Wells, R.S. and M.D. Scott. 1994. Incidence of gear entanglement for resident inshore bottlenose dolphins near Sarasota, Florida. Page 629 *In:* W.F. Perrin, G.P. Donovan, and J. Barlow (eds.), Gillnets and Cetaceans, Rep. int. Whal. Commn (Special Issue 15.).

impact on the population are not known. We interviewed fishermen in an attempt to determine fishing effort in the northern Gulf of California and to quantify vaquita mortality levels in gillnets. Though some problems are inherent to these types of data, the information can guide management decisions until more complete studies on incidental mortality are conducted. A total of 70 fishermen were interviewed from three communities in the northern Gulf of California. Gillnet fishermen reported capturing 22 vaquita, at a rate of 0.05 vaquita/fisherman/year resulting in an overall mortality estimate of 32.3±14.1 (95%CI) vaquita/year. This estimate may represent as much as 10% of the entire vaquita population. The majority of vaquita (90.1%) were caught in the most frequently used nets which consisted of 25.4–30.5cm mesh. Ninety-five percent of the vaquita were captured in water depths between 9 and 50m and mean depth was 24.9±SD 17.61m. The greatest fishing effort and 75.0% of the porpoise captures occurred in March through June corresponding with the northward migration of totoaba (*Cynoscion macdonaldi*). The taking of totoaba is prohibited by law. In addition to vaquita, 43.5% of the fishermen reported capturing sea turtles, 32.6% caught sea lions, 28.3% caught common dolphins and 21.7% caught bottlenose dolphins. Of all reported incidental catches of reptile and marine mammal species, 95.7% occurred in 25.4–30.5cm mesh gillnets. We recommend that gillnetting activities in the northern Gulf of California be ceased immediately. If complete moratoriums are not feasible, restrictions should be considered with respect to mesh size, fishing location, water depth or season.

INCIDENCE OF GEAR ENTANGLEMENT FOR RESIDENT INSHORE BOTTLENOSE DOLPHINS NEAR SARASOTA, FLORIDA. *Randall S. Wells, Conservation Biology Department, Chicago Zoological Society, Brookfield, IL 60513, USA. Michael D. Scott, Inter-American Tropical Tuna Commission, c/o Scripps Institution of Oceanography, La Jolla, CA 92038, USA.*

Bottlenose dolphins residing in the shallow inshore waters along the central west coast of Florida are exposed to gear from a variety of commercial fishing activities, including gillnets, trammel nets, purse seines and crabtraps. We have found evidence of apparent gear entanglement on 11.0% of the 146 dolphins we have handled during our capture, sample, mark and release efforts during 1975–1990. Evidence of apparent entanglement includes direct observations, as well as records of cuts and scars around the torso, fins and gape of the mouth that match the diameters of lines commonly used in fishing gear. Mortality from entanglement with fishing gear, however, appears to occur infrequently. Only one of the resident dolphins is known to have died directly from entanglement during 1975–1989. A subadult male entangled in a beach-set pompano gillnet during a squall in 1976. Two other entangled dolphins would probably have died save for human intervention. One 9 month old female entangled in a mullet gillnet was released unharmed by our research team. A 7 year old male became tangled in a crabtrap floatline; the trap and float were cut free by boaters. A minimum estimate of the annual mortality rate due to entanglement is 0.001±0.0011 (1 confirmed mortality during 898 animal years), but could have been 0.003±0.019 (3 mortalities) if human rescue had not occurred. These mortality rates are minimum estimates because not all dolphin carcasses may have recovered or have shown signs of entanglement. Annual loss from the approximately 100 residents of the Sarasota population due to natural in incidental fishery mortality and emigration averaged 0.189 for young of the year and 0.038 for older animals (Wells and Scott, 1990). A disproportionately high number of subadult dolphins were involved in entanglement. At least 9 of 16 apparent entanglement records involved subadults; the scarring on the remaining adults occurred at an undetermined age.

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FIRST EVALUATION OF THE INTENTIONAL AND ACCIDENTAL CATCH OF CETACEANS AT SANTA CATARINA ISLAND, BRAZIL. *Alfredo Ximenez, Laboratorio de Mamíferos de Universidade Federal de Santa Catarina, Caixa Postal 5132, Campus Universitario, 88049 Florianópolis, SC, Brazil.*

Until 1985, the level of mortality of cetaceans caused by fishing activities in Santa Catarina State was unknown. In that year a program began which included collection, preparation and conservation of stranded specimens all along the littoral (172km) of Santa Catarina located between the parallels 27°10' and 27°50'S and the meridians 48°25' and 48°35'W. Between February 1985 and June 1990, 40 specimens have been obtained showing marks of gillnets and mutilation. One intentional take of *Pontoporia blainvillei* was recorded. The following species were stranded and collected: *Steno bredanensis, Sotalia fluviatilis, Tursiops truncatus, Stenella frontalis, Delphinus delphis, Pseudorca crassidens* and *Balaenoptera acutorostrata*. Also collected was the head of a specimen identified as *Tursiops truncatus* but the morphology of its skull shows combined characters of both *Tursiops* and *Steno*; this suggests that the specimen is an intergeneric hybrid that should be the central point for further studies. Artisanal fishing is developed in the region in ancient traditional communities that use several kinds of nets with mesh size between 40mm and 200mm. The impact of this kind of activity on the cetacean population still remains unknown. Nevertheless a well directed study could yield valuable information in the future.

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