Pacific Sleeper Shark Relative Abundance Trends in the Gulf of Alaska and Bering Sea

Pacific sleeper sharks (*Somniosus pacificus*) are a deepwater shark of the north Pacific. Anecdotal information and research data suggest that Pacific sleeper shark abundance is increasing. We analyzed existing Pacific sleeper shark catches from fishery independent longline surveys in the Gulf of Alaska and the Bering Sea to determine the trend in abundance and whether any change was statistically significant. Relative population numbers (RPN's) of sleeper sharks captured in the NMFS domestic sablefish longline survey increased from a low of 79 in 1988 to a high of 1,779 in 2000. The most substantial increase in RPNs occurred between 1992 and 1993, and RPNs remained high from 1994-2000. The 95% bootstrap confidence intervals calculated for sleeper shark RPN's in the NMFS longline survey between the years 1989 - 2000 did not overlap for some years suggesting that there has been a significant increase in the relative abundance of Pacific sleeper sharks captured. The increase in RPNs was driven largely by sleeper shark catches in a deepwater gully, the Shelikof Trough, on the continental shelf between Kodiak Island and the Alaska Peninsula. Pacific sleeper sharks may be relatively abundant in other areas on the continental shelf of the Gulf of Alaska and Bering sea at depths less than 200m, which are not routinely sampled by the NMFS longline survey. This information was reported as part of the Ecosystems chapter of the Gulf of Alaska Stock Assessment and Fishery Evaluation Report for 2003. Further analysis of Pacific sleeper shark trend data is planned for the 2004 report.