



ALASKA'S NATIONAL WILDLIFE REFUGES PATCH

Visit a National Wildlife Refuge or a refuge headquarters to earn this patch. It is recommended that you contact refuge staff (U.S. Fish & Wildlife – see attached contact info) first to see how they can help you earn the patch, and to find out what educational resources are available. If it's not possible for you to visit a Refuge or refuge headquarters, you may visit an Alaska Public Lands Information Center (located in Anchorage, Fairbanks, Ketchikan and Tok), or you may check out the *National Wildlife Refuges of Alaska* movie from the Council Office.

** A Girl Scout kit is available at the Kenai National Wildlife Refuge in Soldotna that has materials and supplies to complete some of the patch activities.*

Brownies: complete 4 activities (including #1 and 2)

Juniors: complete 5 activities (including #1 and 2)

Cadettes, Seniors and Ambassadors: complete 6 activities (including #1 and 2)

It is recommended (but not required) that you complete at least one animal-related activity and one plant-related activity.

REQUIRED ACTIVITIES

- 1. About Your Refuge** After finding out about the history of the National Wildlife Refuge System by reading the background info provided or watching the *National Wildlife Refuges of Alaska* movie (available at each Refuge, Alaska Public Lands Center, or at the Council Office), get to know your local refuge. What are the major bodies of water in the refuge and what are the major land features - tundra, wetlands, glaciers, volcanoes, maritime or mountains? Find out why and when the refuge was created and how large it is. Make a poster or a map showing what you learned.
- 2. Recreation Activity*** Many refuges are open to wildlife dependent recreation. Visit a refuge or a nearby forest or tundra to try a recreational activity such as hiking, tide pooling, or walking along a beach. Snowshoeing and skiing are winter possibilities, and some refuges may have snowshoes available for use. Investigate off-trail for animal and bird tracks, or head to a field or snow-covered frozen lake to try out races and games. Note: If snowshoeing for the first time, it's good to use a packed trail until you gain more experience.

ANIMAL-RELATED ACTIVITIES

- 3. Animal Tracks*** Identify five Alaskan animals' tracks and learn about their gaits (the distance between the footprints). Using your own hands and feet, try to accurately walk the gait of two different animals. Do an art project of some kind making a replica or print of animal tracks.
- 4. Endangered and Threatened Species of Alaska** Find out what species are endangered or threatened in Alaska (http://adfg.state.ak.us/special/esa/esa_home.php). Sea otters were over-harvested for their furs but have since make a comeback because of recognition of the problem. Are there animals, birds or plants on the list that you have seen? Find out which species live in the refuge nearest you. Write a poem or draw a picture about one of the species listed on the web site.

5. **Birds** Identify 5 birds native to your refuge. Then make a feeder or bird house for your back yard and learn what food mixture to use (don't leave bird food out during bear season); OR learn about Duck Stamps and what the fees are used for. Create your own Duck Stamp design, and consider submitting your entry to the Junior Duck Stamp Contest (contest rules available at <http://duckstamps.fws.gov>).
6. **Salmon** View pictures of the five species of salmon (http://www.adfg.state.ak.us/special/as/docs/id_%20chart.pdf) and learn about fish habitat. Make a drawing of a healthy fish habitat. Remember to have fresh flowing water, hiding places and food for the newly hatched eggs (and salmon). List three things that are possible threats to the well-being of fish habitat or that can cause erosion to the banks of fish habitat.
7. **Animal Identification*** Find out what animals live in your refuge and learn about them. <http://www.adfg.state.ak.us/pubs/notebook/notehome.php> is a great website of fish, wildlife, birds, etc. with pictures and information. Using resources from your local refuge or a local taxidermist, match animal fur samples to photos of animals. Some possible Alaskan animals are black bear, brown bear, mountain goat, Dall sheep, deer, moose, wolf, snowshoe hare, ermine, wolverine, red fox, marmot, beaver, otter, seal, sea lion and walrus.
8. **Seasonal Adaptation and Camouflage*** Learn about seasonal adaptation and camouflage in the ermine, snowshoe hare, arctic fox or ptarmigan. Can you think of other animals that use adaptation and camouflage? Play a camouflage game (i.e., hide and seek).

PLANT-RELATED ACTIVITIES

9. **Invasive Plants, Fish or Animals** Identify three invasive plants in your refuge. See if you can identify the plants both prior to and after blossoming. Talk with refuge staff to find out if your refuge has any invasive animals, fish or other species. Find out why these plants or animals are a threat to native species and how they got on the refuge. Is anything being done to remove them? See if there is an opportunity to volunteer to help pull invasive plants at your refuge (or other public lands in your community), and do this as a troop service project.
10. **Native Plants** Learn uses of native plants located in your refuge by humans – for food, medicine or decorative purposes. Use plants to add color to a bandana or tee shirt by using the leaves and blossoms for natural dye.
11. **Trees** Identify and become familiar with the bark of four different trees native to your refuge. Notice the bark's texture, odor and the leaf shape. Trees grow from the core out and create rings. If samples are available from your local Refuge, study tree ring samples and see if you can tell the ages of the trees.

OTHER ACTIVITIES

12. **Home to Humans?** What kind of people work at Alaska's refuges? What types of jobs are available? Interview up to three refuge staff to learn what they do at the refuge.
13. **Water Everywhere** Make a groundwater parfait (Edible Earth Parfait) and learn about how pollutants get into our groundwater (<http://www.groundwater.org/kc/activity5.html>). Wetlands are often located in Refuges. Learn why wetlands are important in your Refuge (for migratory birds, fish, animals, floods, purifier, etc.).

Girl Scouts Susitna Council is grateful for the help of the following in the development of this patch activity list: Michelle Ostrowski, Kenai National Wildlife Refuge, AK; Tewaukon National Wildlife Refuge, ND; and Sadie Wright, Alaska Dept. of Fish & Game.



NATIONAL WILDLIFE REFUGES (<http://www.fws.gov/refuges/>)

Wildlife habitat is found in very special managed places called National Wildlife Refuges. Habitat is a home for wildlife. It includes everything an animal needs for survival – water, food, shelter, and space. As of September, 2007, there were 548 refuges in the United States. These public lands are managed by the U.S. Fish and Wildlife Service.

The system encompasses more than 96 million acres of land. There is at least one refuge in every state from hot deserts to frozen tundra. Alaska has 16 National Wildlife Refuges where animals come first! Refuges provide important habitat for caribou and birds that migrate, endangered or threatened species, whales, otters, butterflies, bison and many other animals and plants.

Over one hundred years ago President Theodore Roosevelt, along with many other people, became concerned about the over-hunting of many of our country's beautiful birds. Large numbers of pelicans, egrets and herons were being killed every day. President Roosevelt created the first National Wildlife Refuge (Pelican Island NWR) in Florida in 1903. Mr. Roosevelt helped establish 50 more refuges, and he helped to draft laws to protect birds and animals from over-hunting. In Alaska, Refuges range from the North Slope to the rainforests in Southeast and to the tip of the Aleutian Chain. Refuges provide not only protection for animals, plants and their habitats, but many are also open to the public for bird watching, hiking, wildlife observation, hunting, fishing, boating, camping and more.

BLUE GOOSE HISTORY

Many countries, states and groups have symbols that represent themselves. For example, the bald eagle is America's national symbol and is used to represent freedom and strength. Alaska's state flag has the stars of the Big Dipper and represents the northern skies. In 1935, a cartoonist named Jay "Ding" Darling drew a picture of a blue goose to raise awareness of the need to conserve birds by protecting the habitats in which they live. The symbol later became the symbol of the National Wildlife Refuge System. When you see the blue goose on a sign, you know you are in a National Wildlife Refuge.



Alaska's National Wildlife Refuges:

(Refuges with Visitor Centers are in italics and bold)

<p><i>Alaska Maritime National Wildlife Refuge</i> Alaska Islands & Oceans Visitor Ctr., Homer E-mail: alaskamaritime@fws.gov Lisa Matlock: 907-235-6546 http://alaska.fws.gov/nwr/akmar/index.htm</p>	<p><i>Kodiak National Wildlife Refuge</i> Kodiak Refuge Visitor Ctr., Kodiak E-mail: kodiak@fws.gov Sue Knoth: 907-487-2600 http://kodiak.fws.gov</p>
<p><i>Alaska Peninsula National Wildlife Refuge</i> King Salmon Interagency Visitor Ctr., King Salmon E-mail: akpeninsula@fws.gov 907-246-4250 or 907-246-3339 http://alaskapeninsula.fws.gov</p>	<p>Koyukuk National Wildlife Refuge Galena E-mail: koyukuk@fws.gov 907-656-1231 http://koyukuk.fws.gov</p>
<p><i>Arctic National Wildlife Refuge</i> Arctic Interagency Visitor Ctr., Coldfoot (mile 175) E-mail: arctic_refuge@fws.gov Cathy Curby: 907-456-0250 and 800-362-4546 http://arctic.fws.gov</p>	<p>Nowitna National Wildlife Refuge Galena E-mail: nowitna@fws.gov 907-656-1231 http://nowitna.fws.gov</p>
<p><i>Becharof National Wildlife Refuge</i> King Salmon Interagency Visitor Ctr., King Salmon E-mail: becharof@fws.gov 907-246-4250 or 907-246-3339 http://becharof.fws.gov</p>	<p>Selawik National Wildlife Refuge Kotzebue E-mail: selawik@fws.gov 907-442-3799 http://selawik.fws.gov</p>
<p>Innoko National Wildlife Refuge McGrath E-mail: innoko@fws.gov 907-524-3251 http://innoko.fws.gov</p>	<p><i>Tetlin National Wildlife Refuge</i> Tetlin Refuge Visitor Ctr., Alaska Hwy. – 5 miles from Canadian Border E-mail: tetlin@fws.gov Mary Timm: 907-883-5312 http://tetlin.fws.gov</p>
<p>Izembek National Wildlife Refuge Cold Bay E-mail: izembek@fws.gov 907-532-2445 http://izembek.fws.gov</p>	<p>Togiak National Wildlife Refuge Dillingham E-mail: togiak@fws.gov Terry Fuller: 907-842-1063 http://togiak.fws.gov</p>
<p><i>Kanuti National Wildlife Refuge</i> Arctic Interagency Visitor Ctr., Coldfoot (mile 175) E-mail: kanuti_refuge@fws.gov 907-456-0329 http://kanuti.fws.gov</p>	<p><i>Yukon Delta National Wildlife Refuge</i> Yukon Delta Refuge Visitor Ctr., Bethel E-mail: yukondelta@fws.gov 907-543-3151 http://yukondelta.fws.gov</p>
<p><i>Kenai National Wildlife Refuge</i> Kenai Refuge Visitor Center, Soldotna E-mail: kenai@fws.gov Michelle Ostrowski: 907-262-7021 http://kenai.fws.gov</p>	<p><i>Yukon Flats National Wildlife Refuge</i> Arctic Interagency Visitor Ctr., Coldfoot (mile 175) E-mail: yukonflats@fws.gov 907-456-0440 http://yukonflats.fws.gov</p>

Alaska Public Lands Information Centers
605 W. 4th Ave. #105, Anchorage (271-2737)
250 Cushman St., #1A, Fairbanks (456-0527)
Milepost 1314, Tok (883-5667)

Southeast Alaska Discovery Center
50 Main St., Ketchikan (228-6234)

DUCK STAMPS

Hunters must purchase a "Duck Stamp" each year to hunt ducks, geese and swans. The money raised from the sales is used to purchase wetlands and grasslands for the birds. These areas allow birds to nest, raise their families and feed during their long migration.

Duck Stamps are designed by artists and change each year. There is a Junior Duck Stamp Program open to all youth K-12. For more information about the Junior Duck Stamp Contest, visit <http://duckstamps.fws.gov> or contact your local wildlife refuge office for the guidelines. Submissions must be made before March 15 each year.