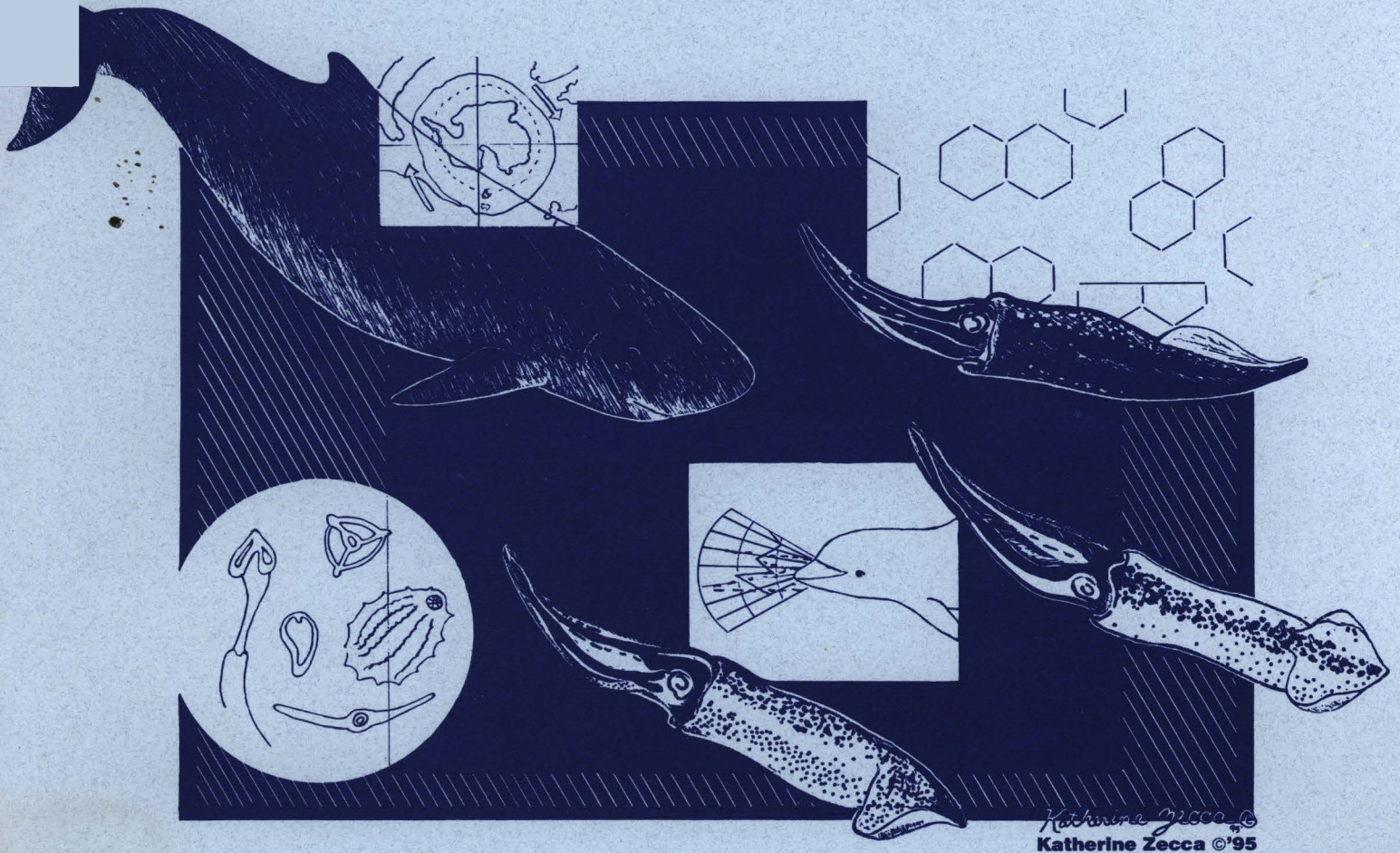


MOVEMENTS OF SATELLITE-TAGGED HARBOR SEALS IN PRINCE WILLIAM
SOUND, ALASKA, 1991-1994.
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Harbor seals (*Phoca vitulina richardsi*) were one of the species injured by the March 1989 Exxon Valdez oil spill (EVOS) in Prince William Sound (PWS), Alaska. During 1991-1993, satellite linked time-depth recorders (SLTDRs) were attached to 20 harbor seals as part of a restoration study supported by the EVOS Trustee Council. The main objective of the study was to describe behavior and habitat use of seals both on-land and at-sea. Four one-watt tags attached in 1991 were erratic and produced little useful data. One-half watt units used since then have produced good results. Ten SLTDRs attached in May 1992 and 1993 transmitted for 39-86 days (mean 66 days), while 6 units attached in September 1993 worked for 101-310 days (mean 182 days). Since 1992, seals were located on 43%-100% of the days that SLTDRs were operational, and an average of 2.1-4.8 location fixes were received per day. Most seals remained in the general vicinity of the tagging site, but some moved to adjacent haulouts or to glaciers in northern PWS. Three moved out of PWS into adjacent parts of the Gulf of Alaska, but all returned. Sixteen of the 20 seals were at the site where they were tagged when their transmitters failed. Minimum distances moved by individuals were 5.4-10.6 km/day for seals tagged in May 1992-1993, which was significantly greater than for seals tagged in September 1993 (4.2-7.4 km/day; $t=2.85$, $p=0.01$). From these results we conclude that over the 1-10 month long tracking periods, PWS harbor seals were largely resident within the Sound.

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ABSTRACTS