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A new Octacnemidae (Ascidiacea) from the Mid-Atlantic Ridge

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A new deep sea Octacnemidae (Ascidiacea, Phlebobranchia) was collected by IFREMER during the Hydrosnake cruise on the N.O. Nadir in July 1988 with the submersible Nautile. The site is located on the Mid-Atlantic ridge, in the Kane fracture zone at 2100m depth. The substratum consists of masses of fallen basalt blocks lying on black pebbles. A single specimen was attached to an easily breakable black stone with manganese particles. This ascidian represents the second specimen of the genus *Myopegma* Monniot & Monniot, 2003 previously known from the Pacific Ocean off New Calédonia.

Description

***Myopegma midatlantica* n. sp.**
Figures 1–3

Material: Mid-Atlantic ridge, Kane Fracture zone , 23°27' N–45°03'W, 2087m, 07/07/1988, dive 18. (MNHN P6 MYO 2: tunic and P6–46: slide)

The single specimen, flat, 5mm in maximum length, was attached to the substratum by its whole ventral side (Fig. 1).The tunic has a paper-like consistency and is thin and transparent, with tiny concentric superficial ridges. Both siphons open at the upper surface of the body. The oral siphon is sessile in a slit. The atrial siphon opens in a round hole in the middle of the body length. The tunic spreads out on the substrate around the body wall. Extracted from the tunic, the body appears in two parts enclosed in a very thin transparent body wall (Fig.2). The thoracic part comprises a large pharyngeal cavity lined by a thin membrane with no trace of branchial sac (Fig. 3A) The abdomen, below the thorax, contains the gut loop and the gonad Fig. 3A). The neural ganglion is round (Figs 2,3A) close to the atrial aperture; no neural gland has been detected. The oral aperture has 6 round membranous introverted lobes and between the lobes arise 6 simple tentacles (Fig. 3B); a ring of circular muscles forms a strong sphincter crossed by a few weak short radiating fibres. The cloacal aperture has a smaller sphincter (Fig.3A). The dorsal side of the body wall over the pharyngeal cavity is the only part containing muscles (Figs 2,3A). The musculature is made of flat ribbons delimiting a square mesh. Two ribbons of long fibres, one on each side, are parallel to the dorsal line. They are crossed perpendicularly by 2 transverse ribbons, one anterior to the oral aperture and the other close to the atrial aperture. The latter ribbon gives off a few fibres starting from its middle part and directed anteriorly in 2 arcs converging on the dorsal line behind the oral siphon. In addition and deeper, a transverse band of long parallel fibres crosses the body width. Some other short transverse fibres are limited to the lateral margins of the body wall (Fig.3A). There are no muscles on the ventral side of the thorax and none above the gut loop.

The abdominal part of the body is filled with the digestive tract (Figs 2,3A). A long oesophagus originates from the middle of the posterior part of the pharynx. The large spherical stomach has a thin smooth wall. The first segment of the intestine is tubular, applied against the pharynx. It gives into an enlarged section (post-stomach), followed by a narrow tube. After a constriction another short segment opens into a large straight rectum (Fig.3A). The anus has a smooth edge. The last intestinal compartment before the rectum wears a large drop-like ampulla (Fig.3A) with a narrow duct (pyloric?) that unites the post-stomach to the intestine (Fig.3A). The whole digestive tract forms a closed loop in which lies the gonad composed of a single testis lobe and a small ovary at its side (Fig. 3A). The sperm duct is long and parallel to the rectum .

The new species likely belongs to the genus *Myopegma* Monniot & Monniot, 2003 collected off New Calédonia at 450m depth, and never subsequently recollected later. *M. midatlantica* **n. sp.** from the mid-Atlantic station is deeper than

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