

Change in harbor seal (*Phoca vitulina*) behavior due to vessel presence in Endicott Arm, Southeast Alaska

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Glacial tidewater systems in the summer are both popular tourist destinations and critical pupping and molting habitat for harbor seals (*Phoca vitulina*). Past studies have recorded vessel disturbance occurring only when the seal leaves their haul-outs into the water, however specific behavioral changes may also represent disturbance. In this study, we observed the behavior of harbor seals on tidewater glacial haul-outs in Endicott Arm, Southeast Alaska, from 3 July - 28 July 2009. Our objective was to determine if there is a specific seal behavior change in the presence of marine vessels. We recorded five separate behavior types (resting, head up, looking around, scratching, and adjusting position) for approximately 15 continuous minutes per observation. Each behavior type was converted to a percentage of time per observation. We compared seal behavior without the presence of vessels (n=46) and with the presence of vessels (n=27). We also examined the effect of the distance between the vessel and the seal on seal behavior. The results demonstrated no significant difference between vessel presence or absence in four of the five behaviors. When a vessel was present, the percent time the seals were looking around was significantly higher than when a vessel was not present. These results were also observed when seals were in groups of greater than three, but not when they were not in groups. Our results suggest that the presence of vessels can change seal vigilance behavior.

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