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**Preliminary Results of a Behavioral Audiometric Study of the**  
**Polar Bear**

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The hearing of polar bears is of great interest because little is known about hearing of large terrestrial carnivores, they are amphibious, their predatory habits differ from most bears, and there is an increasing need for data to manage anthropogenic noise in maternal denning habitat. Behavioral auditory thresholds were collected from two female polar bears at the San Diego Zoo (ZSSD) in 2006-2007, and are now underway with two females and a male at SeaWorld San Diego (SWSD). Thresholds were measured at 19 frequencies between 125 Hz and 31.5 kHz using shaped 500 ms tones, a 'go/no-go' response protocol, and staircase presentation order with catch trials. Holding areas in both facilities were sound-isolated to the extent practicable. Threshold measurements were limited by background noise below 5 kHz, but sensitivity could be measured to below 0 dB at higher frequencies. To date, the bears have detected sounds down to the noise floor from 125 Hz to about 14 kHz. Their sensitivity declines rapidly above 20 kHz. The results suggest that their auditory threshold functions are narrower or shifted to lower frequencies than those of small carnivores. [Supported by Polar Bears International, ZSSD, SWSD and the author's organizations]