

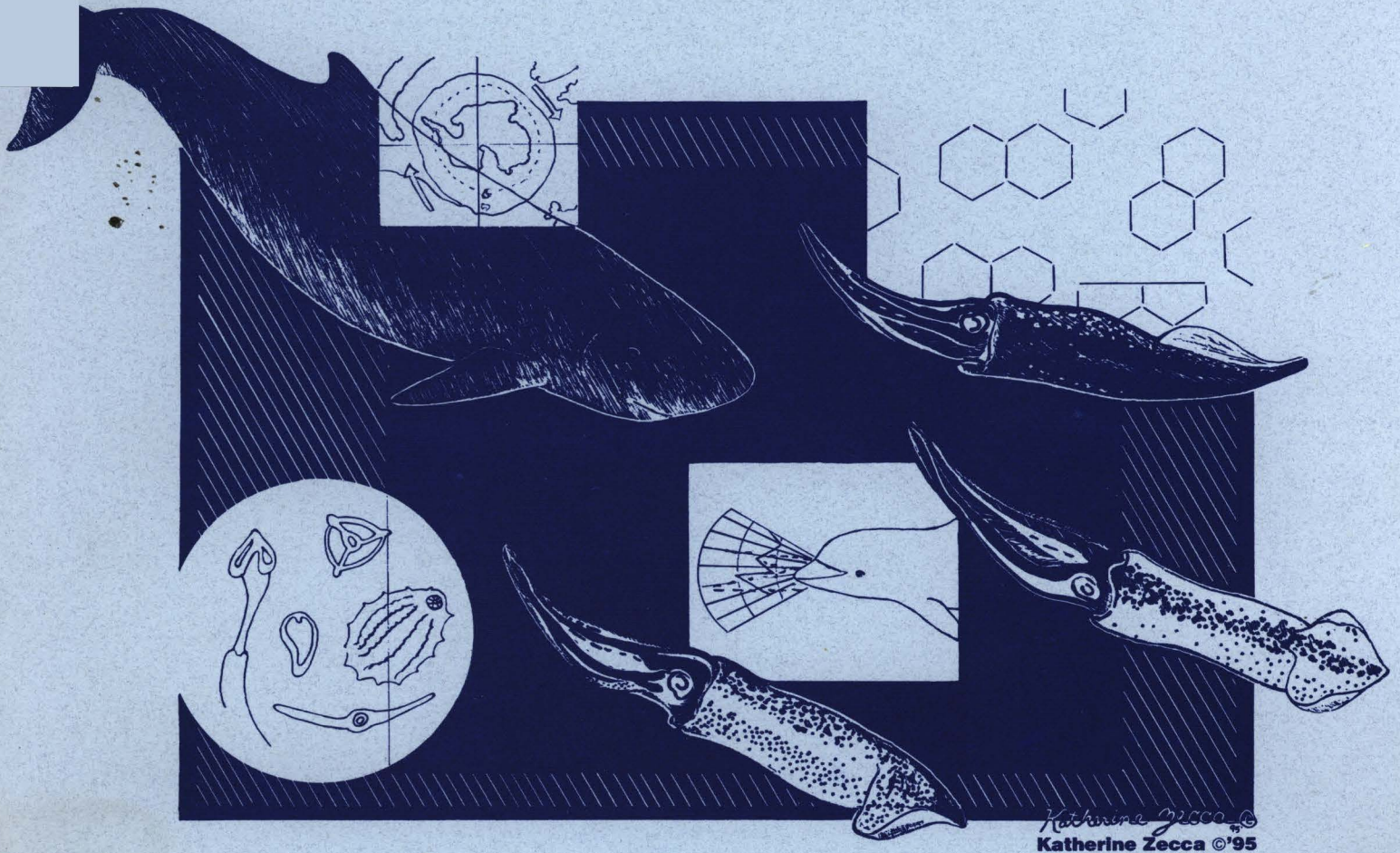
**DETERMINING THE PRECISE TIMING AND LOCATION OF FORAGING BY STELLER SEA LIONS**

Andrews, Russel D., and Calkins, Donald G.

Dept. of Zoology, University of British Columbia, Vancouver, B.C. V6T 1Z4 and  
Alaska Dept. of Fish and Game, Anchorage, AK 99518

Determination of feeding areas and the general foraging ecology of Steller sea lions (*Eumetopias jubatus*) are crucial parts of the recovery plan for this threatened species. Unfortunately, current techniques provide no basis for distinguishing successful foraging areas from those areas searched or just traversed where little or no prey was captured. Therefore, we developed a technique to determine precise timing and location of prey ingestion by pinnipeds. Transmissions of a stomach temperature telemeter (STT) are received by a dorsally mounted satellite-linked data logger which also records dive depth, swim velocity, and water temperature. In order to avoid recapture and reduce disturbance to the rookery, the instrument pack was remotely released via a VHF telemetry link. In June, 1994 we successfully deployed 4 of these instruments on lactating females at Forrester Is., AK. Prey ingestion, indicated by sudden drops in stomach temperature, occurred primarily during bouts of flat-bottom dives. Bathymetry in the location of these bouts suggests that the sea lions were foraging on or near the bottom. Two of the females only engaged in such bouts during daylight hours, while the other two foraged throughout the day and night. Percentage time spent in foraging bouts varied greatly, and therefore some sea lions may be able to increase their foraging effort in response to reduced prey availability. Combination of the STT technique with current location and dive monitoring methods promises to greatly enhance our understanding of the foraging ecology of pinnipeds, and will now allow us to properly test hypotheses concerning the role food limitations play in the recent Steller sea lion population decline.

# Eleventh Biennial Conference on the Biology of Marine Mammals



Katherine Zecca ©'95

*14 - 18 December 1995 Orlando, Florida, U.S.A.*

## ABSTRACTS