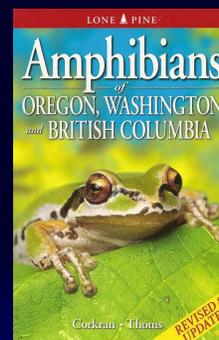


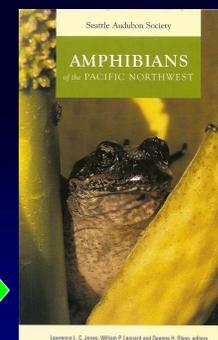
A Guide to Identification of Stillwater-Breeding Amphibians in lowland Clark, Cowlitz and Wahkiakum Counties, Washington State

MARC HAYES
WASHINGTON DEPARTMENT OF FISH AND
WILDLIFE

Regional Amphibian Guides



Corkran & Thoms. 2006.
Amphibians of Oregon, Washington
and British Columbia. Lone Pine Press.



Jones, Leonard & Olson (editors).
2005. Amphibians of the PNW.
Seattle Audubon Society.

Amphibian Groupings

Are based on their reproduction in each of:

Flowing water - 7 species



Uplands - 5 species



or Stillwater - 13 species



Stillwater Breeding Amphibians



- eggs laid in exposed locations
- pigmented eggs
- aquatic larval stage
- no parental care
- 4 salamander species and
11 frog and toad species (2 exotic)



Pacific Tree Frog – *Hyla regilla*



- small size
- loud, high pitched call
- many color morphs: green, brown, etc
 - expanded toe tips
 - dark eye stripe



Pacific Treefrog
Pseudacris regilla
© USGS

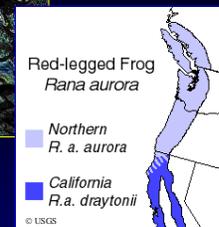


- eggs laid in
 - small packets
 - on diverse substrates
 - in shallow water
- larvae with lateral eyes

Northern Red-legged Frog – *Rana aurora*



- if spotted, irregular
- red or pink wash beneath
- reduced webbing
- slight interruption on posterior dorsolateral fold



Red-legged Frog
Rana aurora

Northern
R. a. aurora

California
R. a. draytonii

© USGS

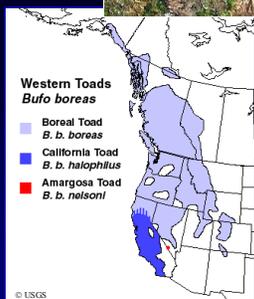


- eggs laid
 - on vegetation brace
 - in grapefruit-sized mass
 - submerged or at water surface
- larvae
 - grow to a large size (90-110 mm)
 - have dorsal eyes

Western Toad – *Bufo boreas*



- large glands behind eyes
- warty upper skin
- short legs
- pale mid-dorsal stripe



Western Toads
Bufo boreas

© USGS

- eggs in strings
- tadpoles
- black
- slow-moving
- school



American Bullfrog – *Lithobates (Rana) catesbeianus*



- green present
- ears large
- large body size
- alarm chirp
- no dorsolateral folds

- egg mass
 - a surface film with tiny eggs
 - draped over/around aquatic vegetation



American Bullfrog
Rana catesbeiana
© USGS

American Bullfrog – *Lithobates (Rana) catesbeianus*

large multi-season larva



- large larvae khaki green with black spots
- may take 2-4 years to metamorphose



medium larvae



small larva



Northwestern Salamander – *Ambystoma gracile*



defensive posture

milky toxin

- permanent water
- tolerates fish

- egg masses
- large
- hard jelly
- on submerged brace



Northwestern Salamander
Ambystoma gracile

© USGS

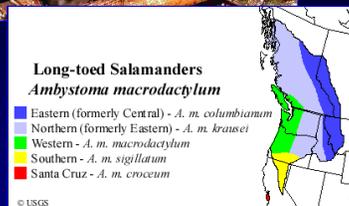
Long-Toed Salamander – *Ambystoma macrodactylum*



- mid-dorsal stripe
- gold, yellow, or green
- irregular or broken
- 4th hindlimb toes long



- eggs in small packets or single
- frequent in ephemeral sites
- co-occurrence with fish rare



Long-toed Salamanders
Ambystoma macrodactylum

- Eastern (formerly Central) - *A. m. columbianum*
- Northern (formerly Eastern) - *A. m. krausei*
- Western - *A. m. macrodactylum*
- Southern - *A. m. sigillatum*
- Santa Cruz - *A. m. croceum*

© USGS

Rough-Skinned Newt – *Taricha granulosa*



- brown above, orange beneath
- skin
- thick
- granular or smooth (season or sex)
- toxin glands



- eggs
- laid singly
- concealed in submerged vegetation
- brown above, orange or cream beneath
- diverse permanent aquatic habitats
- tolerates significant disturbance



Rough-skinned Newt
Taricha g. granulosa

Crater Lake
Rough-skinned Newt
T. g. mazamae

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