Surface brooding in the Caribbean gorgonian *Pterogorgia anceps*

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Fig. 1 Developing embryos (pink spheres, inset) that are adhered to the surface of a branch of *Pterogorgia anceps*

For many Caribbean gorgonian species, the timing and mode of reproduction remain unknown, making research on their fertilization, larval and recruitment ecology impossible. Some Caribbean gorgonians are synchronous spawners (Lasker et al. 1996) while some species are surface brooders, such as *Pseudopterogorgia elisabethae* and *Briareum asbestinum*. These species brood their embryos on the colony surface instead of internally (Brazeau and Lasker 1990; Gutierrez-Rodriguez and Lasker 2004). Some Indo-Pacific and Red Sea soft corals are also surface brooders including *Parerythropodium fulvum fulvum* and *Capnella gaboensis* (Benayahu and Loya 1983; Farrant 1986).

On October 22, 2009 at 9 a.m., while diving at a depth of 10 m on the fore reef of Carrie Bow Cay in Belize, I observed the gorgonian *Pterogorgia anceps* with developing embryos on its surface (Fig. 1). Of the six colonies found within a six meter radius, only two had embryos on their surface. A few embryos were collected and brought to the laboratory where they were confirmed to be fertilized but not completely developed. By 11 am on October 23, the embryos in the laboratory had completed their development and had elongated into swimming planulae. Why some gorgonians brood their larvae on their surface is unknown, but surface brooding may be an adaptation to increase fertilization success for these sessile benthic organisms (Lasker 2006).

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