



# Freshwater Harbor Seals of Lake Iliamna, Alaska

## Do They Pup and Over-Winter in the Lake?

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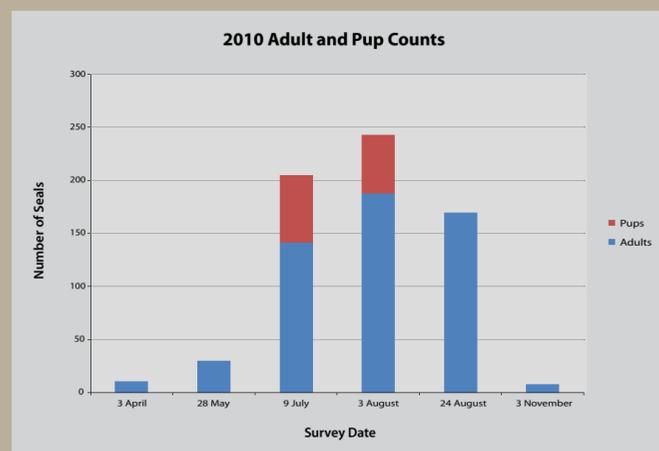
Lake Iliamna

Lake Iliamna is home to a small colony of harbor seals (*Phoca vitulina*) that are thought to live there year-round. There are no known accounts of immigration or emigration despite access to Bristol Bay via the Kvichak River (120 km in length).

Local subsistence hunters harvest small numbers of seals in the early spring when seals haul out along cracks and leads of the frozen lake. There is conflicting information, however, regarding when, where, or whether seals pup in the lake.

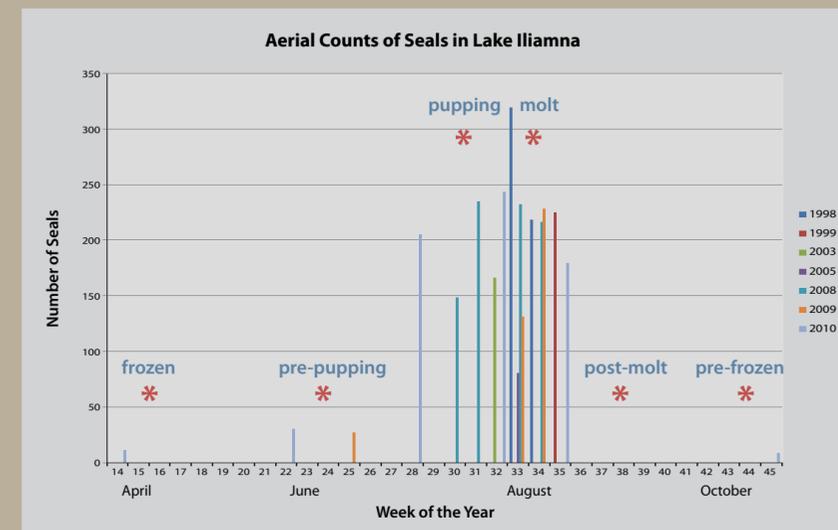


April 3



We flew six aerial surveys in 2010 to support our ongoing efforts to determine seal abundance, distribution, and seasonal timing.

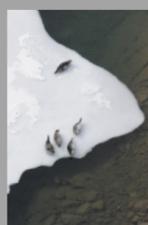
- In April, 11 seals were observed in small shallow-water pools while the rest of the lake was completely frozen-over with no visible cracks or leads, and we did not see any areas that could support the several hundred seals that have been documented in the summer.
- In late May, only 30 seals (no pups) were observed. In July, 205 seals (including 63 newborn pups) were spotted. Elsewhere in Alaska we observe harbor seals pupping much earlier, in May and June.
- In early August, 243 seals (including 55 pups) were seen. By the end of August, the pups had grown to the point where they could no longer be reliably distinguished from older juveniles. The total seal count was 179.
- Our final survey was in early November. The lake was not frozen and we were able to locate only 8 seals. In conclusion, seals do pup in the lake and some seals obviously over-winter, but it seems unlikely that most seals do.



This chart illustrates the survey effort and unadjusted raw counts from aerial surveys by the National Marine Mammal Laboratory (NMML) and the Alaska Department of Fish and Game (ADF&G) since 1998 when our surveys first began. Although there can be significant daily variation in the number of seals hauled out, seal numbers consistently range between 150 and 220 during the molt. Red asterisks indicate when we plan to conduct surveys in 2011 to better understand how the seals utilize the lake throughout the year.



August 24



April 3



April 3



April 3



May 28



July 10



August 20



August 20



November 3