A letter from the editor: Why are you receiving this newsletter?

"Wolves." Just the mention of this mammal conjures up varying memories, emotions and opinions for many Alaskans. This newsletter is intended to keep the residents of Unit 2 updated on the efforts ADF&G's researchers and wildlife managers are making to learn about and manage the wolf population for sustained yield. Stay tuned, there are more updates coming later this year via our "Wolf Trails" newsletter. Send us topics or questions you would like addressed.

** Abby McAllister is the Wildlife Education and Outreach Specialist for Southeast Alaska.*

Send story ideas, questions, comments or feedback to me at abby.mcallister@alaska.gov.

Biologists are asking: Where do you see wolves? And they want your observations

By Abby McAllister

Ketchikan-based biologist Tessa Hasbrouck has bolstered an ongoing effort to encourage Prince of Wales Island residents to submit their wolf sightings via a free, web-based platform — she even has an incentive for those who do!

Sightings help confirm where wolves occur across Unit 2. Knowing if wolves are well distributed each year is another measure ADF&G uses to complement the yearly population estimate.

"I want people to participate because we can't be everywhere and see everything," Hasbrouck said. "And it's a way for people who live [on P.O.W.] to tell us where they see wolves and when."

The wolf sightings website is a way to document wolf occupation in areas ADF&G may not be able to sample with tools like hair boards and trail cameras. The reports received so far indicate wolf observations "span 71 miles north to south and on five outer islands." This is as specific as Hasbrouck wants to be in the annual report she sends to anyone who submits an observation.

"It's useful to say 'on five outer islands' because a proposal [from the January 2023 Board of Game] stated that wolves aren't on small islands," she said. "This shows that wolves are, in fact, on the small islands."

Hasbrouck summarizes wolf sightings made by the public and works the results up into a stylish PDF delivered by email to those who provide information.

Any reports submitted online should include specific names of smaller islands, or locations on P.O.W., how many wolves are observed, coat color, whether they are adults or pups, and specific GPS coordinates, if available.

There is no deadline for submissions, Hasbrouck said. "I want them year round."

Beyond gathering and summarizing reports where wolves are sighted inside and outside the study area, Hasbrouck said she really hopes this effort is a two-way street.

"I think when people make the effort to report information to agencies like Fish and Game, they should get something in return. And so when people share this type of information, it shows that we are looking at it," she said. "Their observations do matter."

Stock image

Reporting when and where a wolf is sighted gives biologists more information about where wolves are across Prince of Wales Island.

Report wolf sightings online

Open your camera app and hover over this code to open the URL.

Why harvest reporting matters

State and federal law require that all harvested wolves be sealed by ADF&G or a designated sealer. Sealing involves attaching a metal tag to each hide and recording information about each wolf, including sex, and the date/location of harvest. ADF&G also collects tissue/DNA samples to identify individual wolves, which coupled with accurate dates and harvest locations, contribute to population estimates. Foreleg bones are used to age wolves into pup, yearling, and adult age classes, so ADF&G requests foreleg bones at sealing. Information collected during sealing helps managers ensure that the population and harvest remain sustainable.

Wolf Trails of Southeast Alaska

Photo: © Kris Larsen

Alaska Department of Fish and Game, July 2023

Deer steak, beaver tail, and a fish to finish it off

What do wolves eat for dinner on P.O.W. Island?

By Alex Lewis

It's not surprising that on Prince of Wales Island deer are wolves' primary food source. But are deer their only food source or do they eat a variety of prey? Gretchen Roffler, a biologist with ADF&G, along with collaborators at Oregon State University, analyzed wolf scats to see what wolves across Southeast Alaska eat and how their diet changed throughout the year.

In a peer-reviewed article published in 2021, Roffler and collaborators reported

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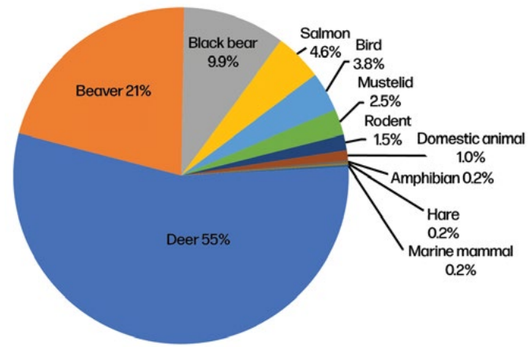
Check out future issues for:

- Genetic data reveals insights into variation of DNA in Southeast Alaska wolf populations.
- Research published by ADF&G Biologist Gretchen Roffler on wolves near denning sites and their associated habitat use.
- How trail cameras help wolf research
- Updates on ESA listing.

Photo by Sean Neilson

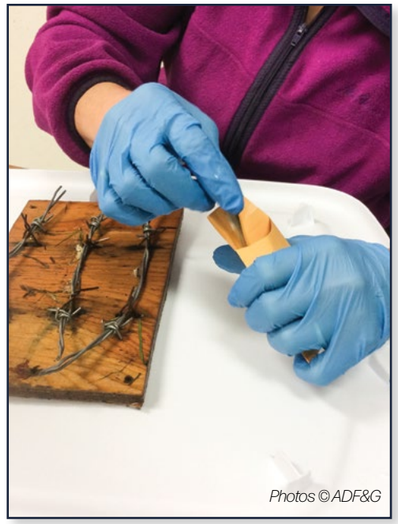
Biologists Alex Lewis and Gretchen Roffler investigate a wolf kill site to learn more about what wolves are eating on the Gustavus forelands. Collecting scat at kill sights, like this one, can provide biologists with information about food sources.



Gretchen Roffler | © ADFG

This chart illustrates the distribution and percentages of prey species found in wolf scat collected on Prince of Wales Island from 2012 to 2018.

Alaska Department of Fish and Game
Division of Wildlife Conservation
P.O. Box 110024
Juneau, AK 99811-0024



Left: Hair is extracted from a hair board and placed in a coin envelope to be sent to the lab. Right: A grey wolf rolls in the snow in winter. This behavior is common of wolves and other canids, like dogs. Hence, scenting a hair board which may encourage this behavior is a great way to snag fur and potentially valuable DNA.

Wolf hair board 'captures' help estimate P.O.W. population

By Alex Lewis

Figuring out how many animals are on the landscape is difficult. In Interior Alaska where tundra is prevalent and trees are sparse, biologists can use aerial surveys to count animals, but aerial counts are impossible in densely forested terrain. In Southeast Alaska, biologists get creative when finding ways to calculate how many animals are on the landscape. Prince of Wales and associated islands are the only areas in the state where ADF&G estimates the entire wolf population, and biologists are continuously trying to improve their methods.

In 2012, ADF&G and the U.S. Forest Service began a project to use DNA from hair samples and spatially-explicit capture-recapture (SECR) to estimate fall wolf abundance in Unit 2. Biologists designed the project to capture hair/DNA from as many wolves as possible using strands of barbed wire fastened to small plywood boards. The hair boards are scented with a lure to entice wolves to investigate and hopefully roll on the hair board — like a dog will roll on a salmon carcass. The wire catches small clumps of hair. If there is enough high-quality DNA, biologists can identify individual wolves. DNA degrades in the environment, so hair boards are checked and re-scented weekly.

Late September to early December is the best season for sampling. By then bears, which also roll on hair boards, are heading to dens to hibernate. It can be difficult to distinguish black bear hair from wolf hair, and mixed hair samples are highly time consuming to sort, and therefore not ideal. By fall, pups are traveling with adult pack members and can be sampled as well. And finally, hair boards are distributed all over northern and central P.O.W., so sampling needs to be complete before snow blocks roads. Although improvements are always being explored, the DNA-based SECR approach is currently the best available way of estimating wolf abundance. For instance, when ADF&G compared the newer SECR method to a traditional capture-and-radiocollar approach, they found the SECR method to be much more efficient and precise. It is important to understand that estimates are not counts, and there

HAIR BOARDS cont. at right

Endangered Species Act update: Decisions coming soon

By Tom Schumacher

Background

In July 2020 the Center for Biological Diversity, Rainforest Defenders, and Defenders of Wildlife petitioned the US Fish and Wildlife Service to again consider wolves throughout Southeast Alaska for listing under the Endangered Species Act. ADF&G has been actively engaged in the review because a decision to list wolves would have profound consequences, including loss of state and federal subsistence authority over wolf harvest. In March 2023 the Alaska Region of the USFWS forwarded their analysis and recommendation to their Washington, D.C. headquarters for a final decision. That decision will be published in the September 2023 edition of the Federal Register.

© ADFG

A wolf walks through the ocean at low tide. The USFS is set to publish their decision on how wolves should be listed, if at all, under the Endangered Species Act.

Possible decisions

Three outcomes are possible. USFWS will find that listing is:

1. Not Warranted: wolves should not be listed; this would end the process.
2. Warranted but precluded: wolves should be listed but other species are higher priority for USFWS; the process would be suspended; or
3. Warranted: wolves should be listed; USFWS would initiate a 12-month public process to finalize the listing and designate critical habitat. Wolf harvest under state and federal seasons would be suspended, probably beginning in fall 2024 until wolves are de-listed.

Other legal news: ADF&G is also the defendant in a lawsuit brought by the Alaska Wildlife Alliance (AWA) in summer 2020 alleging management of Unit 2 wolves by ADF&G does not comply with the Alaska Constitution's sustainability clause. ADF&G prevailed in an April 2022 trial, but AWA appealed to the Alaska Supreme Court. Oral arguments are planned for fall 2023, with a decision expected in 2024.

HAIR BOARDS cont.

is always some uncertainty over how well the estimate reflects the true number of wolves in Unit 2. For that reason ADF&G always presents an estimate within a range of possible values (confidence interval) for the population size that year. Narrower confidence intervals indicate greater confidence in the estimate.

This project began as a collaboration between ADF&G and the USFS, but it has expanded to include the Hydaburg Cooperative Association. People from all three organizations work each fall to deploy and maintain hair boards for the entire season. Teachers from the Craig School District also deploy a few hair boards, contributing hair they collect to ADF&G's estimates. Tissue collected from harvested wolves also contributes DNA for the estimate. In January, ADF&G biologists send hair and tissue samples to a laboratory for genetic analysis. Genetic information is sent back to ADF&G where a biometrician uses the unique wolf IDs and the date and location where each sample was collected to calculate that year's population estimate. Each person involved in this project plays an important role in making sure the best information is obtained. ADF&G would like to extend a huge "THANK YOU!" — to all who participate.

Wolf scat is best identified by its contents, physical shape and size. Often, bone fragments and fur can be visible in the scat. However, it can vary in appearance based on the wolf's diet. Typically it is cylindrical to oblong in shape and typically has pointed ends. Biologists working to analyze wolf scat in Southeast Alaska welcome contributions from community members. See infobox below for more details.

Abby McAllister | © ADFG
Photo by Sean Neilson

How to submit wolf scat samples

Place wolf scat in a Ziploc bag and write the following on the outside of the bag with a black, permanent marker:

- Wolf scat – age (e.g. fresh, old, ancient)
- Location (e.g. Staney Creek)
- Date
- GPS Coordinates (decimal degrees preferred, but not necessary)

Keep scat in a freezer until you contact ADF&G for further instructions.

For more information, contact Alex Lewis – alex.lewis@alaska.gov.

SCAT cont.

the results from the analysis of 860 scats collected from 2010 to 2018 by ADF&G biologists, other agencies and the public, including 301 scats from P.O.W.

Until recently, contents of predator scats were identified by looking for hair, bones, feathers, etc., that identified the animal eaten, but that only informs about larger prey with identifiable remains. To learn more about wolf diet Roffler and colleagues used a new technique called DNA metabarcoding. This technique identifies prey species by DNA found in scats. Deer accounted for just over half (55%) of all prey items detected in P.O.W. wolf scats followed by beaver (21%) and black bear (10%), but P.O.W. wolves included many other prey in their diet (see pie chart). On average, 1.63 prey items were found per scat indicating most scats included 2 or more prey species.

Diets of P.O.W. wolves were generally similar to diets of wolves elsewhere in Southeast Alaska. Hooved animals like deer, moose, and mountain goats made up most of what wolves eat in Southeast Alaska. But sometimes wolves turn to a more diverse diet. For example, on Pleasant Island near Gustavus where deer have become obsolete, wolves have turned to sea otters as their primary prey supplemented by intertidal fish and waterfowl.

ADF&G is investigating changes in wolf diet over time, so ADF&G biologists, Roffler and Alex Lewis, continue to collect wolf scats from all over Southeast Alaska. The public is encouraged to collect scats for ADF&G. For more information contact Alex Lewis at alex.lewis@alaska.gov. The article titled "Metabarcoding of fecal DNA shows dietary diversification in wolves substitutes for ungulates in an island archipelago," can be found at:

https://esajournals.onlinelibrary.wiley.com/doi/10.1002/ecs2.3297.