

Short Communication

**First record of *Eutonina scintillans* Bigelow, 1909
(Hydrozoa: Leptomedusae: Eirenidae)
in temperate waters of the southwestern Atlantic Ocean**

Carolina Rodríguez¹, Gabriel Genzano¹ & Hermes Mianzán²

¹Departamento de Ciencias Marinas, Facultad de Ciencias Exactas y Naturales
Universidad Nacional de Mar del Plata, Funes 3250, (7600) Mar del Plata, Argentina
Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina

²Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP)
PO Box 175, (7600) Mar del Plata, Argentina
Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina

ABSTRACT. We herein report the Leptomedusae *Eutonina scintillans* (Bigelow, 1909) for the Buenos Aires coast (38°S) as a consequence of a research project dealing with hydromedusae distributions in the southwestern Atlantic Ocean (34°-55°S). This is the first record of this species, which was previously known for tropical waters (Brazil, 16°S), in the temperate waters of the South American Atlantic Ocean. Possible reasons for its appearance so far south are discussed.

Key words: *Eutonina scintillans*, Leptomedusae, first record, temperate waters, southwestern Atlantic Ocean.

**Primer registro de *Eutonina scintillans* Bigelow, 1909
(Hydrozoa: Leptomedusae: Eirenidae)
en aguas templadas del océano Atlántico sudoccidental**

RESUMEN. Como consecuencia de un proyecto de investigación sobre la distribución de hidromedusas en el océano Atlántico sudoccidental (34°-55°S), se registra la Leptomedusae *Eutonina scintillans* (Bigelow, 1909) para la costa de Buenos Aires (38°S). La especie era previamente conocida para aguas tropicales (Brasil, 16°S) y este es el primer registro en aguas templadas del océano Atlántico sudamericano. Se discuten posibles vías para la aparición de ésta especie tan al sur.

Palabras clave: *Eutonina scintillans*, Leptomedusae, primer registro, aguas templadas, océano Atlántico sudoccidental.

Corresponding autor: Carolina Rodríguez (csrodrig@mdp.edu.ar)

Hydromedusae constitute one of richest groups in terms of biodiversity in the South Atlantic, accounting for 197 of the recorded species (Bouillon, 1999). Nowadays, the group is growing due to taxonomic works on the cnidarians in the southwestern Atlantic (Genzano *et al.*, 2006; Stampar *et al.*, 2006; Stampar & Kodja, 2007). The first studies on hydromedusae in this area were based on samples collected during several Antarctic expeditions performed at the end of the 19th century and beginning of the 20th century that occasionally collected specimens from Tierra del Fuego and the Malvinas Islands (Kramp, 1959 and

information therein). During the 1980s, after a period without studies, hydromedusae from the north Argentinean continental shelf, particularly from the Buenos Aires coast (35-40°S), were described (Ramirez & Zamponi, 1980, 1981; Zamponi, 1983). Bouillon (1999) updated the species list, although based on scant information in the literature. Therefore, finding new records for this region is to be expected.

We studied over 2,300 samples taken from 1983 to 2006, including areas not explored previously. During this survey, two specimens of the Leptomedusae *Eutonina scintillans* (Bigelow, 1909) were

found for the first time in the temperate waters of this area.

The specimens analyzed were male, with a 5-mm-wide umbrellar diameter, a short peduncle, a mouth with crenulated lips, gonads along the distal parts of the radial canal, an umbrellar margin with 16 marginal tentacles, eight closed estatocysts, no cirri and marginal warts. These characteristics agree with previous descriptions of *E. scintillans* (Kramp, 1959, 1961, 1968; Goy, 1979; Bouillon, 1999; Bouillon *et al.*, 2004), except for the number of tentacles, which seem to be related to the umbrellar diameter since Goy (1979) found specimens of 2-4 mm with 12 tentacles and Kramp (1959, 1961, 1968) and Bouillon *et al.* (2004) found specimens of 10 mm with about 30 tentacles. Anyhow, Goy (1979) listed three constant characteristics present in all descriptions, namely the type of statocysts, a short gastric peduncle, and the position of the gonads; all these were observed in the present specimens (Fig. 1). The polyp stage is still unknown, although other species of the same genus have a meroplanktonic life cycle with small campanulinid-type hydroids (Wrobel & Mills, 1998; Bouillon *et al.*, 2004).

All the previous records of *E. scintillans* were

characterized by the collection of only a few specimens (usually less than 10) (Goy, 1979). This species has a very scattered distribution; it was reported for the Mediterranean, Adriatic, and Red Seas; the east coast of Africa; and the Pacific coast of Mexico (Kramp, 1968; Fernández Álamo, 2000; Segura-Puertas *et al.*, 2003; Bouillon *et al.*, 2004). It is found mostly in tropical waters, reaching temperate waters only at the end of summer (Goy, 1979). In the southwestern Atlantic Ocean, the only record of this species corresponds to nine specimens found in tropical waters from northeastern Brazil (16°29'S-39°01'W) (Goy, 1979). The analyzed specimens were collected along the Buenos Aires coast (38°54'S, 60°42'W and 38°59'S, 60°26'W) in October of 2006 (Austral Spring) at 16-18 m deep, with a plankton net (Pairovet; 200 μ m). The surface temperature was 15.2°C and salinity 33.2 (Fig. 2).

Some hydromedusae found recently in the southwestern Atlantic were considered to be a cryptogenic species (Nogueira Jr. & De Oliveira, 2006). However, we analyzed around 1500 samples from the Buenos Aires coast from the last 25 years and the species *E. scintillans* was only found recently, supporting the idea of a new appearance.

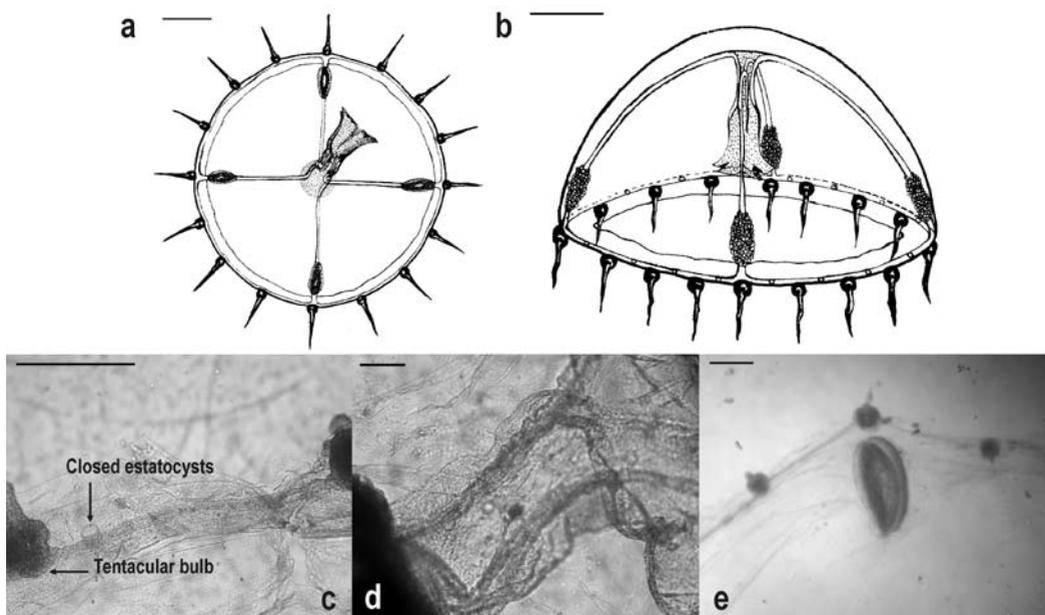


Figure 1. a,b) Oral and lateral view of *Eutonina scintillans* from Buenos Aires coast. Scale represent 1 mm. c) Detail of umbrellar margin with closed statocysts, d) detail of gastric peduncle, e) position of gonads. Scale for c, d, e represent 250 μ m.

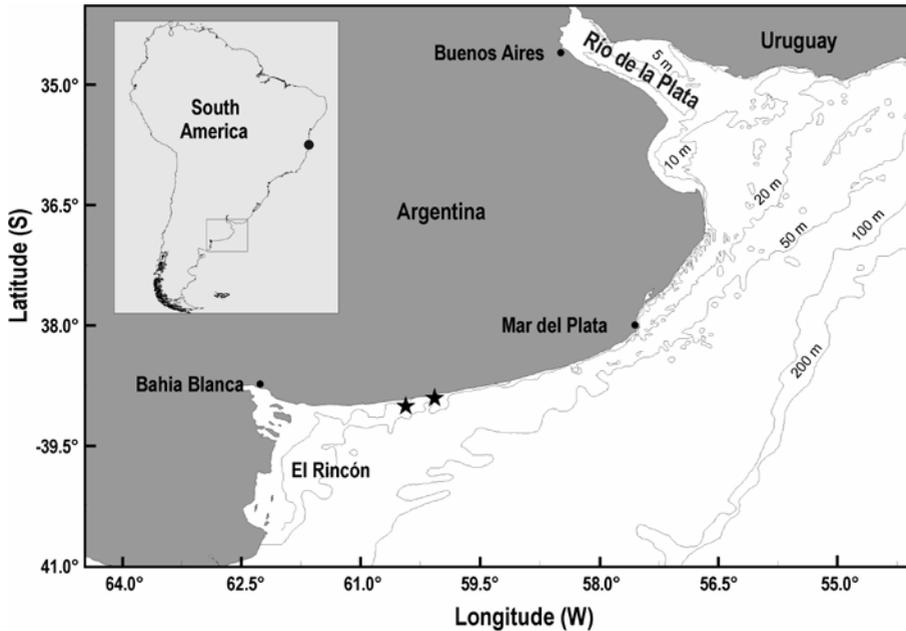


Figure 2. Sampling stations in coastal waters of Buenos Aires Province where the specimens of *Eutonina scintillans* were found. Full circle in the South America map indicates the previous record of Goy (1979).

In recent years, organisms known for southern Brazil such as the cubomedusa *Tamoya haplonema* (Muller, 1859) (Pastorino, 2001) and the cephalopod *Argonauta nodosa* (Solander, 1786) (Pastorino & Tamini, 2002) have been reported for the Buenos Aires coast. Mianzán *et al.* (2001) suggest that the Río de la Plata can act as an intermittent geographical barrier; the appearance of subtropical fauna south of this seems to be a joint consequence of the decreasing freshwater runoff and wind action. However, the scattered distribution of *E. scintillans*, the few specimens found in all the previous records, and its very short planktonic life (from a few hours to one month) (Bouillon *et al.*, 2004) could indicate other possible means of arrival for this species at these southern latitudes, rather than dispersal by currents. Furthermore, the area where we collected the specimens is characterized by four distinct oceanographic regimes based on salinity distributions. One of them, corresponding to a relative minimum in salinity coming from the south (30.0–33.3), is related to El Rincón estuarine system (Lucas *et al.*, 2005). The salinity values of our record indicate that our samples were collected in waters from such a regime. Consequently, it is very difficult to accept that any specimens of this species were advected from the north. On the other hand, several medusa species can be invasive, such

as *Blackfordia virginica* (Mayer, 1910), a species from the Black Sea recently found in Río de la Plata estuary, Argentina (Genzano *et al.*, 2006). In this case, *E. scintillans* might also have the ability to be introduced into new areas through nautical activities (rafting, ballast water, etc.), either in the medusa or polyp stage, or both.

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