



SWORDFISH IN THE GULF OF MEXICO: THE FACTS

The swordfish (*Xiphias gladius*) is one of the most powerful fish in the ocean. Elusive and combative, the swordfish is prized by recreational anglers in the United States. Its name comes from its long, flat, swordlike bill, which is larger than those of other billfish species. When hooked and brought near the boat, the swordfish aggressively wields its bill, forcing anglers to use extreme caution to avoid being injured.

Swordfish is popular table fare because of its mildly sweet flavor, moist, meaty texture and moderately high fat content. It is an excellent source of selenium, niacin and vitamin B12, but sometimes contains high levels of mercury.

BIOLOGY AND BEHAVIOR

Like other billfish, females grow larger than males. Swordfish feed near the surface at night on squid and small pelagic fish; during the day, they move deeper to feed on squid and larger pelagic fish¹ that they stun with their slashing bill.² Swordfish generally live to nine years, although some have lived to 15 years.



PHOTO: STEVE DROGIN/MARINE THEMES

Fully grown, they exceed 14 feet in length. The International Game Fish Association's world record for swordfish is 1,182 pounds, set in 1953.

Sexual maturity occurs at between five and six years. In the Gulf of Mexico, spawning takes place year-round, however, the peak season is from late April to July near the Gulf's Loop Current.³

WASTEFUL FISHING GEAR

About 40 boats use surface longline gear in the Gulf. Longline fishermen there catch yellowfin tuna and swordfish by setting hundreds of hooks on lines extending an average of 30 miles,⁴ but they also catch and kill an estimated 84 other species, including spawning bluefin tuna, endangered sea turtles and hard-fighting game fish such as blue marlin.⁵ Longline fishermen are prohibited from keeping these game fish, so they throw them back. Many of these fish die.

Even the target species are wasted. Longline fishermen keep fewer than half of all swordfish they catch because of size restrictions,⁶ and 77 percent of these discarded swordfish die.⁷

LONGLINE PROHIBITION IN THE ATLANTIC OCEAN

The swordfish population in the North Atlantic declined rapidly during the 1970s and 1980s because of unsustainable fishing pressure from surface longline fishing gear.⁸ In response to a lawsuit filed by several marine conservation and recreational fishing organizations,⁹ in 2001¹⁰ the National Marine Fisheries Service (NMFS) prohibited longline use in waters off the southeastern United States.¹¹ The restriction was

necessary to rebuild declining swordfish populations and reduce bycatch (catching and killing of non-target species) of other depleted and protected species.

After nine years, the results have been positive, and Atlantic swordfish is making a comeback due to the prohibition and reduction of quotas by international swordfish management organizations. NMFS now estimates that Atlantic swordfish is no longer overfished.¹² Recreational charter captains and anglers report increased numbers of swordfish during annual tournaments in South Florida largely because of the 2001 longline prohibition. Despite the improved status of the stock, however, swordfish are still vulnerable to surface longlines in the Gulf of Mexico that kill juvenile fish before they reach spawning age.

THE SOLUTION

The Pew Environment Group is working with a coalition of environmental organizations and recreational fishing groups to prohibit the use of wasteful and indiscriminate longline fishing gear in the Gulf of Mexico. And because there are more selective alternative types of fishing gear, fishermen can still keep fishing.

Take Action Today

We need your support. Take action now. Please visit www.PewEnvironment.org/GulfTuna to tell Dr. Jane Lubchenco, administrator of the National Oceanic and Atmospheric Administration, to prohibit surface longline gear in the Gulf of Mexico.

1 Adid, E., and M. Idrissi. 2006. ICCAT Manual. Chapter 2.1.9: Swordfish. http://www.iccat.int/Documents/SCRS/Manual/CH2/2_1_9_SWO_ENG.pdf.

2 Stillwell, C.E., and N.E. Kohler. 1985. Food and Feeding Ecology of the swordfish *Xiphias gladius* in the western North Atlantic Ocean with estimates of daily ration. *Marine Ecology-Progress Series*. 22: 239-247. www.int-res.com/articles/meps/22/m022p239.pdf.

3 Neilson, J.D., S.D. Paul and S.C. Smith. 2006. *Stock Structure of Swordfish (Xiphias Gladius) in the Atlantic: A Review of the Non-Genetic Evidence*. Collective Volume of Scientific Papers ICCAT, 61: 25-60, p. 30. www.iccat.int/Documents/CVSP/CV061_2007/no_1/CV061010025.pdf.

4 Personal communication with Dr. Lawrence Beerkircher and Dr. Kenneth Keene of the Southeast Fisheries Science Center.

5 *Ibid.*

6 *Ibid.* Also, Beerkircher, L., C.A. Brown and V. Restrepo. 2009. Pelagic observer program data summary, Gulf of Mexico bluefin tuna (*Thunnus thynnus*) spawning season 2007 and 2008; and analysis of observer coverage levels. NOAA Technical Memorandum NMFSSEFSC- 588, 33, Table 2, p. 28, www.nmfs.noaa.gov/sfa/hms/Tuna/2009/POP_GOMEX_BFT_588.pdf.

7 *Ibid.*

8 NMFS. 2010. *2009 Status of U.S. Fisheries*, p. 15, www.nmfs.noaa.gov/sfa/statusoffisheries/sos_full28_press.pdf.

9 *National Coalition for Marine Conservation v. Evans*, 231 F. Supp. 2d 119 (D.D.C. 2002).

10 NMFS closed four areas: (1) the East Coast Florida area (the "Florida Closure"), off Florida's east coast and north to Georgia, closed year-round (Federal Register 65[1]: 47 and 214 [<http://frwebgate1.access.gpo.gov/cgi-bin/PDFgate.cgi?WAISdocID=cv4HPV/4/2/0&WAIAction=retrieve>]); (2) the Charleston Bump area near Wilmington Beach, N.C., closed annually Feb. 1 to April 30, (see note 10 above); (3) a horizontal rectangular area off New Jersey, closed every June, 50 CFR 635.21(c)(2) (http://edocket.access.gpo.gov/cfr_2003/octqtr/pdf/50cfr635.21.pdf); and (4) the DeSoto Canyon area, off Florida's west coast in the Gulf of Mexico, closed year-round.

11 50 Code of Federal Regulations (CFR) 635. http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title50/50cfr635_main_02.tpl.

12 NMFS. *2009 Status of U.S. Fisheries*.

For more information, please contact:

Lee Crockett | Director of Federal Fisheries Policy | Pew Environment Group | 202-552-2065 | lcrockett@pewtrusts.org

For additional resources, visit us at www.PewEnvironment.org/GulfTuna.

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