National Park Service

Flash Card Series

Amphibians of Alaska

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Amphibians of Alaska

CITATIONS

Hodge, Robert Parker. 1976. *Amphibians and Reptiles in Alaska, the Yukon Territories and Northwest Territories* Anchorage: Alaska Northwest Publishing Company

Stebbins, Robert C. 1985. *Western Reptiles and Amphibians.* New York: Houghton Mifflin Company.

Richter, Klaus. 2000. *How to Identify Salamanders and Frogs in Puget Sound Lowlands.* King County, Washington, Department of Natural Resources, Water and Land Division. Amphibian Web Site: http://dnr.metrokc.gov/wlr/waterres/amphibian/index.htm

Altig, R., R.W. McDiarmid, K.A. Nichols and P.C. Ustach. *Tadpoles of the United States and Canada: A Tutorial and Key.* USGS Web Site: http://www.pwrc.usgs.gov/tadpole/

NP Species—National Park Service Species Database

Alaska Natural Heritage Program, University of Alaska, *Expected Species List*, 2001.

PHOTO CREDITS

Glacier Bay wood frog by Chad Soiseth, NPS

Wood frog adult, Copyright©2001 John White

Spotted frog larvae, Copyright©1999 William Leonard

Spotted frog eggs/ bottom, Copyright©1992 William Leonard

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Boreal toad eggs, Copyright©1998 Joyce Gross

Displaying rough-skinned newt, Copyright©1998 Harry Greene

Northwestern salamanders by Dr. Robert Thomas and Margaret Orr, California Academy of Sciences

Northwestern Salamander larvae and rough-skinned newt by Matthew Hunter

Drawings by Jennifer McGrath, NPS

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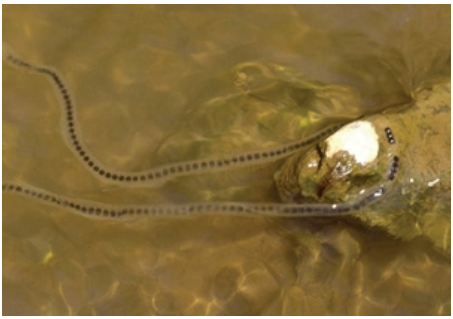
Alaska Amphibian Field Flashcard

BOREAL TOAD

(Bufo boreas boreas)

Adult boreal toad. Note bumpy skin and dominate parotoid glands on the back of the head. Approximately 6-12.5 cm in length.



Boreal toad egg clutch in typical string form attached to a rock.

Boreal toad tadpoles 2.5-5 cm in length, black on top, lighter underneath. They forage in large schools and emerge as toadlets in July-August.

Alaska Amphibian Inventory Project
National Park Service, Inventory and Monitoring Program
Funded by the Southeast Alaska Network, Lewis Sharman, Network Lead

BOREAL TOAD

(Bufo boreas boreas)

(from Hodge 1976, and Stebbins 1985, Altig, et al)

HABITAT

Grassland and woodlands near fresh water (breeds in ponds, lakes, streams, rain pools); most often in open areas. Found in coastal forests. Terrestrial. Expected to occur in Glacier Bay National Park & Preserve, Klondike Goldrush National Historical Park, Yukon-Charley Rivers National Preserve, and Wrangell-St.Elias National Park & Preserve. Differs from the western toad (B. boreas) by its northern range.

IDENTIFICATION

Size: 6-12.5 cm (2.5-5 in.) long snout to vent. Only 1 cm when metamorphosing.

Appearance: Has many warts; usually gray, brown or green; noticeable parotoid glands; usually has conspicuous white stripe down middle of back (not present or as conspicuous in recently morphed young)– only 6mm. (0.75 cm long).

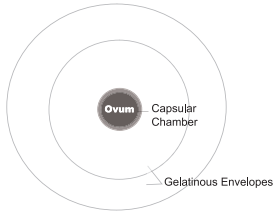
Male: Thumb base is dark and enlarged.

OTHER CHARACTERISTICS

Diurnal. Voice is a "soft birdlike clucking."

EGGS

Laid in strings of 12,000-16,500 eggs, frequently wrapped around vegetation. Often in shallow water.



Typical Amphibian Egg Detail

TADPOLES

2.5-5 cm (1-2 in.) long or smaller; dark body and tail (brown, black, or gray), tail musculature is uniformly dark, body has uniform dark color; when viewing laterally, snout forms a long slope.

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Alaska Amphibian Field Flashcard

NORTHWESTERN SALAMANDER

(Ambystoma gracile)

Adult northwestern salamander. Gray-brown color and smooth skin apparent. Approximately 20-22 cm in length.

Northwestern salamander larvae. 7.5-15 cm in length.

Adult northwestern salamander. Note rib-like coastal grooves.

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National Park Service, Inventory and Monitoring Program
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NORTHWESTERN SALAMANDER

(Ambystoma gracile)

(from Hodge 1976, and Stebbins 1985)

HABITAT

Coastal forests, next to fresh water (ponds or lakes); under logs or rocks. May occur in Glacier Bay National Park & Preserve and in Klondike Goldrush National Historical Park.

IDENTIFICATION

Size: 20-22 cm (7-8.7 in.) (total length-nose to tip of tail).

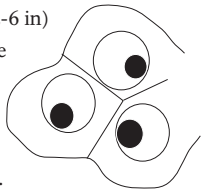
Appearance: Gray/brown color, smooth skin, coastal grooves, large granular parotoid glands, pitted granular area also on ridge of tail; back could have flecks of green or yellow.

OTHER CHARACTERISTICS

Nocturnal; metamorphosis from larvae stage to adult is thought to take two years in Alaska.

EGGS

Laid in clusters of 30-270 eggs (often 60-140), masses usually 5-15.2 cm (2-6 in) in diameter, masses sometimes have green color from symbiotic algae, attached to vegetation, submerged trees in slow moving streams, ponds, or lakes (usually permanent).



Northwestern Salamander

LARVAE

7.5-15 cm (3-6 in) long; body is brown, olive-green or light yellow on top, sides are blotched (sooty) with yellow spots; glandular strip on tail fin.

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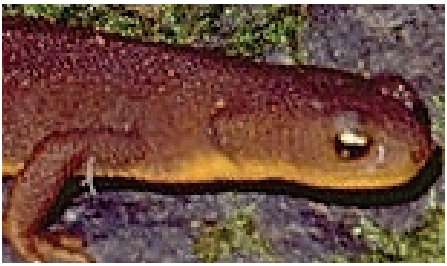
Alaska Amphibian Field Flashcard

ROUGH-SKINNED NEWT

(Taricha granulosa)



Adult rough-skinned newt. 13.3-20 cm long. "Rough" look to skin (except for breeding male).

Rough-skinned newt larvae. Note small size. Can reach 7.5 cm.

Threat posture display. Orange/ yellow on ventral surface, does not have coastal grooves as found in northwestern and long-toed salamander.

Alaska Amphibian Inventory Project
National Park Service, Inventory and Monitoring Program
Funded by the Southeast Alaska Network, Lewis Sharman, Network Lead

ROUGH-SKINNED NEWT

(Taricha granulosa)

(from Hodge 1976, Stebbins 1985, Richter 2000)

HABITAT

Most aquatic newt, found in spruce and hemlock forests around permanent ponds or lakes, or slow-moving streams that have large amounts of vegetation. Coastal forests. Expected to occur in Glacier Bay National Park & Preserve. May occur in Klondike Goldrush National Historical Park.

IDENTIFICATION

Size: 13.3-20 cm (5.25-8 in) long (total length-nose to tip of tail).

Appearance: "Rough" look to skin (except for breeding male), orange/yellow on ventral surface, does not have coastal grooves as found in northwestern and long-toed salamander.

Male: Smooth skin, flat tail, swollen forelimbs, dark pads on feet, swollen vent.

OTHER CHARACTERISTICS

Diurnal. Metamorphosis from larvae stage to adult is thought to take two years in Alaska.

EGGS

Laid singly, eggs are in large single gelatinous envelope; large capsular chamber; attached to vegetation, usually in slow-moving streams or still water; usually hard to find, sometimes attached between parts of vegetation.

Rough-skinned Newt

LARVAE

Reaches 7.5 cm (3 in.); trunk may have two rows of spots that run length of body (in some cases form light stripe).

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Alaska Amphibian Field Flashcard

SPOTTED FROG

(Rana pretosia)

Adult spotted frog. 3.1-8.1 cm. Has red color on ventral surface and black spots on back with a white or cream jaw stripe. Smooth skin.

Ventral surface is white or cream. Thumb base is dark and enlarged in male.

Spotted frog egg clusters laid among aquatic vegetation. Usually free-floating.

Alaska Amphibian Inventory Project
National Park Service, Inventory and Monitoring Program
Funded by the Southeast Alaska Network, Lewis Sharman, Network Lead

SPOTTED FROG

(Rana pretosia)

(from Hodge 1976, and Stebbins 1985, Altig, et al)

HABITAT

Seldom found away from permanent rivers, lakes, ponds or streams; often in vegetation surrounding bodies of water. Coastal forests. Expected to occur in Glacier Bay National Park & Preserve.

IDENTIFICATION

Size: 4.4-10 cm (1.75-4 in.) long (snout to vent).

Appearance: Red color on ventral surface (usually legs and stomach); black spots on back; inconspicuous banding on legs, white or cream stripe on jaw. Smooth skin.

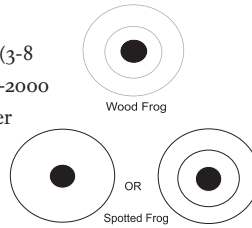
Male: Thumb base is dark and enlarged.

OTHER CHARACTERISTICS

Very active. Voice is a "low basslike tone," frequently calls underwater.

EGGS

Laid in masses of 7.5-20 cm (3-8 in.) diameter containing 150-2000 eggs, usually in shallow water floating freely on surface among vegetation, 1-2 gelatinous envelopes.



TADPOLES

7.5-10 cm (3-4 in) long; dark with gold flecks, underside has bronze sheen, dorsal fin begins at tail-body junction, forms arch.

National Park Service

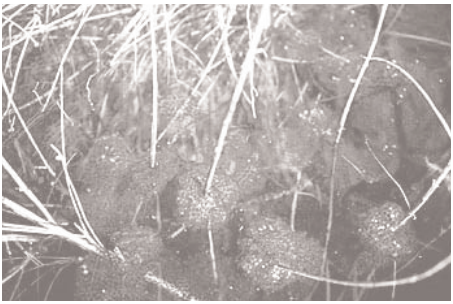
Alaska Amphibian Field Flashcard

WOOD FROG

(Rana sylvatica)

Adult wood frog. Note light-colored stripe below the eye and prominent eye mask.

Adult wood frog captured near GLBA. Note size relative to hand. 3.1-8.1 cm.



Wood frog egg clusters on aquatic vegetation. Near surface, either floating freely or attached to vegetation.

Alaska Amphibian Inventory Project
National Park Service, Inventory and Monitoring Program
Funded by the Southeast Alaska Network, Lewis Sharman, Network Lead

WOOD FROG

(Rana sylvatica)

(from Hodge 1976, and Stebbins 1985, Altig, et al)

HABITAT

Can be found far from water, in open forest, grassland, tundra and muskeg; most widespread of Alaskan amphibians. Expected to occur in all National Parks in Alaska.

IDENTIFICATION

Size: 3.1-8.1 cm (1.25-3.25 in.) snout to vent.

Appearance: Has dark "eye mask" that is flanked by a white or cream jaw stripe. Smooth skin. Some individuals have light stripe along spine. Ventral surface is white or cream.

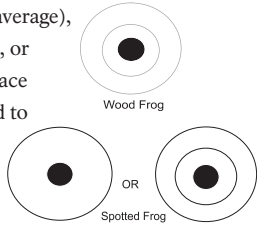
Male: Thumb base is dark and enlarged.

OTHER CHARACTERISTICS

Abundant and active at temperatures slightly above freezing. These hardy frogs have been observed frozen for extended periods of time and later revived due to complex 'antifreeze' in their blood. This ability allows them to survive in the arctic regions of Alaska and Canada. Breeds April-June in interior Alaska. Voice is a "rapidly repeated ducklike staccato."

EGGS

Laid in 6.2-15 cm (2.5-6 in.) clusters (firm), 100-3000 eggs per cluster (780 average), in shallow areas of ponds, lakes, or slow-moving streams, near surface either floating freely or attached to vegetation, many clusters often located in close proximity; two gelatinous envelopes.



TADPOLES

5 cm (2 in.) long; uniformly dark dorsum, high dorsal fin, few markings on fins, dark body, dusky with green sheen, underside cream color with hints of pink.

National Park Service

Alaska Amphibian Field Flashcard

Amphibians of Alaska

OCCURRENCES

BOREAL TOAD *Bufo boreas boreas*

Expected to occur in Glacier Bay National Park & Preserve, Klondike Goldrush National Historical Park, Yukon-Charley Rivers National Preserve, and in Wrangell-St.Elias National Park & Preserve.

NORTHWESTERN SALAMANDER *Ambystoma gracile*

May occur in Glacier Bay National Park & Preserve and in Klondike Goldrush National Historical Park.

ROUGH-SKINNED NEWT *Taricha granulosa*

Expected to occur in Glacier Bay National Park & Preserve. May occur in Klondike Goldrush National Historical Park.

SPOTTED FROG *Rana pretosia*

Expected to occur in Glacier Bay National Park & Preserve.

WOOD FROG *Rana sylvatica*

Expected to occur in *all* National Parks in Alaska.

Please report any other reliable sightings to the Alaska Region Inventory and Monitoring Program

National Park Service

Flash Card Series

This set of five flashcards compliments the Amphibians of Alaska Field Form. To obtain the field form, or for more information, please contact the NPS Alaska Region Inventory and Monitoring Program Sara_Wesser@nps.gov or (907) 257-2557.