

# **The Impact of Education on Ecotourism and Harbor Seal Behavior in Kenai Fjords National Park**

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Tourism is one of the fastest growing industries in Alaska and worldwide. Marine and ecotourism are expanding at the highest rates and assessments of the impacts of tourist activities on wildlife and the ecosystems are needed. Kenai Fjords National Park was established in 1980 and has increased in popularity for both large vessel tours and sea kayakers. Harbor seals (*Phoca vitulina*) have experienced more than an eighty percent decline in the Aialik Bay area during the past 25 years. Since 2002, a network of remote cameras has been used near Aialik and Pedersen glaciers to monitor number of seals and their responses to vessels. In the summer of 2005 an in-depth study on the impacts of kayaks on harbor seals in Pedersen Lake was initiated after increasing numbers of kayakers were observed in this secluded haulout. Seal behavior was recorded during the molt from July through September 2004- 2006 via the remotely controlled video camera system and by direct field observation. Method of collection, year, tide, time of day, rain, and training level of groups of recreationists were taken into account when analyzing behavioral data. Results indicate the median activity level of harbor seals is higher in the presence of kayakers and walkers than when humans are absent and the abandoning frequency of seals is significantly higher when kayakers are present. Guided groups disturbed fewer seals than unguided groups. Groups with mitigation training disturbed fewer seals than groups without; the abandoning frequency of seals in the presence of groups with mitigation training was not significantly different than when humans were absent. Educational training was effective at reducing the human disturbance to harbor seals.