Spawning of the giant barrel sponge *Xestospongia muta* in Belize

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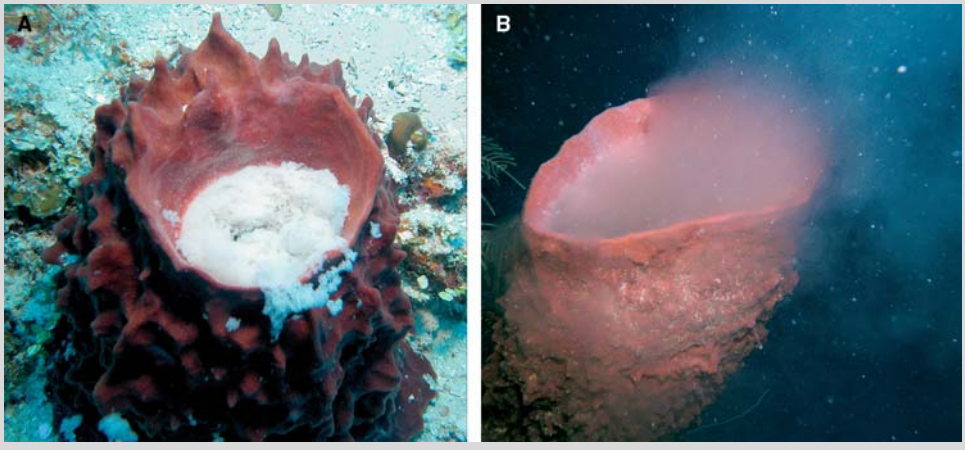

Fig. 1 *Xestospongia muta* spawning on the Belize outer reef. **A** Female, **B** Male

On March 30, 2004 we observed the giant barrel sponge *Xestospongia muta* broadcast spawning at the barrier reef, south of Carrie Bow Cay, Belize. *X. muta* was observed on the inner reef slope (10–20 m depth) and on the fore reef slope (15 to >60 m), but only individuals on the fore reef slope below 20 m were observed spawning. Spawning of *X. muta* was synchronous, involving numerous male and female specimens of various sizes. Spawning had already started at 8:00 a.m. and continued until at least 9:00 a.m. Eggs were negatively buoyant being accumulated in the sponge atrium and scattered on the benthos around the sponge (Fig. 1a). Sperm was positively buoyant and left a "cloud" in the water column (Fig. 1b). We dove further south along the reef on March 28 and 31, 2004 and did not observe *X. muta* spawning.

Even though sponges are a major component of Caribbean coral reefs, little is known about the timing of their spawning (Fell 1993). In Curaçao the sponge *Neofibularia nolitangere* is known to synchronously spawn in the afternoon of October and November 3 days after the full moon (Hoppe and Reichert 1987). Further studies are necessary to determine what factors trigger/control spawning in *X. muta*.

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