**Physical Characteristics of the 198 Reefs**

**Title:** Long Term Reef Physical Characteristics

**Overview:** Shapes and sizes of structures can affect the settlement and dynamics of organisms associated with reefs. For example, larger reefs are expected to have higher abundances of organisms based on species/area relationships.

**General Procedure:** Data were collected in 2003,2007 for reefs 1-192, and in 2009 and 2012 for all 198 reefs that are monitored. In 2004, letter-marked reefs were monitored. A diver swims up to one of the reefs. If the reef has two distinct sections they are labeled A and B randomly. Using a transect tape, the diver determines the maximum length and perpendicular width. Three height measurements are taken: From the base of the reef the diver measures the typical height of the reef and the maximum height (from the highest point). From the highest point, the diver measures the distance to the top of the water column. In 2003, the percent cover and direction of the nearest neighbor reefs were also measured.

**Materials:**

Transect tape

**Solutions/Reagents** (if applicable): NA

**Procedure:** See above.

**Calculations**

**Author:** List the original author, as well as names of any one who updated or changed the protocol, listing the name and date. For example:

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