

AMPHIBIANS AND REPTILES OF
LAS POSADAS

from

Lab Syllabus (RJ) in Herpetology

by

Robert C. Stebbins
University of California
Berkeley

Part 1 - Newts and Salamanders

California Newt (Triturus torosus)

Its range is from middle Mendocino County, north of San Francisco Bay, south along coast into San Diego County. Adult is 6 to 8 inches; above light chocolate to dark brown, sometimes almost black; below pale yellow to orange. Usually found in vicinity of or within permanent bodies of water such as ponds, streams and reservoirs. Although much time spent on land in moist situations beneath boards, logs, rocks and in rodent burrows, adult must return to water for breeding. Terrestrial individuals often active in daytime, especially during wet weather. Frequently considerable numbers found when seeking breeding ponds. More tolerant of light than most salamanders. Rather awkward when crawling on land but swims with facility by means of lateral undulations of flattened tail with limbs extended posteriorly. When irritated may project head vertically, flatten body, extend legs stiffly laterally, depress eyes, and elevate tail. Food - earthworms, small snails, slugs, sowbugs and larvae and adults of many species of insects.

Eschscholtz's Salamander (Ensatina eschscholtzii)

Its range is from southwestern mainland and Vancouver Island, British Columbia, south in coastal areas to extreme southern San Diego County. Ranges inland in California through the Siskiyou and southern Cascade Mountains southward through the Sierra Nevada and thence into the mountains of southern California. Adult is 3 to 6 inches; tail rounded above, somewhat compressed ventrally, constricted at base; toes 4-5; eyes large and protuberant; 12 costal grooves; coloration highly variable. When soil is damp, found beneath rotting logs, boards, rocks and other surface litter, usually where there is considerable leaf mold. Sometimes found in rodent burrows and buried in damp leaf mold. Trees in habitat are often canyon and coast live oak, black oak, maple, pine, madrone, tan' oak and redwood. Seems to avoid steep slopes much over 45°. Never voluntarily enters water. Spends entire life in damp situations on land. Most often found singly, but adults sometimes found together and subadults and juveniles may occasionally occur in groups of two or rarely more. Usually lies quietly when first exposed but after few moments may lunge forward, crawling with considerable speed. When quiet, tail may be curled. Feeds almost entirely on various kinds of terrestrial arthropods such as small millipedes, sowbugs, spiders, camel crickets, etc.

Slender Salamander (Batrachoseps attenuatus)

Range is coastal regions from southwestern Oregon to northern Lower California; in the Sierra foothills to southern Tulare County, in the Central Valley opposite San Francisco Bay and at Marysville Buttes, Butte County, Calif.; on Santa Cruz and Coronados Islands off the Pacific Coast and on Goat Island in San Francisco Bay. Adults 3 to 5½ inches; ground color dark brown to blackish, often marked dorsally with brownish or reddish-tan longitudinal band which may possess herring bone markings; dorsal band sometimes obscure centrally or represented by lichen-like flecks and mottlings of buff to rusty brown; rusty spot usually present centrally on upper surface of neck; below sooty; iris dark brown, usually with flecks of brassy. Occurs in moist situations on ground in leaf mold and beneath surface objects of all sorts. In dry weather goes under ground, probably employing burrows of other animals such as those of earthworms, arthropods, rodents etc. or by using old root channels, or other cavities since incapable of digging into firm soil. Often found curled in tight coil. Frequently several individuals are present beneath same object.

Crawls by using diminutive limbs in conjunction with lateral undulations of body. When picked up, may move very quickly and haphazardly by lashing body from side to side in violent contortions. Food - earthworms, small beetles, beetle larvae and small sowbugs.

Black Salamander (*Aneides flavipunctatus*)

Range from the Klamath Mountains in California south along coast to southern Santa Cruz County. Adults 4 to 6 inches; costal grooves usually 14. Occur in rocky situations along streams and in talus where seepages occur. Colony of heavily spotted animals was found near Lucerne, Lake County, Calif. beneath talus, 100 feet back in damp mine shaft. Food - spiders and beetles.

Arboreal Salamander (*Aneides lugubris*)

Range is principally in coastal mountains of California from Humboldt County to San Diego; also in the foothills of the Sierra from Calaveras to Madera counties. Adult around 4-6 inches; head broad, triangular, widened and deepened behind eyes due to large jaw muscles; eyes strongly protuberant; tail slender, somewhat prehensile; costal grooves usually 15, rarely 14 or 16; tips of toes of appressed limbs meet or overlap usually up to 1 intercostal fold; toes with enlarged tips; above dark brown with whitish to yellow spots varying in size and abundant; below whitish with numerous minute stipple marks which in some individuals may give a grayish cast, depending in part on location of pigment of melanophores; underside of tail and feet buff colored; iris with variable number of flecks of silver to pale yellow on dark brown ground color. Frequents both trees and ground. Has been found in cavities principally in coast live oaks to a height of 30 feet. As many as 35 individuals have been found in a single chamber during summer months. Occurs beneath rocks, boards, logs and other surface objects. Also has been discovered inside decayed logs and stumps, in mine shafts, damp cellars, rodent burrows and in wood rat and red tree mouse nests. They are active, agile climbers; expanded digits and prehensile tail arboreal adaptations. May utter squeaking sound when disturbed. Breathes as other plethodonts but also has large blood sinuses at tips of toes which probably make possible considerable respiration through digits as animal climbs about over damp tree surfaces or ground. May feed to large extent upon soft wood and fungus. Also eats slender salamanders and insects such as beetles and ants.

Part 2 - Toads and Frogs

Western Toad (*Bufo boreas*)

The range is from southeastern Alaska through British Columbia, Washington, Oregon, California, into northern Lower California. Adult is 2½ to 5 inches; numerous pitted warts on dorsum; general coloration grayish dusky brown or dull greenish; whitish vertebral stripes present, sometimes broken; warts light colored, usually brownish, set in black blotches which may unite; tendency toward dark banding on limbs. Occupies diverse habitats from sea level to high mountains; in relatively dry to quite humid situations. Found in open valleys and meadows, about lakes and streams, and less commonly in heavily wooded regions. Seeks shelter in daytime beneath boards, logs, rocks and other surface objects or in recent burrows. Individual toads known to return

regularly to selected retreats, exhibiting pronounced homing behavior. May hop in moving about but larger-bodied individuals usually prefer to walk. Gait awkward, not rapid; hind toes dragged, as indicated by tracks. When swimming, forelimbs appressed to sides or extended anteriorly, propulsion by means of hind limbs. Voice weak. During nuptial activity or when handled, may utter bird-like chirping sound, also capable of grating croak. Eggs black enclosed in tubular sheath of clear jelly arranged in 2 or 3 parallel rows. Over 10,000 eggs have been laid by a single female.

Pacific Tree Toad (*Hyla regilla*)

Range from British Columbia, south through Washington, Oregon, California. Adult is usually under 2 inches; hind toes webbed; skin smooth or with few inconspicuous tubercles; general color highly variable - green, various shades of brown, light gray, to almost black. Capable of marked color change; below unspotted whitish or pale yellow, yellow color becoming more pronounced posteriorly, especially on concealed surfaces of limbs. Seeks cover in variety of places such as rock fissures, vegetation along streams, rodent and other burrows, nooks, springs, streams, irrigation canals and other bodies of water, but has been found as far as one-half mile from water. Behavior is largely nocturnal but active also in daytime. Not especially attracted to trees; usually found on or near ground. Voice well developed in male. Volume of voice all out of proportion to size of toad. Food - damsel flies, leaf hoppers, cockroaches, beetles, small flies, spiders, etc.

Red-Legged Frog (*Rana aurora*)

Range from southwestern British Columbia southward through Washington, Oregon and California into northern Lower California. Adult to somewhat over 5 inches; skin smooth or rough; above brownish to olive with dusky spots, often with fuzzy outline; limbs blotched and cross-banded with blackish; below light colored, mottled; capable of considerable color change from dark to light phase. Frequents permanent bodies of relatively quiet water such as ponds, pools along streams, reservoirs, springs, lakes and marshes. Highly aquatic. Voice a gurgling tremulous sound. Usually exceedingly wary.

Yellow-Legged Frog (*Rana boylei*)

Range from coastal areas of Oregon southward throughout California to San Diego County. Adult around 2-2½ inches, usually under 3½ inches. Skin roughened in varying degrees by numerous minute tubercles; above variable in ground color - blackish, reddish brown, gray, olivaceous, or greenish with varying amounts of intensity of dusky spotting and mottling - some individuals quite uniform in body color; most with light patch in front of dark area on upper eyelid; below whitish, grading to yellow on posterior part of body and hind limbs. Frequents streams., Nearly always found within few feet of water. Creeks with rocky courses appear to be favored. Seeks moving but not swiftly flowing water. Often active in daytime. May be found sunning on bank of stream. When frightened, seeks seclusion beneath stones or in sediment of stream bottom. Food - aquatic and terrestrial arthropods, particularly insects. Eggs in grape-like clusters in water usually 5 inches or less deep, attached to stones. Egg with three jelly envelopes.

Part 3 - Lizards

Western Fence Lizard (*Sceloporus occidentalis*) (Blue-bellied Lizard)

Adult about $2\frac{1}{2}$ to $3\frac{1}{2}$ inches (snout to vent). Tail somewhat longer than head-body measurement. Scales smaller beneath; no reddish-orange on sides of body. Color above brown or olivaceous; some individuals almost black. Color beneath whitish, yellowish, blotched blue patches beneath. Frequents wood piles, old buildings, wood rat nests, banks with gopher and other burrows. Prefers wooded or rocky canyon and stream beds. Is a good climber. Changes color easily. Male fights vigorously in defense of favored location against trespass of rivals. Bobbing and flashing of abdominal blue patches by laterally flattening of body. Food - insects of several kinds. Eggs are laid in loose, moist earth. There are several closely related subspecies.

Small Scaled Swift (*Sceloporus graciosus*)

Resembles the fence lizard but smaller. Sides often with orange color. Some blue areas beneath. Observed about stumps, logs and rock piles, often in sparsely wooded regions. Primarily lives on the ground but may climb in bushes and when frightened occasionally may climb trees 12 to 15 ft. Bobbing habit as with many lizards. Body rhythmically and stiffly raised and lowered by bending and straightening the forelimbs. Food - insects and arthropods.

Western Skink (*Eumeces skiltonianus*)

Adults $2\frac{1}{2}$ to 3 inches in snout-vent length; tail about $1\frac{1}{2}$ times head-body measurement. Scales in not more than 28 rows around width of body. Above brown with two light lines passing back from upper eyelids onto body, fading out at base of tail. Tail usually uniformly colored toward tip. Belly pale blue; sometimes bluish tinge on throat. Occurs beneath decayed logs, bark, in leaf litter, beneath stones, and other surface objects. Found in woodland, forests and grassland. Food - principally insects. Eggs are spherical, blackish-brown in color and with soft flexible shells. Laid on ground in shade of rocks, etc.

Northern Alligator Lizard (*Gerrhonotus coeruleus*)

Average adult size about 5-2/5 inches in snout-vent length. Tail less than two times the head-body measurement. Eye with dark pigment. Dark markings irregular in spots or blotches not sufficiently distinct to make counting in series possible. Above with glazed appearance and olive, greenish or bluish suffusion. Male often with broad more triangular head than female. Usually in vicinity of coniferous forests. Found under logs and other objects where bushes, trees and open grassy areas afford forage and cover. Food - insects, spiders, grasshoppers, snails. Female lays from 2 to 15 eggs usually in September which are retained in the body until young are fully formed. They are encased in thin transparent membrane from which they soon escape.

Foothill Alligator Lizard (*Gerrhonotus multicarinatus*)

Adults $4\frac{1}{2}$ to $6\frac{1}{2}$ inches in snout-vent length. Tail slightly over two times head-body length. Above dull yellow or brownish colored. Lower surface with dark longitudinal markings on middle of scale rows. Inhabits oak and chaparral belt in foothills and valleys. Found in woodpiles, brush heaps, and shady

thickets. Fond of cover. Good climber and swims well. Body moves in sinuous curves when crawling rapidly forward. When not alarmed slow and deliberate. May play "possum" when caught in open away from cover. An aggressive species; may attack animals much larger than self when cornered. When picked up writhes and emits ill smelling excrement. Food - beetles, crickets, termites, spiders, scorpions, snails, bird eggs and young, and possibly small mammals. Several subspecies.

Part 4 - Snakes

Rubber Snake (Charina bottae) (Also called Ball or Two-headed Snake)

Wide range in California. Adults around 18 inches in length with tail short and almost as blunt as head. Enlarged scales on top of head. Color tan to dark brown, frequently with yellowish, greenish or bluish tinge without pattern. Below yellow to yellowish white. Usually found in moist localities, often in coniferous woods, near streams, under rocks, bark or in rotting wood. Usually move about at night. They burrow in loose soil and are good climbers. Food - small mammals and lizards which are killed by squeezing as this snake is a constrictor. Several subspecies.

Western Ring-necked Snake (Diadophis amabilis)

Wide range in California. Adults may be 12 to 18 inches long and olive, brownish, greenish, bluish slate or gray color above and darker on head. Distinct white or yellowish neck ring, below brilliant orange or coral red, brightest on tail. Belly spotted with small black dots. Usually found beneath boards, logs and rocks, often in moist localities with good vegetation. Behavior - Secretive. When irritated, usually coils tip of tail into tight "thimble-like" spiral, revealing red coloration of ventral surface. Food - tree frogs, small larvae, salamanders, lizards, worms and possible insects. Several subspecies.

Racer and Whipsnake (Genus Coluber)

Body long and slender; head elongate and distinct from the neck; eyes large. Scales smooth - in less than 19 rows. Alert, active and swift moving snakes. Head and neck usually held well above the ground when crawling. Most are good climbers. They do not employ constriction in killing their prey but usually subdue it by pressing against ground with loop of the body.

Racer - Coluber constrictor. Adult under 4 ft. long usually $2\frac{1}{2}$ to 3 ft. No pattern; color olivaceous to bluish; below unmarked, light colored. Young ones marked with dark dorsal patches. Is somewhat larger than the smooth green snake. Prefers moist areas. Occurs in open country in fields, along streams with grassy margins, in mountain meadows, and in thin brush along edges of prairie land. A good climber and is a graceful, gentle snake. Food - amphibians including tree frogs, crickets, rodents and birds; possibly lizards and insect larvae. Females lay about 16 eggs sometimes in decaying vegetation. Eggs about 2 inches in length with granular surface. The young are 8-12 inches on hatching.

The variety Coluber masticophis lateralis is known as the California striped whipsnake. It has a single light lateral stripe extending to the tail.

Gopher Snake (Pituophis catenifer)
(Pacific Bull Snake)

Adults $4\frac{1}{2}$ to 6 ft. or more in length. Above pale brown, yellowish white, or whitish with pattern of squarish black, brown or grayish blotches along middle of back, separated by light colored interspaces; ground color of sides broken by checker-board pattern of small blotches; below whitish or yellowish. Occurs in wide variety of places from lowlands to mountains, cultivated fields and grass lands. Is abroad both day and night except in hot weather. Food - rodents of various kinds, rats, mice, gophers and ground squirrels; also small birds. Kills by constriction. A useful snake in keeping down rodent population. Eggs are probably laid in late July or August. Several subspecies.

Common King Snake (Lampropeltis getulus)
(Chain Snake)

Widely distributed in the west. Adults $2\frac{1}{2}$ to 3 ft., occasionally to 5 ft. Reddish brown, chocolate brown or black with white or straw colored rings with or without brown pigment. Widely distributed but not in high mountains. Common in chaparral areas. Frequently in cultivated areas where rodent prey is abundant. Food - snakes are important in diet. Whipsnakes, bull snakes and rattlesnakes among those taken. Occasionally will swallow a snake longer than itself. Other food includes lizards, birds and their eggs, and rodents such as mice and gophers. Females lay 6 to 9 eggs per clutch in June to August. Hatchlings are about 10 inches and emerge from late August to September.

Mountain King Snake (Lampropeltis multicincta)
(Also called Coral King Snake)

Widely distributed in mountains throughout the west. Adults are 2 to 3 ft. in length; body brightly banded with red, white and black. The red markings are always bounded on either side with black. White rings usually more than 30; snout black. Note! The poisonous coral snake is not found in the north coast area. In it the wide red bands are bordered on either side with yellow instead of black. The harmless Mountain King Snake frequents coniferous forests and prefers moist, cooler portions. Food - lizards, possible snakes and small rodents including mice.

Sharp-tailed Snake (Contia tenuis)

Wide range from Puget Sound to S. central California. Adults are 10 to 11 inches long with smooth scales. This is a rather stout snake with a short conical tail ending in a sharply pointed scale. Color above, brown, reddish or yellowish brown or grayish, sometimes weakly spotted with slaty or black; usually with light yellowish, brownish, orange or reddish line along each side, bordered below by a row of black dots which in a very young individuals form a continuous black line. Upper surface of tail sometimes suffused with red. Ventral plates white to pale yellowish with sharply defined black anterior borders. Usually found beneath boards, stones, logs, etc. in relatively damp situations, often not far from creek or stream. Has been found in numbers in digger pine, blue oak, manzanita, chamise association, beneath logs with moisture as indicated by presence of slugs, earthworms, and millipedes. Behavior - probably largely nocturnal or in dim light. Secretive. Foods - slugs and earthworms.

GARTER SNAKES

Western Garter Snake (*Thamnophis elegans*)

Pacific Coast Garter Snake (*Thamnophis elegans terrestris*)
(Also Single-striped Garter Snake)

Common Garter Snake (*Thamnophis sirtalis*)

The garter snakes are usually 2 to 3 ft. in length; the males smaller than females. Ground color of the body black, gray or brown with yellow dorsal stripe and lateral stripes of yellow or red. Found in meadows with tall grass or clearings. Prefers moist localities usually near water but not in it. Food - small fish, slugs, earthworms, fish eggs, salamanders, small frogs, toads, tadpoles, lizards, snakes, birds and small mammals. Garter snakes are widely distributed and one of the best known small snakes. They are pugnacious when picked up and excrete a strong smelling white fluid from scent glands to aid in escape.

Western Rattlesnake (*Crotalus viridis*) - subspecies oreganus

The rattlesnakes in a number of subspecies are widely distributed from Canada to Mexico and from sea-level to timber line or above in the mountains. They are poisonous and distinguished by the diamond shaped markings, flattened head and jointed horny rattles on the tail. The coast form is generally darker in color and may be almost black above. This subspecies (*oreganus*) is found in grassland, chaparral and forested areas. It stands more cold than other rattlesnakes. Food - principally small rodents as ground squirrels, meadow mice, gophers, chipmunks and occasionally lizards.

This is the only snake in the Las Posadas area that is poisonous.

Part 5 - Turtles

Pacific Mud Turtle (*Clemmys marmorata*)

(Western Pond Turtle)

Adults are sometimes over 7 inches long. Prefers quiet water of ponds or pools in sluggish streams. Thoroughly aquatic but comes out of water to bask on logs or rocks along shore. Quickly drops in water when disturbed. Female lays 5 to 11 eggs in sunny place along stream or some distance from water in open field or on hillside.