



Dall's Sheep- 2021 Survey Summary

Gates of the Arctic National Park and Preserve

Background

The National Park Service conducted an aerial survey for Dall's sheep July 8th-14th, 2021. Four aircraft based out of Galbraith Lake and Coldfoot surveyed three different survey areas in Gates of the Arctic Park and Preserve (GAAR): Itkillik, Anaktuvuk, and Southeast Gates of the Arctic Park. The survey used a standardized distance sampling protocol. Accurate Dall's sheep abundance and demographic data are critical for sustainable management of Dall's sheep populations and their harvest.



Figure 1. A Dall's sheep (NPS / JARED HUGHEY).

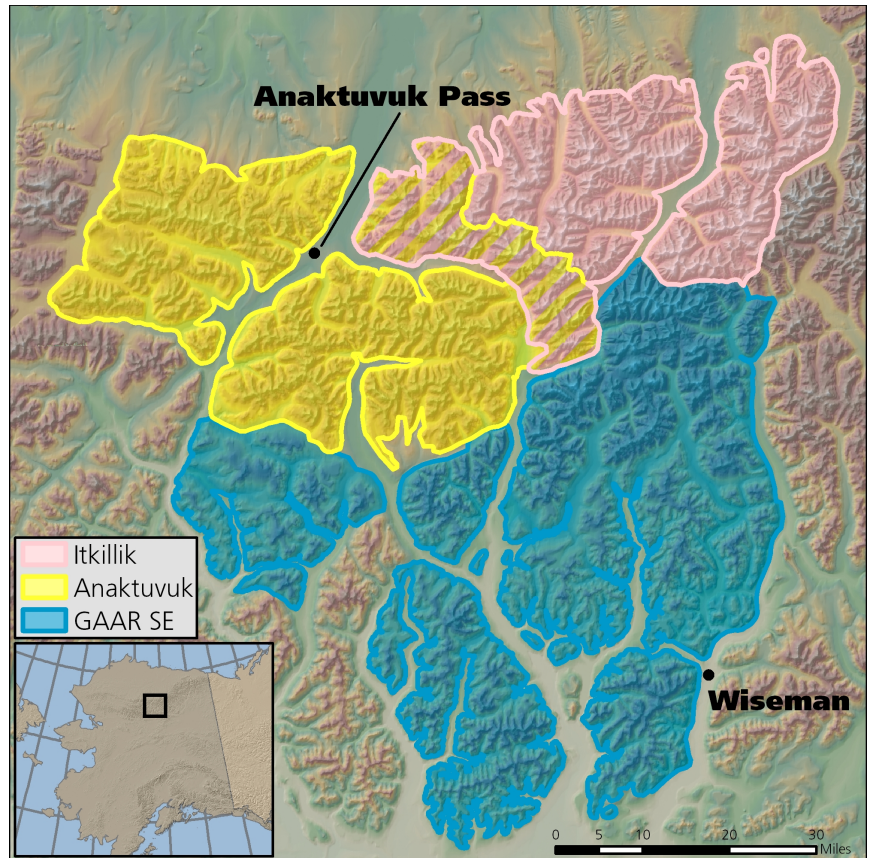


Figure 2. Map of Gates of the Arctic Park and Preserve survey areas.

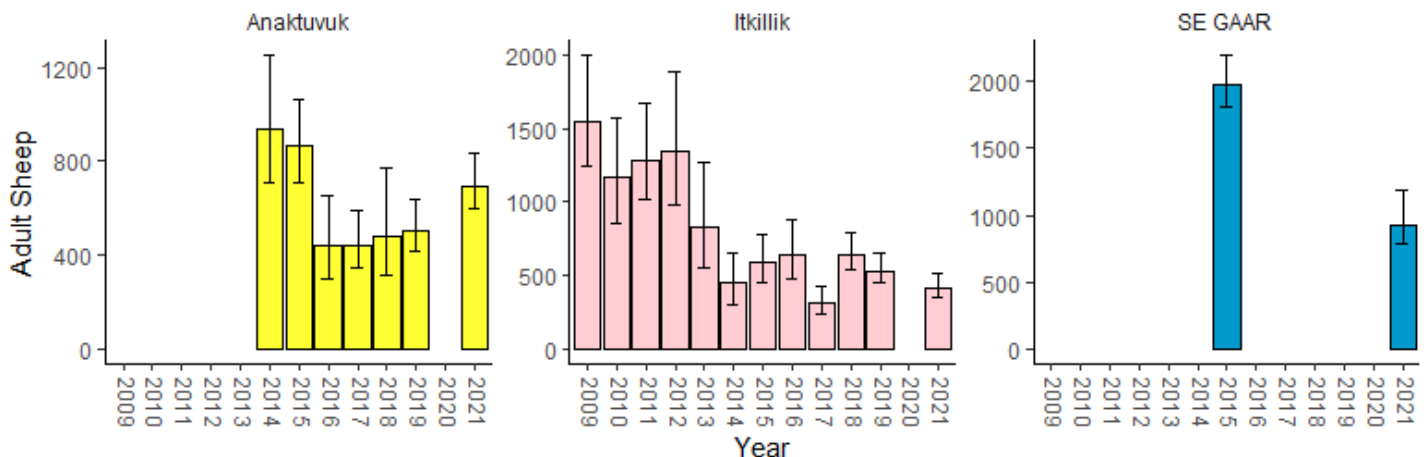


Figure 3. Estimated number of adult sheep in each survey area. Error bars indicate 95% Bayesian Credible Intervals. Colors correspond to survey areas in Figure 2.



Figure 4. A group of Dall's sheep running through rocky terrain (NPS / DYLAN SCHERTZ).

Dall's Sheep Estimates

The estimated number of Dall's sheep in the Itkillik and Anaktuvuk survey areas crashed after difficult winter and spring weather in 2013/2014. Since then, the number of sheep in the Itkillik area has remained low and stable, but has climbed slowly in the Anaktuvuk area. Southeastern GAAR, which is surveyed less frequently, has experienced a large decline since 2015. The estimated number of adult sheep has fallen from 1,969 (95% Bayesian Credible Interval: 1805—2189) in 2015 to 925 (95% BCI 790—1182) in 2021, a 53% decline. The number of lambs per ewe-like sheep, an indicator of reproductive success, has varied greatly across survey areas and years. Reproductive success in 2021 appeared to be above average in the Anaktuvuk and Itkillik survey areas and average in SE GAAR.



Figure 5. A Piper SuperCub, the survey aircraft typically used for Dall's sheep surveys (NPS / BRAD SHULTS).

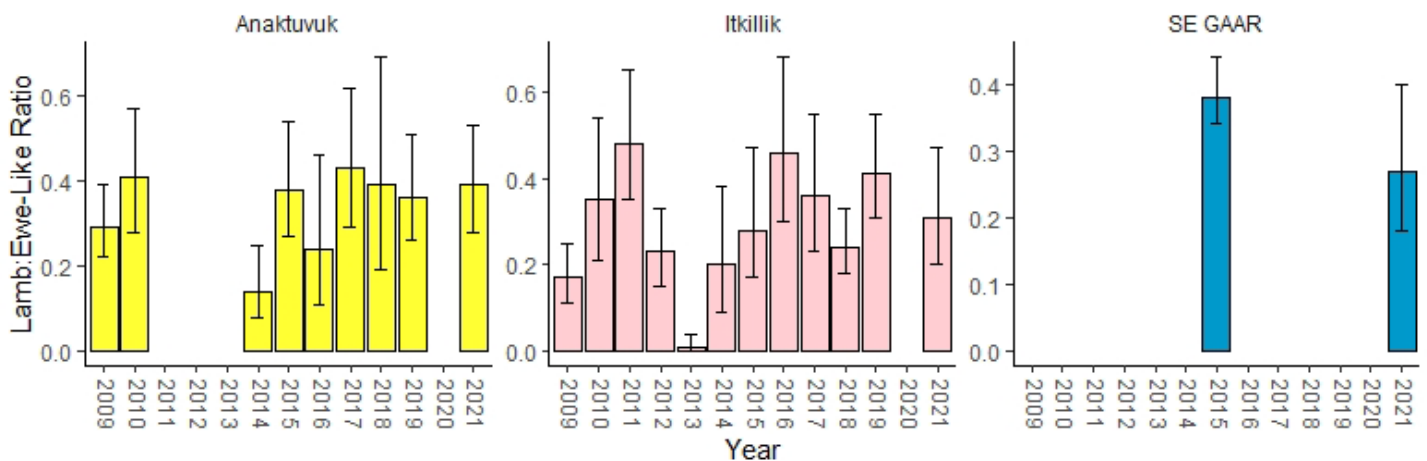


Figure 6. Estimated ratio of lambs to ewe-like sheep, an indicator of reproductive success. Error bars indicate 95% Bayesian Credible Intervals.

More Information

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