



UNC-IMS Data Report – 4 November 2013

Longline Shark Survey Data Report: 1972-2011

**Frank J. Schwartz¹, John J. Hoey², Camilla T. McCandless³, and
Charles H. Peterson¹**

¹ University of North Carolina at Chapel Hill, Institute of Marine Sciences, Morehead City, NC 28557

² NOAA NMFS/NEFSC, Cooperative Research Program, Narragansett, RI 02882

³ NOAA NMFS/NEFSC, Apex Predators Investigation, Narragansett, RI 02882

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<http://ims.unc.edu/files/2013/11/sharksurvey.pdf>

Longline Shark Survey Data Report: 1972-2011 (in Microsoft Excel Format):

<http://ims.unc.edu/files/2013/11/uncsharkdata.xlsx>

Introduction

This data report presents information derived from the multi-year longline shark sampling survey conducted since 1972 by Frank J. Schwartz of the UNC Institute of Marine Sciences. As of July 2013, the survey is still being conducted. More recent survey results will be put up on this website annually, with a time lag of approximately 2.5 yr. The purpose of this data posting is to provide the information to resource managers, researchers, NGOs and other organizations, and to the public for their use. Any such use should acknowledge the source as the UNC-IMS longline shark survey from this website. The data set as posted is identical to the data used by NOAA NMFS in their 2007 SEDAR assessment and has passed necessary institutional review. Although this version of the data set has been subjected to careful QA/QC procedures, subsequent information may result in some future modifications. If and when any such modifications are made, the changes will be clearly indicated. Data on shark lengths have not yet been thoroughly examined for the presence of outliers: consequently, comments on length information include notice of uncertainty over the lengths of 5 unusually small dusky sharks. This data posting includes sharks only: other fishes also captured are not included in the data posting. Tag return information is also not included. Data from 2009 onward report only total number of each species (rather than individual sharks) caught on a particular date / time and are presented on a separate tab from the 1972 - 2008 data.

Methods

The long-term UNC-IMS research survey of sharks has been conducted each year since 1972 by Dr. F.J. Schwartz of the University of North Carolina at Chapel Hill Institute of Marine Sciences in Onslow Bay off the central coast of North Carolina near Cape Lookout. Survey methods (Schwartz 1984) have remained identical over a 40-year period. Unanchored longlines have been set biweekly from about April 15 to November 1 (a total of 758 sets from 1972-2003, plus additional sets for 2004 - 2011, the additional years posted since the initial release of the data) using a design employing the same gear at two fixed stations. Prior to setting out the longline, fresh fish were collected by trawling and used as whole fish to bait the hooks. Two successive sets of baited hooks constituted the sampling for every date (except less than one quarter of days when bad weather prevented establishment of the second set). Sampling was carried out during the day between the hours of 0800 and 1500hr. The East-West set was established first, near shore and approximately parallel to the beach of Shackleford Banks in 13 m depth, running up to 4.8 km eastward from 34° 38.029' N, 76° 37.835' W. Sets employed between 27 and 483 hooks (mean = 151), with one plastic foam international orange buoy of 1.3-m diameter attached for every 10 hooks and hooks spaced every 4.5 m. Case-hardened steel 9/0 Mustad tuna hooks were attached to 1.8-m drop lines of No. 2 (95 kg) porch swing chain, which were snapped onto the 7.6-cm braided nylon main line. Soak time after setting was 1 hr. During the ≈45 min required to pull in the line, the species, sex, and fork length of each hooked shark was recorded and all live sharks were tagged and returned to the sea. After 35-40 minutes travel time, the North-South set was

established further offshore in Onslow Bay in 22 m depth, running southwards from 34° 33.071' N, 76° 37.422' W. The procedures followed were identical to those of the East-West set. Trawling for additional bait was occasionally required between sets.

Acknowledgments

The collection of these data on shark abundances and sizes in coastal Onslow Bay has been supported by Carolina Power and Light in early years and by resources of the Institute of Marine Sciences of the University of North Carolina at Chapel Hill in all years. The chief scientist who ran the survey from its inception is Dr. Frank J. Schwartz. Numerous individuals have contributed assistance on deck and in the laboratory over the years, far too many to identify by name. Some, however, deserve special thanks. Captains John Wegner, Otis Lewis, and Joseph Purifoy guided the research ships, *Machapunga* and then *Capricorn*, from which the survey was conducted. Many mates served tirelessly, recently including Glenn Safrit, Claude Lewis, Wayne Fluellen, and Stacy Davis. Glen Safrit provided many hours of laboratory assistance. The NOAA NMFS staff helped organize, code, and verify the data. Kar Howe has developed the website posting.

Literature Cited

Schwartz, F.J. 1984. Occurrence, abundance, and biology of the blacknose shark, *Carcharhinus acronotus* in North Carolina. *Northeast Gulf Science* 7: 29-46.

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