

## ABSTRACT

This study, titled "A Comparison of Species Diversity of Small Cetaceans in the Fisheries Catch on the West Coast of Sri Lanka and Offshore Sightings", was carried out over a period of six months from May to October 1994. The two fish landing sites of Negombo and Beruwala, on the west coast of Sri Lanka, were selected for monitoring small cetacean catches, and the adjacent waters, to a distance of 16 km from the shoreline, for monitoring offshore occurrence.

Species diversity of small cetaceans and seasonal variation were examined in the catch and offshore sightings. Sex ratio, capture method and size variation were also examined. Statistical analyses were carried out on all parameters examined to determine: a) species richness, species abundance and species diversity in the catch and in offshore sightings at each site and the variation between sites, b) seasonal variation in the catch and in offshore sightings at each site and differences between sites, c) differences in sex ratios and capture method ratios in the catch and differences

between sites, d) intersexual length variation of each species, variation between sites and vulnerable age groups for each species in the catch.

For catch data, species diversity was not statistically significant between sites, whereas the diversity of offshore sightings was significantly different. Species diversity between the catch and offshore sightings for each site was also significantly different. Twelve species and nine species of small cetaceans were recorded from the catch at Beruwala and Negombo respectively. The Spinner Dolphin (*Stenella longirostris*) was the most abundant species in the catch at both sites and in sightings off Negombo.

Seasonal variation in small cetacean catches was observed in the form of peak catches but there was no clear seasonal trend in offshore sightings. Seasonal variation between sites was not significant in months where peak catches were recorded. Numbers caught at both sites were significantly higher during the post monsoonal period indicating increase of fishing effort.

The sex ratio of the catch was significantly different at Beruwala, where more females were caught. The capture method was not significantly different between sites indicating a quantifiable increase in intentional harpooning since historic times. There was also no significant variation in capture method between sites indicating that the practice of harpooning is spreading although it was unknown in Beruwala till the early 1990's.

There was no sexual dimorphism in the more common species of the catch. In most species there was a clearly vulnerable size group in the catch (juveniles or sub-adults), indicating an adverse effect on the population in the future, resulting from a lack of adult replacement in populations.

Further studies for longer periods and wider coverage is needed. This study indicates clearly that current measures for cetacean conservation are insufficient and recommends a temperate approach of public education and awareness.