

Short Communication

**New record of *Aphrogenia alba* Kinberg, 1856 from Brazilian waters:
a rare Aphroditidae species**

Nykon Craveiro¹, Flavio de Almeida Alves-Júnior¹ & José Souto Rosa-Filho¹

¹Laboratório de Bentos, Universidade Federal de Pernambuco (UFPE), Recife-PE, Brasil
Corresponding author: Nykon Craveiro (nykoncraveiro@gmail.com)

ABSTRACT. This paper reports the occurrence of *Aphrogenia alba* in Potiguar Basin, northeastern Brazil. The specimen was sampled at a depth of 180 m off the Rio Grande do Norte coast in the muddy bottom. This new record extends, after 37 years, the known geographic distribution of the species in the Brazilian coast, which had previously been recorded between Rio de Janeiro (Cabo de São Tomé and Ilha Grande) and Rio Grande do Sul.

Keywords: Aphroditids; Polychaeta; intertidal species; new record; northeastern Brazil

The Aphroditidae Malmgren, 1867 comprises nine genera widely distributed in the Indian, Pacific and Atlantic oceans (Fauvel, 1932; Hutchings & McRae, 1993; León-González *et al.*, 2009), with most individuals inhabiting mud or gravel substrate of intertidal zones, continental slope and deep waters (Hutchings & McRae, 1993; Rouse & Pleijel, 2001). Aphroditids are carnivorous opportunistic predators, specialized in slow or sessile preys (Fauchald & Jumars, 1979), feeding on a wide variety of prey, like other annelids, small crustaceans, mollusks and diatoms (Pettibone, 1953).

The genus *Aphrogenia* Kinberg, 1856 is composed of four species: *Aphrogenia alba* Kinberg, 1856 (type species), *Aphrogenia margaritacea* Augener, 1913, *Aphrogenia nigropunctata* Horst, 1916 and *Aphrogenia villosa* Horst, 1916. Up to date, only one *A. alba* is recorded in Brazilian waters, occurring between the states of Rio de Janeiro and Rio Grande do Sul (Amaral *et al.*, 2013). The reports of the species in Brazil are based on observations made until 1982 by Amaral & Nonato (1982). Thus, in this paper we report the first record of *A. alba* in northeastern Brazil, extending after 37 years, the known geographic distribution of the species in the Brazilian coast.

The material was collected as part of the monitoring program "Avaliação da Biota Bentônica e Planctônica

da Bacia Potiguar e Ceará (Bpot)", developed by the Brazilian Oil Company Petróleo Brasileiro S/A (Petrobras), aboard of R/V Seward Johnson in May 2011, off the coast of the states of Ceará (CE) and Rio Grande do Norte (RN) (Potiguar Basin). Samples were taken by box core (50×50 cm) from depths of 150-2,068 m.

After the campaign, the specimens were sorted, preserved in formalin 4% and after that identified to species level according to Amaral & Nonato (1982) and León-González *et al.* (2009). The specimen was measured with a digital caliper (0.01 mm) at total length (TL). All the material was deposited in the Museu de Oceanografia Prof. Petrônio Alves Coelho (MOUFPE) at Federal University of Pernambuco, Recife, Brazil.

Systematic

Order Phyllodoceida Dales, 1962

Suborder Aphroditiformia Levinsen, 1883

Family Aphroditidae Malmgren, 1967

Genus *Aphrogenia* Kinberg, 1856

Aphrogenia alba Kinberg, 1856

Examined material

One specimen of *Aphrogenia alba* (Fig. 1) with 1.8 cm total length was collected on 23 May 2011 at station

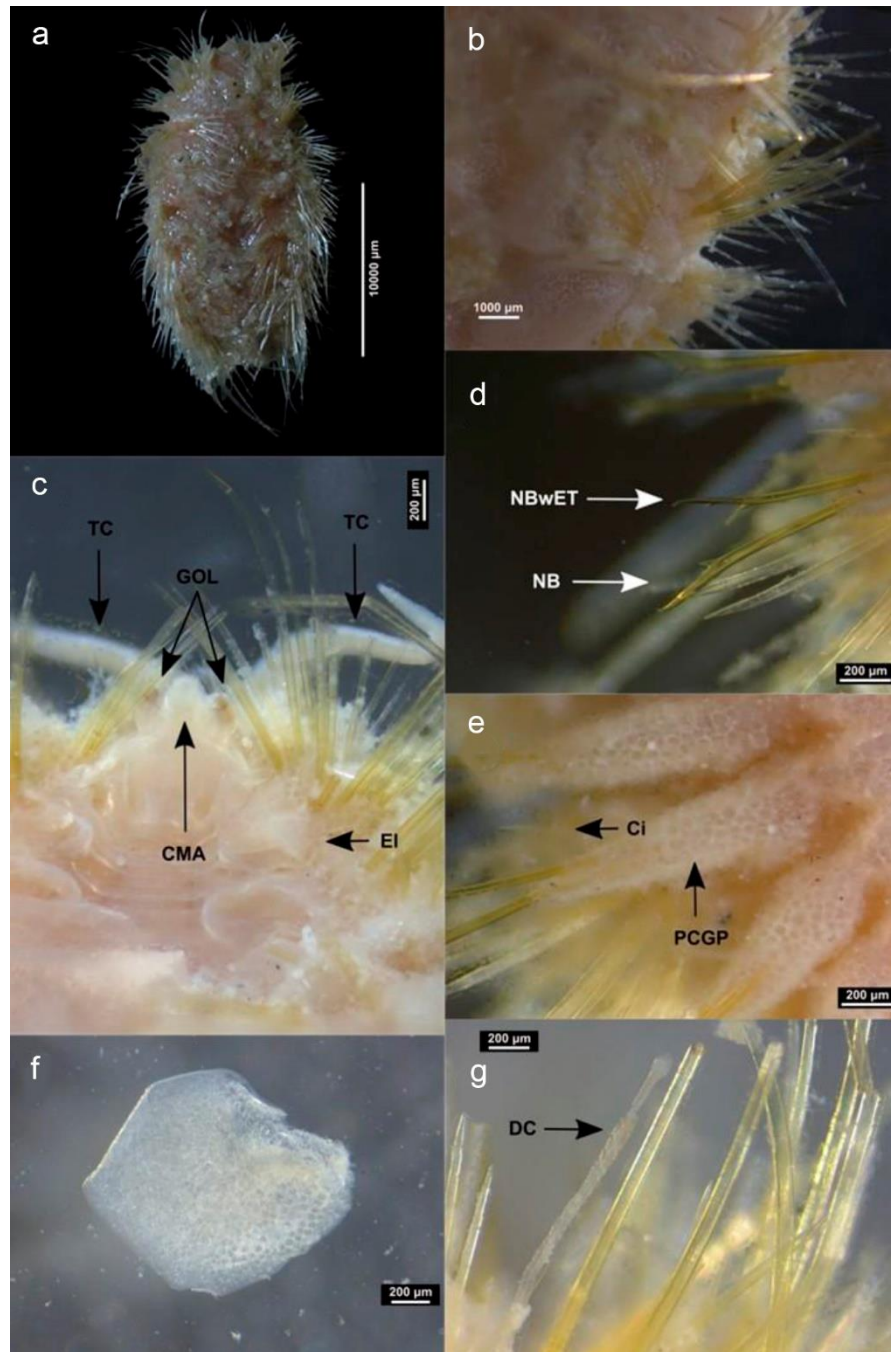


Figure 1. *Aphrogenia alba* Kinberg, 1856, Potiguar Basin MT#52. a) Dorsal view, b) detail of dorsal view, c) dorsal view of prostomium and first four segments, GOL: globular ocular lobes, CMA: ceratophore of the median antenna, EL: elytophores, d) neuropodium of segment 5, NB: neurosetae bidentate, NBwET: neurosetae bidentate with one extra tooth, e) parapodium from segment 5, PCGP: parapodium covered with globular papillae, CI: ventral cirrus, f) elytrum from segment 2, g) dorsal cirrus from segment 3. MOUFPE: 001, collected in Potiguar Basin, northeastern Brazil.

MT# 52 (4°44'S, 36°25'W) at a depth of 180 m, temperature 28.8°C, salinity 36.6, in the muddy bottom (voucher number MOUFPE: 001).

Diagnose

Oval-shaped body, about 30 setiger; elytra 15 pairs, with scattered papillae; prostomium with globular ocular lobes; facial tubercle present; long median ante-

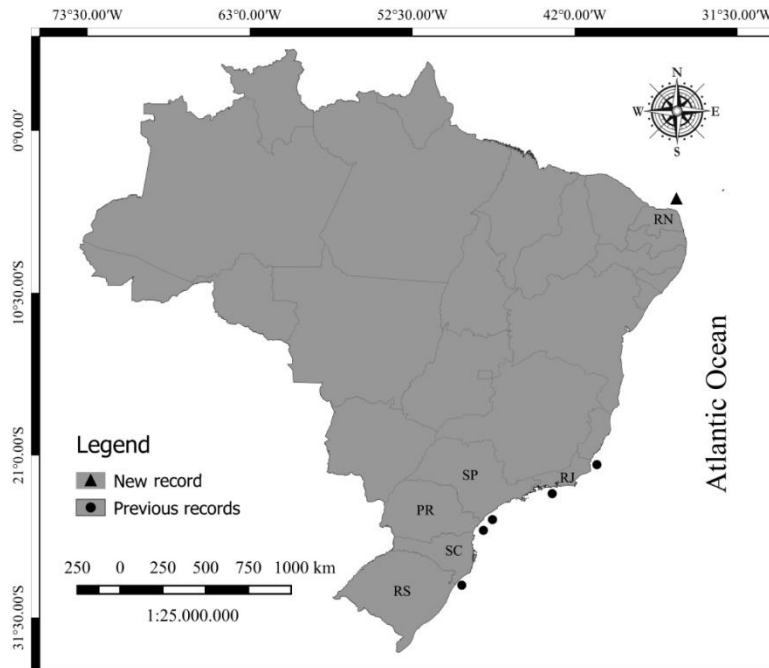


Figure 2. Geographic distribution of *Aphrogenia alba* Kinberg, 1856 in the Brazilian coast. RN: Rio Grande do Norte (new record), RJ: Rio de Janeiro, SP: São Paulo, PR: Paraná, SC: Santa Catarina, RS: Rio Grande do Sul.

na with ceratophore; long palps with small scattered papillae; tentacular cirrus long and thin; dorsum without or with very few felted notosetae, elytra visible; harpoon-shaped notosetae absent; notosetae long, notosetae all smooth, of two kinds: stout, smooth sabre-like, long, curved over dorsum and fine capillary setae; neurosetae of anterior few segments with extra teeth, some bipinnate; ventral surface and parapodia covered with globular papillae (Amaral & Nonato, 1982).

Description

Body oval, 1.8 cm total length. 26 segments. Dorsum with 13 pairs of elytra with scattered papillae (Fig. 1f), without dorsal felt covering elytra (Figs. 1a-b). Prostomium rounded with two globular ocular lobes (Fig. 1c). Median antenna (missed) inserted in ceratophore, with scattered papillae (Fig. 1c), tentacular cirrus long, reaching the 5th segment (Fig. 1c). Parapodia covered with globular papillae (Fig. 1e). Dorsal cirrus of segment three very long (Fig. 1g). Notopodia with sabre-like notosetae (Fig. 1b). Neuropodia with neuroseta bidentate and bidentate with one extra tooth (Fig. 1d). Segment 3 with bipinnate and serrated capillary neurosetae. Ventral surface with globular papillae.

Distribution

A. alba was described by Kinberg (1856), based on only one specimen obtained in Saint Thomas (Caribbean

Sea), however, the species was recorded in the ocean Atlantic, Pacific and Indian, with records from: Egypt, Mediterranean Sea (Suez Canal), Arabian Sea, Malay Archipelago, Ceylon, Andamans, Caribbean Sea, West Indies and Saint Thomas, Colombia and Brazil, from depths of 0-180 m in soft bottom (Kinberg, 1856; Fauvel, 1932; Hartman, 1939; Amaral & Nonato, 1982; Hutchings & McRae, 1993; Dueñas, 1999; León-González *et al.*, 2009). In Brazil the species was recorded in Rio Grande do Norte (present study), Rio de Janeiro (Cabo de São Tomé and Ilha Grande), São Paulo, Santa Catarina and Rio Grande do Sul (Fig. 2), at depths ranging from 0 and 180 m (Nonato, 1981; Amaral & Nonato, 1982; Amaral *et al.*, 2013).

Remarks

The observed specimen agrees with the original description by Kinberg (1856) and figures and additional description provided by Nonato (1981). The closest species of *A. alba* is *Aphrogenia villosa* Horst, 1916; however, the principal difference is the presence of sabre-like notosetae with ridges/teeth, present only in *A. villosa* and the presence of neuroseta bidentate without an extra tooth. *A. alba* may have a wider distribution along the Brazilian coast than the previous record, but due to the low sampling efforts in the Brazilian continental slope areas, this species is still poorly known. So, this observation in northeastern Brazil expands the Atlantic distribution of the rare *A.*

alba after 37 years of the last record of the species in Brazilian waters.

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