[redacted] R.L. Brownell

THOMAS JEFFERSON

VAQUITA or COCHITO

Phocoena sinus (Norris and McFarland, 1958)

Order CETACEA Family PHOCOENIDAE

STATUS AND SUMMARY Vulnerable. Probably confined to the northern half of the Gulf of California. Total number, status and condition of habitat unknown and requiring much more research. Subjected to indirect exploitation due to incidental killing during commercial fishing operations.

DISTRIBUTION Mexico. Norris and McFarland report the range of this porpoise as certainly including the upper Gulf of California and probably extending south along the Mexican coast, but they question whether it has ever occurred outside the gulf (6). All the 21 confirmed records are from the northern end of the gulf (1). Several at-sea sightings have also been reliably reported from the upper gulf (6; 7; 9), but all other sightings to the south must be considered as tentative and unconfirmed, being unsupported by specimens, photographs or descriptions sufficiently detailed to allow positive identification (4; 6; 8).

POPULATION No estimates of current or former total numbers are available. Brownell believes numbers are now small and localised and mentions that unintentional catches of P. sinus are assumed to have reduced numbers below their original level (1), although firm evidence of this is lacking.

HABITAT AND ECOLOGY Shallow, inshore waters. Remains of grunts Orthopristis reddingi, gulf croakers Bairdiella icistius and squid were found in the stomach of one specimen (1; 2). Both of the fish mentioned are shallow-water bottom-dwelling species and abundant throughout the upper Gulf of California (2).

THREATS TO SURVIVAL Incidental mortality during commercial fishing may represent a substantial impact on a population that is believed to be relatively small and local. However, few details are available. The gill net fishery for totoaba Cynoscion macdonaldi started in the gulf at least by the late 1940s but no records or figures were kept of other species, such as porpoises, taken incidentally (1). During the late 1960s and early 1970s, P. sinus has been reported as captured in two of the three major fishing grounds off San Felipe, Baja California, at about 31°N and off El Golfo de Santa Clara at 31°48'N just over the Sonora border and annual catches of the porpoise may have ranged from tens to the low hundreds (1). Shark fishing with gill nets and shrimp trawling probably also cause some mortality (1; 7). If incidental killing is indeed a substantial threat, future population trends of P. sinus will depend largely on the magnitude, gear and area of commercial fishing. Information about any other existing or potential threat, whether directly or through habitat modification, is scanty: residues of insecticides used by U.S. and Mexican farmers are entering the Gulf via the Colorado River (3), but it is not known if they constitute a threat.

CONSERVATION MEASURES TAKEN Some conservation of the porpoise has indirectly resulted from recent measures taken to restore the stocks of totoabs which have drastically declined in number in recent years (3). The totoabs has been included in Appendix 1 of the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora, and its exploitation is therefore subject to strict regulations by ratifying nations (P.J.H. van Bree, 1977, pers. comm.); the Mexican Government has declared a total closure of both sport and commercial fishing for the species (3). These measures if enforced should halt or greatly reduce the number of P. sinus killed in the course of fishing operations.

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CONSERVATION MEASURES PROPOSED A research programme to cover: (a) examination of carcasses of porpoises that are stranded or accidentally taken in order to improve knowledge of their life history; (b) a review of all available statistics of gill net and trawl fisheries for totoaba, sharks, and shrimps in the upper Gulf of California, to extract all available information about the incidental capture of P. sinus; (c) probable impact on P. sinus of existing or future fishing operations; (d) more precise determination of the range of the species; (e) the ecological effect, if any, of the diversion of Colorado River waters for agricultural and other purposes; (f) levels of pollutants in the food chain; and (g) impact on the porpoises of increasing tourist traffic (Dr. B. Villa R. 1977, pers. comm.).

REMARKS For description of animal see (5; 10). The Family and generic names of this porpoise are spelt with an 'a' by many authorities - Phocaenidae, Phocaena. This data sheet has been compiled with the kind assistance of Dr. Bernardo Villa R.

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