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BLUE AND FIN WHALE ACOUSTIC MONITORING OFF ANTARCTIC PENINSULA

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Baleen whale acoustic data were collected off the Western Antarctic Peninsula (WAP) and in the Scotia Sea using long-term, moored instruments during real-time surveys. Long-term moored instruments used were Acoustic Recording Packages (ARPs). ARPs were deployed at 8 locations in the Southern Ocean GLOBEC WAP region during a two-year period from March 2001 to February 2003. Two methods, automatic call detection and acoustic power, were used for determining seasonal presence and absence of calls. Blue whale calls were detected on the ARPs year-round, but showed variable calling rates by site and season. The highest blue whale calling rates were in the late summer and autumn, with a secondary peak in the spring. Fin whale calls suggest a strong seasonal presence, with a peak in the autumn and absence of fin whale calls through the winter, spring and most of the summer.

Real-time survey data using sonobuoys were available from WAP, as well as from the Scotia Sea. These data provided a synoptic picture of calling whale distribution over a larger area during the time of the Southern Ocean GLOBEC cruises, in the autumn and winter of 2001 and 2002, and the summer of 2003. Both ARP and sonobuoy data indicated that blue and fin whale calls are usually detected at different locations throughout this region, with fin whales generally occurring farther north than blue whales. This difference could be an indication of the difference between the species in the ability to exploit the resources or deal with the extreme polar environment.