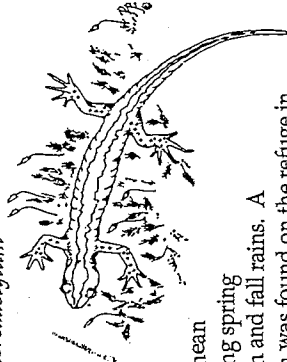


Amphibians

Long-toed Salamander

Ambystoma macrodactylum
6-10 inches.



Only salamander found on the refuge. They lead a subterranean life except during spring breeding season and fall rains. A single specimen was found on the refuge in the spring of 1990. Documentation of a population is needed.

Western Toad

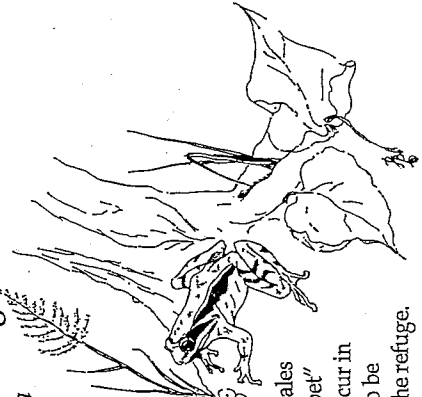
Bufo boreas
2 1/2-5 inches.



Green to gray to brown warty skin with a white cream-colored mid-dorsal line. Most often encountered in the evening. Documentation of refuge population needed.

Pacific Chorus Frog

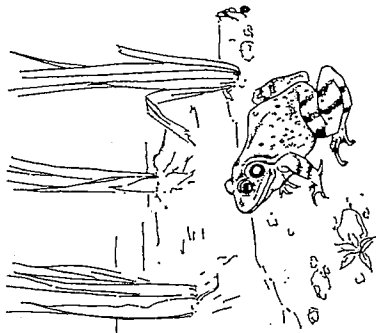
Pseudacris regilla
3/4-2 inches.



Toes terminate with a round "toe pad," a special adaptation for arboreal life. Males attract females with typical "ribbet" call. Known to occur in the area has yet to be documented on the refuge.

Bullfrog

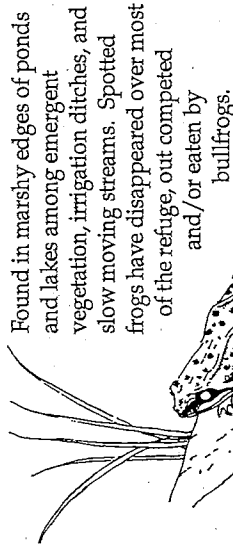
Rana catesbeiana
3 1/2-8 inches.



INTRODUCED to the refuge and western Montana. Where the bullfrog has been introduced, the spotted numbers or has disappeared. Their call is a deep "Br-wum" with great carrying power. They eat just about anything that moves and is small enough to fit into their mouths, including other frogs, mammals, birds, snakes and turtles.

Spotted Frog

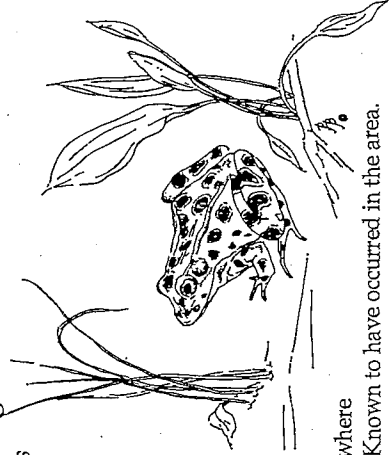
Rana pretiosa
2-4 inches.



Found in marshy edges of ponds and lakes among emergent vegetation, irrigation ditches, and slow moving streams. Spotted frogs have disappeared over most of the refuge, out competed and/or eaten by bullfrogs.

Leopard Frog

Rana pipiens
2-5 inches.



Populations have disappeared in western Montana. Sightings of this frog are of special concern anywhere in the state. Known to have occurred in the area. Documentation of present refuge population needed.

Field Notes:

Date _____ Time _____

ACKNOWLEDGEMENTS

The natural history text for this guide has been prepared using the following sources:

- Montana Wildlife
- Distribution of Montana Amphibians, Reptiles and Mammals
- Herpetologica
- The Audubon Society Field Guide to North American Reptiles and Amphibians
- Western Reptiles and Amphibians
- Amphibians and Reptiles of the Pacific Northwest
- Montana Outdoors
- The personal experiences of Lee Metcalf NWR staff and visitors.

TEXT: Sam Manno of the Craighead Wildlife-
Wildlands Institute

ILLUSTRATIONS: Pat Bartholomew

COVER DRAWING: Monte Dolack

DESIGN: Sam Manno

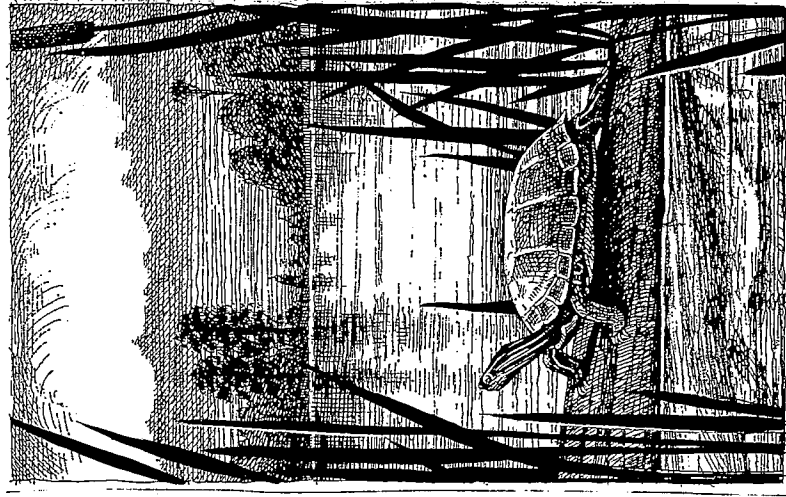
Lee Metcalf Refuge is administered by the US Fish & Wildlife Service as part of the National Wildlife Refuge System. For further information, contact:

Lee Metcalf National Wildlife Refuge
4567 Wildfowl Lane
Stevensville, MT 59870
406/777-5552



THE REPTILES AND AMPHIBIANS

of Lee Metcalf
National Wildlife Refuge



Mr. Dolack-75

THE SLIMY AND THE SCALY

The days lengthen and the earth warms. Snow melts.

The ground becomes saturated and changes with each step we take. The solid surfaces of ponds and streams become fluid. The season of activity for amphibians and reptiles is beginning. While skim-ice is still forming at night, spotted frogs congregate, calling for a mate and laying eggs. Often, before all the snow has melted, long-toed salamanders migrate to their breeding pools. Garter snakes emerge from their hibernating dens, mate, and begin to disperse over the Refuge to their foraging grounds. A lone western painted turtle climbs onto a half submerged log to soak up the early spring sun. Its olive colored carapace grayed with mud from its six month sleep buried in the pond bottom.

Although not the only time, spring affords the best opportunity to observe amphibians and reptiles on the Refuge. This is when they are congregating at breeding sites and are frequently encountered on the road. Soon they will disperse over their summer range.

As swallowtail and morning-cloak butterflies float through the hot summer air searching for flowers, painted turtles can be seen stacked three and four high basking on logs and stumps. Young bullfrogs, easily scared from the banks emit a piercing "eep" as they seek refuge in the water. Toads can be seen in the cool of the evening foraging on emerging insects.

As the days shorten and the earth begins to cool, amphibians and reptiles begin migrating to their hibernating places. They are often encountered on the road soaking up the last of summer's warmth before retreating for the winter.

Amphibians and reptiles are important

members of the Refuge community, serving as both predators and prey. Snakes that prey on rodents, fish, or frogs may in turn be eaten by hawks or herons.

Amphibians are the fastest disappearing group of vertebrates on earth. The reasons for their disappearance are not clear. It could be one or a combination of the following: environmental degradation such as acid rain, global warming, pesticides, habitat loss, the introduction of exotic species or some yet-to-be discovered factor. For example spotted frogs do not survive well where the bullfrog has been introduced. The leopard frog seems to have disappeared from all of its former strongholds in western Montana.

If you encounter an amphibian or reptile while visiting the refuge please contact the refuge office. Your report will help paint a picture of the health and vitality of the amphibian and reptile populations which are an intricate part of this refuge.

Lizards

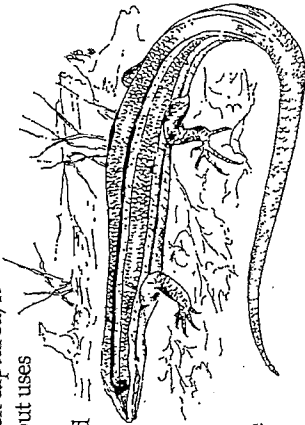
Western Skink

Eumeces skiltonianus skiltonianus
7-10 inches.

Diurnal. Often encountered around rock piles and under stones. Bright blue tails in juveniles and sub-adults. Tail fades to blue grey in adults. Tails break off easily when captured, it

regenerates but uses energy that could be used for reproduction,

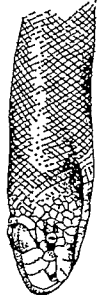
foraging, or hibernation. Documentation of refuge population needed.



Snakes

Rubber Boa

Charina bottae
14-30 inches.



A true boa. It resembles a giant earthworm. Looks and feels rubbery. Their tail resembles their head, a characteristic, used to confuse predators and prey.

Western Yellow-bellied Racer

Coluber constrictor moritanus
20-73 inches.



Slender and fast moving. Brown, olive or bluish grey dorsally with a yellow belly. Hatchlings have blotches down the middle of their back which fade when snakes are about 18 inches long.

Common Garter Snake

Thamnophis sirtalis
18-52 inches.



Well defined yellow dorsal stripe with red spots or blotches along the sides.

Western Terrestrial Garter Snake

Thamnophis elegans vagrans
18-43 inches.



Uneven yellow(ish) to brown dorsal stripe sometimes absent frequently broken up by the top row of two alternating rows of black spots, appearing along the sides.

Bullsnake

Pituophis melanoleucus sayi
36-110 inches.

Cream to tan colored with light

brown to dark brown or black blotches on back and sides. Bullsnares mimic rattlesnakes in patterning and defensive behavior including vibration of their tails which can sound like the rattle of a rattlesnake.

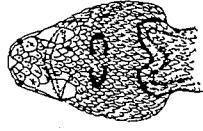


Prairie Rattlesnake

Crotalus viridis viridis
15-65 inches.



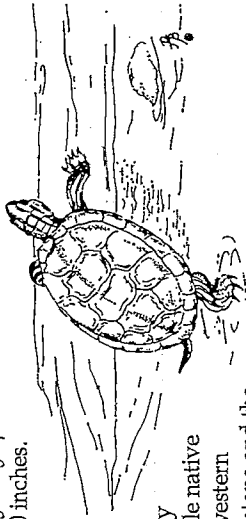
VENOMOUS. Rarely encountered on the refuge. Thick body with a thin neck and a triangular head. Dorsal blotches are brown surrounded by a thin light line.



Turtles

Western Painted Turtle

Chrysemys p. belli
4-10 inches.



Only turtle native to western Montana and the refuge. Carapace olive to black. Red marks on underside of marginal scutes. Red branching pattern on plastron, and yellow stripes on neck, legs, and tail.

Single specimens of a Softshell Turtle and a Snapping Turtle have been observed on the refuge but they are not native to the refuge or western Montana.

Softshell Turtle

Trionyx spiniferus
5-18 inches.

Almost round in shape. Carapace is tan and covered with soft leathery skin.

Snapping Turtle

Chelydra serpentina
8-18 1/2 inches.

Large head and strong jaws. Carapace tan to dark brown, often covered in mud and sustaining a growth of algae. This acts as camouflage and aides in catching prey.