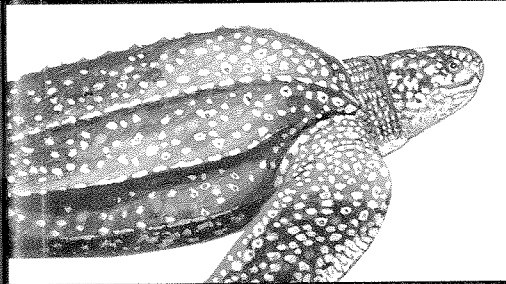
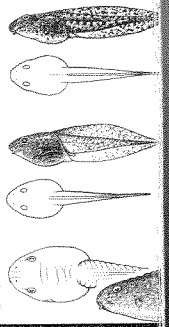
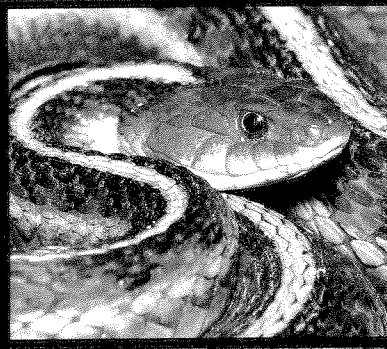
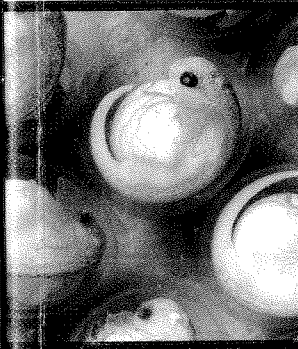


PETERSON FIELD GUIDES®

Western
Reptiles and
Amphibians

Third Edition

NEWLY
REVISED AND
IN FULL
COLOR



Robert C. Stebbins



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MOUNTAIN TREEFROG *Hyla eximia*

Pl. 15, Map 46

IDENTIFICATION: $\frac{3}{4}$ –2 in. (1.9–5.1 cm). Resembles Pacific Treefrog (p. 222). Green to brownish above, with *dark eye stripe that extends beyond shoulder*, sometimes to groin; toward rear the stripe may break up into spots. Note thin white line separating dark stripe from back color. Spotting on head and upper back usually scarce or absent. May have a spot on each upper eyelid and dark lengthwise bars or spots on lower back; some completely lack such markings. Toe pads distinct but small. Webbing reduced. **Male:** Throat dusky.

Frequents meadows in oak-pine or pine-fir forests in the U.S., generally above 5,000 ft. (1,520 m). In Mex. in mesquite grassland, scrub, and pine-oak forests. Found both on the ground and in shrubs and trees, usually near grassy shallow pools and along slower parts of streams. Breeds June–Aug., during and after rains. **VOICE:** A series of short, low-pitched notes, sometimes distinct and separate or given as a trill. Individual notes are brief, metallic *quacks* or *clacks*, each lasting about $\frac{1}{2}$ second or less, uttered around 40 to over 150 times per minute depending on temperature and individual variation. Lacks two-parted quality of Pacific Treefrog's voice. Vocal sac round. **SIMILAR SPECIES:** See Pacific Treefrog (p. 222). **RANGE:** Mountains of cen. Ariz. and w. N.M., south in Sierra Madre Occidental to Guerrero, Mex. Isolated population in Huachuca Mts., Cochise Co., Ariz. From around 3,000–9,500 ft. (910–2,900 m).

TRUE FROGS: FAMILY RANIDAE

Typically slim-waisted, long-legged, smooth-skinned jumpers with webbed hind feet, often with a pair of dorsolateral folds (glandular ridges) that extend from behind eyes to lower back (see Fig. 5, p. 28). Any western tail-less amphibian with distinct dorsolateral folds is a True Frog. Family is best represented in Africa, but species are found on all continents except Antarctica. Australia has only one "native" species—a recent (in geological terms) arrival from New Guinea. More than 700 species. Only the large, widespread genus *Rana* (with some 270 species) occurs in the New World. Twenty-five species in N. America north of Mexico; 15 in the East, 16 in our area. A dozen or so more live in New World tropics. Two of our species, Bullfrog and Green Frog, have been introduced. Two native species, the Northern Leopard Frog and Wood Frog, range across N. America. Some of our western frogs are difficult to identify—rely heavily on the range maps.

In males during the breeding season, forelimbs and thumb bases become enlarged and webbing increases; a dark nuptial pad

appears on each thumb. Amplexus is pectoral. Vocal sac paired or single, sometimes inconspicuous. When paired a sac inflates on each side above forelimbs.

RED-LEGGED FROG *Rana aurora*

Pl. 16, Map 50

IDENTIFICATION: $1\frac{3}{4}$ –5 $\frac{1}{4}$ in. (4.4–13.3 cm). Red on lower abdomen and underside of hind legs, often overlying yellow ground color. Usually has *dark mask bordered by whitish jaw stripe* (Fig. 11, Pl. 16, p. 66). Back often has many small black flecks and larger, irregular dark blotches with indistinct outlines on brown, gray, olive, or reddish ground color. In some the flecks join to form a more or less continuous network of black lines. Dark bands on legs. *Usually with coarse black (or gray), red, and yellow mottling in groin*. Often greenish wash in light-colored areas of groin. Relatively long legs; heel of adpressed hind limb extends to or beyond nostril. Eyes turned outward, well covered by lids as viewed from above. Prominent dorsolateral folds. **Young:** May have yellow instead of red on underside of legs and in groin. **Male:** Enlarged forelimbs, thumb base, and webbing.

Chiefly a pond frog that inhabits humid forests, woodlands, grasslands, and streamsides, especially where cattails, bulrushes, or other plants provide dense riparian cover. Most common in lowlands and foothills. Frequents marshes, streams, lakes, reservoirs, ponds, and other, usually permanent, sources of water. Generally found in or near water, but disperses after rains and may appear in damp woods and meadows far from water. Overland movements of over two miles recorded in Santa Cruz Mts., Calif. Breeding period short, often lasting only 1–2 weeks; late Nov. to usually Jan.–April, depending on locality. When not breeding, may be found in a variety of upland habitats. **VOICE:** Stuttering, sometimes accelerating, series of guttural notes (4–7) on one pitch—*uh-uh-uh-uh-uh-rowr*; the last note, sometimes omitted, resembles a growl or groan, *waaaa*, and appears not to be given in northern part of species range. Calls last 1–3 seconds but are weak and easily missed. Occasionally only 2–4 chuckles given. When frogs are in chorus a continual low clucking may be heard. Calls of Northern Red-legged Frog (p. 226) are typically given underwater. When Red-legged Frogs call, throat enlarges at center and sides. Vocal sacs absent north of Smith River, Del Norte Co., Calif., whereas populations south of San Francisco Bay have small paired subgular sacs. Intermediate conditions found in intervening area. **SIMILAR SPECIES:** (1) In Oregon Spotted Frog (p. 228), groin usually unmottled, or less conspicuously so, and eyes slightly upturned and less completely covered by the lids (Fig. 11, p. 66). Ventral color usually orange-red rather than deep

red, and appears painted on rather than beneath the skin surface. (2) Cascades Frog (p. 230), a mountain species, usually has distinct black spots on back; yellowish color on lower abdomen and underside of legs; yellowish, lightly mottled groin; and generally rougher skin. (3) See also Foothill Yellow-legged Frog (p. 231).

RANGE: Chiefly west of Cascade-Sierran crest from sw. B.C. (Sullivan Bay) to nw. Baja Calif. (Arroyo Santo Domingo). Coastal Calif. and Sierran foothills, but only scant dubious records for Great Valley at Lodi, Gadwall, and Buena Vista Lake. Reported absent from lowlands of Sacramento Valley in mid-1920s and continues so. Former desert outposts were Mojave R., Whitewater Canyon, and San Felipe Creek in s. Calif. In Nye Co., Nev., introduced at Millett and elsewhere in Big Smoky Valley and at Duckwater. An old record (1919) from Santa Cruz I. (near Pelican Bay), Calif., where introduced. From near sea level to about 8,000 ft. (2,440 m).

SUBSPECIES: NORTHERN RED-LEGGED FROG, *R. a. aurora*. Dorsal spots often lack light centers. To 3 in. (7.6 cm). This taxon may be more closely related to Cascades Frog than California Red-Legged Frog. CALIFORNIA RED-LEGGED FROG, *R. a. draytonii*. Dorsal spots more numerous, usually with light centers. Skin rougher, limbs shorter, and eyes smaller than in Northern Red-legged Frog. To 5 1/4 in. (13.3 cm).

REMARKS: Overlap zone between above two taxa (Map 50) lies between Point Arena and Elk, Mendocino Co. Some studies support elevating the California form to full species status.

Sierran and s. Calif. populations seriously depleted. Species estimated to have disappeared from around 75 percent of former range throughout state. However, it still exists at a few localities in n. and cen. Sierra—French Creek, Butte Co., to Weber Creek near Pollock Pines, El Dorado Co., and Swamp Lake Reserve in Yosemite Nat'l Park. Also persists at a reserve in the



California Red-legged Frog. Mark Twain's famed "notorious jumping frog of Calaveras Co." Now listed as a threatened subspecies.

Santa Rosa Mts. in s. Calif. Introduction of Bullfrog and nonnative fishes, pesticides and other pollutants, loss of habitat to developments, all may be factors involved in decline. Heavily marketed in cen. Calif. and elsewhere as a source of frog legs in the late 1800s and early 1900s.

WOOD FROG *Rana sylvatica*

Pl. 18, Map 48

IDENTIFICATION: 1 1/4–3 1/4 in. (3.2–8.2 cm). A black or dark brown mask ends abruptly just behind the eardrum and is bordered below by white jaw stripe. Brown, pink, gray, or greenish above, often with 2 broad, light-colored stripes down back, separated by a dark stripe. Dark middorsal stripe sometimes bisected by whitish line. Dark spot on each side of chest, near base of foreleg. Prominent dorsolateral folds. Individuals in northwestern part of range short-limbed and toadlike in proportions. The white-striped form, rare in the East, occurs with increasing frequency to the northwest. **Male:** Swollen and darkened thumb base.

In the East this species is truly a wood frog, inhabiting damp shady woods and forests near clear streams and leafy pools. Favors shade, but when breeding may move out of forests. In Northwest, in colder parts of range, it is chiefly diurnal and less of a forest dweller. There it may be found in open grassy areas bordered by thickets of willow and aspen, and in tundra ponds. Spruce or other trees often present nearby. Coloration blends well with fallen leaves and mottled light and shade of forest floor. Breeds Jan.–July, usually starting soon after ice begins to melt from ponds—in southern part of range (s. Appalachians and Ozarks) in Jan. and Feb., at the coldest time of year, and in far Northwest from April–June. Breeding lasts 1–2 weeks, after which frogs usually disperse. **VOICE:** Resembles Northern Leopard Frog's (p. 234), including the sound made by rubbing an inflated balloon, but shorter, higher-pitched, and weaker. A series of rather high grating notes lasting 1 second or less, like clucking of a small domestic duck. Paired vocal sacs, one over each forelimb. **SIMILAR SPECIES:** (1) Oregon and Columbia Spotted Frogs (pp. 228–29) have a less distinct mask, no stripes except on jaw, and are red, orange, or yellow below. (2) Red-legged Frog (p. 225) has a less well defined mask and reddish color on underside of hind legs. **RANGE:** North of Brooks Range, Alaska, to Labrador, southward in e. U.S. to s. Appalachian Mts. Distribution follows closely the distribution of spruce over much of its range. Ranges farther north than any other N. American amphibian. In our area isolated populations in se. Alta. (Cypress Hills), n. Colo. (near Rand, Jackson Co., northwest of Grand Lake, Grand Co., and Chambers Lake, Larimer Co.), and adjacent s. Wyo. (Medicine Bow Mts.), and in n. Wyo. (Bighorn Mts.). Sea level to about 10,000 ft. (3,050 m).

scale rows 2 and 3, 3 and 4, or confined to row 3. Count upward from ends of ventrals about $\frac{1}{4}$ body length behind the head. Some species are unstriped or have only ventral stripes and a spotted or checkered pattern. Most species of Garter Snakes have a red or orange tongue with black tips. Conspicuous flickering tongue is thought sometimes to act as a lure, attracting fish and other prey to near the mouth of the snake.

Garter Snakes have long been the bane of many taxonomists and further changes in their classification can be expected (note the many changes since publication of my 1985 Field Guide!). Many are notoriously difficult to identify. Rely heavily on geographic location.

Garter Snakes occupy a great variety of habitats from sea level to high in mountains. Many are aquatic or semiaquatic but some are almost completely terrestrial. Like the Water Snake (*Nerodia*), when caught they often void feces and expel muck from their anal glands. Live-bearing. Thirty species occur in region from Canada to Costa Rica and Pacific to Atlantic Coast, 14 in our area. Common Garter Snake ranges farther north than any other reptile in the Western Hemisphere (see Map 162).

NARROW-HEADED GARTER SNAKE

Pl. 48, Map 162

Thamnophis rufipunctatus

IDENTIFICATION: 18–44 in. (46–112 cm). Olive, tan, gray-brown, or brown above, marked with *conspicuous dark brown, blackish or reddish spots* that fade on tail. No well-developed stripes or pale crescent behind corner of mouth as in some species of Garter Snakes. Dark bars on labial scales. Traces of dorsal and side stripes sometimes present on neck. Brownish gray below, paling on throat. Often a row of black wedge-shaped marks on each side of belly. Tongue black. Head long and narrow. Eyes high on head. *Eight or 9 upper labials*. Scales keeled, usually 21 rows at midbody. Anal usually single. **Young:** Throat often cream-colored and belly dull yellowish.

Ranges from piñon-juniper and oak-pine belts into forests of ponderosa pine along rocky lakeshores and clear permanent or semipermanent rocky streams, where it seems to prefer quiet, well-lit sections. Highly aquatic, remaining close to water. When frightened, usually dives to bottom for refuge, often hiding under a stone or within a rock crevice. Live-bearing; 8–18 young born July–Aug. Eats fish, frogs, toads, tadpoles, and larval Tiger Salamanders. **SIMILAR SPECIES:** Distinctive color, head shape, and elevated eyes of this species combined with its highly aquatic habits separate this snake from our other species. **RANGE:** Upland drainages of cen. and e. Ariz. and sw. N.M. N. Chihuahua to cen.

Durango. In Ariz. originally ranged north to Fort Valley Creek, Coconino Co. From around 2,300 to 7,972 ft. (700 to 2,430 m).

REMARKS: In our area this snake has suffered a severe decline because of human disturbances, including introduction of predatory fish and bullfrogs.

COMMON GARTER SNAKE

Pl. 48, Map 162

Thamnophis sirtalis

IDENTIFICATION: 18–55 in. (46–140 cm). Coloration highly variable, but dorsal and side stripes usually well defined. Dorsal stripe may be gray, tan, green, blue, yellow, orange, or white. Frequently red spots or blotches and a double row of alternating black spots on sides between stripes, or dark blotches may join vertically to form dark bars or horizontally to form dark stripes (San Francisco Garter Snake). Some populations in the Northwest have nearly solid dark coloration between stripes. Light-colored side stripe usually on 2nd and 3rd scale rows. Top of head brown, olive, gray, red, or black. Upper labials often with black wedges. Frequently bluish gray, or blue-green below, sometimes becoming dusky or black especially toward tail, or venter may be pale and unmarked. Throat pale. Eyes relatively large. *Usually 7 upper labials*. Rear pair of chin shields usually longer than front pair. Dorsal scales keeled, in up to 19 rows at midbody. Anal single. **Male:** Knobbed keels on scales above vent.

Found in many environments—grassland, woodland, scrub, chaparral, and forest. Lives in or near ponds, marshes, prairie swales, roadside ditches, streams, sloughs, damp meadows, woods, farms, and city lots. Tends to stay near water, entering it freely and retreating to it when alarmed. Excellent swimmer. When emerging from overwintering sites, especially in cooler parts of range, may be present in great numbers. Spirited; often defends itself energetically when cornered. When caught it often bites and smears its captor with excrement and odorous contents of anal glands. Live-bearing; 3–85 (often 12–18) young, born May–Nov., the earlier months in southern part of range. Appears to be capable of activity at lower body temperature than any other Garter Snake. Eats fish, toads, frogs, tadpoles, salamanders and their larvae, birds and their eggs, small mammals, reptiles, earthworms, slugs, and leeches. One of the few predators that can eat adult Pacific Newts (*Taricha* species, pp. 164–67) without suffering lethal poisoning. **SIMILAR SPECIES:** Usual presence of red markings between stripes, often dark wedges on upper labials, the 7 (occasionally 8) upper labials, and relatively large eyes (see Pl. 48) generally distinguish this species from other Garter Snakes within its western range. See also (1) Northwestern (p. 386), (2)