigua, Guadeloupe, Dominica, Aruba, Panama, Barbados, Trinidad, Bonaire, Klein Bonaire, Curaçao, Brazil (Rocas Atoll and Fernando de Noronha Archipelago, Ceará to Rio de Janeiro) (Rodrigues and Young, 2005).

*Habitat:* In coral rubble and calcareous algae bottom, known from 0 to 130 m depth (Gomes-Corrêa, 1998).

*Remarks:* Some specimens have spaced dark patches of chromatophores on the sixth

thoracic somite and first abdominal somite in agreement with Manning (1969).

*Neogonodactylus torus* (Manning, 1969)

*Gonodactylus torus* Manning, 1969: 90, fig. 90 – Coelho and Koenig, 1972: 251; Gomes-Corrêa, 1998: 294.

*Neogonodactylus torus* – Manning, 1995: 80; Manning and Heard, 1997: 303; Hendrickx and Salgado-Barragán, 2002: 393; Almeida *et al.*, 2007b: 7; 2008: 25; Schram, 2010: 67.

*Material examined:* Holotype (Palm Beach, Florida, USA) (USNM 119289); 2 specimens (AKA 91; 10°19'S / 36°15'W; 15 m) (MOUFPE 1241); 1 specimen (AKA 46; 09°37'S / 35°15'W; 36 m) (MOUFPE 1249); 1 specimen (PB 22; 07°21'S / 34°41'W; 28 m) (MOUFPE 1250); 2 specimens (SALD 1783A; 03°22'N / 48°55'W; 105 m) (MOUFPE 1251) 16 November 1967; 1 specimen (Carneiros beach-PE; 08°42'S / 35°05'W, coral reef) (MOUFPE 8715) July 1997; 1 specimen (REVIZEE-NE I 213; 4°39'43"S / 36°43'23"W; 52 m) (MOUFPE 12340); 1 specimen (REVIZEE-NE II 109/108; 3°48'S / 33°12'W) (MOUFPE 12586) 03 March 1997; 1 specimen (REVIZEE-NE III 166; 8°48'S / 35°12'W) (MOUFPE 12899) 15 July 1998; 1 specimen (Santo Aleixo Island-PE 01; 8°36'42.37"S / 35°01'27.64"W; subtidal zone in rocks) (MOUFPE 13433) June 2006; 1 specimen (Santo Aleixo Island-PE 01; 8°36'42.37"S / 35°01'27.64"W; subtidal zone in rocks) (MOUFPE 13510) February 2007; 1 specimen (BPot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14057) 29 May 2004; 2 specimens (BPot IV 05-dredge; 04°47.40'S / 36°17.77'W; 85 m) (MOUFPE 14065) 30 May 2004; 2 specimens (BPot IV 24-dredge; 04°41.09'S / 36°34.03'W; 72 m) (MOUFPE 14080) 05 June 2004; 2 specimens (BPot IV A23; 04°47.42'S / 36°33.97'W; 21.8 m) (MOUFPE 14087) 05 June 2004; 2 specimens (BPot IV 24-dredge; 04°41.09'S / 36°34.03'W; 72 m) (MOUFPE 14101) 24 May 2004; 1 specimen (BPot IV 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14110) 27 May 2004;



1 specimen (BPot IV A2N; 4°58'06.8"S / 36°12'37.3"W; 11 m) (MOUFPE 14112) 20 June 2004; 1 specimen (BPot IV A5N; 4°37'33.83"S / 36°50'11.4"W; 84.9 m) (MOUFPE14114) 21 June 2004; 1 specimen (BPot IV A1N; 4°58'08.3"S / 36°17'25.8"W; 10.2 m) (MOUFPE 14117) 20 June 2004; 2 specimens (BPot III 13-dredge; 04°47.41'S / 36°23.17'W; 45.7 m) (MOUFPE 14130) 22 November 2003; 2 specimens (BPot III 06-dredge; 04°52.84'S / 36°17.83'W; 34.5 m) (MOUFPE 14159) 21 November 2003; 1 specimen (BPot III MF 29; 5°01'57.9"S / 36°19'32.7"W; 5.7 m) (MOUFPE 14166) 23 November 2003; 1 specimen (BPot III 39-dredge; 04°42.08S / 36°50.23W; 17.60 m) (MOUFPE 14168) 24 November 2003; 1 specimen (BPot III MF 39; 5°01'55.4"S / 36°31'52.1"W; 4.9 m) (MOUFPE 14169) 21 November 2003; 1 specimen (BPot III 05; 04°47.40'S / 36°17.77'W; 93 m) (MOUFPE 14170) 14 November 2003; 2 specimens (BPot III 21-dredge; 04°58.30'S / 36°33.94'W; 10.7 m) (MOUFPE 14171) 22 November 2003; 4 specimens (BPot II 40-dredge; 04°36.66'S / 36°50.25'W; 79.1 m) (MOUFPE 14215) 19 May 2003; 3 specimens (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14220) 23 May 2003; 2 specimens (BPot II 24-dredge; 04°41.09'S / 36°34.03'W; 67.1 m) (MOUFPE 14229) 24 May 2003; 1 specimen (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14238) 23 May 2003; 5 specimens (BPot I 13A-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14259); 1 specimen (REVIZEE IV-NE 149; 6°15'36"S / 34°53' 17"W; 30 m) (MOUFPE 14888) 24 November 2000; 2 specimens (BPot-PAI 121 RNS 34 Extra; 04°46'56"S / 36°25'32"W; 44.3 m) (MOUFPE 14889) 14 July 2009; 1 specimen (Santo Aleixo Island-PE 01; 08°36'42.37"S / 35°01'27.64"W; subtidal zone) (MOUFPE 14890) 19 April 2007; 1 specimen (BPot-PAI 121 RNS 42 Extra; 04°46'58"S / 36°25'08"W; 45.7 m) (MOUFPE 14891) 15 July 2009; 1 specimen (BPot-PAI 121 RNS 33 Extra; 04°47'07"S / 36°25'24"W; 40 m) (MOUFPE 14892) 14 July 2009; 1 specimen (BPot-PAI 121 RNS

43 Extra; 04°47'15"S / 36°25'24"W; 38.2 m) (MOUFPE 14893) 14 July 2009; 1 specimen (BPot-PAI 121 RNS 21 R3 (0-10); 04°46'55"S / 36°25'24"W; 45.7 m) (MOUFPE 14894) 13 July 2009.

*Distribution:* Western Atlantic – North Carolina, Georgia, Florida, Cuba, Mexico, Panama, Barbados and Brazil (Amapá to Bahia) (Gomes-Corrêa, 1998).

*Habitat:* Rocky reef bottom and inside sponge cavity (Gomes-Corrêa, 1998), at depths from 10 to 364 m (Manning, 1969).

*Remarks:* The specimens analysed herein showed some morphological variations, as on rostral plate (extending or not until the base of ocular peduncle), carina swollen and telson's proportion. Manning (1969) described males with more swollen carinae than females, but the males analysed in the present contribution present swollen or slender carinae. The apical spinule was found in some males, although this was not mentioned by Manning (1969) or Ah Yong and Norrington (1997).

*Neogonodactylus wennerae* Manning and Heard, 1997

*Gonodactylus oerstedii* – Lunz, 1935:152, fig. 1. [not *G. oerstedii* Hansen, 1895].

*Gonodactylus bredini* – Manning, 1969: 315, figs. 88a–c [part, see Manning and Heard, 1996]; Camp, 1973: 53, figs. 21–26, tabs. 14–17, plate 1 [part, see Manning and Heard, 1997]; Fausto Filho and Sampaio Neto, 1976: 66; Manning, 1977: 280; Morgan and Goy, 1987: 595–618; Schotte and Manning, 1993: 567; Gomes-Corrêa, 1998: 293. [not *G. bredini* Manning, 1969].

*Neogonodactylus bredini* – Manning, 1995: 80; Almeida *et al.*, 2008: 24.

*Neogonodactylus wennerae* Manning and Heard, 1997: 306, figs. 2, 3 [detailed loc. list]; – Hendrickx and Salgado-Barragán, 2002: 393; Schram, 2010: 67.

*Material examined:* Holotype (United States; off South Carolina; 32°49'18"N / 78°39'24"W; 44 m) (USNM 232666) 03 November 1981; 1 specimen (Piedade-PE; 08°10'S / 34°56'W, subtidal zone)

(MOUFPE 1011) 10 September 1991; 1 specimen (REVIZEE-NE III 40; 4°05'38"S / 37°25'34"W; 50 m) (MOUFPE 12347) 15 May 1998; 1 specimen (REVIZEE-NE III 53; 01°14'24"S / 41°14'24"W) (MOUFPE 12553) 16 May 1998; 4 specimens (REVIZEE-NE III 36; 5°29'53"S / 35°04'41"W; 24 m) (MOUFPE 12588) 14 May 1998; 1 specimen (REVIZEE-NE III 28; 7°27'11"S / 34°31'30"W; 43 m) (MOUFPE 12592) 10 May 1998; 1 specimen (REVIZEE-NE III 42; 03°29'46"S / 38°08'53"W; 19 m) (MOUFPE 12598) 16 May 1998; 5 specimens (REVIZEE-NE III 166; 8°48'S / 35°12'W) (MOUFPE 12923) 15 July 1998; 1 specimen (Santo Aleixo Island-PE 01 8°36'42.37"S / 35°01'27.64"W; subtidal zone in rocks) (MOUFPE 13508) 06 February 2007; 3 specimens (BPot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14053) 19 May 2004; 1 specimen (BPot IV 35-dredge; 04°47.48'S / 36°44.81'W; 19.7 m) (MOUFPE 14058) 28 May 2004; 1 specimen (BPot IV E22; 05°02.39'S / 36°23.12'W; 7.4 m) (MOUFPE 14068) 23 May 2004; 3 specimens (BPot IV A2N; 4°58'06.8"S / 36°12'37.3"W; 11 m) (MOUFPE 14079) 20 June 2004; 1 specimen (BPot IV A7; 4°44'54"S / 36°52'25"W; 12.2 m) (MOUFPE 14107) 20 May 2004; 1 specimen (BPot IV A5N; 4°37'33.83"S / 36°50'11.4"W; 84.9 m) (MOUFPE 14108) 21 June 2004; 1 specimen (BPot IV A7N; 4°44'54"S / 36°52'25"W; 12.2 m) (MOUFPE 14109) 20 June 2004; 1 specimen (BPot III 19-dredge; 05°03.51'S / 36°28.55'W; 3.9 m) (MOUFPE 14140) 19 November 2003; 1 specimen (BPot III 42-dredge; 04°42'09"S / 36°55.63'W; 20.2 m) (MOUFPE 14141) 24 November 2003; 1 specimen (BPot III 35-dredge; 04° 47.48'S / 36°44.81'W; 15 m) (MOUFPE 14142) 24 November 2003; 1 specimen (BPot III 14 dredge; 4°47.41'S / 36°26.89'W; 28 m) (MOUFPE 14144) 23 November 2003; 1 specimen (BPot III 21-dredge; 04°58.30'S / 36°33.94'W; 10.7 m) (MOUFPE 14157) 22 November 2003; 1 specimen (BPot III MF 34; 5°01'03.9" / 36°25'05.6"; 7.1 m) (MOUFPE 14158) 23 November 2003; 3 specimens (BPot

III 17-trawl; 04°57.67'S / 36° 25.93'W; 11.2 m) (MOUFPE 14173) 22 November 2003; 1 specimen (BPot II MF 14-trawl; 4°57'50.6"S / 36°36'18.3"W; 7.5 m) (MOUFPE 14196) 28 May 2003; 1 specimen (BPot II 15-dredge; 04°52.87'S / 36°28.55'W; 11.8 m) (MOUFPE 14200) 22 May 2003; 1 specimen (BPot II 30-dredge; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14219) 20 May 2003; 1 specimen (BPot II 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14224) 19 May 2003; 2 specimens (BPot II 09-dredge; 05°04.75'S / 36°18.93'W; 2.8 m) (MOUFPE 14227) 15 May 2003; 9 specimens (BPot II 40-dredge; 04°36.66'S / 36°50.25'W; 79.1 m) (MOUFPE 14231) 19 May 2003; 1 specimen (BPot II MF 11-trawl; 04°47'41.6"S / 36°47'46.04"W; 13.6 m) (MOUFPE 14234) 28 May 2003; 1 specimen (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14236) 23 May 2003; 1 specimen (BPot II 21-dredge; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14240) 21 May 2003; 1 specimen (BPot I 37B-dredge; 04°57.83'S / 36°44.24'W; 8 m) (MOUFPE 14250) August 2002; 4 specimens (BPot I 35 B-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14253) August 2002; 4 specimens (BPot I 22A-dredge; 04°52.88'S / 36°33.98'W; 13.3 m) (MOUFPE 14261) August 2002; 1 specimen (BPot I 37C-dredge; 04°57.83'S / 36°44.24'W; 8 m) (MOUFPE 14265) August 2002; 2 specimens (BPot I 30A dredge; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14268) August 2002; 1 specimen (Paracuru beach-CE; 03°24'03.71"S / 39°00'51.32"W; subtidal zone) (MOUFPE 14877) 11 July 2002; 3 specimens (BPot III 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14884) 24 November 2003; 1 specimen (BPot III 03; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14885) 13 November 2003; 1 specimen (BPot MF 37; 04°57.83'S / 36°44.24'W; 8 m) (MOUFPE 14886) 21 November 2003; 1 specimen (BPot-PAI 121 RNS 42 extra; 04°46'58"S / 36°25'08"W; 45.6 m) (MOUFPE 14887) 15 July 2009; 1 specimen (BPot-Regional MR 32 R1; 04° 49'20"S / 36°25'56"W; 22 m) (MOUFPE 14976) 27 October 2009.

*Distribution:* Western Atlantic – Bermuda, North Carolina, South Carolina, Gulf of Mexico, Florida to Curaçao and Brazil (Maranhão to Rio de Janeiro) (Schotte and Manning, 1993; Gomes-Corrêa, 1998).

*Habitat:* Hard substrates such as coral reefs and rock wall, among seagrass and sponges at depths from 0 to 85 m. The lower depth limit provided by Schotte and Manning (1993), 73 m, is herein extended to 85 m.

*Remarks:* Some of the specimens identified as *N. bredini* by Manning (1969, fig. 88) are actually *N. wenneerae*, given the bathymetry (sublittoral), smaller size and the long rostral spine (Manning and Heard, 1997). The presently analysed specimens agree with these features and should thus be recorded as *N. wenneerae* instead of *N. bredini*. Some additional variations were found in the present material, such as the presence or absence of movable apex on intermediate denticle and the rostral plate extending or not until de base of ocular peduncle. These features are not conservative and can lead to doubtful records and the last one is probably a preservation effect as the position of the ocular somite can change depending on the degree of contraction of the arthrodial membrane between the ophthalmic and ocular somites.

#### *Neogonodactylus* spp.

*Material examined:* 1 specimen juvenile (REVIZEE-NE III 93; 3°45'04"S / 32°19'58"W; 70 m) (MOUFPE 12584) 02 June 1998; 4 specimens juveniles (BPot IV 35-dredge; 04°47.48'S / 36°44.81'W; 19.7 m) (MOUFPE 14071) 28 May 2004; 1 specimen juvenile (BPot IV 12-dredge; 04°52.84'S / 36°23.17'W; 18.5 m) (MOUFPE 14078) 26 May 2004; 3 specimens resected (BPot IV 37-dredge; 04°57.83'S / 36°44.24'W; 7.4 m) (MOUFPE 14118) 30 May 2004; 1 specimen juvenile (BPot IV 38-Van Veen B; 04°47.50'S 36 / °50.22'W; 15 m) (MOUFPE 14119) 29 May 2004; 1 specimen juvenile (BPot III 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14139) 23 November 2003; 1 specimen juvenile (BPot II 14-dredge;

04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14235) 03 May 2003; 1 specimen juvenile (BPot I 30B; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14266) August 2002; 1 specimen juvenile (BCAM-40 GAR S6 R2 C2; 13°29'S / 38°54'W) (MOUFPE 14949); 1 specimen juvenile (BCAM GAR S3 R3 C2; 13°29'18"S / 38°54'05"W) (MOUFPE 14950); 1 specimen juvenile (BPot-PAI 121 RNS 21 Extra; 04°46'55"S / 36°25'24"W; 45.7) (MOUFPE 14951) 13 July 2009; 1 specimen juvenile (BPot-PAI 121 RNS 22 R3 (0-10); 04°46'58"S / 36°25'21"W; 43.6 m) (MOUFPE 14952) 15 July 2009; 1 specimen juvenile (BPot-PAI 121 RNS 41 R1 (0-10); 04°46'42"S / 36°25'24"W; 46.7 m) (MOUFPE 14953) 13 July 2009; 1 specimen juvenile (BCAM-40 GAR B3 R1 C2; 13°29'45"S / 38°54'19"W) (MOUFPE 14954); 1 specimen juvenile (BPot-Regional MR 25 R2; 04°52'17"S / 36°45'58"W) (MOUFPE 14979); 1 specimen juvenile (BPot-Regional MR 41 CL R2; 04°49'40"S / 36°10'06"W; 58 m) (MOUFPE 14980) 27 October 2009; 1 specimen juvenile (BPot-Regional MR 43 R3-Extra; 04°38'28"S / 36°45'37"W; 52 m) (MOUFPE 14981) 26 October 2009; 1 specimen juvenile (BPot-Regional MR 45 CO R2; 04°35'17"S / 36°55'03"W; 47 m) (MOUFPE 14982) 01 May 2010.

*Remarks:* These specimens are either juveniles or damaged and identification to species level was not possible.

#### **Family Odontodactylidae Manning, 1980**

Genus *Odontodactylus* Bigelow, 1893

*Odontodactylus havanensis* (Bigelow, 1893)

*Gonodactylus havanensis* Bigelow, 1893: 101.  
*Odontodactylus havanensis* – Bigelow, 1894: 497, figs. 1–2, pl. 20; Lunz, 1937: 5, fig. 2; Holthuis, 1941: 37; Ah Yong, 2001: 79; Rodrigues and Young, 2005: 234; Schram, 2010: 73.

*Odontodactylus brevirostris* – Manning, 1967: 22, fig. 8; 1969: 285, figs. 80–81; Coelho and Koenig, 1972: 251 (in part); Gomes-Corrêa, 1998: 294.



*Material examined:* Holotype (Off Havana, Cuba) (USNM 17997); 1 specimen (Tamandaré beach-PE; 08°44'S / 35°06'W; subtidal zone, in gravel bottom) (MOUFPE 995) 01 July 1972; 1 specimen (SALD 1944; 20°37'S / 34°42'W; 80-131 m) (MOUFPE 996) 07 September 1968; 2 specimens (AKA 104; 10°33'45"S / 36°12'W; 27 m) (MOUFPE 999) September 1965; 1 specimen (GM 218-3D; 02°09'N / 47°25'W; 92 m) (MOUFPE 1001); 3 specimens (BPot IV 03-dredge; 04°51.43'S / 36°12.36'W; 33.5 m) (MOUFPE 14120) 26 May 2004; 1 specimen (BPot III 11-dredge; 04°58.25'S / 36° 27.14'W; 10.2 m) (MOUFPE 14145) 21 November 2003; 4 specimens (BPot III MF 24; 05°02'00.3"S / 36°14'09.4"W; 8.4 m) (MOUFPE 14175) 23 November 2003; 1 specimen (BPot III MF 29; 5°01'57.9"S / 36°19'32.7"W; 5.7 m) (MOUFPE 14176) 23 November 2003; 3 specimens (BPot III MF 26; 5°01'56.7"S / 36°16'13.4"W; 7.3 m) (MOUFPE 14179) 23 November 2003; 3 specimens (BPot III MF 25; 5°01'57.2"S / 36°15'07.3"W; 6.6 m) (MOUFPE 14180) 23 November 2003; 2 specimens (BPot III MF 39; 5°01'55.4"S / 36°31'52.1"W; 4.9 m) (MOUFPE 14183) 21 November 2003; 1 specimen (BPot II MF 15-trawl; 04°05'23.3"S / 36°40'11.5"W; 21.4 m) (MOUFPE 14189) 28 May 2003; 1 specimen (BMA-Manati CO 1 R2; 13°20'S / 38°52'W; 50 m) (MOUFPE 14962) February 2009; 1 specimen (BPot-Regional MR 43 R3-Extra; 04°38'28"S / 36°45'37"W; 52 m) (MOUFPE 14963) 01 May 2010; 1 specimen damaged (SALD 1755; 00°37.5'S / 45°38.5'W; 80 m) (MOUFPE 997) 07 November 1967; 1 specimen (CANOPUS 08A; 02°20'S / 41°20'W) (MOUFPE 998) July 1965; 1 specimen (BPot IV 24-dredge; 04°41.09'S / 36°34.03'W; 72 m) (MOUFPE 14066) 24 May 2004; 1 specimen (BPot IV 20-dredge; 05°03.73'S / 36°33.91'W; 4.2 m) (MOUFPE 14074) 20 May 2004; 2 specimens (BPot III 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14146) 23 November 2003; 6 specimens (BPot III MF 34; 5°01'03.9"S / 36°25'05.6"W; 7.1 m) (MOUFPE 14174) 22 November 2003; 2 specimens (BPot III

MF 32; 5°00'08.4"S / 36°24'16.3"W; 5.9 m) (MOUFPE 14177) 22 November 2003; 2 specimens (BPot III MF 27; 5°01'55.8"S / 36°17'24.3"W; 2.7 m) (MOUFPE 14178) 23 November 2003; 6 specimens (BPot III MF 28; 05°01'56.9"S / 36°18'22.9"W; 6.2 m) (MOUFPE 14181) 23 November 2003; 7 specimens (BPot III MF 33; 05°00'04.7"S / 36°25'07.4"W; 6 m) (MOUFPE 14182) 22 November 2003; 2 specimens (BPot II MF 12-trawl; 4°58'26.8"S / 36°27'48.8"; 9.6 m) (MOUFPE 14195) 28 May 2003; 1 specimen (BPot II MF 07-trawl; 04°44'54"S / 36°52'25"W; 12.2 m) (MOUFPE 14212) 27 May 2003; 1 specimen (BPot II MF 23-trawl; 5°02'S / 36°14'W; 8 m) (MOUFPE 14213) 29 May 2003; 1 specimen (BPot I 24-dredge; 04°41.09'S / 36°34.03'W; 67.1 m) (MOUFPE 14281) August 2002; 1 specimen (PE 30 R1; 07°45'S / 34°43'W; 19 m) (MOUFPE 14869) 26 February 1969; 1 specimen (BPot-PAI 121 RNS 22 extra; 04°46'58"S / 36°25'21"W; 44 m) (MOUFPE 14870) 15 July 2009.

*Distribution:* Western Atlantic – Gulf of Mexico to Brazil (Pará to Rio de Janeiro) (Gomes-Corrêa, 1998).

*Habitat:* In fine sand and calcareous algae bottoms, from 4 to 309 m (Manning, 1969).

*Remarks:* *Odontodactylus havanensis* was removed from the synonymy of *O. brevisrostris* by Ahyong (2001), on the basis of characters such as the uropodal exopod pigmentation and presence or absence of a posterolateral spine on AS3. The Western Atlantic population is recognized as *O. havanensis* (see Ahyong, 2001).

#### Family Pseudosquillidae Manning, 1977

Genus *Pseudosquilla* Dana, 1852

*Pseudosquilla ciliata* (Fabricius, 1787)

*Squilla ciliata* Fabricius, 1787: 333; Manning, 1963: 311.

*Squilla stylifera* Lamarck, 1818: 189.

*Squilla quadrispinosa* Eydoux and Souleyet, 1842: 362, pl. 15, fig. 1.

*Pseudosquilla ciliata* var. *occidentalis* Borradaile, 1900: 398.

*Pseudosquilla ciliata* – Kemp, 1913: 96; Lunz, 1937: 6; Chopra, 1939: 160; Holthuis, 1941: 35; Lemos de Castro, 1955: 26, figs. 20–21, pl. 7 and 16; Manning, 1961: 39, pl. 11, figs. 1–2; Manning, 1968: 42; 1969: 264, fig. 74; 1970: 264; Coelho and Koenig, 1972: 251; Fausto Filho and Sampaio Neto, 1976: 66; Manning, 1977: 100, figs. 30, 31, 55; Reaka and Manning, 1987: 182, tab. 1; Holmquist, *et al.* 1989: 255, tab. 2; Moosa, 1991: 169; Richer de Forges and Moosa, 1992: 155, figs. 2, 5, tabs. 1–4; Schotte and Manning, 1993: 571; Manning, 1995: 59; Gomes-Corrêa, 1998: 295; Moosa, 2000: 426; Ahyong, 2001: 112, fig. 55; 2002: 355; Hendrickx and Salgado-Barragán, 2002: 394; Ahyong, 2004: 526, fig. 168 a-c; Rodrigues and Young, 2005: 240; Almeida *et al.*, 2007b: 7; Ahyong and Jarman, 2009: 93; Schram, 2010: 90.

*Alimerichthus cylindricus* Holthuis and Manning, 1964: 138.

*Material examined:* 1 specimen (AKA 14; 09°07'20"S / 34°53'40"W; 72 m) (MOUFPE 1002) September 1965; 1 specimen damaged (SALD A55) (MOUFPE 1003); 1 specimen (Tamandaré beach-PE; 08°44'S / 35°06'W; subtidal zone) (MOUFPE 1004); 2 specimens (SALD 1981; 13°48.5S / 38°48.5'W; 49 m) (MOUFPE 1005) 23 September 1968; 1 specimen (AKA 59; 09°46'10"S / 35°34'40"W; 31 m) (MOUFPE 1007) 07 September 1965; 1 specimen (Tambaú-PB; 07°07'S / 34°52'W; subtidal zone) (MOUFPE 1008) 06 September 1971; 4 specimens (SALD 1981B; 12°59.7'S / 38°19.5'W; 59 m) (MOUFPE 1009) 27 September 1968; 1 specimen (CAN 91; 06°24'S / 34°46'W; 54 m) (MOUFPE 1010) 21 December 1965; 1 specimen (AKA 32; 09°24'S / 35°14'W; 27 m) (MOUFPE 1012); 1 specimen (SALD 1648; 07°30'S / 34°32'W; 37 m) (MOUFPE 1013) 07 September 1967; 3 specimens (SALD 7566; 02°16'S / 41°15'48"W; 41 m) (MOUFPE 1014) 20 July 1987; 1 specimen (SALD 7597; 02°15'S / 41°57'W; 47 m) (MOUFPE 1015) 30 July 1987; 1 specimen (Forte Orange-PE 02; 07°48'S / 34°50'W; subtidal zone) (MOUFPE

1016) 08 April 1989; 1 specimen (Cond./Suape 15; 08°21'S / 34°57'W) (MOUFPE 1017) 20 July 1978; 1 specimen (SALD 7624; 01°01'S / 43°35'W; 53 m) (MOUFPE 1019) 12 August 1987; 1 specimen (CAN 50; 03°51'S / 37°42'W) (MOUFPE 1022); 4 specimens (GM 29; 00°38'N / 45°52.5'W; 75 m) (MOUFPE 1023) 06 June 1969; 1 specimen (Jaguaribe-PE; 07°43'S / 34°50'W; subtidal zone) (MOUFPE 1024) 02 October 1971; 1 specimen (SALD 1649; 07°26'S / 34°30'W; 51 m) (MOUFPE 1025) 06 October 1967; 1 specimen (PE 36; 07°40'S / 34°28'W; 60–88 m) (MOUFPE 1026) 14 February 1969; 3 specimens (SALD 1743A; 00°51'S / 43°41.4'W; 75 m) (MOUFPE 1027) 04 November 1967; 3 specimens (SALD 1684A; 03°59.5'S / 35°53.7'W; 140 m) (MOUFPE 1028) 18 October 1967; 1 specimen (REC 149; 07°56'S / 34°37'W; 38 m) (MOUFPE 1029); 1 specimen (CAN 14; 01°30'S / 38°48'W) (MOUFPE 1031) July 1965; 2 specimens (SALD 1684; 03°59.5'S / 35°53.7'W; 75 m) (MOUFPE 1032) 18 October 1967; 1 specimen (Tambaú-PB; 07°07'S / 34°52'W; subtidal zone) (MOUFPE 1033) 07 September 1971; 1 specimen damaged (SALD 2447; 02°24'N / 48°24'W; 85 m) (MOUFPE 1034); 1 specimen (SALD 1711; 02°25'S / 39°30.5'W; 49 m) (MOUFPE 1035) 27 October 1967; 1 specimen (SALD 1732A; 02°13'S / 41°51'W; 69 m) (MOUFPE 1037); 1 specimen (CAN 87; 07°08'S / 34°26'W) (MOUFPE 1038) December 1965; 2 specimens (CAN 30; 02°49'S / 38°55'W) (MOUFPE 1039) August 1965; 1 specimen (CAN 18; 01°56'S / 37°51'W) (MOUFPE 1040); 1 specimen (CAN 31; 02°52'S / 38°52'W; 72 m) (MOUFPE 1041) 11 August 1965; 1 specimen (AKA-Mouth of São Francisco River; 10°44'S 36°21'W) (MOUFPE 1042); 2 specimens (SALD 1655; 06°04'S / 34°59'W; 25 m) (MOUFPE 1043); 1 specimen (GM 153; 02°16'N / 47°49'W; 85 m) (MOUFPE 1045); 1 specimen (Tamandaré beach-PE-dredge; 08°44'S / 35°06'W; 90 m) (MOUFPE 1046) 24 May 1965; 3 specimens (SALD 1708; 02°44'S / 39°01.5'W; 65 m) (MOUFPE 1047) 22 October 1967; 1

specimen damaged (SALD 1663A; 03°49.6'S / 33°49.2'W; 53 m) (MOUFPE 1048) 09 October 1967; 1 specimen (SALD 1701A; 01°57'S / 37°46'W; 57 m) (MOUFPE 1049); 1 specimen (CAN 30; 02°49'S / 38°55'W) (MOUFPE 1050) August 1965; 1 specimen (GM 45; 01°32'N / 47°34'W; 67 m) (MOUFPE 1051) 08 June 1969; 1 specimen (CAN 101; 04°48'S / 35°06'W; 69 m) (MOUFPE 1052); 1 specimen (SALD 1738A; 01°55.5'S / 42°45'W; 75 m) (MOUFPE 1053) 31 October 1967; 3 specimens resected (CAN 89; 06°46'S / 34°36'W; 72 m) (MOUFPE 1054) 21 December 1965; 1 specimen (CAN 48; 04°01'S / 37°33'W) (MOUFPE 1055) August 1965; 1 specimen (CAN 33; 02°58'S / 38°45'W) (MOUFPE 1056) August 1965; 2 specimens (SALD 1711A; 02°25'S / 39°30'W; 75 m) (MOUFPE 1057) 27 October 1967; 2 specimens (SALD 1767A; 01°57.5'N / 47°13.5'W; 93 m) (MOUFPE 1058) 13 November 1967; 2 specimens (SALD 1750; 00°04'S / 44°33.5'W; 52 m) (MOUFPE 1059) 06 November 1967; 2 specimens damaged (CAN 13; 01°30'S / 38°48'W; 45–49 m) (MOUFPE 1060) 11 July 1965; 4 specimens (SALD 1729; 02°10.5'S / 41°27'W; 53 m) (MOUFPE 1061) 30 October 1967; 1 specimen (CAN 107; 04°40'S / 36°06'W; 56 m) (MOUFPE 1062) 15 January 1966; 2 specimens (SALD 1647A; 07°30'S / 34°34.7'W; 37 m) (MOUFPE 1063) 06 October 1967; 1 specimen (SALD 1684; 03°59.5'S / 35°53.7'W; 75 m) (MOUFPE 1065) 18 October 1967; 3 specimens (CAN 52; 03°40'S / 37°54'W; 54 m) (MOUFPE 1067) 24 August 1965; 1 specimen (Vila Velha-PE 6; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1068) 16 September 1989; 1 specimen damaged (CAN 74; 03°58'S / 35°56'W; 70 m) (MOUFPE 1153); 1 specimen (REVIZEE-NE I 210; 03°50'17"S / 37°37'05"W) (MOUFPE 12335) 12 October 1995; 1 specimen (REVIZEE-NE I 237; 07°47'53"S / 34°29'06"W; 52.89 m) (MOUFPE 12337) 17 October 1995; 1 specimen (REVIZEE-NE I 235; 07°48'S / 33°34'05"W; 42 m) (MOUFPE 12338) October 1995; 1 specimen (REVIZEE-NE I 93; 03°59'35"S / 35°55'23"W; 64 m) (MOUFPE 12339) October 1995; 1 specimen (REVIZEE-NE I 225; 06°21'47"S / 34°45'54"W; 57 m) (MOUFPE 12341) 14 October 1995; 1 specimen (REVIZEE-NE III 42; 03°29'46"S / 38°08'53"W; 19 m) (MOUFPE 12342) 16 May 1998; 1 specimen (REVIZEE-NE III 81A; 01°43'48"S / 37°07'16"W; 55 m) (MOUFPE 12343) 06 June 1998; 1 specimen (REVIZEE-NE III 40; 4°05'38"S / 37°25'34"W; 50 m) (MOUFPE 12345) 15 May 1998; 1 specimen (REVIZEE-NE I 210; 03°50'17"S / 37°37'05"W) (MOUFPE 12512) 12 October 1995; 6 specimens (REVIZEE-NE III 33; 06°50'42"S / 34°39'W; 35 m) (MOUFPE 12557) 13 May 1998; 3 specimens (BPot IV 35-dredge; 04°47.48'S / 36°44.81'W; 19.7 m) (MOUFPE 14062) 28 May 2004; 1 specimen (BPot IV 30-dredge; 04°47.46'S / 36°39.38'W; 22.5 m) (MOUFPE 14063) 28 May 2004; 2 specimens (BPot IV 38-dredge; 04°47.50'S / 36°50.22'W; 15 m) (MOUFPE 14.064) 29 May 2004; 1 specimen (BPot IV 05-dredge; 04°47.40'S / 36°17.77'W; 85 m) (MOUFPE 14069) 30 May 2004; 1 specimen (BPot IV A10; 4°48'38.40"S / 36°42'15"W; 17 m) (MOUFPE 14124) 20 May 2004; 1 specimen (BPot III 02-dredge; 04°58.21'S / 36°12.29'W; 10.1 m) (MOUFPE 14131) 21 November 2003; 4 specimens (BPot III 38-dredge; 04°47.50'S / 36°50.22'W; 11.1 m) (MOUFPE 14132) 24 November 2003; 1 specimen (BPot III 41-dredge; 04°36.64'S / 36°55.83'W; 24.5 m) (MOUFPE 14133) 24 November 2003; 1 specimen (BPot III 34-dredge; 04°42.07'S / 36°44.88'W; 26 m) (MOUFPE 14134) 24 November 2003; 1 specimen (BPot III 14-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14135) 24 November 2003; 1 specimen (BPot III 17-dredge; 04°57.67'S / 36°25.93'W; 11.2 m) (MOUFPE 14136) 22 November 2003; 1 specimen (BPot III 42-dredge; 04°42'09"S / 36°55.63'W; 20.2 m) (MOUFPE 14137) 24 November 2003; 2 specimens (BPot III 03-dredge; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14138) 21 November 2003; 1 specimen (BPot III 38-Van Veen A; 04°47.50'S / 36°50.22'W; 11.1 m)



(MOUFPE 14155); 1 specimen (Bpot III 09; 05°04.75'S / 36°18.93'W; 1.6 m) (MOUFPE 14184) 16 November 2003; 1 specimen (Bpot III MF 34; 5°01'03.9"S / 36°25'05.6"W; 7.1 m) (MOUFPE 14185) 22 November 2003; 1 specimen (BPot II 35B; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14207) May 2003; 1 specimen (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14208) 23 May 2003; 2 specimens (BPot II 39-dredge; 04°42.08'S / 36°50.23'W; 15.1 m) (MOUFPE 14209) 19 May 2003; 1 specimen (BPot II 40-dredge; 04°36.66'S / 36°50.25'W; 79.1 m) (MOUFPE 14210) 19 May 2003; 2 specimens (BPot II 03-dredge; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14214) 22 May 2003; 7 specimens (BPot I 13B-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14270) July-August 2002; 2 specimens resected (BPot I 13C-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14271) August 2002; 2 specimens (BPot I 14C-dredge; 4°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14272) August 2002; 1 specimen (Bpot I 21B-dredge with algae; 04°58.30'S / 36°33.94'W; 9.6 m) (MOUFPE 14273) August 2002; 1 specimen (BPot I 23C-dredge; 04°47.42'S / 36°33.97'W; 21.8 m) (MOUFPE 14274) August 2002; 1 specimen (BPot II 24-dredge; 04°41.09'S / 36°34.03'W; 67.1 m) (MOUFPE 14275) 24 May 2003; 1 specimen (BPot I 30B-dredge; 04°47.46'S / 36°39.38'W; 18.8 m) (MOUFPE 14276) August 2002; 2 specimens (BPot I 35C-dredge; 04°47.48'S / 36°44.81'W; 15.8 m) (MOUFPE 14277) August 2002; 1 specimen (Petrobrás 1 PEP 1-Control 2) (MOUFPE 14866) December 2003; 3 specimens (BPot-PAI 081 CES 41 Extra; 03°00'17"S / 38°51'26"W; 55 m) (MOUFPE 14900) 07 July 2009; 1 specimen (BPot-PAI 121 RNS 42 Extra; 04°46'58"S / 36°25'08"W; 45.7 m) (MOUFPE 14901) 15 July 2009; 1 specimen (Paracurú-CE) (MOUFPE 14902) November 2003; 1 specimen (Poço do Cravo- 03 R1; 13°24'S / 38°42'W; 100 m) (MOUFPE 14903) May 2009; 1 specimen (BPot-PAI 075 CES 23 Extra; 03°08'34"S / 38°52'01"W; 33 m) (MOUFPE 14904) 09 July 2009; 1 specimen

(BPot-PAI 121 RNS 41 Extra; 04°46'42"S / 36°25'24"W; 46 m) (MOUFPE 14905) 13 July 2009; 1 specimen (BPot-PAI 144 RRN 01-Extra; 04°19.1483'S / 37°20.7081'W; 20 m) (MOUFPE 14906) 11 July 2009; 1 specimen (Petrobrás PAT 21500 J sample 2) (MOUFPE 14907) December 2003; 2 specimens (BPot-PAI 081 CES 42 Extra; 03°00'08"S / 38°51'05"W; 59.7 m) (MOUFPE 14908); 1 specimen (BPot-PAI 121 RNS 34 Extra; 04°46'56"S / 36°25'32"W; 44.3 m) (MOUFPE 14909) 14 July 2009; 1 specimen (BPot-PAI 121 RNS 13 Extra; 04°47'00"S / 36°25'24"W; 44 m) (MOUFPE 14910) 13 July 2009; 1 specimen (BPot-PAI 081 CES 41 Extra; 03°00'17"S / 38°51'26"W; 55 m) (MOUFPE 14911); 2 specimens (BPot-PAI 144 RRN 03 Extra; 04°19'24"S / 37°20'08"W; 20 m) (MOUFPE 14912) 12 July 2009; 2 specimens (BPot-PAI 081 CES 32 Extra; 03°00'15"S / 38°51'08"W; 58 m) (MOUFPE 14913); 3 specimens (BPot-PAI 144 RRN 05 Extra; 04°19'30"S / 37°20'51"W; 20 m) (MOUFPE 14914) 12 July 2009; 1 specimen (BPot-PAI 081 CES 33 Extra; 03°00'26"S / 38°51'04"W; 58 m) (MOUFPE 14915) 07 July 2009; 1 specimen (BPot-PAI 121 RNS 21 Extra; 04°46'55"S / 36°25'24"W; 43 m) (MOUFPE 14916) 13 July 2009; 1 specimen (BPot-PAI 121 RNS 32 Extra; 04°46'58"S / 36°25'16"W; 44 m) (MOUFPE 14917) 15 July 2009; 1 specimen (BPot-PAI 081 CES 44 Extra; 03°00'38"S / 38°51'17"W; 53 m) (MOUFPE 14918) 08 July 2009; 1 specimen (BPot-Regional MR 26 CO R2; 04°48'13"S / 36°54'53"W; 13 m) (MOUFPE 14964) 02 May 2010; 1 specimen (Bpot-Regional MR 32 R3 Extra; 04°49'11"S / 36°25'32"W; 19 m) (MOUFPE 14965) 27 October 2009.

*Distribution:* Western Atlantic – Bermuda, Bahamas, Florida, Belize, British Honduras, Nicaragua, Panama, Cuba, Jamaica, Dominican Republic, Puerto Rico, Virgin Islands, Guadeloupe, St. Eustatius, Barbuda, Antigua, Colombia, Venezuela, Bonaire, Curaçao, Tobago, southward to Brazil (Rocas Atoll and Amapá to São Paulo). Central Atlantic – St. Helena. Eastern Atlantic

– Cape Verde Islands, San Pedro Bay, St. Vincent, Senegal. Indo-West Pacific – Red Sea, Somalia, Arabian Sea, Persian Gulf, Sri Lanka, Seychelles, Comores, Mozambique, Madagascar, La Réunion, Mauritius, Thailand, Vietnam, Taiwan, Japan, South China Sea, Indonesia, Papua New Guinea, Philippines, Australia, Lord Howe Island, New Caledonia, Chesterfield Atoll, Loyalty Islands (Uvea), Tuamotu, Hiva Oa, Nuku Hiva, Marquesas, Chesterfield Islands. Eastern Pacific – Hawaii (24°00'N / 167°00'W) (Schram, 2010).

*Habitat:* All kinds of bottom, from intertidal to 110 m depth (Manning, 1969). Material examined is from shallow subtidal to 140 m.

*Remarks:* This species has a near pan-tropical distribution (Ahyong, 2001). The Brazilian specimens showed a slightly striped red pattern on telson, but this was not found in all specimens.

Genus *Pseudosquillisma* Cappola and

Manning, 1995

*Pseudosquillisma oculata* (Brullé, 1837)

*Squilla oculata* Brullé, 1837: 18, fig. 3.

*Squilla monodactyla* A. Milne-Edwards, 1878: 232.

*Pseudosquilla oculata* – Miers, 1880: 110, pl. 3, figs. 3–4; Kemp, 1913: 102; Holthuis, 1941: 266; Lemos de Castro, 1955: 29, figs. 22–23, pl. 8 and 16; Manning, 1969: 271, figs. 75–76; 1977: 103; Coelho and Koenig, 1972: 251; Manning and Chace, 1990: 71; Gomes-Corrêa, 1998: 295.

*Pseudosquillisma oculata* – Cappola and Manning, 1995: 285; Moosa, 2000: 408, tab. 1; Ahyong, 2001: 117, fig. 57; 2002: 369; Hendrickx and Salgado-Barragán, 2002: 394; Schram, 2010: 94.

*Material examined:* 1 specimen (Santo Aleixo Island; 08°36'S / 35°02'W; subtidal zone) (MOUFPE 1169); 1 specimen (Candeias beach-PE; 08°12'S / 34°56'W; subtidal zone) (MOUFPE 1170) 16 May 1905; 1 specimen (Suape Bay-PE; 08°22'S / 34°57'W; subtidal zone) (MOUFPE 1171) 07 August 1963.

*Distribution:* Western Atlantic – Florida;

Bahamas, Mexico, Nicaragua, Dominican Republic, Puerto Rico, Virgin Islands, Guadeloupe, Colombia, Brazil (Rio Grande do Norte to Espírito Santo). Central Atlantic – Ascension and St. Helena Islands. Eastern Atlantic – S. Thomé, Cape Verde Islands, Azores, Canary Islands, Portugal and Gulf of Guinea. Indo-West Pacific – Somalia, Madagascar, Mauritius, South China Sea, Indonesia, Australia, Samoa, French Polynesia, Hawaii, Easter Island (Rodrigues and Young, 2005).

*Habitat:* Usually found in reef habitats and under rocks, at depths from subtidal to 69 m (Schram, 2010).

*Remarks:* The specimens agree very well with the description given by Manning (1969) and Ahyong (2001).

### Superfamily Lysiosquilloidea Giesbrecht, 1910

#### Family Lysiosquillidae Giesbrecht, 1910

Genus *Lysiosquilla* Dana, 1852

*Lysiosquilla scabricauda* (Lamarck, 1818)

*Squilla scabricauda* Lamarck, 1818: 188.

*Lysiosquilla inornata* Dana, 1852: 615.

*Lysiosquilla maculata* – Boone, 1930: 11, 29, pl. 3 [not *L. maculata* Fabricius, 1793].

*Lysiosquilla scabricauda* – Glassell, 1934: 454; Lemos de Castro, 1955: 34, fig. 24, pl. 10 and 17; Manning, 1967: 104; 1969: 24, figs. 2–4, 5a–b; 1977: 287; Coelho and Koenig, 1972: 250, tab.; Camp, 1973: 10, fig. 2; Fausto Filho, 1978: 66, tab. I; Manning and Camp, 1993: 89, fig. 3d–f.; Gomes-Corrêa, 1998: 292; Ahyong, 2001: 130; Hendrickx and Salgado-Barragán, 2002: 394; Schram, 2010: 111.

*Material examined:* 1 specimen (Tamandaré Bay-PE; 08°44'S / 35°06'W; subtidal zone) (MOUFPE 1154) 07 June 1905; 1 specimen (Raposa beach-MA; 02°24'S / 44°05'W; subtidal zone) (MOUFPE 1155) 26 September 1978; 2 specimens (Tamandaré Bay-PE; 08°44'S / 35°06'W; subtidal zone) (MOUFPE 1221) 1967; 1 specimen (Itamaracá Island-PE; 07°48'S / 34°50'W; subtidal zone) (MOUFPE 14956) June 2000.

*Distribution:* Western Atlantic - Bermuda, Mississippi, Louisiana, Texas, Bahamas, North Carolina, Florida, Honduras, Nicaragua, Mexico, Panama, Antigua, Colombia, Venezuela, Trinidad, Brazil (Piauí to Santa Catarina) and numerous records in Manning (1969: 25–27).

*Habitat:* In soft bottoms burrows, at depths from shallow subtidal to 200 m (Schram, 2010).

*Remarks:* Dana (1852) did not select a type species for *Lysiosquilla* but *L. inornata* (= *L. scabricauda*) was selected as the type of the genus by Fowler (1912). Manning (1961) found designated a syntype of *L. inornata* as lectotype. The specimens agree very well with the description given by Manning (1969).

Genus *Lysiosquillina* Manning, 1995

*Lysiosquillina glabriuscula* (Lamarck, 1818)

*Squilla glabriuscula* Lamarck, 1818: 188.

*Squille glabrisculæ* – H. Milne Edwards, 1837: 519.

*Squilla vittata* H. Milne Edwards, 1837: 519.

*Lysiosquilla glabriuscula* – Miers, 1880: 7; Holthuis, 1941: 36; Lemos de Castro, 1955: 37, fig. 25, 43e, 54, pl. 11, 17; Manning, 1969: 34, figs. 5c–d, 6; Coelho and Koenig, 1972: 250, tab.; Fausto Filho, 1978: 66, tab. I; Schotte and Manning, 1993: 571, fig. 2; Gomes-Corrêa, 1998: 292.

*Lysiosquillina glabriuscula* – Manning, 1995: 133; Ahyong, 2001: 137; Hendrickx and Salgado-Barragán, 2002: 394; Schram, 2010: 113.

*Material examined:* 1 specimen (CAN. 13; 01°30'S / 38°48'W; 45 m) (MOUFPE 1212) 11 July 1965; 1 specimen (BPot-PAI 121 RNS 33 Extra; 04°47'07"S / 36°25'24"W; 40 m) (MOUFPE 14895) 14 July 2009; 1 specimen (Candeias beach-PE; 08°11'S / 34°54'W; subtidal zone) (MOUFPE 14983) 17 November 2007.

*Distribution:* Western Atlantic - North and South Carolina, Georgia, Florida, Mexico, Bahamas, Jamaica, Honduras, Dominican Republic, Puerto Rico, St. Vincent, Virgin Islands, Guadeloupe, Colombia, Tobago,

Brazil (Ceará to São Paulo) (Gomes-Corrêa, 1998).

*Habitat:* In coral reefs and sandy bottoms, on depths from shallow subtidal to 50 m (Gomes-Corrêa, 1998; Schotte and Manning, 1993).

*Remarks:* The specimens agree very well with the description given by Manning (1969). The color was almost faded, but the dark band pattern cited by Schotte and Manning (1993) was preserved.

### Family Nannosquillidae Manning, 1980

Genus *Alochosquilla* Schotte and Manning, 1993

*Alochosquilla floridensis* (Manning, 1962)

*Lysiosquilla floridensis* Manning, 1962: 221.

*Acanthosquilla floridensis* – Rodrigues, 1966: 142; Manning, 1969: 67, fig. 16; Coelho and Koenig, 1972: 250, tab.

*Alochosquilla floridensis* – Schotte and Manning, 1993: 573, fig. 3; Schram, 2010: 120.

*Material examined:* Holotype (Cape Florida, Key Biscayne, Florida, USA) (USNM 107875); 1 specimen (Piedade beach-PE; 08°10'S / 34°56'W; subtidal zone) (MOUFPE 1274) 12 September 1962; 1 specimen (Petrobrás1 PEP 1-500 M; 03°08'07"S / 38°48'43"W; 37 m) (MOUFPE 14862) December 2001; 1 specimen (BPot-PAI 075 CES 41 R1 (0-10); 03°08'45"S / 38°52'05"W; 35 m) (MOUFPE 14938) 09 July 2009; 1 specimen (BPot-PAI 075 CES 42 R1 (0-10); 03°08'31"S / 38°52'17"W; 35 m) (MOUFPE 14939) 08 July 2009.

*Distribution:* Western Atlantic – Florida, Virgin Islands, Tobago, Venezuela to Brazil (Bahia and São Paulo) (Schotte and Manning, 1993). Northern distribution filled with records from Ceará and Pernambuco States.

*Habitat:* In coral reefs, rocky walls and burrows on sandy substrates, at depths from shallow subtidal to 28 m (Schotte and Manning, 1993). The deepest bathymetric limit is increased to 37 m.



*Remarks:* The specimens analysed are in agreement with Manning's (1969) description. The mandibular palp was absent and the fused ocular scale showing a square shape.

Genus *Bigelowina* Schotte and Manning,  
1993  
*Bigelowina biminiensis* (Bigelow, 1893)

*Lysiosquilla biminiensis* Bigelow, 1893: 102.

*Acanthosquilla biminiensis* – Holthuis, 1967: 3; Manning, 1969: 63, figs. 14–15; Reaka and Manning, 1980: 11; Gomes-Corrêa, 1998: 292.

*Bigelowina biminiensis* – Schotte and Manning, 1993: 574, fig. 4; Schram, 2010: 123.

*Material examined:* Lectotype (Nixies' Harbor, South Bimini) (USNM 17999); 1 specimen (BPot-PAI 121 RRN 3 R1 (0-10); 04°51'38"S / 35°57'15"W; 46.5 m) (MOUFPE 14940) 15/07/2009; 1 specimen (BPot-PAI 121 RRN 1 R3; 04°51'21"S / 35°57'53"W; 46.7 m) (MOUFPE 14941) 15 July 2009; 1 specimen damaged (BPot-PAI 121 RNS 23 R2 (0-10); 04°47'02"S / 36°25'24"W; 42.7 m) (MOUFPE 14942) 14 July 2009; 1 specimen (BPot-PAI 121 RNS 44 R1 (0-10); 04°46'58"S / 36°25'40"W; 43.2 m) (MOUFPE 14943) 14 July 2009; 1 specimen (BPot-PAI 121 RRN 1 Extra; 04°51'21"S / 35°57'53"W; 47 m) (MOUFPE 14944) 15 July 2009.

*Distribution:* Western Atlantic – Bahamas, North Carolina, Georgia, Texas, Cuba, Tobago, Colombia, Brazil (Rio Grande do Norte and São Paulo). Eastern Pacific – Costa Rica, Panama (Manning, 1974). The species is herein recorded from Rio Grande do Norte State.

*Habitat:* On sand, rocks and in coral reefs, shallow to 46 m depths (Schotte and Manning, 1993).

*Remarks:* Manning (1969) selected the most intact male from syntypes as lectotype. The specimens agree with the lectotype identified by Bigelow (1893). Manning (1969) incorrectly reported fused ocular scales in *B. biminiensis*; the ocular scales in the present

series are separate with a bilobed shape, as in the lectotype. The mandibular palp is present as cited by Manning (1969).

*Bigelowina* spp.

*Material examined:* 1 specimen juvenile (BPot-PAI 144 RRN 1 Extra; 04°19'09"S / 37°20'43"W; 20 m) (MOUFPE 14945) 11 July 2009; 1 specimen (BPot-PAI 075 CES 31 Extra; 03°08'40"S / 38°52'03"W; 36 m) (MOUFPE 14946) 09 July 2009; 1 specimen juvenile (BPot-PAI 121 RRN 1 (0-10); 04°51'21"S / 35°57'53"W; 47 m) (MOUFPE 14947) 15 July 2009; 1 specimen (BPot-PAI 075 CES 44 R2 (0-10); 03°08'43"S / 38°51'47"W; 35 m) (MOUFPE 14948) 09 July 2009.

*Remarks:* These specimens are juveniles or damaged, so species identification was not possible.

Genus *Nannosquilla* Manning, 1963  
*Nannosquilla dacostai* Manning, 1970

*Nannosquilla dacostai* Manning, 1970: 101, fig. 2 – Schotte and Manning, 1993: 567; Gomes-Corrêa, 1998: 293; Schram, 2010: 129.

*Material examined:* Holotype (Camocim, Ceará, Brazil; 02°31'S / 40°22'W; 23 m) (USNM 128332); 1 specimen (NE II 112/111; 3,838°S / 33,687°W; 28 m) (MOUFPE 12333) 03 March 1997; 1 specimen (BPot-PAI 121 RNS 12 R1; 04°46'58"S / 36°25'23"W; 44 m) (MOUFPE 14897) 14 July 2009.

*Distribution:* Western Atlantic – Brazil (Ceará) (Manning, 1970). Southern distribution increased with records from Rio Grande do Norte and Fernando de Noronha Chain-PE (this study).

*Habitat:* From 23 to 44 m depth.

*Remarks:* Manning (1970) described the median prominence flanked laterally by obtusely rounded lateral projection, but the specimens analysed in this study do not present this feature. Otherwise the characters agree well with the original description.

*Nannosquilla potiguara* Albuquerque and  
Coelho, 2009

*Nannosquilla potiguara* Albuquerque and  
Coelho, 2009: 56, fig.1.

*Material examined:* Holotype (Bpot II 06; 04°52.84'S / 36°17.83'W; 16.9 m) (MOUFPE 14022) 22 May 2003; 1 paratype (Bpot III E14; 04°59.94'S / 36°26.80'W; water depth: 8.8 m) (MOUFPE 14154) 15 November 2003; 1 specimen (BPot-PAI 075 RCE 5 R2; 03°28'17"S / 38°15'38"W; 37 m) (MOUFPE 14898) 10 July 2009.

*Distribution:* Only known from the type locality, Rio Grande do Norte State, Brazil (Albuquerque and Coelho, 2009).

*Habitat:* On sandy bottoms, at depths from 8 to 37 m.

*Remarks:* This is the first record of the species after the original description, but no morphological variations were found between them. Color has faded and could not be recognized.

**Superfamily Squilloidea Latreille, 1802**

**Family Squillidae Latreille, 1802**

Genus *Cloridopsis* Manning, 1968

*Cloridopsis dubia* (H. Milne Edwards, 1837)

*Squilla dubia* H. Milne Edwards, 1837: 522.

*Squilla rubrolineata* Dana, 1852: 618.

*Squilla desaussurei* Stimpson, 1857: 503.

*Lysiosquilla desaussurei* – Miers, 1880: 8.

*Squilla alba* – Boone, 1930: 35, pl. 5 [non *S. alba* Bigelow, 1893].

*Squilla dubia* – Lemos de Castro, 1955; Manning, 1967: 13, fig. 9, pl. II, fig. 34e, pl. XIII, fig. 45.

*Cloridopsis dubia* – Manning, 1969: 141; Coelho and Koenig, 1972: 250, tab.; Reaka and Manning, 1980: 15; Gomes-Corrêa, 1998: 291; Boyko, 2000: 49; Bento and Melo, 2010: 148; Schram, 2010: 179.

*Material examined:* 1 specimen (Vila Velha-ITA 6; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1161) 08 March 1989; 1 specimen (Sobrado-Itamaracá 3; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1162) 26 August 1988; 4 specimens (Santa Cruz

Channel-ITA; 07°48'S / 34°51'W; intertidal zone) (MOUFPE 1163) 08 October 1991; 1 specimen (Vila Velha, Itamaracá Island-PE; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1200) 06 April 1974; 4 specimens (Vila Velha-Santa Cruz channel-PE; 07°48'S / 34°51'W; intertidal zone) (MOUFPE 1201) 12 July 1973; 1 specimen (Santa Cruz channel; 07°48'S / 34°51'W; intertidal zone) (MOUFPE 1202) 17 March 1972; 1 specimen damaged (Gaibú-PE; 08° 18'S / 34°56'W; subtidal zone) (MOUFPE 1203) 27 June 1993; 1 specimen (Santa Cruz channel; 07°48'S / 34°51'W; intertidal zone) (MOUFPE 1204) 22 March 1967; 1 specimen (FURENE 112-Vila Velha; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1205) 21 November 1972; 1 specimen (Vila Velha-Santa Cruz channel; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1206) 23 October 1971; 2 specimens (São José do Ribamar - MA; 02°33'48"S / 44°03'12"W; subtidal zone) (MOUFPE 1208) 01 July 1970; 1 specimen (Itamaracá Island; 07°48'S / 34°51'W; subtidal zone) (MOUFPE 1209) 22 September 1972; 1 specimen (Genipapeiro; 02°31'S / 44°16'W; subtidal zone) (MOUFPE 1210) 09 November 1983.

*Distribution:* Western Atlantic – South Carolina, Georgia, Mexico, Guatemala, Dominican Republic, British Honduras, Cuba, Trinidad, Panama, Colombia, Venezuela, Brazil (Pará to Santa Catarina). Eastern Pacific – Mexico, El Salvador, entrance of Panama Canal, Colombia, Peru (Manning, 1969; Bento and Melo, 2010).

*Habitat:* Usually on shallow mud flats; salt lake, mud and mouth of river at depths of 0 to 73 m (Reaka and Manning, 1980).

*Remarks:* The specimens agree well with description of Manning (1969). This species is reported from estuarine habitats, with mud flat substrate (Manning, 1969).

Genus *Meiosquilla* Manning, 1968

*Meiosquilla quadridens* (Bigelow, 1893)

*Squilla quadridens* Bigelow, 1893: 102 – Manning, 1961: 14, pl. 3, figs. 1–2.

*Meiosquilla quadridens* – Manning, 1969:

106, figs. 31, 33a; Camp, 1971: 125; Coelho and Koenig, 1972: 250, tab.; Camp, 1973: 18, fig. 6, tab. 4; Holmquist *et al.*, 1989: 255, tab. 2.; Gomes-Corrêa, 1998: 291; Bento and Melo, 2010: 150; Schram, 2010: 196.

*Material examined:* Holotype (Key Largo, Florida, USA; ALBATROSS 2604; 25°05'N / 80°15'W; 102 m) (USNM 11547) 09 April 1886; 2 specimens (REVIZEE-NE I 213; 4°39'43"S / 36°43'23"W; 52 m) (MOUFPE 12585) 1995; 1 specimen (BPot IV 40 Van Veen A; 04°36.66'S / 36°50.25'W; 78 m) (MOUFPE 14070) 29 May 2004; 1 specimen (BPot IV 05-dredge; 04°47.40'S / 36°17.77'W; 85 m) (MOUFPE 14072) 30 May 2004; 1 specimen (BPot IV 24-dredge; 04°41.09'S / 36°34.03'W; 72 m) (MOUFPE 14076) 24 May 2004; 1 specimen (BPot III 40 Van Veen B; 04°36.66'S / 36°50.25'W; 83.1 m) (MOUFPE 14153) 25 November 2003; 1 specimen (BPot II 13-dredge; 04°47.41'S / 36°23.17'W; 47.1 m) (MOUFPE 14202) 23 May 2003; 1 specimen (BPot II 05-dredge; 04°47.40'S / 36°17.77'W; 100 m) (MOUFPE 14203) 24 May 2003; 1 specimen (BPot II 14-dredge; 04°47.41'S / 36°26.89'W; 27 m) (MOUFPE 14204) 23 May 2003; 1 specimen (Manati OC8 R2; 13°31'S / 38°49'W; 45 m) (MOUFPE 14937) 15 February 2009.

*Distribution:* Western Atlantic – North Carolina, Georgia, Florida, Gulf of Mexico, Bahamas, Colombia, off Venezuela, British Guiana, Surinam, Brazil (Maranhão, Rio Grande do Norte to Pernambuco and Rio de Janeiro) (Bento and Melo, 2010).

*Habitat:* On coral gravel bottoms, at depths from littoral to 137 m (Manning, 1969).

*Meiosquilla schmitti* (Lemos de Castro, 1955)

*Squilla quadridens* – Holthuis, 1941: 32.

*Squilla schmitti* Lemos de Castro, 1955: 8, figs. 5–8, pl. 1, figs. 32–33; – Manning, 1961: 17, pl. 3, figs. 3–4.

*Meiosquilla schmitti* – Manning, 1969: 111, figs. 32, 33b; Coelho and Koenig, 1972: 250, tab.; Camp, 1973: 24, fig. 8, tab. 5; Fausto Filho and Sampaio Neto, 1976: 65; Gomes-

Corrêa, 1998: 291; Schram, 2010: 197.

*Material examined:* 1 specimen (REC 148; 07°52'S / 34°32'W; 46 m) (MOUFPE 1173); 3 specimens (SALD 1843; 05°46'S / 35°01.4'W; 47 m) (MOUFPE 1174) 13 April 1968; 1 specimen (SALD 1872; 01°20'S / 43°33.5'W; 50 m) (MOUFPE 1175) 23 April 1968; 1 specimen (SALD 1760A; 01°10.7'N / 46°32.5'W; 100 m) (MOUFPE 1176) 08 November 1967; 3 specimens (SALD 1767; 01°32.5'N / 47°24.5'W; 63 m) (MOUFPE 1177) 13 November 1967; 1 specimen damaged (SALD 1755; 00°37.5'S / 45°38.5'W; 80 m) (MOUFPE 1178) 07 November 1967; 3 specimens (SALD 1875; 00°56'S / 43°41.5'W; 49 m) (MOUFPE 1179) 23 April 1968; 1 specimen (Fortaleza-CE; 03°43'S / 38°30'W; subtidal zone) (MOUFPE 1180) 04 July 1965; 1 specimen damaged (GM. 116; 02°57.5'N / 48°45'W; 81 m) (MOUFPE 1181) 13 September 1970; 2 specimens (SALD 2447; 02°24'N / 48°24'W; 85 m) (MOUFPE 1182); 1 specimen (SALD 1675A; 05°11'S / 35°09.7'W; 33 m) (MOUFPE 1183) 16 October 1967; 1 specimen (SALD 1817; 02°12.7'S / 42°25.5'W; 60 m) (MOUFPE 1184) 28 November 1967; 4 specimens (SALD 1718; 02°07'S / 40°36'W; 71 m) (MOUFPE 1185) 28 October 1967; 1 specimen (SALD 1739A; 02°14'S / 42°43'W; 35 m) (MOUFPE 1186) 31 October 1967; 1 specimen damaged (SALD 1749A; 00°03'N / 44°32.3'W; 63 m) (MOUFPE 1187) 06 November 1967; 1 specimen damaged (GM. II 186; 04°12.5'N / 50°12'W; 84 m) (MOUFPE 1188); 1 specimen damaged (GM. 183; 04°35'N / 50°35'W; 84 m) (MOUFPE 1190); 3 specimens (SALD 1813; 01°29'S / 43°19'W; 83 m) (MOUFPE 1191) 28 November 1967; 3 specimens (SALD 1750; 00°04'S / 44°33.5'W; 52 m) (MOUFPE 1192) 06 November 1967; 1 specimen (Suape-PE; 08°22'S / 34°57'W; subtidal zone) (MOUFPE 1193) 25 September 1965; 1 specimen (SALD PAVASAS 03-dredge; 02°46'S / 39°30'W; 25 m) (MOUFPE 9060) 19 July 1987; 1 specimen (REVIZEE-NE I 225; 06°21'47"S / 34°45'54"W; 57 m) (MOUFPE 12336) 14 October 1995; 1 specimen (REVIZEE-NE I 213; 4°39'43"S /



36°43'23"W; 52 m); 2 specimens (REVIZEE-NE III 180; 12°02'31"S / 37°14'24"W) (MOUFPE 12587) 19 July 1998; 1 specimen (BPot IV 03-dredge; 04°51.43'S / 36°12.36'W; 33.5 m) (MOUFPE 14073) 26 May 2004; 1 specimen (BPot IV 24-dredge; 04°41.09'S / 36°34.03'W; 72 m) (MOUFPE 14075) 24 May 2004; 1 specimen (BPot IV 42-dredge; 04°42'09S / 36°55.63'W; 23.5 m) (MOUFPE 14121) 29 May 2004; 1 specimen (BPot IV 34-dredge; 04°42.07'S / 36°44.88'W; 27.5 m) (MOUFPE 14122) 29 May 2004; 1 specimen (BPot IV 23-dredge; 04°47.42'S / 36°33.97'W; 21.8 m) (MOUFPE 14123) 27 May 2004; 1 specimen (BPot III 41-dredge; 04°36.64'S / 36°55.83'W; 24.5 m) (MOUFPE 14147) 24 November 2003; 1 specimen (BPot III 31 Van Veen A; 04°42.05'S / 36°39.43'W; 38.5 m) (MOUFPE 14148) 24 November 2003; 1 specimen (BPot III 30-dredge; 04°47.46'S / 36°39.38'W; 18 m) (MOUFPE 14149) 23 November 2003; 1 specimen (Bpot III 42-dredge; 04°42'09"S / 36°55.63'W; 20.2 m) (MOUFPE 14150) 24 November 2003; 9 specimens (Bpot III 03-dredge; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14151) 21 November 2003; 1 specimen (BPot III 28-dredge; 04°56.43'S / 36°41.35'W; 14.3 m) (MOUFPE 14152) 23 November 2003; 1 specimen (BPot III 31 Van Veen C; 04°42.05'S / 36°39.43'W; 38.5 m) (MOUFPE 14156) 24 November 2003; 4 specimens (BPot II 03-dredge; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14205) 22 May 2003; 1 specimen (BPot I 03A; 04°51.43'S / 36°12.36'W; 29.1 m) (MOUFPE 14278) August 2002; 1 specimen (BPot I 07B-dredge; 04°58.23'S / 36°17.73'W; 10.5 m) (MOUFPE 14279) August 2002; 1 specimen (BPot I 23A-dredge; 04°47.42'S / 36°33.97'W; 21.8 m) (MOUFPE 14280) August 2002; 1 specimen (Petrobrás PCR 1-1000M; 03°05'43.3"S / 38°46'57.5'W; 47 m) (MOUFPE 14865) December 2003; 1 specimen (BCAM OC 5B; 13°29'S / 38°49'W; 45 m) (MOUFPE 14867) 19 January 2008; 1 specimen (BCAM-40 OC 8 R3; 13°31'S / 38°49'W; 45 m) (MOUFPE 14919) May 2007; 1 specimen (OC 04 R2; 13°27'S / 38°49'W; 45 m) (MOUFPE 14920); 2 specimens

(Manati CO1 R4; 13°22'S / 38°55'W; 50 m) (MOUFPE 14921) 16 January 2009; 2 specimens (ES RRN 6 R2 (2-5); 20°26'S / 39°52'W; slope) (MOUFPE 14922) October 2010; 1 specimen (Petrobrás OC 10B; 13°29'S / 38°51'W; 40 m) (MOUFPE 14923) 20 January 2008; 1 specimen (Manati OC 4 R1; 13°27'S / 38°49'W; 45 m) (MOUFPE 14924) 16 February 2009; 3 specimens (Manati PMNT R1) (MOUFPE 14925) 15 February 2009; 1 specimen (Poço do Cravo CO 03 R3; 13°24'S / 38°42'W) (MOUFPE 14926) May 2009; 1 specimen (Manati PMNT R2) (MOUFPE 14927) 15 February 2009; 1 specimen (BPot-PAI 075 CES 34 Extra; 03°08'40"S / 38°51'55" W; 34.5 m) (MOUFPE 14928) 09 July 2009; 1 specimen (BPot-PAI 121 RNS 11 Extra; 04°46'57"S / 36°25'24" W; 45 m) (MOUFPE 14929) 13 July 2009; 1 specimen (BPot-PAI 075 CES 24 Extra; 03°08'39"S / 38°51'59" W; 34 m) (MOUFPE 14930) 08 July 2009; 3 specimens (BPot-PAI 121 RRN 4 Extra; 04°52'02"S / 35°57'36" W; 40 m) (MOUFPE 14931) 15 July 2009; 2 specimens (BPot-PAI 121 RRN 5 Extra; 04°51'45"S / 35°58'02" W; 41.6 m) (MOUFPE 14932) 15 July 2009; 1 specimen (BPot-PAI 081 CES 11 R3 (0-10); 03°00'22"S / 38°51'13" W; 56 m) (MOUFPE 14933) 07 July 2009; 1 specimen (BPot-PAI 121 RNS 44 R3; 04°46.8943'S / 36°25.6745'W; 42.5 m) (MOUFPE 14934) 14 July 2009; 1 specimen (BPot-PAI 081 CES 42-Extra; 03°00.1320'S / 38°51.0849'W; 59.7 m) (MOUFPE 14935) 07 July 2009; 2 specimens (Bpot-PAI 075 CES 21 Extra; 03°08'39"S / 38°52'03" W; 36 m) (MOUFPE 14936) 09 July 2009; 1 specimen (BPot-Regional MR 32 R1; 04°49'11"S / 36°25'32" W; 22 m) (MOUFPE 14967) 27 October 2009; 1 specimen (BPot-Regional MR 44 R3; 04°38'28"S / 36°45'37" W; 50 m) (MOUFPE 14968) 23 October 2009; 2 specimens (BPot-Regional MR 44 R1; 04°38'28"S / 36°45'37" W; 50 m ) (MOUFPE 14969) 23 October 2009; 2 specimens (BPot-Regional MR 41 CL R1; 04°49'40"S / 36°10'06" W; 59 m) (MOUFPE 14970) 2010; 1 specimen (Bpot-Regional MR 34 R1; 04°51'35"S / 36°39'18" W; 13 m)

(MOUFPE 14971) 22 May 2010; 1 specimen (BPot-Regional MR 42 R2; 04°45'54"S / 36°25'49"W; 51 m) (MOUFPE 14972) 25 October 2009; 1 specimen (BPot-Regional MR 32 R2 Extra; 04°49'11"S / 36°25'32"W; 19 m) (MOUFPE 14973) 27 October 2009; 1 specimen (BPot-Regional MR 33 R1; 04°48'58"S / 36°36'10"W; 24 m) (MOUFPE 14974) 22 May 2010.

*Distribution:* Western Atlantic – Florida, Gulf of Mexico, Bahamas, Colombia, Venezuela, Brazil (Abrolhos Archipelago and Amapá to Rio de Janeiro) (Gomes-Corrêa, 1998).

*Habitat:* In coral gravel, sandy and mud bottoms, the depth range is from shallow sublittoral to 100 m depth (Coelho and Koenig, 1972).

*Remarks:* The specimens agree well with diagnosis and description given by Manning (1969). Some dark spaced chromatophores were found on specimens, mainly on the telson.

*Meiosquilla tricarinata* (Holthuis, 1941)

*Squilla tricarinata* Holthuis, 1941: 32–35, fig. 1.

*Meiosquilla tricarinata* – Manning, 1969: 114, figs. 33c, 34; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 291; Bento and Melo, 2010: 150; Schram, 2010: 198.

*Material examined:* 1 specimen (REVIZEE-NE III 93; 3°45'04"S / 32°19'58"W; 70 m) (MOUFPE 12558) 02 June 1998; 1 specimen juvenile (BPot II 34 Van Veen A; 04°42.07'S / 36°44.88'W; 7.1 m) (MOUFPE 14206) 20 May 2003.

*Distribution:* Western Atlantic – Florida (off Jensen beach, Indian River region), Bahamas, Virgin Islands, Lesser Antilles, Colombia (Northeast of Santa Marta: Punta Aguja), Aruba, Brazil (Fernando de Noronha and Abrolhos Archipelagos and Pernambuco, Bahia and Espírito Santo) (Bento and Melo, 2010). Herein reported to Rio Grande do Norte State, extending its northern distribution in Brazil.

*Habitat:* In coral gravel, at depths from

subtidal to 48 m (Manning, 1969), extended herein to 70 m.

*Meiosquilla* spp.

*Material examined:* 1 specimen damaged (PMNT R1; absent data) (MOUFPE 14861); 1 specimen (BPot-Regional MR 41 CL R2; 04°49'40"S / 36°10'06"W; 58 m) (MOUFPE 14975); 27 October 2009.

*Remarks:* These specimens are juveniles or damaged and identification to species level is not possible.

Genus *Alima* Leach, 1817

*Alima hildebrandi* (Schmitt, 1940)

*Squilla hildebrandi* Schmitt, 1940: 152, fig. 6.

*Squilla empusa* Balss, 1916: 50 [part, non *Squilla empusa* Say, 1818].

*Squilla labadiensis* Ingle, 1960: 566, figs. 1–10.

*Alima hieroglyphica* – Manning, 1969: 135, fig. 40; 1977: 112, figs. 36, 51; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 291; Almeida *et al.* 2007a: 8.

*Squilla hieroglyphica* – Ortiz and Silva, 1992: 12.

*Alima hildebrandi* – Ahyong, 2001: 188; Almeida *et al.* 2008: 25; Schram, 2010: 205.

*Material examined:* Holotype (Fort Sherman, Canal Zone, Panama) (USNM 76068) 03 March 1937; 1 specimen (Santo Aleixo Island-PE-trawling; 08°36'35"S / 35°01'27"W; 1 m) (MOUFPE 13432) 04 November 2005.

*Distribution:* Western Atlantic – from Panama, Cuba, and Brazil (Ceará to Pernambuco, Bahia and São Paulo). Eastern Atlantic – from off West Africa: Senegal (Gorée), Ivory Coast, Ghana, Congo (Almeida *et al.*, 2007a, as *A. hieroglyphica*).

*Habitat:* On fine quartz muddy sand, at depths from the intertidal to 20 m (Manning, 1977).

*Remarks:* *Alima hildebrandi* was removed from the synonymy of *A. hieroglyphica sensu stricto* by Ahyong (2001) who considered both species as valid. *Alima hildebrandi* presents a telson with prelateral lobe and is restricted

to the Atlantic, while *A. hieroglyphica* has no prelateral lobe and is restricted to the Indo-West Pacific (for more details see Ahyong, 2001).

*Alima neptuni* (Linnaeus, 1768)

*Cancer neptuni* Linnaeus, 1768: 226. – Holthuis, 2000: 17.

*Alima hyalina* Leach, 1817: appendix 4.

*Alima angusta* Dana, 1852: 631.

*Squilla alba* Bigelow, 1894: 539, pl. 22 – Hendrickx and Salgado-Barragán, 2002: 395.

*Squilla hyalina* – Manning, 1967: 105.

*Alima hyalina* – Manning 1962: 496; Manning, 1969: 128, figs. 37–39; 1970: 1432, fig. 1; 1977: 115, figs. 37, 51; Coelho and Koenig, 1972: 250, tab.; Fausto Filho and Sampaio Neto, 1976: 66.

*Alima alba* – Schotte and Manning, 1993: 577.

*Alima neptuni* – Manning and Lewinsohn, 1986: 13; Ahyong, 2001: 188; 2002: 395; Schram, 2010: 206.

*Material examined*: Neotype (Bimini, Bahamas Islands) (USNM 18495); 1 specimen (REVIZEE-NE III 28; 07°27'11"S / 34°31'30"W; 43 m) (MOUFPE 12591) 10 May 1998; 1 specimen (BPot-PAI 075 CES 14 Extra; 03°08'38"S / 38°52'01"W; 34.7 m) (MOUFPE 14957) 08 July 2009; 1 specimen (BPot-PAI 075 CES 11 R2; 03°08'37"S / 38°52'02"W; 33.7 m) (MOUFPE 14958) 09 July 2009; 1 specimen (BPot-PAI 121 RNS 13 R2 (0-10); 04°47'00"S / 36°25'24"W; 42 m) (MOUFPE 14959) 14 July 2009; 1 specimen (BPot-PAI 144 RNS 44 Extra; 04°39'24"S / 36°53'04"W; 22 m) (MOUFPE 14960) 13 July 2009; 1 specimen (BPot-PAI 075 CES 13 R1 (0–10); 03°08'36"S / 38°52'02"W; 34 m) (MOUFPE 14961) 09 July 2009 (Fig. 2).

*Distribution*: Western Atlantic – Gulf of Mexico, Bahamas, Florida (Peanut Island in Lake Worth, Palm Beach County), Tobago (Buccoo Reef), Dominican Republic, Barbuda, Curaçao, Colombia (Manning, 1969). From Ceará to Paraíba State, extending its southern distribution in Atlantic (this study). Eastern – Cape Verde Islands. Central Atlantic – St.

Helena. Indo-Pacific – Red Sea, South Africa, Madagascar Great Reef, Tuléar, Indonesia (Kongsi Island), Marquesas, Hawaii (Waikiki Reef, Honolulu) (Manning, 1969).

*Habitat*: Back reef area on sandy patches and tidal flats exposed at low tide, from intertidal to 70 m (Schotte and Manning, 1993).

*Remarks*: *Alima neptuni* was described based on a larva of *A. hyalina* (Leach, 1817), which lead to a huge confusion when the adult forms were analysed (see Ahyong, 2001; Schotte and Manning, 1993). Manning (1962) studying larval development, synonymized *A. alba* with *A. hyalina* and Ahyong (2001) placed *A. hyalina* as junior synonym of *A. neptuni*, based on presence of two rounded lobes between terminal spines on uropodal protopod. Because the larval holotype of *A. neptuni* was lost and the description given by Linnaeus (1768) insufficient, Holthuis (2000) selected the lectotype of *Squilla alba* Bigelow, 1894 as the neotype of *A. neptuni*, making the two species objective synonyms, to fix the identity of the species. *Alima neptuni* is part of the genus group (with *A. pacifica* Ahyong, 2001) that share the following characters: six teeth on the dactylus of the raptorial claw, sharp telson denticles in adults and the uropodal protopod bears two lobes between the terminal spines (for more details, see Ahyong, 2001; 2012). The specimens examined herein agree well with description by Ahyong (2001).

Genus *Gibbesia* Manning and Heard, 1997

*Gibbesia neglecta* (Gibbes, 1850)

*Squilla neglecta* Gibbes, 1850: 200.

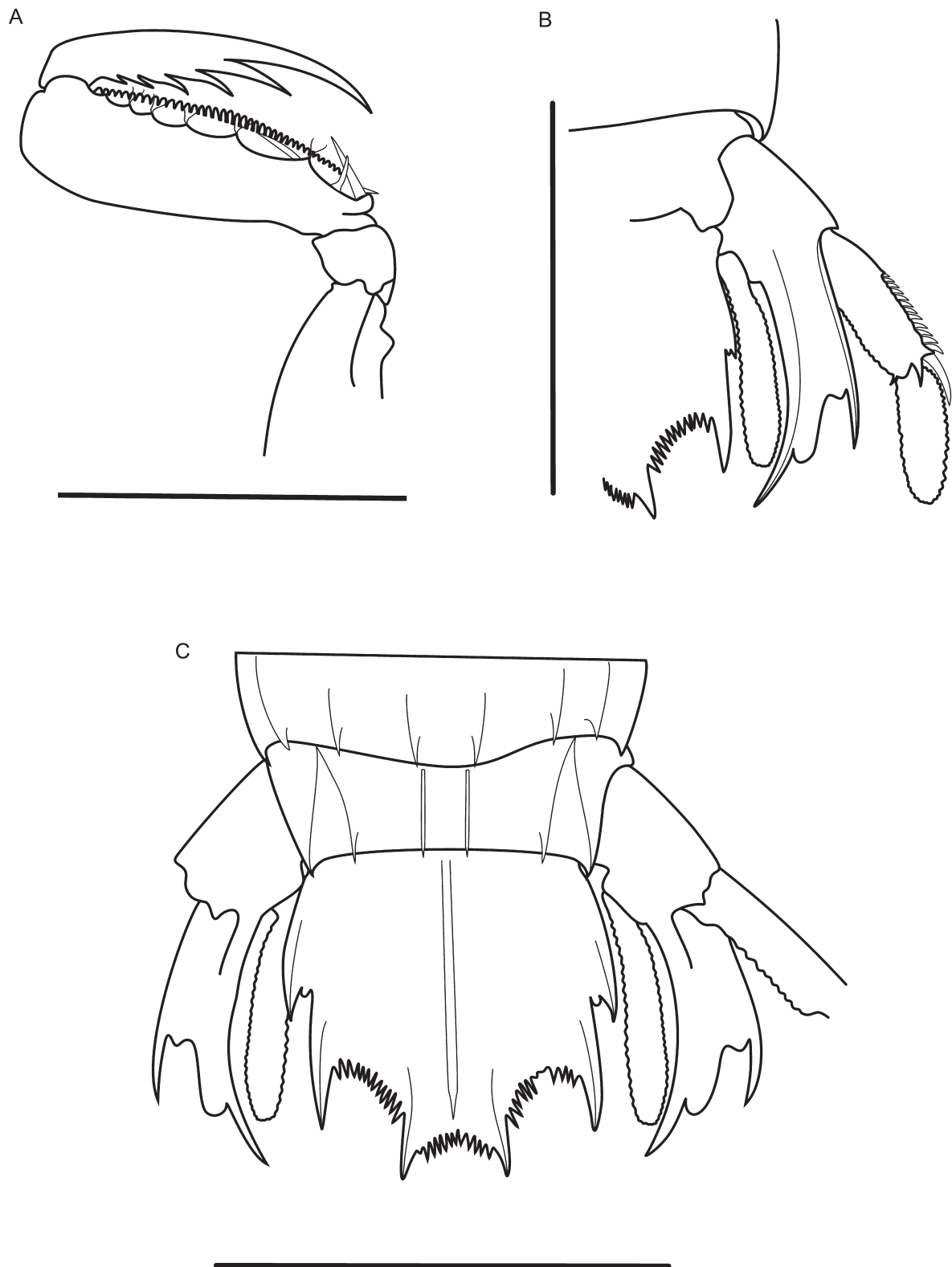
*Chloridella neglecta* – Lunz, 1937: 154, fig. 4.

*Squilla neglecta* – Lemos de Castro, 1955: 22, fig. 17, pl. 6–38, pl. 15–49; Manning, 1969: 181, figs. 50b, 51; Coelho and Koenig, 1972: 250, tab.; Camp, 1973: 37, fig. 13, tab. 9; Gomes-Corrêa, 1998: 290.

*Gibbesia neglecta* – Manning and Heard, 1997: 313, fig. 14; Almeida *et al.*, 2007a: 7; 2008b: 6; Bento *et al.*, 2008: 62, figs. 1a, b; Schram, 2010: 236.

*Material examined*: 1 specimen damaged





**Figure 2.** *Alima neptuni* (Linnaeus, 1768), female MOUFPE 14961; Bacia Potiguar-PAI 075 CES 13 R1 (0–10); 03°08'36"S 38°52'02"W). (A) Right raptorial claw, ventral view. (B) Left uropod, ventral view. (C) Telson, dorsal view. Scale bar = 0.5 cm.

(AKA mouth of São Francisco River; 10°44'S / 36°21'W) (MOUFPE 1165) 01 December 1965; 1 specimen (ITA 93; 07°35'S / 34°47'W; 9 m) (MOUFPE 1166); 1 specimen (SALD 1765A; 00°31'N / 47°49'W; 39 m) (MOUFPE 1167) 12 12 November 1967; 1 specimen (AKA-mouth of São Francisco River; 10°44'S / 36°21'W) (MOUFPE 1199) 01 December 1965; 1 specimen (BPot II MF 22; 5°02'00.3"S / 36°14'09.4"W; 8.4 m) (MOUFPE 14211) 29 May 2003.

*Distribution:* Western Atlantic – North Carolina to Jupiter Inlet, Florida, Gulf of Mexico from West Florida to Texas, Brazil (Ceará to Rio Grande do Sul) (Gomes-Corrêa, 1998).

*Habitat:* Muddy and sandy bottoms with detritus, from littoral to 540 m depth (Bento *et al.*, 2008).

*Gibbesia prasinolineata* (Dana, 1852)

*Squilla prasinolineata* Dana, 1852: 630 – Lemos de Castro, 1955: 15, figs. 12–15, pl. 3; 35, pl. 13–46; Manning, 1967: 105; 1969: 175, figs. 49, 50a; 1977: 292; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 250, tab; Hendrickx and Salgado-Barragán, 2002: 395.

*Gibbesia prasinolineata* – Ahyong, 2001: 184; Bento *et al.*, 2008: 63, fig. 1c, d; Schram, 2010: 236.

*Material examined:* 1 specimen (Tutóia-MA; 02°46'S 42°16'W; subtidal zone) (MOUFPE 1168) 23 May 1978; 1 specimen damaged (Barra de Almofala-CE; 02°50'S 40°08'W; subtidal zone) (MOUFPE 1214) 27 January 1967.

*Distribution:* Western Atlantic – Florida, Mexico, Cuba, Jamaica, Virgin Islands (St. Thomas), Brazil (Pará to Santa Catarina) (Gomes-Corrêa, 1998).

*Habitat:* On muddy bottoms from shallow water to 75 m depth (Bento *et al.*, 2008).

Genus *Squilla* Fabricius, 1787

*Squilla brasiliensis* Calman, 1917

*Squilla brasiliensis* Calman, 1917: 139, figs.

1–3 – Lemos de Castro, 1955: 18–22, fig. 16A, pl. 4, fig. 30, pl. 5, fig. 37, pl. 14, figs. 47–48; Manning, 1969: 215, figs. 57b, 60, 61a–b; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 289; Schram, 2010: 240.

*Material examined:* 1 specimen (SALD 2235A; 32°11'S / 50°57.5'W; 64 m) (MOUFPE 1157) 27 October 1969; 1 specimen (SUL II 11; 23°44'S / 42°51'W; 184 m) (MOUFPE 1158) 27 March 1972; 1 specimen (SALD 2259 - Uruguay; 34°32.5'S / 53°04'W; 60 m) (MOUFPE 1159) 09 November 1969.

*Distribution:* Western Atlantic – Brazil (Rio de Janeiro to Rio Grande do Sul) and Uruguay (many records in Manning, 1969: 215–216).

*Habitat:* At depths from 10 to 295 m (Gomes-Corrêa, 1998).

*Squilla empusa* Say, 1818

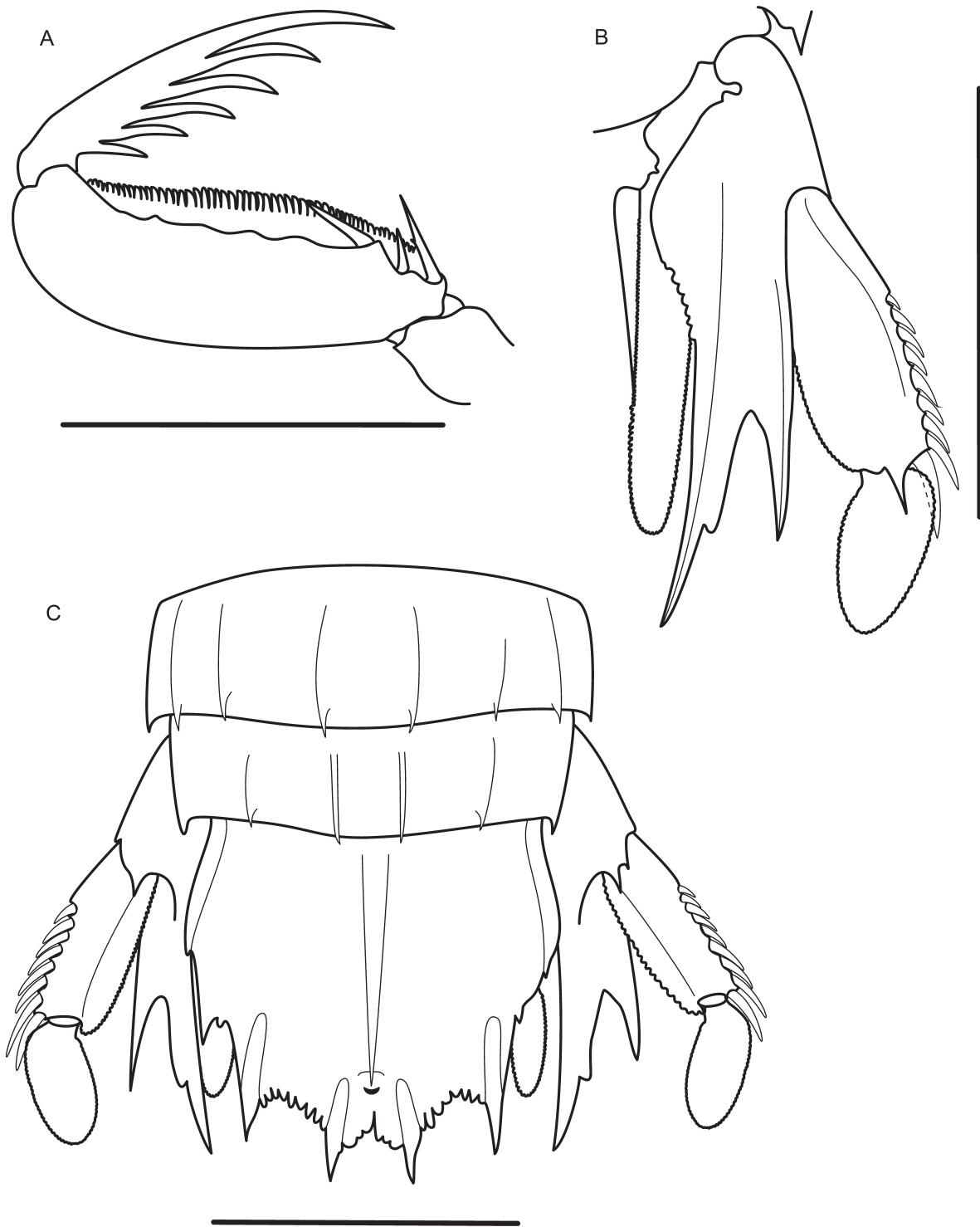
(Fig. 3)

*Squilla empusa* Say, 1818: 250 – Lunz, 1937: 8; Manning, 1961: 20, pl. 4, figs. 4–5; 1969: 201, figs. 57a, 58–59; 1970: 257; Coelho and Koenig, 1972: 250, tab.; Camp, 1973: 39, fig. 14, tab. 10; Hernández Aguilera and Hermoso Salazar, 1988: 2, fig. 1, tab. 1; Viana *et al.*, 1998: 100; Hendrickx and Salgado-Barragán, 2002: 395; Bento and Melo, 2010: 150; Schram, 2010: 243.

*Chloridella empusa* – Fowler, 1912: 303; Rathbun, 1935: 119.

*Material examined:* 1 specimen damaged (SALD 1891; 01°33'N / 48°28'W; 24 m) (MOUFPE 6793) 01 May 1968 (Fig. 3).

*Distribution:* Western Atlantic – State of Maine (USA), Bermuda, Massachusetts, Rhode Island, Connecticut, New York, Long Island Sound, New Jersey, Delaware, Maryland, Chesapeake Bay, Virginia, North and South Carolina, Georgia, Florida, Gulf of Mexico, Alabama, Mississippi, Mexico (Campeche Bay), Nicaragua, Cuba, Jamaica, Trinidad, Colombia (Gulf of Urabá), Venezuela, Suriname (off mouths of rivers), French Guiana, numerous records in Manning (1969: 202–209), Brazil (Pará) (Viana *et al.*, 1998).



**Figure 3.** *Squilla empusa* Say, 1818, female MOUFPE 6793 (Almirante Saldanha 1891; 01°33'N 48°28'W; 24 m) 01 May 1968. (A) aptorial claw, ventral view. (B) Left uropod, ventral view. (C) Telson, dorsal view. Scale bar = 0.5 cm.



*Habitat*: On silty-clay bottoms; in waters of low salinity. Depth range, 0–154 m (generally <40 m) (Manning, 1969).

*Squilla grenadensis* Manning, 1969

*Squilla grenadensis* Manning, 1969: 152, fig. 42 – Camp, 1973: 26, fig. 9, tab. 6; Fausto Filho, 1975: 133, fig. 1; Gomes-Corrêa, 1998: 290; Rodrigues and Young, 2005: 239, fig. 4; Bento and Melo, 2010: 150, fig. 3; Schram, 2010: 244.

*Material examined*: 1 specimen (SALD 2168; 23°05.7'S / 40°55.5'W; 103 m) (MOUFPE 1213) 19 September 1969; 1 specimen (GM III 15; 00°29.5'S / 43°55'W; 110 m) (MOUFPE 1298); 1 specimen (BPot-PAI 121 RRN 3 Extra; 04°51'38"S / 35°57'15"W) (MOUFPE 14868); 1 specimen (BPot-Regional MR 42 R2; 04°45'54"S / 36°25'49"W) (MOUFPE 14966).

*Distribution*: Western Atlantic – Grenada, Gulf of Mexico, Brazil (Maranhão, Bahia and Santa Catarina) (Gomes-Corrêa, 1998; Bento and Melo, 2010). Herein reported to Rio Grande do Norte and Rio de Janeiro States.

*Habitat*: It is found on sandy and gravel bottoms on depth range between 54.9–311 m (Rodrigues and Young, 2005).

*Squilla lijdingi* Holthuis, 1959

*Squilla lijdingi* Holthuis, 1959: 181, fig. 76b–d, pl. 9, figs. 1–2 – Manning, 1961: 26, pl. 6, figs. 1–3; 1969: 192, figs. 53b, 55; Fausto Filho, 1966: 139, fig. 1; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 290; Schram, 2010: 245.

*Material examined*: 1 specimen (SALD 1793B; 04°13.5'N / 50°26'W; 75 m) (MOUFPE 1215) 18 November 1967; 2 specimens (GM. 179; 04°32'N / 51°07'W; 63 m) (MOUFPE 1216) 1971; 1 specimen (SALD 1892 II; 01°45'N / 48°18'W; 56 m) (MOUFPE 1218) 01 May 1968.

*Distribution*: Western Atlantic – Colombia (Dept. Guajira), Venezuela, Trinidad, Tobago, Guyanas, off Surinam (6°24.5'N 55°03'W), Brazil (mouth of

Amazon River, Amapá to Pará) (Gomês-Corrêa, 1998).

*Habitat*: On sandy, muddy and shell bottoms; often in mouths of rivers, in a depth range of 9–182 m (most often <100 m) (Manning, 1969).

*Squilla obtusa* Holthuis, 1959

*Squilla obtusa* Holthuis, 1959: 186, fig. 76 h–j, pl. 9, figs. 3–4 – Manning, 1961: 28, pl. 7, figs. 1–3.; 1969: 187, figs. 53a, 54; Coelho and Koenig, 1972: 250, tab.; Gomes-Corrêa, 1998: 290; Rodrigues and Young, 2005: 238, fig. 3; Almeida *et al.* 2007a: 8; 2007b: 6; Schram, 2010: 247.

*Squilla intermedia* - Bigelow, 1901: 159 [not *S. intermedia* Bigelow, 1893].

*Material examined*: 1 specimen (AKA 179; 10°35'42"S / 36°15'10"W; 64 m) (MOUFPE 1194) 04 December 1965; 1 specimen damaged (SALD 1787A; 03°31.5'N / 50°11'W; 75 m) (MOUFPE 1195) 17 November 1967; 2 specimens (AKA Mouth of São Francisco River; 10°44'S / 36°21'W; subtidal zone) (MOUFPE 1196); 1 specimen (Cachoeira River-BA; 14°49'S / 39°02'W; estuary zone) (MOUFPE 5385) 29 July 1999.

*Distribution*: Western Atlantic – Colombia, Venezuela, Curaçao, Puerto Rico, Trinidad, Surinam, Brazil (Piauí to Espírito Santo) (Rodrigues and Young, 2005).

*Habitat*: On muddy and shell bottoms, in a depth range of 13–182 m (Manning, 1969).

*Remarks*: The specimens agree well with the diagnostic characters recognized by Manning (1969) and Gomes-Corrêa (1986). Some color features are given by Rodrigues and Young (2005).

*Squilla surinamica* Holthuis, 1959

*Squilla surinamica* Holthuis, 1959: 184, figs. 76e–g, pl. 8, fig. 5, pl. 9, fig. 5 – Manning, 1969: 185, figs. 48b, 52; Coelho and Koenig, 1972: 250, tab.; Fausto Filho and Sampaio Neto, 1976: 65; Gomes-Corrêa, 1998: 290; Schram, 2010: 249.

*Material examined:* 2 specimens (GM. 159; 00°39.5'N / 47°13'W; 43 m) (MOUFPE 1222) September 1970; 1 specimen (SALD 2002 II; 03°20'N / 50°11'W; 28 m) (MOUFPE 1223) 25 November 1968; 1 specimen (SALD 1785 II; 03°02'N / 49°27'30"W; 45 m) (MOUFPE 1224) 16 November 1968; 1 specimen damaged (SALD 2454; 03°47'N / 50°44'W) (MOUFPE 1225); 2 specimens (SALD 2010; 03°41'N / 50°31'W; 30 m) (MOUFPE 1226) 27 November 1968; 1 specimen (GM. 177; 04°11'30"N / 50°40'W; 32 m) (MOUFPE 1227) June 1971; 2 specimens damaged (GM. 161; 01°43'N / 48°10'30"W; 47 m) (MOUFPE 1228); 2 specimens (SALD 1992A II; 01°21'N / 48°32'30"W; 19 m) (MOUFPE 1231) 23 November 1968; 3 specimens (GM. III 157; 01°46'N / 47°14'W; 77 m) (MOUFPE 10205) September 1970.

*Distribution:* Western Atlantic – French Guiana, Surinam, Venezuela, Brazil (Amapá, Pará and Pernambuco) (Gomes-Corrêa, 1998).

*Habitat:* On muddy bottoms, often in mouths of rivers (Manning, 1969), in a depth range of 15–77 m.

### Superfamily Eurysquilloidea Ahyong and Harling, 2000

#### Family Eurysquillidae Manning, 1977

Genus *Eurysquilla* Manning, 1963

*Eurysquilla plumata* (Bigelow, 1901)

*Lysiosquilla plumata* Bigelow, 1901: 156, figs. 6–9.

*Pseudosquilla plumata* – Manning, 1959: 18 [list]; 1961: 3.

*Eurysquilla plumata* – Manning, 1966: 378, fig. 8c–e; 1969: 251, fig. 70; Camp, 1971: 125; Coelho and Koenig, 1972: 251, tab.; Camp, 1973: 44, fig. 16, tab. 12; Gomes-Corrêa, 1998: 294; Schram, 2010: 151.

*Material examined:* Holotype (Mayaguez Harbor, Puerto Rico) (USNM 64823); 2 specimens (REVIZEE-NE III 184; 12°56.95'S / 38°13.59'W) (MOUFPE 12891) 20 July 1998; 1 specimen (PE 07 R3; 08°40'S /

34°53'W; 35 m) (MOUFPE 14899).

*Distribution:* Western Atlantic – Gulf of Mexico, Florida (Indian River Region: off Sebastian Inlet, Florida Keys, Puerto Rico, Colombia (Bahía de Santa Marta), Brazil (Abrolhos Island and Bahia) (Gomes-Corrêa, 1998). From now registered to Pernambuco State, extending its northern distribution in Brazil (this study).

*Habitat:* It is found on sandy bottoms, between 10 and 60 m depth.

*Eurysquilla petronioi* Lucatelli, Ahyong, Bezerra and Santos, 2012

*Eurysquilla petronioi* Lucatelli, Ahyong, Bezerra and Santos, 2012: 1, fig. 1.

*Material examined:* Holotype (Barbados, Caribbean Sea, Station NR1-3; 13°00'N / 59°30'W; 91.5 – 366 m) (USNM 111111) 1960; 1 Paratype (Rio Grande do Norte, Brazil; BPot II No. 33, dredge; 04°36.64'S / 36°44.89'W; 368 m) (MOUFPE 14201) 20 May 2003.

*Distribution:* Presently known only from Barbados and Rio Grande do Norte, Brazil (Lucatelli *et al.*, 2012).

*Habitat:* It is found on sandy muddy substrate, between 91.5 and 368 m depth (Lucatelli *et al.*, 2012).

### Conclusions

This paper records new distribution ranges for nine species. *Squilla grenadensis* was registered further north than the previously known occurrence in Rio Grande do Norte. The southernmost distribution limit was also increased for *Neogonodactylus moraisi* (to Rio Grande do Norte), *Nannosquilla dacostai* (to Rio Grande do Norte and Pernambuco). In other cases, the distribution gaps were filled to the north: *Alachosquilla floridensis* (to Rio Grande do Norte and Pernambuco), *Bigelowina biminiensis* (to Rio Grande do Norte), *Eurysquilla plumata* (to Pernambuco), and *Meiosquilla tricarinata* (to Rio Grande do

Norte). *Alima neptuni* (Rio Grande do Norte and Paraíba) was recorded for the first time from Brazilian waters.

Furthermore, the collection contains some rare species, such as *Nannosquilla dacostai* Manning, 1970, *Neogonodactylus moraisi* (Fausto Filho and Lemos de Castro, 1973) and *Neogonodactylus minutus* (Manning, 1969), which are endemic to Brazilian coast. Accordingly, there are now 42 species recorded for Brazil of which 33 are deposited in the MOUFPE collection. New records and new species should be found as additional samplings are made unraveling the biodiversity of these important but cryptic benthic animals.

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