

Movement and Haulout Patterns of Harbor Seals (*Phoca vitulina*) in Glacier Bay, Alaska

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Historically, Glacier Bay National Park supported one of the largest breeding populations of harbor seals (*Phoca vitulina*) in Alaska. However, since monitoring began in 1992, the number of harbor seals in Glacier Bay has declined dramatically. In 2004 we initiated a study in Glacier Bay, Alaska to document movement and haulout patterns of harbor seals. From 2004-2006 we captured harbor seals at glacial and terrestrial habitats. We implanted 155 animals (2004 n=50, 2005 n=67, 2006 n=38) with subcutaneous VHF transmitters that were duty cycled for multi-year battery life. We implanted 46 (30%) males and 109 (70%) females. Sixty-five percent of the transmitters (n=101) were implanted in seals captured in glacial habitat and the remainder (n=54) were implanted in seals captured at terrestrial sites. We established remote data logging stations near three haulouts (one glacial and two terrestrial) and equipped them with continuously scanning receivers to record the presence of tagged seals. Eighty-three percent (n=128) of the tagged seals were detected on at least one day with the number of days of detection ranging from 1-212 (average=32). Fifty-five percent (n=71) of the detected seals were detected in multiple years. Preliminary analysis shows that seals captured in glacial habitat were detected 98% of the time in glacial habitat and 2% at terrestrial sites. Seals captured at terrestrial sites were detected at terrestrial sites 72% of the time and 28% in glacial habitat. Results from this study indicate that multi-year VHF transmitters provide insight into haulout patterns of harbor seals.

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