

California Wildlife Habitat Relationships System
California Department of Fish and Wildlife
California Interagency Wildlife Task Group

CASCADES FROG

Rana cascadae

Family: RANIDAE
A042

Order: ANURA

Class: AMPHIBIA

Written by: M. Simon

Reviewed by: T. Papenfuss

Edited by: R. Duke

Updated by: CWHR Program Staff, January 2000

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

In California, the cascades frog is found in two locations, namely Siskiyou Co. and further south near Lassen Peak. Its elevational range extends from 230 m (750 ft) to 2500 m (8200 ft) (Jennings and Hayes 1994). This species can be found in water and surrounding vegetation in mountain lakes, small streams, and ponds in meadows up to timber line. It is closely restricted to water (Dumas 1966, Stebbins 1985). Individuals are active during late spring and summer (Briggs and Storm 1970, Altig and Dumas 1971).

SPECIFIC HABITAT REQUIREMENTS

Feeding: No specific data on feeding. This species likely feeds on aquatic and semi-aquatic insects and other arthropods.

Cover: This species hibernates in the mud on the bottom of lakes and ponds during the winter.

Reproduction: Eggs are deposited in shallow water of stream pools, lake margins, and clear mountain ponds with silty, sandy or gravelly substrates. Females prefer to lay eggs at sites with low or patchy aquatic vegetation cover (Wright and Wright 1949, Stebbins 1954, 1985, Wiens 1972, Briggs 1987). Reproduction typically occurs in waters lacking predatory fish (Jennings and Hayes 1994).

Water: Standing water is required for reproduction (see habitat requirements above).

Pattern: This species is found primarily in montane aquatic habitats during warm, moist periods.

SPECIES LIFE HISTORY

Activity Patterns: Primarily diurnal, individuals bask on water-covered rocks. Active during the warm periods of late spring and summer. Individuals hibernate on the bottom of lakes or ponds during the winter (Briggs and Storm 1970).

Seasonal Movements/Migration: No information available.

Home Range: No information.

Territory: No information.

Reproduction: Breeding occurs from late May to mid-August, but may be as early as March if the ambient temperature is sufficiently warm (Briggs and Storm 1970). Females lay up to 425 eggs, which hatch in 8 to 20 days. Larvae require 3 months to complete development and metamorphose by late August and early September. Individuals reach sexual maturity in 3+ years (Wright and Wright 1949, Briggs and Storm 1970).

Niche: Probable predators on adults are owls, jays, black bears, raccoons, minks, and coyotes. Robins have been observed preying on tadpoles of this species. Adults cannibalize newly metamorphosed frogs (Briggs and Storm 1970).

REFERENCES

- Altig, R., and P. C. Dumas. 1971. *Rana cascadae*. Cat. Amer. Amphibians and Reptiles 105.
- Briggs, J. L., and R. M. Storm. 1970. Growth and population structure of the Cascades frog, *Rana cascadae* Slater. Herpetologica 26:283-300.
- Dumas, P. C. 1966. Studies of the *Rana* species complex in the Pacific Northwest. Copeia 1966:60-74.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Department of Fish and Game. Rancho Cordova 255 pp.
- Stebbins, R. C. 1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.
- Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. 2nd ed., revised. Houghton Mifflin, Boston. 336pp.
- Wiens, J. A. 1972. Anuran habitat selection: early experience and substrate selection in *Rana cascadae* tadpoles. Anim. Behav. 20:218-220.
- Wright, A. H., and A. A. Wright. 1949. Handbook of frogs and toads of the United States and Canada. Cornell Univ. Press, New York. 640pp. Knopf, New York. 743pp.
- Carpenter, C. C. 1954. A study of amphibian movement in the Jackson Hole Wildlife Park. Copeia 1954:197-200.
- Dumas, P. C. 1966. Studies of the *Rana* species complex in the Pacific Northwest. Copeia 1966:60-74.
- Jennings, M. R. and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California. California Department of Fish and Game. Rancho Cordova 255 pp.
- Licht, L. E. 1974. Survival of embryos, tadpoles, and adults of the frogs *Rana aurora aurora* and *Rana pretiosa pretiosa*. Can. J. Zool. 52:613-627.
- Moore, J. E., and E. H. Strickland. 1955. Further notes on the food of Alberta amphibians. Am. Midl. Nat. 54:253.
- Morris, R. L., and W. W. Tanner. 1969. The ecology of the western spotted frog, *Rana pretiosa pretiosa* Baird and Girard. A life history study. Great Basin Nat. 29:45-81.
- Pickwell, G. 1947. Amphibians and reptiles of the Pacific States. Stanford Univ. Press, Stanford, CA. 236pp.
- Stebbins, R. C. 1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.
- Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. 2nd ed., revised. Houghton Mifflin, Boston. 336pp.
- Turner, F. B. 1958. Life-history of the western spotted frog in Yellowstone National Park. Herpetologica 14:96-100.
- Turner, F. B. 1960. Population structure and dynamics of the western spotted frog, *Rana p. pretiosa* Baird and Girard, in Yellowstone National Park, Wyoming. Ecol. Monogr. 30:251-278.
- Turner, F. B., and P. C. Dumas. 1972. *Rana pretiosa*. Cat. Am. Amphibians and Reptiles 119.
1954. Amphibians and reptiles of western North America. McGraw-Hill, New York. 536pp.