

Northern Goshawk (*Accipiter gentilis*)

This 20-26" (50-65 cm) long hawk with a wingspan of 42-48" (1-1.2m) can be distinguished by its black cap and ear patch which are marked off by a white eye-stripe. It is uniformly gray above and white with light gray cross-barring below. It flies with several flaps of the wings followed by a glide. As with most birds of prey, the female is larger and stronger than the male.

The male supplies food while the female incubates and tends the young. As the young grow and demand more food, both parents hunt. Although Northern Goshawks can kill animals as large as jackrabbits, they feed mainly on grouse and smaller birds. As a circumpolar species, this bird inhabits the northern coniferous forests and its western extensions. It migrates and winters in lowlands as far south as northern Mexico.

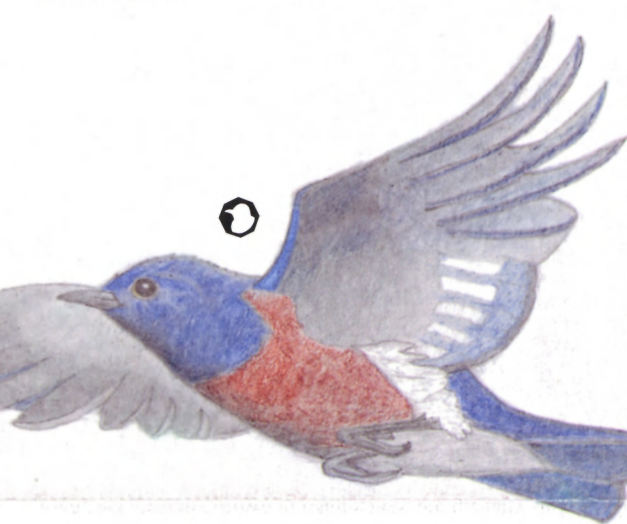


Western Bluebird (*Sialia mexicana*)

This long-winged, rather short-tailed bird measures 6-7" (15-18 cm). The male has a deep blue head, tail, throat, and wings, a rusty red breast and crescent mark across upper back, and a white belly. The female is sooty gray above, reddish-brown on sides, with dull blue wings and tail. Juveniles look like the female, but are grayer and have speckled underparts.

The Western Bluebird lives in coniferous forests and mixed evergreen forests with old trees for nest sites, also in brushlands and cultivated areas.

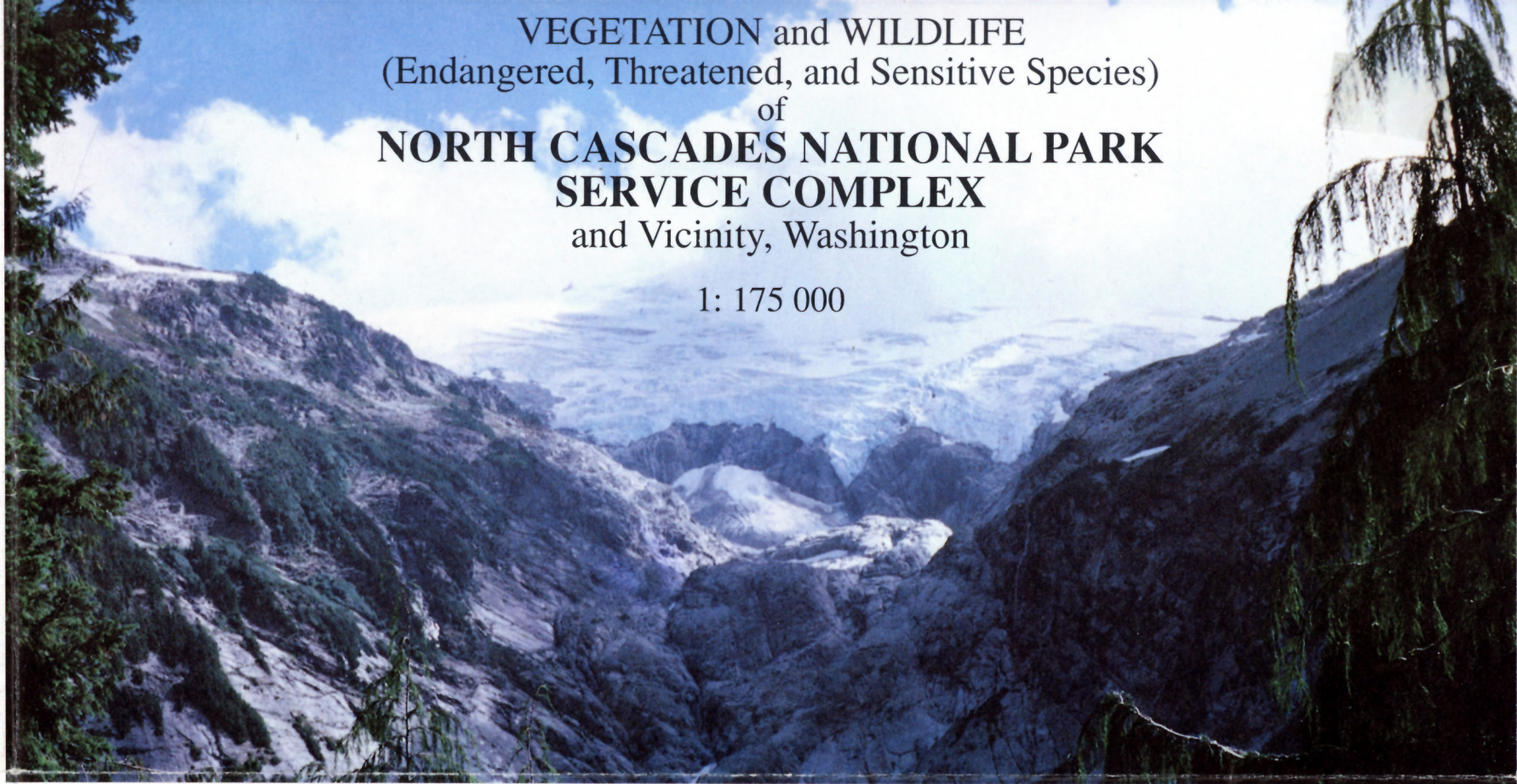
Females are attracted by the vivid blue of the male and by the availability of nesting holes, which are often in short supply. Once the male secures a nesting hole he entices the female with a colorful display that repels rivals. His red breast is a signal of aggression toward other males.



From cover: Challenger Glacier

VEGETATION and WILDLIFE
(Endangered, Threatened, and Sensitive Species)
of
NORTH CASCADES NATIONAL PARK
SERVICE COMPLEX
and Vicinity, Washington

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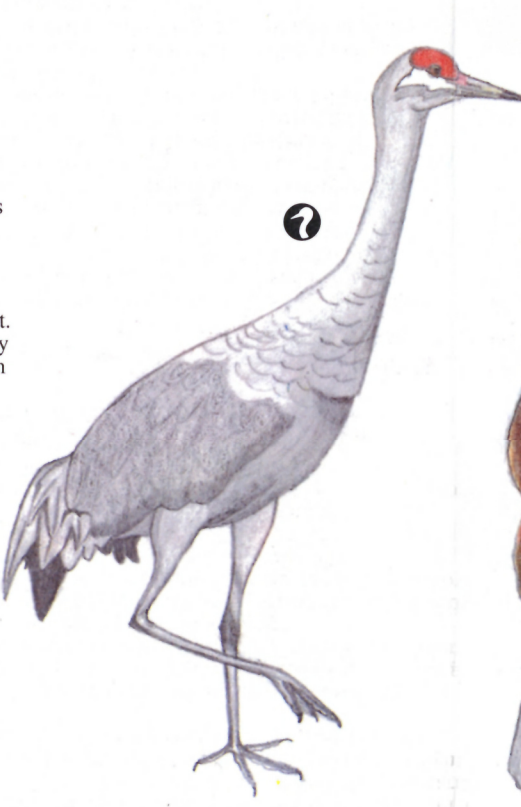


Sandhill Crane (*Grus canadensis*)

The Sandhill is still common at some places in the North, but the nesting population in British Columbia and the United States is decreasing due to loss of its habitat.

It measures 34-48" (85-120 cm), its color being of ash or wet sand, with a red cap on the forehead. The bill is relatively short. Like all cranes, this bird flies with neck and legs outstretched. Breeding grounds are marshes and both parents incubate the eggs and tend the young.

In winter the bird chooses not only marshes but also extensive prairies and fields, where it thrives on spilled grain. Families fly together in groups of 20 to 100 birds in "V" formation, usually during early afternoon when the air is warmest. In rising columns of air, called thermals, the cranes gain height by circling on outstretched wings until almost out of sight, then form a "V" again and glide to the next thermal.



Bald Eagle (*Haliaeetus leucocephalus*)

The U.S. national bird has, when over 5 years old, a snow white head, neck, and tail, and a yellow bill; the rest of the body is brownish-black. It measures 30-43" (75-108 cm), with a wingspan of 78-96" (2-2.4 m). It lives on or near seacoasts, large lakes and rivers where fish are abundant.

The Bald Eagle is primarily a fish-eater, but also feeds on carrion and crippled waterfowl. Hunting, poaching, the encroachment of civilization, and the accumulation of pesticides in its body from contaminated fish and wildlife have diminished its numbers.

The Skagit Valley in the North Cascades hosts one of the largest concentrations of this threatened species in all of the lower 48 states. The arrival of the eagles coincides with the spawning of salmon whose carcasses are the birds' major food source. January and February are the peak months when about 500 birds frequent the Skagit and Nooksack Rivers.

A communal night roost survey for Bald Eagles has been coordinated by the Forest Service for four years that provides data which will support protection of eagle habitat in the Skagit Valley. The number of birds sighted during the surveys has been increasing over the last few years.

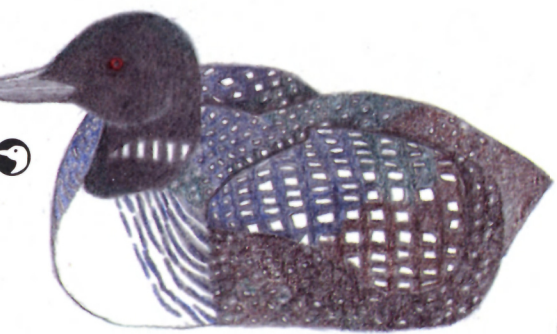


Gray Wolf (*Canis lupus*)

The Gray Wolf's body measures 40-80" (1-2 m). It is usually grizzled gray, but shows great variation in color, ranging from white to black. The long, bushy tail has a black tip. Males are larger than females. The hind foot is very large, leaving a track about 5" (12.5 cm) long. This animal lives in coniferous forests, mountain meadows, subalpine meadows, and streamside woodland.

A social animal, it lives in packs of 2-15, usually 4-7, formed primarily of family members and relatives. The Gray Wolf possesses various whines, yelps, growls, and barks; but not all wolves are capable of barking. Howls are used to keep the pack together and may stimulate the urge to hunt.

Wolves were almost eradicated from the western U.S. by 1940. Five or ten years ago they were extinct in Vancouver Island, Montana, and Wisconsin. Natural repopulation of these areas has since occurred, with each now supporting small breeding populations. Apparently the northern Cascade Range is experiencing a natural increase in wolves, which could lead to reestablishment of a breeding population. In the past few years numerous possible wolf tracks have been photographed in the North Cascades. In the last twenty years there have only been about 15 fleeting sightings of the shy Gray Wolf in this area.



American White Pelican (*Pelecanus erythrorhynchos*)

The very large White Pelican measures 54-70" (135-175 cm) with a wingspan of 108" (2.7 m). It is uniformly white with black primaries (outermost and longest flight feathers) and outer secondaries (flight feathers along the rear edge of the wing) and has a large, yellow pouched bill.

It inhabits large, shallow bodies of water rich in fish, with flat inaccessible islets for nesting, which it does in colonies. The young are naked at first, and parents must shield them from the sun. After leaving the nest, they congregate in large groups.

Unlike the Brown Pelican (*Pelecanus occidentalis*), individual birds do not dive for prey but cooperate with others to trap fish in shallow water, scooping them into their enormous bill pouches.

A vanishing species, the White Pelican is a victim of insecticide poisoning and shooting by hunters who mistake it for the Snow Goose. Many nesting colonies are decreasing due to careless visitors who scare these birds off at midday, causing the death of many young from overexposure to the sun.

Common Loon (*Gavia immer*)

About the size of a Canada Goose, the loon is 28-36" (70-90 cm) long. Breeding birds are blackish-gray, with cheek, throat, and underparts white; head and neck are glossy green-black, the back is checkered with pearl-white marks. In winter, color changes to gray-brown above and white below. The dark bill is heavy and straight, whereas the similar Yellow-billed Loon (*Gavia adamsii*) seems to have an upturned bill. It gives a yodelling call on breeding grounds, less commonly on migration. The Common Loon's habitat are lakes or rivers with deep water where vegetation reaches the waterline to hide the nest. In winter, the majority prefer bays and coves along the coast. Loons are powerful divers and are able to stay under as long as 2 or 3 minutes.

Washington presently has less than 5 known nests. Although dozens of sightings of loon pairs have occurred in the park in spring and summer, breeding was confirmed just last year.

Common Loon populations have been diminished by human activities. Many accidentally drown in fishing nets, are illegally shot, or die of pesticides. Loss of habitat has resulted from the filling of ponds and construction of vacation homes along lakeshores. Numbers in the park appear stable, though, and breeding habitat relatively secure. However, because the loons are migratory, most spend part of each year outside the park, where protection is not ensured.



Trumpeter Swan (*Cygnus buccinator*)

One of North America's largest birds, the swan measures 60-72" (150-180 cm), the adult male weighing up to 28 pounds (over 12.5 kg). It is snow white with a brownish tinge on head and neck and a black bill. The immatures are dusky, gray-brown, and have pink bills with a black base and tip. This swan swims with straight neck and horizontal bill.

Its habitat are marshes, lakes, or rivers with dense vegetation. Draining of marshes, hunting, and other disturbances brought the Trumpeter Swan close to extinction. From a very small number in the 1930s, conservation measures increased their number to more than a thousand in each of two remaining nesting areas, one in Alaska and northern Canada and the other in Montana and nearby states. Reintroduction into formerly inhabited marshes has been successful and the population in 1985 was estimated at about 10,000.

Information about individual species is compiled and partly cited from following sources:

UDVARDY, Miklos D.F. 1986: The Audubon Society Field Guide to North American Birds. Western Region. Twelfth printing. New York, Toronto.

WHITNEY, Stephen 1986: Western Forests. (The Audubon Society Nature Guides). Second printing. New York, Toronto.

THE NORTH CASCADES CHALLENGER. Summer/Fall 1989. Sedro Woolley.

YOCOM, Charles & Vinson Brown 1971: Wildlife and Plants of the Cascades. (American Wildlife Region Series, Vol.8). Happy Camp.

MURFIN, James V. (Ed.) 1985: Pacific Northwest and Alaska. (The Sierra Club Guides to the National Parks). New York.



Peregrine Falcon (*Falco peregrinus*)

The cosmopolitan Peregrine Falcon inhabits grasslands, marshes and lakes, cliffs and large rock outcroppings.

It measures 15-21" (38-53 cm) with a wingspan of 39-45" (98-113 cm). The male is slate gray above, with a dark mustache, and pale below with a white unstreaked throat and fine barring on its buffy breast. The female is browner, and juveniles are darker buff, with heavy streaking on the underparts.

This falcon once ranged from coast to coast in North America, but is now scarce in the western United States and absent from the eastern states. It flies with dazzling speed and catches and kills fast-flying ducks and other large birds on the wing. Its legendary speed and stoops after prey have made it the most sought-after bird of prey by falconers in the northern continents. Pesticide accumulation has brought this falcon near extinction; however, experimental breeding programs in captivity are proving successful.

Grizzly Bear (*Ursus arctos*)

This bear's brown to brownish-yellow body, which measures 6-7' (1.8-2.1 m), has a grizzly appearance because of numerous white-tipped hairs. It differs from the Black Bear (*Ursus americanus*) by the shoulder-hump and the somewhat concave facial profile. The two species cannot be distinguished reliably by color and size only.

The hindprint of a large Grizzly may be 10-12" (25-30 cm) long and 7-8" (18-20 cm) wide in the front; the foreprint is often as wide and about half as long.

The Grizzly inhabits semiopen country usually in mountainous areas. Omnivorous, it feeds on many kinds of plants, including roots or sprouts, fungi, berries, fish, insects, large and small mammals, and carrion. Grizzly cubs can climb, though not as nimbly as Black Bear cubs, but lose the ability during their first year.

In winter, the bears den up in a protected spot, such as a cave, crevice, hollow tree, or a hollow dug out under a rock. Not being true hibernators, they can be awakened easily.

The Grizzly was declared a threatened species in 1975, and is protected by the Federal Endangered Species Act. The bear is an endangered species in Washington. Major causes of their decline are habitat loss and excessive human-caused deaths. The Interagency Grizzly Bear Committee, comprised of nine state, federal, and provincial agencies, coordinates study and habitat recovery efforts. In the North Cascades, the interagency group is conducting a five year evaluation to document Grizzly Bear population size, distribution, and habitat requirements. This information will be used to make management decisions concerning the future of the resident population.

While the Grizzly normally avoids man, some precautions are necessary when moving in Grizzly country. Park officials are prepared to give advice on how to behave and what to avoid during an encounter with a bear.



Spotted Owl (*Strix occidentalis*)

This large rodent-eater (16-19", 40-48 cm) is dark brown with white spots on head and back and has brown barring below. It has large dark eyes, while all other True Owls (*Strigidae*) have yellow eyes. *Strix* owls are round-headed, fluffy birds with no ear tufts. This owl's call is a high-pitched "who-hoo-hoo"; each group rapidly repeated, it sounds like a dog barking.

Spotted Owls require mature old-growth coniferous forest and quickly retreat with the advance of civilization, like cutting of roads. Often the larger, more adaptable Great Horned Owl (*Bubo virginianus*) will take its place. Whether or not the latter kills off the Spotted Owl has not been ascertained.

Field studies on the Spotted Owl by the Forest Service in the North Cascades area were initiated after the decision of the U.S. Fish and Wildlife Service to consider listing this bird as a threatened or endangered species.

Fisher (*Martes pennanti*)

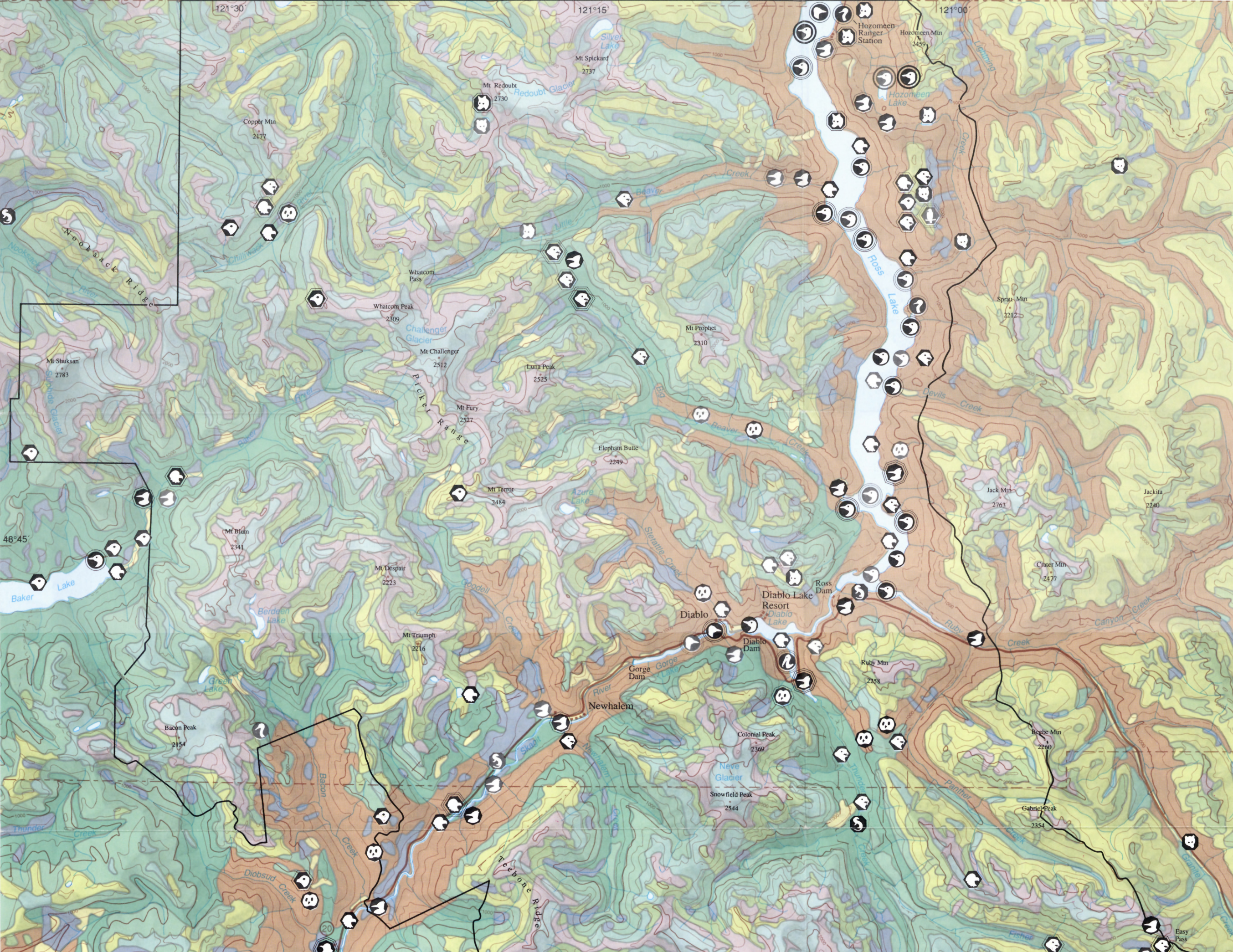
The Fisher's body measures 19-24" (48-60 cm), its tail 13-17" (33-43 cm). Generally blackish-brown, it has grayish shoulders and grizzled fur on top of head with white hairs and whitish spots on belly and throat.

It does not really fish at all, but got its name from the habit of extricating fish used as bait out of traps. Its main prey, however, are large rodents and birds and it even runs down and kills American Martens (*Martes americana*). Probably the most successful killer of porcupines, it throws this animal on the back to get at the unprotected belly.

It lives in Ponderosa and lodgepole pine forests.

This large marten was eradicated in several areas, but thrives in protected regions.





National boundary

County boundary

National Recreation Area, National Forest, and Wilderness boundary

National Park Service Complex boundary

Primary highway

Light-duty road

Unimproved road

Trail

State Route

Ferry

Conversion table

Metres - Feet

2500

7500

2000

6000

1500

4500

1000

3000

500

1500

0

0

Scale 1: 175 000

0

5

10

15 Kilometres

0

5

10 Miles

Contour interval 250 metres

Mountain height in metres

Final project by Monika Nill, Department of Survey and Cartography, Fachhochschule Karlsruhe, Federal Republic of Germany, under supervision of Prof. Dr. Dietrich O. Müller

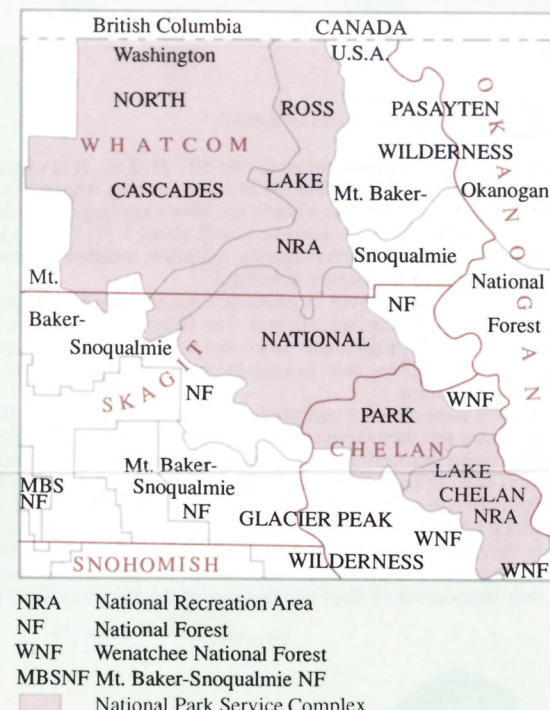
Base map generalized from 1 : 100,000-scale topographic map "North Cascades National Park, Wash.", dated 1974, published by the U.S. Geological Survey

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VEGETATION and WILDLIFE
(Endangered, Threatened, and Sensitive Species)
of
NORTH CASCADES NATIONAL PARK SERVICE COMPLEX
and Vicinity, Washington

WILDLIFE
The location of a symbol shows the sighting of one of the following species covering the period from 1967 to July 1988:

- MAMMALS

Bears (*Ursidae*)

Grizzly Bear - *Ursus arctos* (E,-)

Wolves (*Canidae*)

Gray Wolf - *Canis lupus* (E,E)

Martens (*Mustelidae*)

Fisher - *Martes pennanti* (S,-)

BIRDS

Cranes (*Gruidae*)

Sandhill Crane - *Grus canadensis* (E,-)

Pelicans (*Pelecanidae*)

American White Pelican - *Pelecanus erythrorhynchos* (E,S)

Swans (*Anatidae*)

Trumpeter Swan - *Cygnus buccinator* (-,S)

Loons (*Gaviidae*)

Common Loon - *Gavia immer* (S,S)

True Owls (*Strigidae*)

Spotted Owl - *Strix occidentalis* (E,S)

Hawks (*Accipitridae*)

Bald Eagle - *Haliaeetus leucocephalus* (T,T)

Ferruginous Hawk - *Buteo regalis* (S,-)

Northern Goshawk - *Accipiter gentilis* (S,-)

Swainson's Hawk - *Buteo swainsoni* (S,S)

Falcons (*Falconidae*)

Peregrine Falcon - *Falco peregrinus* (E,E)

Woodpeckers (*Picidae*)

Pileated Woodpecker - *Dryocopus pileatus* (S,-)

Bluebirds (*Turdidae*)

Western Bluebird - *Sialia mexicana* (S,S)

Letters in parentheses indicate status; first letter stands for status in state, second for federal status: E=endangered, T=threatened, S=sensitive, -=no special status

Date of sighting:

Number of sightings:

1

2

3-6

9-20

More than one sighting at the same location need not have occurred at the same time

VEGETATION

Snow

Rock

Subalpine herb/ Heather meadow

Subalpine Fir/Whitebark Pine/ Subalpine Larch

Mountain Hemlock

Pacific Silver Fir

Western Hemlock

Broad-leaved trees and shrubs

Douglas-fir

Ponderosa Pine

Lowland herb

Date of Landsat MSS data tapes used for vegetation mapping

27 June 1978

20 July 1979

Since Landsat scenes were recorded in early to mid-summer, snow-covered areas are not necessarily glaciers or névés, but may be rock or subalpine meadows under snow