

NEW RECORDS OF TRICHOBRANCHIDAE (ANNELIDA: POLYCHAETA) FROM VENEZUELA

Oscar Díaz Díaz* and Ildefonso Liñero Arana

Instituto Oceanográfico de Venezuela, Universidad de Oriente.
Cerro Colorado, Edif. Inst. Oceanogr. Venezuela, Piso 2, Labs. 208-210.
Telf. 0293-4302129/4302239. E-mail: ecobentos12@hotmail.com,
linero@hotmail.com

Abstract. Forty-four specimens belonging to Trichobranchidae were collected in different substrata from the northeastern coast of Venezuela. Samplings were made in six localities at depths of 0,5-2,0m, employing a corer, with a 14,8cm diameter, to collect the samples on a muddy-sandy floor (Turpialito) with *Thalassia testudinum* fields on bed bottoms (Toporo, Ensenada de Reyes, Varadero), and squares on rocky substrata floors (Punta Colorada, Cubagua Island and Guacarapo). *Trichobranchus glacialis* and *Terebellides carmenensis* were identified; both of which are new records for Venezuelan waters.

Key words: Trichobranchidae, *Terebellides carmenensis*, *Trichobranchus glacialis*, Polychaeta.

NUEVOS REGISTROS DE TRICHOBRANCHIDAE (ANNELIDA: POLYCHAETA) PARA VENEZUELA

Resumen. Cuarenta y cuatro especímenes pertenecientes a la familia Trichobranchidae (Annelida: Polychaeta) se colectaron en diferentes tipos de substratos en la costa nororiental de Venezuela. Los muestreos se realizaron en seis localidades a profundidades comprendidas

*Autor para la correspondencia

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entre 0,5 y 2,0 m, empleándose un nucleador de 14,8 cm de diámetro para la colecta en fondos fango-arenosos (Turpialito) y con praderas de *Thalassia testudinum* (Toporo, Ensenada de Reyes y Varadero); y cuadratas para el substrato rocoso (Punta Colorada, Isla Cubagua y Guacarapo). Se identificaron dos especies *Trichobranchus glacialis* y *Terebellides carmenensis*, ambas constituyen nuevos registros para Venezuela.

Palabras clave: Trichobranchidae, *Terebellides carmenensis*, *Trichobranchus glacialis*, Polychaeta.

INTRODUCTION

Members of Trichobranchidae family are related closely to Terebellidae (Kritzler 1984). Their body is separated in two regions; anterior one with biramous parapodia and posterior one with only neuropodia (Day 1967). Seven genera and near 30 species has been identified (Fauchald 1977, Williams 1984). Between these, *Terebellides* and *Trichobranchus* genera are most know members of this family. *Terebellides stroemi* Sars was considered during a time a classic example of a cosmopolitan species and has been recorded in all seas of the world, in a great variety of depths and in all substrata (Williams 1984). However, it was difficult to conceive that this species could develop mechanisms adaptative that allowed to occupy so great habitats variety. Williams (1984) and Solis-Weiss *et al.* (1991) carried out studies in which they analyzed specimens identified as *T. stroemi* employing morphologic characteristics not used previously, and they were able to separate several new species. Williams (1984) concluded that *T. stroemi* is not a cosmopolitan species and that its distribution is restricted to North Atlantic. *Trichobranchus glacialis* has been recorded from Gulf of Mexico and it has been the only specie of the genus described for Great Caribbean. This paper, a study of taxocene of Trichobranchidae polychaetes from northeastern coast of Venezuela, is a contribution for the knowledge of the biodiversity, mainly, polychaete-fauna.

MATERIALS AND METHODS

This study was carried out in six localities, in shallow bottoms, of the northeastern coast of Venezuela (Fig. 1). The specimens from Ensenada de Reyes, Varadero and Toporo (Bahía de Mochima), were collected in seagrass beds of *Thalassia testudinum*, and from Turpialito, in mud-sandy bottom, using, for both species, a PVC corer of 14,8cm of diameter; each core was sieved in sieve of 1mm

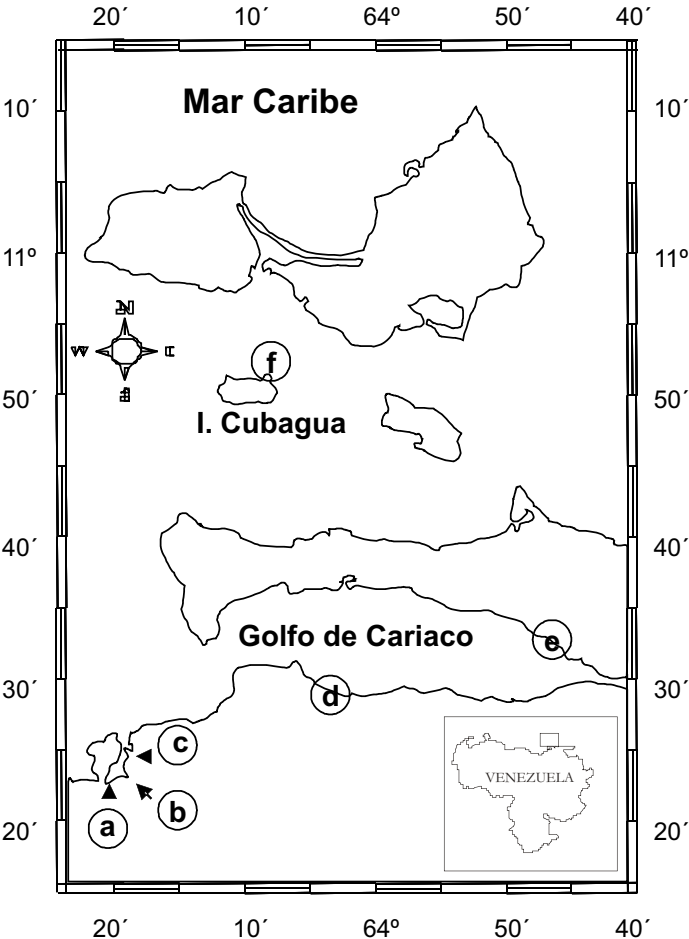


FIGURE 1. Study area: a) Ensenada de Reyes; b) Varadero; c) Toporo; d) Turpialito; e) Guacarapo and f) Punta Colorada.

open mesh. The specimens from Guacarapo were collected on artificial substrate, following Díaz and Liñero-Arana (2000) methodology, and those from Punta Colorada (Isla Cubagua) on rocky substrata, using square of 0,25m². The specimens were preserved in 8% formaldehyde solution in seawater, carried to laboratory and separated in families. After 48 hours were washed in fresh water and fixed in alcohol 70% (ethanol). For identifications and descriptions, works of Day (1967), Williams (1984), Kritzler (1984), Solis Weiss *et al.* (1991) was employed. Drawing was made with lucid camera adapted to microscope stereoscopic.

RESULTS

Fourty-four specimens belonging to the family Trichobranchidae were collected. Two species were identified, *Trichobranchus glacialis* (one specimen) and *Terebellides carmenensis* (43 specimens) both species are new records for Venezuela.

Genus *Trichobranchus* Malmgren, 1866.

Species type: *Trichobranchus glacialis* Malmgren, 1866

Diagnosis: Large tentacular lobe with numerous grooved tentacles arising from the dorsal surface. A pair of lateral lobes on first segment. Two or three pairs filamentous gills on segments 2-4. Notosetae capillaries starting from the sixth segment and neurosetae on setiger I, thoracic long acicular hooks with toothed crests and abdominal avicular uncini.

Trichobranchus glacialis Malmgren, 1866.

(Figure 2a-d)

Trichobranchus glacialis: Fauvel 1927, Day 1967, Hartmann-Schröder 1971, Kritzler 1984, Holthe 1986, Hernández-Alcántara and Solis-Weiss 1993.

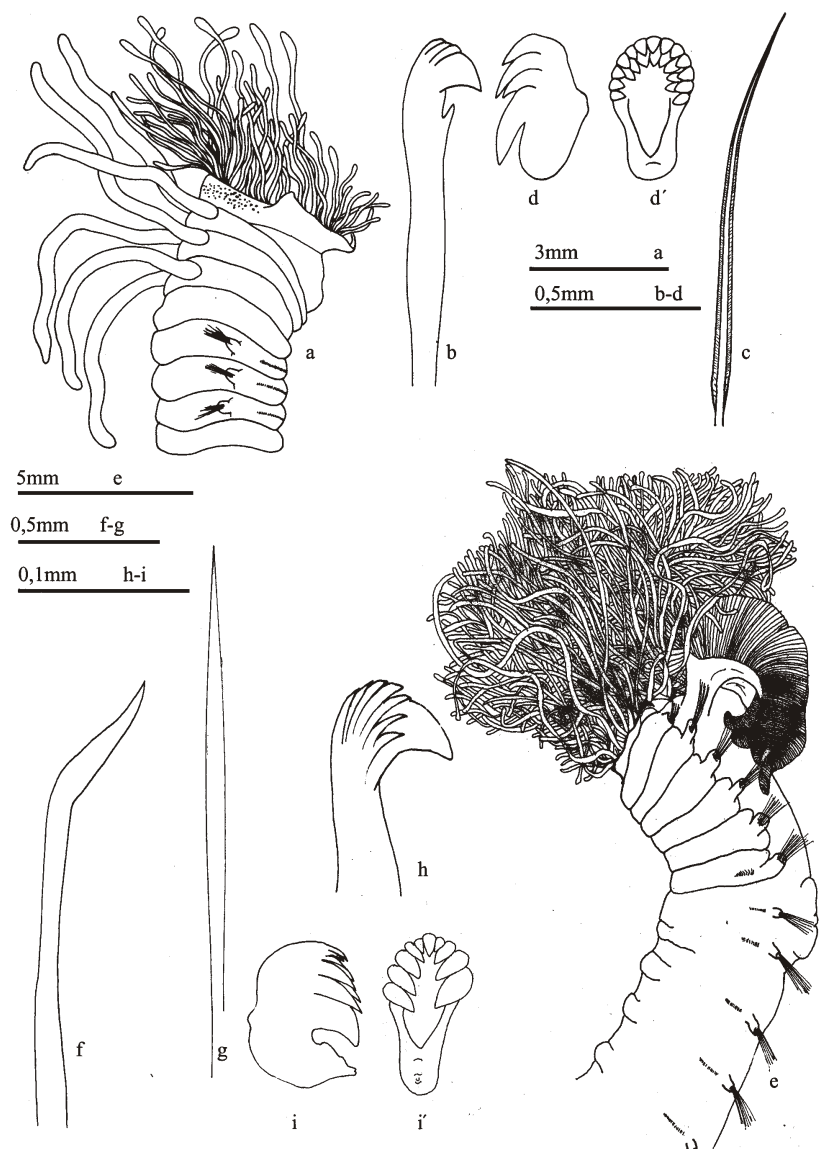


FIGURE 2. a-d) *Trichobranthus glacialis*: a) Anterior region, in lateral view, b) notosetae, c) thoracic uncini, d) abdominal uncini, in lateral view, d') same, in frontal view; e-i) *Terebellides carmenensis*: e) Anterior region, in lateral view, f) notosetae, g) neuropodial retractile hook, h) thoracic uncini, i) abdominal uncini, in lateral view, i') same, in frontal view.

Description: Specimen incomplete, length 25mm, width 4mm. Tentacular lobe large with frilly margin and numerous tentacles arising from its outer surface. Prostomium with ocular spots and fused to the buccal segment, which bears a pair of horizontal lateral lobe and a ventral keel. Three pairs of filamentous gills on segments 2-4 (Fig. 2a). Fifteen thoracic setigers, long-shafted neurosetae starting from segment 6. Notoetae (Fig. 2b) with very narrow wings. Thoracic neurosetae (Fig. 2c) with about 12 denticles above the rostrum. Abdominal avicular uncini (Fig. 2d-d') with three to four denticles above the main fang, in lateral view, and one to three arcs of denticles in frontal view, with formula MF: ca10: 0-20.

Material examined: 1 specimen (LBEPTr-0001/1, Punta Colorada, Cubagua, Venezuela, 25/V/01).

Distribution: Cosmopolitan (Kritzler 1984, Hernández-Alcántara and Solis-Weiss 1993).

Genus: *Terebellides* Sars, 1835.

Species type: *Terebellides stroemi* Sars, 1835.

Diagnosis: Cephalic region with numerous non retractile tentacular filaments. Thorax with 17 or 18 segments; abdomen with numerous segments. Branchiae constituted by four lobes laminated with a common base. Thoracic setae of two types; abdominal region with avicular uncini.

***Terebellides carmenensis* Solis-Weiss et al. (1991).**

(Figures 2e-i)

Terebellides cf. *klemani*: Hernández Alcántara 1985

Terebellides carmenensis: Solis-Weiss et al. 1991.

Material examined: Four specimens (LBEPTr-0002/4, Toporo-Bahía de Mochima, 27-II-02,); One specimen (LBEPTr-0003/1, Mangle Quemao -Bahía de Mochima, 28-III-02,); two specimens (LBEPTr-0004/2, Toporo- Bahía de Mochima,

28-III-02), 19 specimen (LEBPTr-0005/19, Toporo- Bahía de Mochima, 26-IV-02); one specimens (LEBPTr-0006/1, Toporo- Bahía de Mochima, 29-V-02); one specimen (LEBPTr-0007/1, Varadero- Bahía de Mochima, 29-V-02); six specimens (LEBPTr-0008/6, Toporo- Bahía de Mochima, 28-VI-02); two specimens (LEBPTr-0009/2, Varadero- Bahía de Mochima, 28-VI-02); three specimens (LEBPTr-0010/3, Toporo- Bahía de Mochima, 25-VII-02); two specimens (LEBPTr-00011/2, Toporo- Bahía de Mochima, 27-VIII-02); one specimen (LEBPTr-00012/1, Guacrapo, 22-V-1999); one specimen (LEBPTr-00013/1, Turpialito, 18-V-1995).

Description: Body with 39 mm length and 6 mm of width. A great transverse hump at level of the seventh setiger (Fig. 2e), branchial lobes fused in almost their length, the inferior as wide as the superiors, a previous projection confers to the branchiae an appearance pentalobulated. Thorax with 18 setigers. Setigers 1 and 2 in dorsal position and lateral lappets more developed than in the other setigers. First notopodia with smaller setae and in smaller number than in the remaining ones. Thin bilimbate setae (Fig. 2f). Seven neuropodial retractile hooks (Fig. 2g) beginning from the sixth setiger. Thoracic uncini (fig. 2h) with a main tooth, two secondary and tiny denticles in distal end. Numerous multidenticulated abdominal uncini (Fig. 2i).

Distribution: Gulf of Mexico and Venezuela.

DISCUSSION

T. carmenensis was recorded, for the first time, in the Lagoon of Terminos, Mexico in shallow waters, associated to red mangrove (*Rhizophora mangle*) in mud-sandy sediments (Solis-Weiss *et al.* 1991); etymologically obey to the area in which it was collected, Southeast of Isla del Carmen, Mexico. Our specimens were collected associated to *Thalassia testudinum* in muddy sediment; this constitutes the first record for the South Caribbean and Venezuela. *T. carmenensis* differs from *T. angicomus*, species recorded

for Brazil, in the position of the prominent dorsal humps, in the toracic setigers number and the great number of abdominal uncini present in each segments (Solis-Weiss *et al.* 1991).

On the other hand, *T. glacialis* has been recorded in a great variety of substrate (mud, sand, and muddy-sand substrates, between stones, coral-rocks, shells and stick to algae). Pigidium was not observed, but Fauvel (1927) point out anus terminal with edge smooth. The unique specie, of this genus, in Great Caribbean, was reported for Kritzler (1984) in Gulf of Mexico; this is a new record for Venezuela.

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