

BENTHIC IMAGING OF CORAL REEFS IN OPTICALLY-DEEP WATERS

Roy Armstrong

Departamento de Ciencias Marinas, UPRM

roy.armstrong@upr.edu

Optical imaging of coral reefs and other benthic communities present below one attenuation depth, the limit of effective airborne and satellite remote sensing, requires the use of in situ platforms such as autonomous underwater vehicles (AUVs). The Seabed AUV, which was designed for high-resolution underwater optical and acoustic imaging, has provided unprecedented information on the distribution, community structure, and status of mesophotic (30-100+ m depth) reefs throughout the U.S. Caribbean. The digital photo transects obtained by the Seabed AUV provides quantitative data on living coral, sponge, gorgonian, and macroalgal cover as well as coral species richness and diversity.