



### A new species of *Polyzoa* (Ascidiacea: Styelidae) from the Atlantic coast of N America, U.S.A.

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A new species of colonial Styelid ascidian of the genus *Polyzoa* was found attached to the test of solitary ascidians collected by divers off the coast of Georgia, U.S.A. The colony of this new species, consisting of small sandy zooids, is cryptic and difficult to detect. The species is characterized by three longitudinal branchial vessels on each side of the body and is the second species of the genus reported for the Atlantic.

#### *Polyzoa atlantica* n.sp.

(Figures 1–3)

**Material examined:** Holotype: collected in 2004, at 31°36.056' N, 80°47.431' W, specimen #190, deposited in Kamchatka Branch of the Pacific Institute of Geography (KBPIG 1/1384).

The colony consists of several ovoid or globular zooids 3–4 mm in diameter that are attached to the test of the solitary ascidians *Molgula occidentalis* Traustedt, 1882 and *Styela canopus* Savigny, 1816. The spacing between zooids is variable, zooids are never coalescent, and are attached by a small narrow surface on their posterior side (Figure 1 A, B). Zooids are connected only by inconspicuous thin sheet or stolons that are spread over the substrate. Each zooid has its own test covered completely with firmly attached sand grains (Figure 1 C). The zooids do not possess hair-like outgrowths. The siphons are not discernible on the preserved material and, as a whole, this sandy colony is very inconspicuous and difficult to detect.

The body wall is thin, firm, and translucent. Body musculature consists of a rather irregular mesh of spaced longitudinal and circular fibers that are long and fine, but rather resistant. The branchial siphon opens approximately on the top of the zooid and the atrial siphon is displaced slightly downward along the dorsal side. Simple oral tentacles are rather long and robust; in two zooids about 10 larger tentacles were observed alternating with an equal number of smaller ones. The prepharyngeal band runs as a circular line without dorsal indentation around minute dorsal tubercle. The dorsal lamina is high and has a smooth margin. A flat branchial sac has only three internal longitudinal vessels on each side. Stigmata are in 12 transverse rows with 30–35 stigmata per row. Most stigmata are crossed by a rather thick parastigmatic vessel. As is common in many species of ascidians, the space between the endostyle and the most ventral longitudinal vessel is about two times wider than the space between adjacent longitudinal vessels. All stigmata are longitudinal (transverse protostigmata are not present).

The gonads are firmly attached to the body wall but not embedded into it. They are arranged in a single series along each side of the ventral mid-line. Gonads on the right side are more numerous, up to eight, and are more or less equally spaced along the whole length of the endostyle. Those on the left side are not as numerous, four to six, and are positioned along the endostyle above the pole of the gut loop. Most gonads on each side of the body are hermaphrodite, consisting of a single large non-lobed testis and one or two ova of different sizes on its mesial surface. Sometimes the ovary is not developed and the gonad consists of only one male follicle. Sperm ducts are short, not attached to the body wall, and directed dorsally. The short oviducts are not always visible, but when observed have large openings and are directed dorsally.

In less contracted zooids the gut forms a slightly curved loop across the posterior end of the body and the rectum extends forward to the atrial aperture (Figure 3B). The stomach is rather short and expanded distally. It has 10 wide,