

South Florida/Caribbean Network

National Park Service
Inventory and Monitoring Division



Standard Operating Procedure SL01

Sample Frame and Habitat Classification—Version 1.1

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Purpose

This standard operating procedure (SOP) describes the background and development of the sample frame and habitat classification scheme used for sample allocation within this protocol and how the habitat maps will be updated in the future. The sample design for the spiny lobster monitoring protocol uses the sample frame and habitat classification in the previously published reef fish monitoring protocols for Florida and the U.S. Virgin Islands (Brandt et al. 2009; Bryan et al. 2013).

Revision Log

Revision Date	Author	Changes Made	Reason for Change	New Version #
6/30/2020	W. Wright	Changed name	SOPs split during operational review	1.1

Source Protocol

This SOP is derived from SOP A in the Florida reef fish monitoring protocol and SOP 1 in the Virgin Islands reef fish monitoring protocol:

- Brandt, M. E., N. Zurcher, A. Acosta, J.S. Ault, J. A. Bohnsack, M. W. Feeley, D. E. Harper, J. H. Hunt, T. Kellison, D. B. McClellan, M. E. Patterson, and S. G. Smith. 2009. A cooperative multi-agency reef fish monitoring protocol for the Florida Keys coral reef ecosystem. Natural Resource Report NPS/SFCN/NRR—2009/150. National Park Service, Fort Collins, Colorado.
- Bryan, D. R., A. J. Atkinson, J. S. Ault, M. E. Brandt, J. A. Bohnsack, M. W. Feeley, M. E. Patterson, B. I. Ruttenberg, S. G. Smith, and B. D. Witcher. 2013. A cooperative multiagency reef fish monitoring protocol for the U.S. Virgin Islands coral reef ecosystem. Natural Resource Report NPS/SFCN/NRR—2013/672. National Park Service, Fort Collins, Colorado.

Introduction

The sample design for the spiny lobster monitoring protocol uses the sample design for the reef fish monitoring protocols for Florida and the U.S. Virgin Islands (Brandt et al. 2009; Bryan et al. 2013). This protocol uses the exact same sample frame and habitat classification as those used in reef fish monitoring. The sample frames for Florida and the U.S. Virgin Islands are updated prior to biennial sampling of fish in each region. SOP A in Brandt et al. (2009) describes the sample frame and habitat classification used for spiny lobster monitoring in Florida. SOP 1 in Bryan et al. (2013) describes the sample frame and habitat classification used for spiny lobster monitoring in the U.S. Virgin Islands.

Updates to Reef Fish Protocols

Since the reef fish monitoring protocols were published there have been a few modifications. In Brandt et al. (2009) the sample frame in Florida utilized a 200×200 -meter (656×656 -foot [ft]) grid. Due to the availability of more accurate benthic habitat maps, in 2014 the sample frame was revised to a 100×100 -meter (328×328 -ft) grid. Unfortunately, at the time of this writing there are no publications or updates that document this change.

Since the publication of Bryan et al. (2013) two additional strata are available in the U.S. Virgin Islands. These are “Deep, unknown hard-bottom” and “Shallow, unknown hard-bottom.” These two strata are known to be hard-bottom habitats, but the exact type of hard-bottom is unknown. As more surveys are completed, the habitat information recorded will be used to correctly classify the grid cell to a known habitat stratum. Unfortunately, at the time of this writing there are no publications or updates that document this change.

Literature Cited

- Brandt, M. E., N. Zurcher, A. Acosta, J.S. Ault, J. A. Bohnsack, M. W. Feeley, D. E. Harper, J. H. Hunt, T. Kellison, D. B. McClellan, M. E. Patterson, and S. G. Smith. 2009. A cooperative multi-agency reef fish monitoring protocol for the Florida Keys coral reef ecosystem. Natural Resource Report NPS/SFCN/NRR – 2009/150. National Park Service, Fort Collins, Colorado. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/662816> (last accessed June 2020).
- Bryan, D. R., A. J. Atkinson, J. S. Ault, M. E. Brandt, J. A. Bohnsack, M. W. Feeley, M. E. Patterson, B. I. Ruttenberg, S. G. Smith, and B. D. Witcher. 2013. A cooperative multiagency reef fish monitoring protocol for the U.S. Virgin Islands coral reef ecosystem. Natural Resource Report NPS/SFCN/NRR—2013/672. National Park Service, Fort Collins, Colorado. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2195859> (last accessed June 2020).