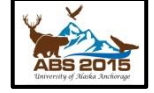


Mirror-Directed Behavior by Beluga Whales (*Delphinapterus leucas*)



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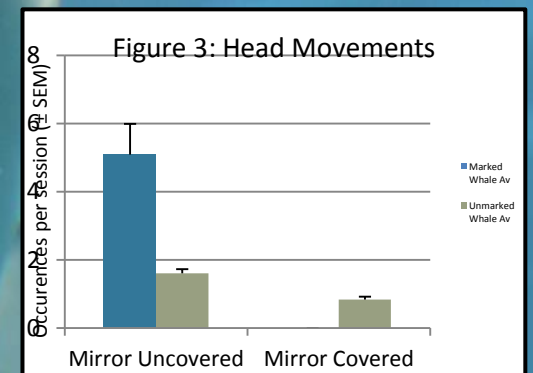
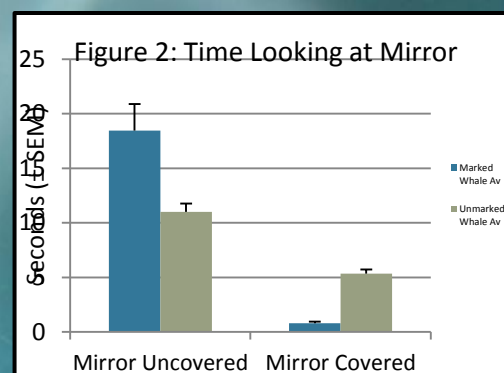
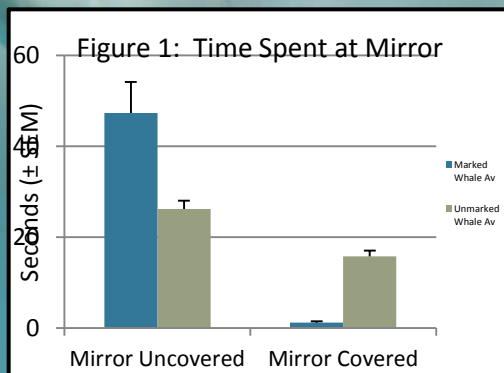
Introduction

When presented with reflective mirrors, the behavior of some primate species is suggestive of self-perception and self-examination. Similar interpretations have also been offered for mirror-directed behavior in elephants and dolphins. The goal of the present investigation was to examine this phenomenon in beluga whales.

Results

The results are presented in Figures 1-3. When compared to unmarked whales, the marked whales

- spent more time spent in front of the uncovered mirror
- spent more time spent looking at the uncovered mirror
- made more head movements in front of the uncovered mirror



Methods

The subjects of this investigation were 10 beluga whales (*Delphinapterus leucas*). They had been wild-caught in the Chukchi Sea, and are now housed at Marineland of Canada (Niagara Falls, Ontario).

Over successive days, a black mark was placed centrally on the melon of one whale, while a large glass mirror was positioned at an underwater viewing window. On each day a different whale was marked, and the mirror was either uncovered or covered. On each day, the behavior of any whale within 6 meters of the mirror was then recorded over 10-min observation periods.

Discussion

Thus, the preliminary findings obtained here indicate that beluga whales attend to visible marks on their faces, and that marked whales show an increased frequency of head movements that might reflect contingency testing in front of the mirror. This is compatible with an interpretation of self-perception and self-examination in this species.

Acknowledgements

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