

Amphibians and Reptiles

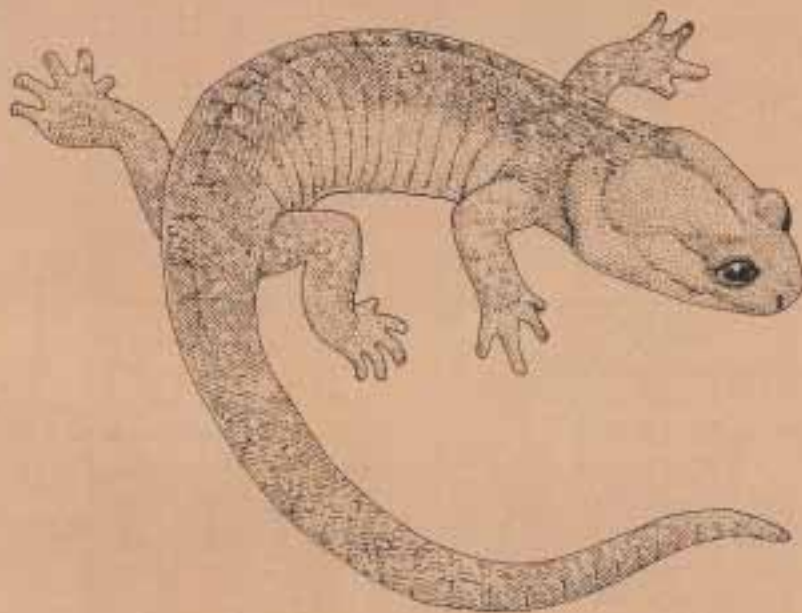
Harold E. Bary and David A. Sinclair

This chapter offers the most recent information available on the habitat relationships of the 26 species of amphibians and 27 species of reptiles known to occur on the west slope of the Sierra Nevada. Nomenclature used follows that in the most recent literature for each species. The species are arranged in phylogenetic order and numbered in sequence, with prefix "A" (amphibians) or "R" (reptiles), for purposes of internal cross-referencing and computer access coding.

In addition to the literature cited for the various species treated in this chapter, several general sources will be invaluable to the forest manager in assessing the effects

of forest management on amphibians and reptiles. The sources include Van Denburg (1922), Grinnell and Storer (1924), Storer (1925), Grinnell *et al.* (1930), Adams (1942), Smith (1946), Bishop (1947), Wright and Wright (1949, 1957), and Wake (1974).

The species notes identify numerous areas in which our knowledge of the biology of amphibians and reptiles is inadequate to permit wise management decisions. To this extent, this publication will serve as a useful guide to researchers and others interested in pursuing field work on the species covered here.



Species List

A001	Tiger Salamander <i>Ambystoma tigrinum</i>	A025	Mountain Yellow-legged Frog <i>Rana muscosa</i>	R023	Western Terrestrial Garter Snake <i>Thamnophis elegans</i>
A002	Long-toed Salamander <i>Ambystoma macrodactylum</i>	A026	Bullfrog <i>Rana catesbeiana</i>	R024	Western Aquatic Garter Snake <i>Thamnophis couchi</i>
A003	California Newt <i>Taricha torosa</i>	R001	Western Pond Turtle <i>Clemmys marmorata</i>	R025	Western Black-headed Snake <i>Tantilla planiceps</i>
A004	Rough-skinned Newt <i>Taricha granulosa</i>	R002	Western Fence Lizard <i>Sceloporus occidentalis</i>	R026	Night Snake <i>Hypsiglena torquata</i>
A005	Pacific Giant Salamander <i>Dicamptodon ensatus</i>	R003	Sagebrush Lizard <i>Sceloporus graciosus</i>	R027	Western Rattlesnake <i>Crotalus viridis</i>
A006	Mount Lyell Salamander <i>Hydromantes platycephalus</i>	R004	Side-blotched Lizard <i>Uta stansburiana</i>		
A007	Limestone Salamander <i>Hydromantes brunus</i>	R005	Coast Horned Lizard <i>Phrynosoma coronatum</i>		
A008	Shasta Salamander <i>Hydromantes shastae</i>	R006	Gilbert's Skink <i>Eumeces gilberti</i>		
A009	Ensatina <i>Ensatina eschscholtzi</i>	R007	Western Skink <i>Eumeces skiltonianus</i>		
A010	California Slender Salamander <i>Batrachoseps attenuatus</i>	R008	Western Whiptail <i>Cnemidophorus tigris</i>		
A011	Relictual Slender Salamander <i>Batrachoseps relictus</i>	R009	Southern Alligator Lizard <i>Gerrhonotus multicarinatus</i>		
A012	Kern Canyon Slender Salamander <i>Batrachoseps simatus</i>	R010	Northern Alligator Lizard <i>Gerrhonotus coeruleus</i>		
A013	Tehachapi Slender Salamander <i>Batrachoseps stebbinsi</i>	R011	California Legless Lizard <i>Anniella pulchra</i>		
A014	Arboreal Salamander <i>Aneides lugubris</i>	R012	Rubber Boa <i>Charina bottae</i>		
A015	Black Salamander <i>Aneides flavipunctatus</i>	R013	Ringneck Snake <i>Diadophis punctatus</i>		
A016	Tailed Frog <i>Ascaphus truei</i>	R014	Sharp-tailed Snake <i>Contia tenuis</i>		
A017	Western Spadefoot <i>Scaphiopus hammondi</i>	R015	Racer <i>Coluber constrictor</i>		
A018	Western Toad <i>Bufo boreas</i>	R016	Coachwhip <i>Masticophis flagellum</i>		
A019	Yosemite Toad <i>Bufo canorus</i>	R017	Striped Racer <i>Masticophis lateralis</i>		
A020	Pacific Treefrog <i>Hyla regilla</i>	R018	Gopher Snake <i>Pituophis melanoleucus</i>		
A021	Red-legged Frog <i>Rana aurora</i>	R019	Common Kingsnake <i>Lampropeltis getulus</i>		
A022	Cascades Frog <i>Rana cascadae</i>	R020	California Mountain Kingsnake <i>Lampropeltis zonata</i>		
A023	Leopard Frog <i>Rana pipiens</i>	R021	Long-nosed Snake <i>Rhinocheilus lecontei</i>		
A024	Foothill Yellow-legged Frog <i>Rana boylei</i>	R022	Common Garter Snake <i>Thamnophis sirtalis</i>		

LEGEND
 Occasional Habitat (1)
 Suitable Habitat (2)
 Marginal Habitat (3)
 Spring
 Summer
 Fall
 Winter

Species occurrence and utilization, by habitat stage

Code	Species	Special Habitat Requirements	Page	Annual Freshwater	Blue Oak Savanna	Digger Pine-Oak	Chaparral	Redwood Pine	Black Oak Woodland	Monterey Woodland	Baywood	Marine Coastal	Golden Pine	Red Fir	Redwood Pine	Alpine Meadow
A001	Tiger Salamander	Ponds, ground burrows	19	1	1	1	1	1	1	1	1	1	1	1	1	1
A002	Long-toed Salamander	Ponds, lakes, bays, littor	20	1	1	1	1	1	1	1	1	1	1	1	1	1
A003	California Newt	Ponds, lakes, streams	21	1	1	1	1	1	1	1	1	1	1	1	1	1
A004	Rough-skinned Newt	Ponds, lakes, streams	22	1	1	1	1	1	1	1	1	1	1	1	1	1
A005	Pacific Giant Salamander	Perennial streams	23	1	1	1	1	1	1	1	1	1	1	1	1	1
A006	Mountain Yellow Salamander	Tidal springs, seeps	24	1	1	1	1	1	1	1	1	1	1	1	1	1
A007	Lutescent Salamander	Littoral margins	25	1	1	1	1	1	1	1	1	1	1	1	1	1
A008	Shasta Salamander	Littoral margins	26	1	1	1	1	1	1	1	1	1	1	1	1	1
A009	Enallagma	Moist soil, bays, littor	27	1	1	1	1	1	1	1	1	1	1	1	1	1
A010	California Archerfish	Moist soil, bays, littor	28	1	1	1	1	1	1	1	1	1	1	1	1	1
A011	Beloved Skink	Moist soil, springs, seeps	29	1	1	1	1	1	1	1	1	1	1	1	1	1
A012	Kern Canyon Shiner	Moist soil, bays, littor	30	1	1	1	1	1	1	1	1	1	1	1	1	1
A013	Tribal Shiner	Moist soil, bays, littor	31	1	1	1	1	1	1	1	1	1	1	1	1	1
A014	Arched Salamander	Ground burrows, moist soil, littor	32	1	1	1	1	1	1	1	1	1	1	1	1	1
A015	Black Salamander		33	1	1	1	1	1	1	1	1	1	1	1	1	1

LEGEND

Openland Habitat (1)
Savanna Habitat (2)
Marginal Habitat (3)
Spring
Summer
Fall
Winter

For key to this matrix, see Figure 2.

Code	Species	Special Habitat Requirements	Page	Species occurrence and utilization, by habitat status																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
R005	Cane Horned Lizard	Trilled call	60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

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Tiger Salamander

A001 (*Ambystoma tigrinum*)

STATUS: No official listed status. Considered fragile because conversions of grassland to other types and use of poisons in ponds could have deleterious effects on species.

DISTRIBUTION/HABITAT: Found primarily in grasslands at elevations below 1000 ft (305 m), but has been sighted in an oak woodland habitat on the San Joaquin Experimental Range, Madera County.

SPECIAL HABITAT REQUIREMENTS: Ponds for breeding and ground burrows for summer dormancy.

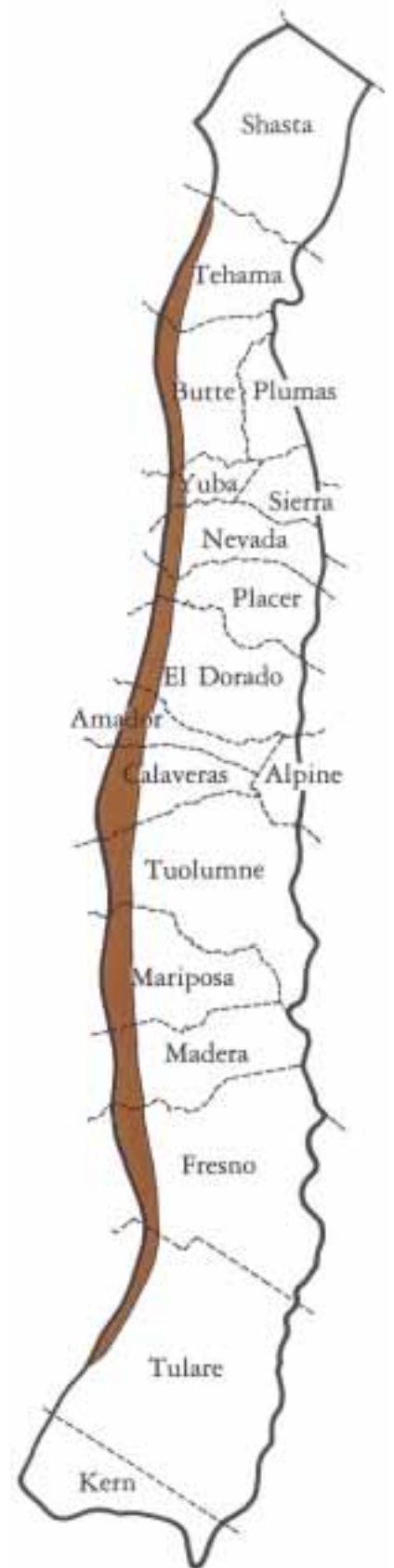
BREEDING: Breeds from December to February in streams, ponds, reservoirs, and wells. Peak breeding varies with rain patterns from year to year. Females lay as many as 500 eggs attached singly or in clumps to submerged objects; many clutches. Mean clutch size 3 to 4 (range 1 to 15).

TERRITORY/HOME RANGE: Not territorial. Home range estimated as 1 acre (0.4 ha); species found up to 600 ft (180 m) from breeding sites.

FOOD HABITS: Aquatic and terrestrial insects and other invertebrates stalked or searched for in ponds, on land surfaces, and under objects.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Gehlbach 1967.



Long-toed Salamander

A002 (*Ambystoma macrodactylum*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found from Stanislaus River drainage northward, with an elevational range of 1000 to 9000 ft (305 to 2740 m). Observed in all successional stages of ponderosa pine type to red fir type with mountain meadow and mixed-conifer types as favored habitats. Permanent bodies of water required at 7400 ft (2265 m), but temporary ponds suffice at 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS: Ponds and lakes for breeding; surface objects, such as logs, around breeding sites.

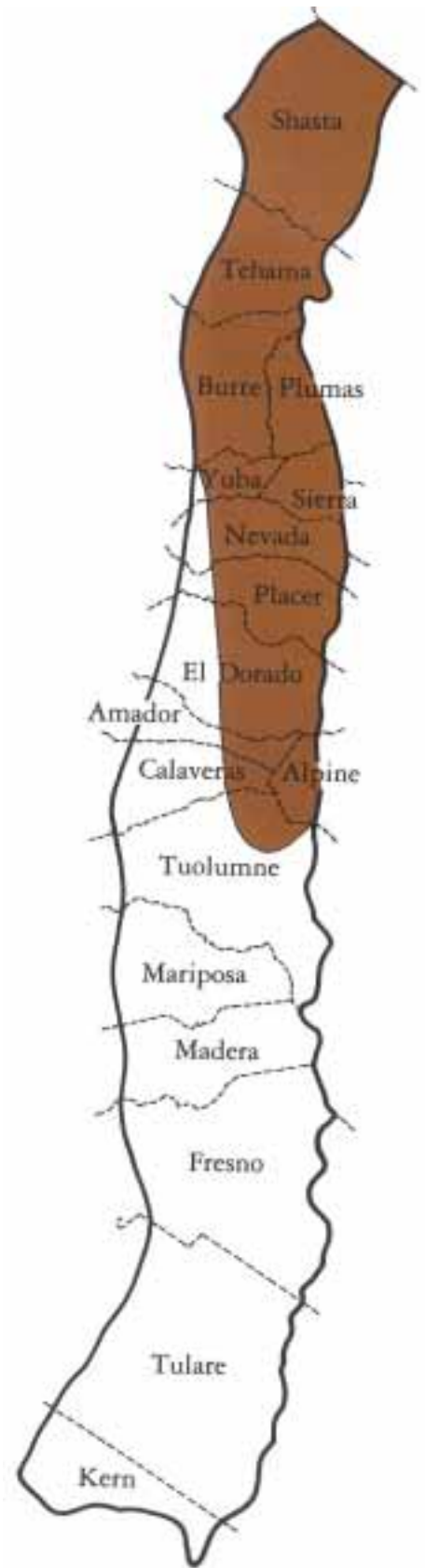
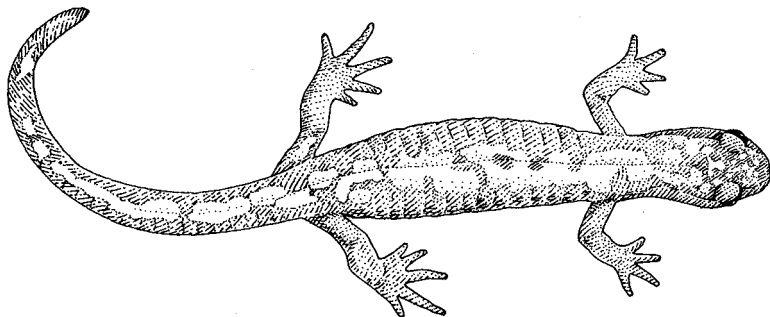
BREEDING: Breeds in May and June, with peak breeding depending on snowmelt. Eggs laid singly (range 85 to 345). Reproduces in small to large bodies of water where eggs are attached to submerged logs or other objects.

TERRITORY/HOME RANGE: Not territorial. Home ranges estimated up to 1 acre (0.4 ha).

FOOD HABITS: Stalks or scavenges for spiders, insects or insect parts under forest surface objects and in ponds.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1972; Ferguson 1961, 1963; Anderson 1967.



California Newt

A003 (*Taricha torosa*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found in all successional stages from blue oak savannah to mixed-conifer types; prefers riparian deciduous. Elevation range up to 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS: Ponds, lakes, and streams.

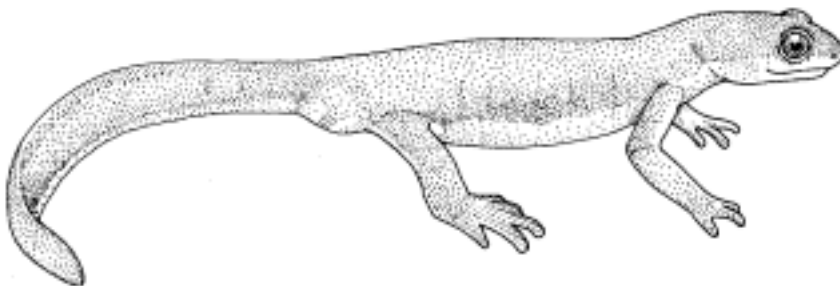
BREEDING: Breeds from February to June, with peak in March and April. Eggs laid in clumps (mean 16, range 6 to 30). Clumps attached to submerged vegetation and underside of boulders. Pools in streams (some lakes and reservoirs) are required breeding sites.

TERRITORY/HOME RANGE: Not thought to be territorial. Home ranges estimated at 1 acre (0.4 ha). Movement to and from breeding sites not included in home range.

FOOD HABITS: Searches for insects under surface objects and in streams.

OTHER: Inactive during late summer and early fall (until it rains). Evidently estivates in burrows and crevices; only a few found at this time of year.

REFERENCES: Stebbins 1951, 1954a, 1972.



Rough-skinned Newt

A004 (*Taricha granulosa*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found from blue oak savannah to Jeffrey pine types in all successional stages; prefers mountain meadows and riparian deciduous types. Elevation range up to 5000 ft (1520 m). Distribution from east of Chico, Butte County, northward.

SPECIAL HABITAT REQUIREMENTS: Ponds, lakes, and streams for breeding.

BREEDING: Breeds from January to June, with peak activity in March and April. Females found with 1 to 40 eggs; eggs deposited singly.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be 1 acre (0.4 ha).

FOOD HABITS: Searches under surface objects and in ponds for insects and other arthropods (primarily aquatic).

OTHER: Inactive during late summer and early fall. Evidently estivates in burrows and crevices; only a few found at this time of year.

REFERENCES: Stebbins 1951, 1954a, 1972.



Pacific Giant Salamander

A005 (*Dicamptodon ensatus*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found up to 6000 ft (1830 m) in all successional stages of ponderosa pine, black oak woodland, mountain meadow, and mixed-conifer types; prefers riparian deciduous. Lives in damp forests in or near clear streams and rocky shores of mountain lakes in the area of Shasta County, but not in the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Permanent streams for feeding and breeding.

BREEDING: Breeds from March to May, with peak breeding in early May. Eggs laid in concealed locations several feet beneath the surface in cold, slowly flowing water of springs, channels, under streambanks, and beneath rocks in stream bottoms. Mean clutch size unknown but suspected to be 100 (range 70 to 146).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Searches under logs and other surface objects for insects, snails and slugs, shrews, mice and other amphibians.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Anderson 1969.



Mount Lyell Salamander A006 (*Hydromantes platycephalus*)

STATUS: No official listed status. Fragile species; total population relatively small, composed of scattered local populations.

DISTRIBUTION/HABITAT: Wet spots in the high Sierra Nevada—edges of snow-banks, seeps, wet meadows. Found in all successional stages of mixed conifer, red fir, and lodgepole pine. Elevation range 4000 to 11,600 ft (1220 to 3540 m).

SPECIAL HABITAT REQUIREMENTS: Wet areas (springs and seeps), under large granite slabs and boulders at the base of talus slopes.

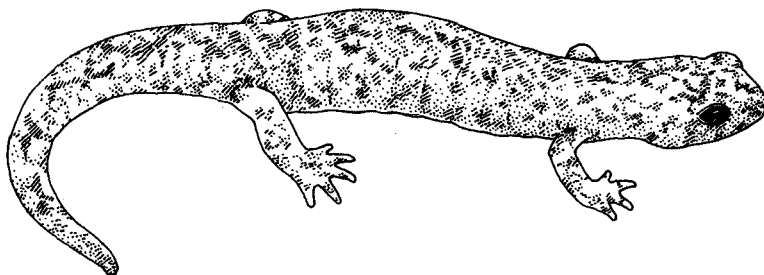
BREEDING: Breeding season unknown. Peak thought to be May and June depending on year. Clutch size unknown; nest site unknown.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range may be up to 1 acre (0.4 ha), probably less.

FOOD HABITS: Searches for insects and spiders under surface objects.

OTHER: Thought to be a relict of a once widespread species in past Sierra glacial periods. Recent population reported in Desolation Wilderness, El Dorado County, but not confirmed. Species endemic to the Sierra Nevada.

REFERENCES: Adams 1942, Stebbins 1951, 1954a; Gorman 1964.



Limestone Salamander

A007 (*Hydromantes brunus*)

STATUS: Rare (State of California).

DISTRIBUTION/HABITAT: Very limited distribution. Found only along riparian deciduous zone in Merced River Canyon, Mariposa County. Elevation range 840 to 2500 ft (255 to 760 m). Associated with limestone outcrops.

SPECIAL HABITAT REQUIREMENTS: Moist limestone outcrops and caverns.

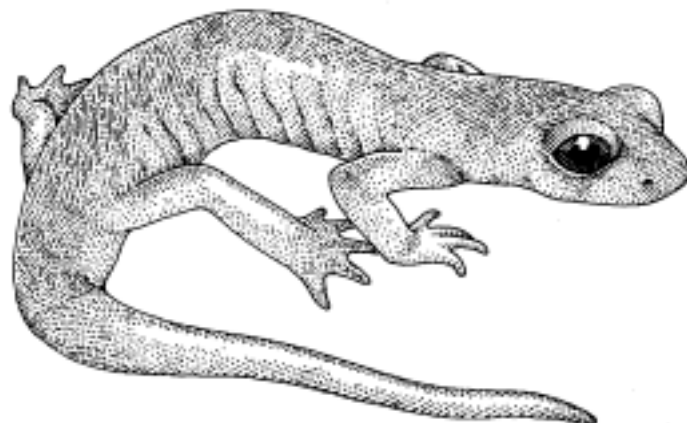
BREEDING: Little definite information. Suspected that it breeds in limestone caverns from May to July, with peak in June. Mean clutch size 7 (range 5 to 14).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range may be as large as 1 acre (0.4 ha).

FOOD HABITS: Searches for insects and other invertebrates under surface objects and in caverns.

OTHER:

REFERENCES: Gorman 1964, Leach *et al.* 1976.



Shasta Salamander

A008 (*Hydromantes shastae*)

STATUS: Rare (State of California).

DISTRIBUTION/HABITAT: Restricted in distribution to limestone outcrops in Lake Shasta area, Shasta County. Found in all successional stages of digger pine-oak, ponderosa pine, and black oak types. Elevation range up to 2500 ft (760 m).

SPECIAL HABITAT REQUIREMENTS: Moist limestone outcrops and caverns.

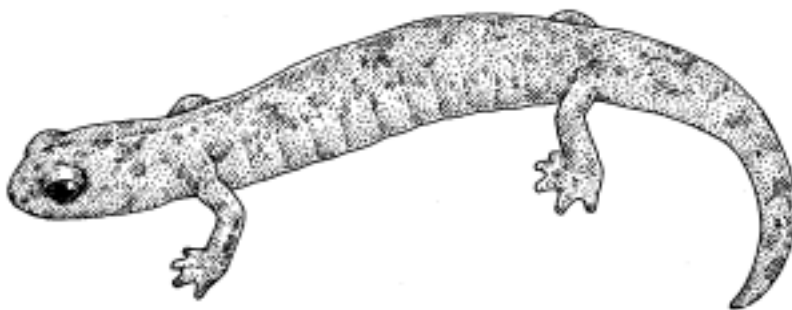
BREEDING: Probably breeds from May to July, with peak breeding in June. Mean clutch size 7 (range 5 to 12). Thought that it breeds in moist limestone caverns.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range may be up to 1 acre (0.4 ha).

FOOD HABITS: Searches for insects and other invertebrates under surface objects and in caverns.

OTHER:

REFERENCES: Gorman and Camp 1953, Gorman 1964, Leach *et al.* 1976, Papenfuss and Carufel 1977.



Ensatina

A009 (*Ensatina eschscholtzi*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: A forest dweller, found in all successional stages from chaparral to mixed-conifer types. Prefers mountain meadow and mixed-conifer types. Elevation range 1900 to 8000 ft (580 to 2440 m). An upper foothill subspecies, *E. e. xanthoptica*, found from Mokelumne River south to Bass Lake, Madera County.

SPECIAL HABITAT REQUIREMENTS: Moist subsurface areas to lay eggs (under logs and litter).

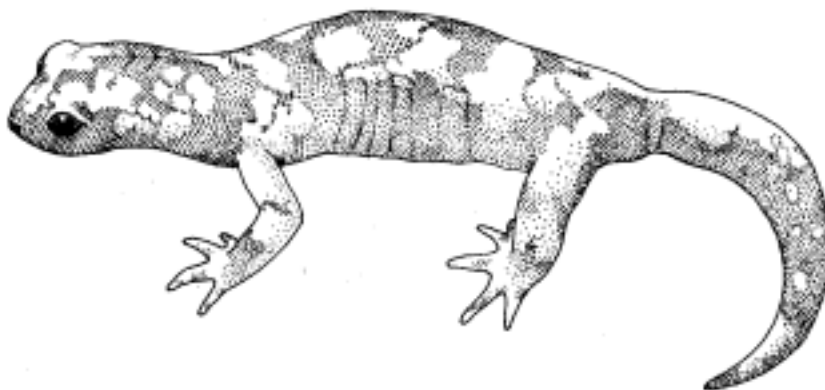
BREEDING: Lays eggs from April to June, with peak activity varying from year to year. Clutch size averages 11 (range 5 to 16).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be up to 1 acre (0.4 ha).

FOOD HABITS: Searches for insects and other invertebrates under surface objects.

OTHER:

REFERENCES: Stebbins 1954a, 1954b; Brown 1974.



California Slender Salamander

A010 (*Batrachoseps attenuatus*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found in all successional stages of blue oak savannah, digger pine-oak and chaparral types; prefers blue oak savannah. The only slender salamander found in oak woodlands north of Merced River. Elevation range to 5000 ft (1520 m).

SPECIAL HABITAT REQUIREMENTS: Moist soil under logs and litter.

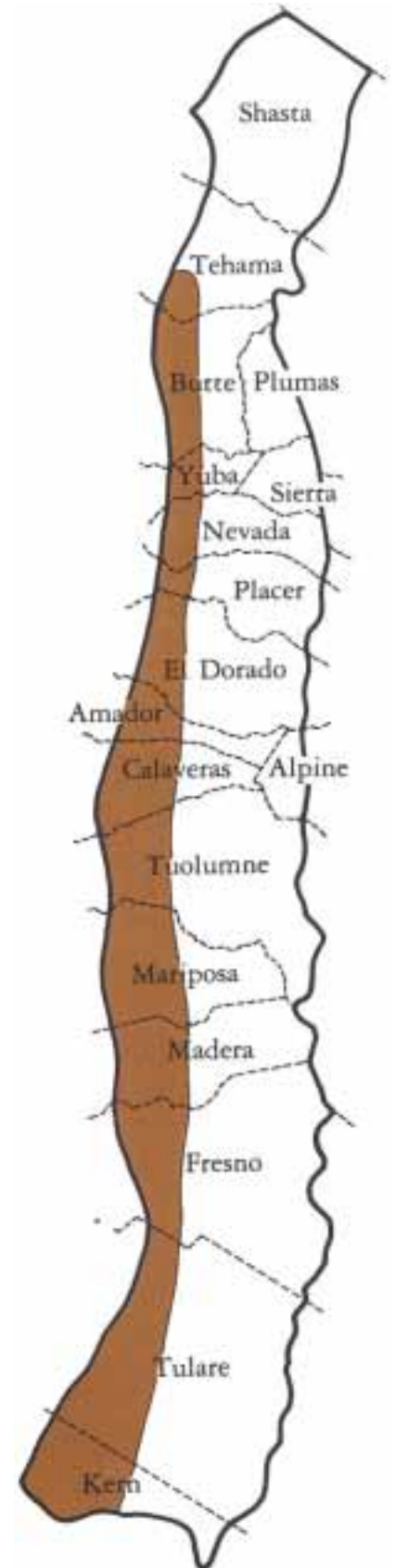
BREEDING: Breeds from October to January, with peak breeding in November. Mean clutch size 9 (range 4 to 25). Eggs laid in moist places under surface objects and in burrows.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range up to 0.5 acre (0.2 ha).

FOOD HABITS: Searches for small insects and other invertebrates under surface objects.

OTHER:

REFERENCES: Hendrickson 1954, Brame and Murray 1968.



Relictual Slender Salamander

A011 (*Batrachoseps relictus*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Prefers mountain meadows; also found in ponderosa pine, black oak woodland, riparian-deciduous and mixed-conifer types, from Merced River Canyon, Tuolumne County, south. Elevation range up to 8000 ft (2440 m).

SPECIAL HABITAT REQUIREMENTS: Moist soil, springs, and seeps.

BREEDING: Lays eggs in moist places under surface objects from May to July, with peak activity suspected to be in June. Mean clutch size 4 (range 1 to 12).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range suspected to be 0.5 acre (0.2 ha).

FOOD HABITS: Searches for small insects and other invertebrates under surface objects.

OTHER: Species first described in 1968; little ecological information available.

REFERENCES: Stebbins 1966, 1972; Brame and Murray 1968.



Kern Canyon Slender Salamander

A012 (*Batrachoseps simatus*)

STATUS: Rare (State of California).

DISTRIBUTION/HABITAT: Found only in Kern River Canyon, Tulare and Kern Counties. Observed in all successional stages of blue oak savannah; prefers digger pine-oak types. Elevation range 1000 to 4000 ft (305 to 1220 m).

SPECIAL HABITAT REQUIREMENTS: Logs, litter, and moist soil.

BREEDING: Lays eggs in moist places under surface objects. Clutch size unknown. Suspected to breed from November to February, with peak activity in November.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range suspected to be 0.5 acre (0.2 ha).

FOOD HABITS: Forages by searching and waiting for small insects and other invertebrates under surface objects.

OTHER: Species first described in 1968; little ecological information available.

REFERENCES: Brame and Murray 1968, Leach *et al.* 1976.



Tehachapi Slender Salamander

A013 (*Batrachoseps stebbinsi*)

STATUS: Rare (State of California).

DISTRIBUTION/HABITAT: Found only in Tulare and Kern Counties. Reported found from 2500 to 8300 ft (760 to 2530 m). Prefers all successional stages of blue oak savannah, digger pine-oak, and riparian deciduous types. Other habitats are mountain meadow and all successional stages of mixed conifer.

SPECIAL HABITAT REQUIREMENTS: Moist places under logs and litter.

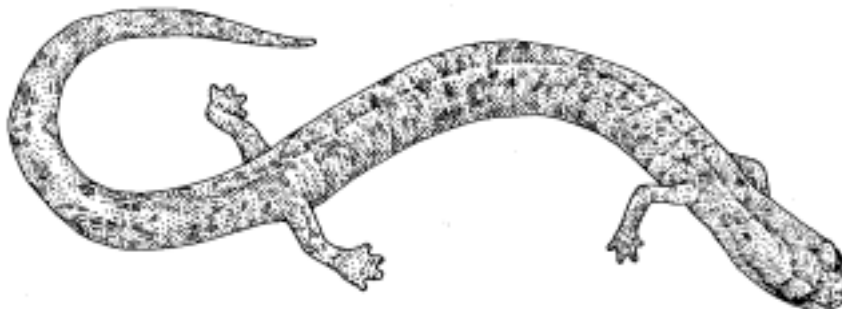
BREEDING: Eggs laid in moist places under surface objects. Breeding season suspected to be from November to February, with peak activity in November and December. Clutch size unknown.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range suspected to be 0.5 acre (0.2 ha).

FOOD HABITS: Searches or waits for small insects and other invertebrates under surface objects.

OTHER: First described in 1968; little ecological information available.

REFERENCES: Brame and Murray 1968, Leach *et al.* 1976.



Arboreal Salamander

A014 (*Aneides lugubris*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found from 1000 to 5000 ft (305 to 1520 m) from Madera County north to El Dorado County. Prefers digger pine-oak, chaparral, and riparian deciduous types. Also found in ponderosa pine, black oak woodland, and mountain meadow types. Usually found in association with interior live oak.

SPECIAL HABITAT REQUIREMENTS: Moist places under logs and litter. Uses ground burrows during summer.

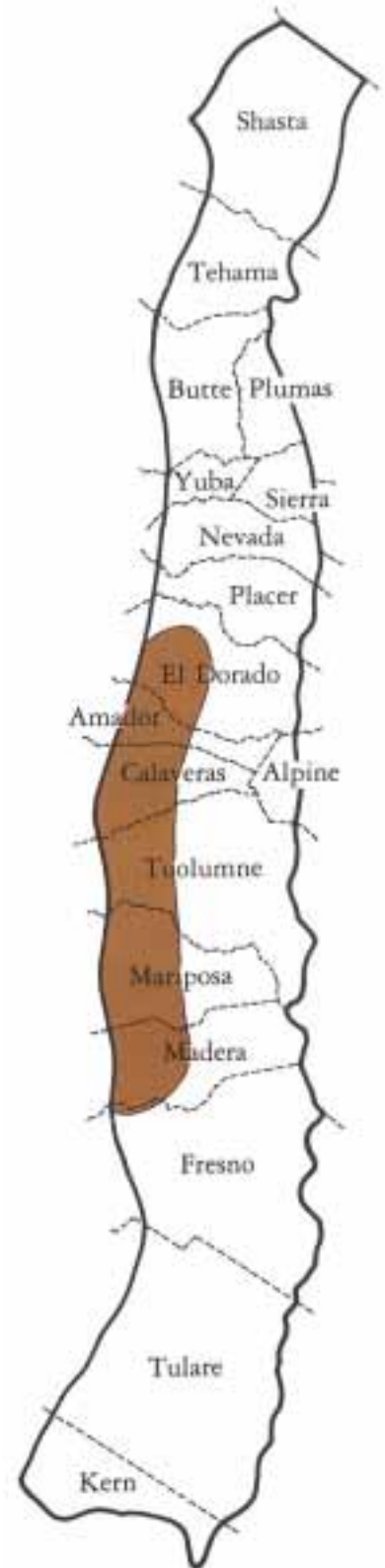
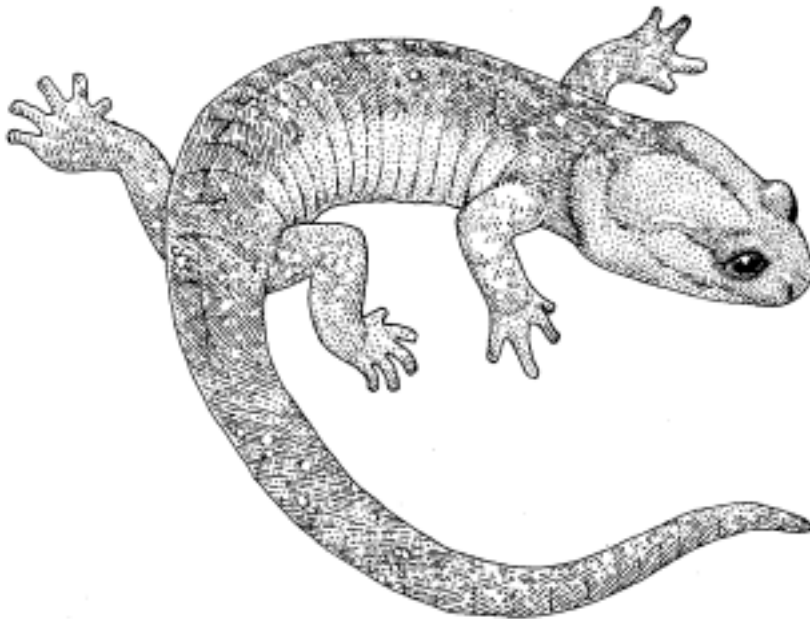
BREEDING: Eggs laid from May to June in moist places under surface objects, in logs, and occasionally up in trees, with peak activity around June 1. Mean clutch size 17 (range 12 to 23).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range suspected to be 1 acre (0.4 ha).

FOOD HABITS: Searches or waits for insects and other invertebrates under surface objects. Also eats some fungi.

OTHER: Primarily a foothill species.

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Rosenthal 1957, Lynch and Wake 1974.



Black Salamander

A015 (*Aneides flavipunctatus*)

STATUS: No official listed status. Common in its preferred habitat.

DISTRIBUTION/HABITAT: Distributed in Shasta Lake area, Shasta County. Found in all successional stages of digger pine-oak, chaparral, ponderosa pine, black oak woodland, and mixed-conifer types. Also occurs in wet mountain meadows and riparian deciduous types. Elevation range 1000 to 4000 ft (305 to 1220 m).

SPECIAL HABITAT REQUIREMENTS: Unknown.

BREEDING: Eggs laid in moist places under surface objects from June to August, with peak activity in July. Mean clutch size 15 (range 5 to 30).

TERRITORY/HOME RANGE: Not thought to be territorial. Suspected home range 1 acre (0.4 ha).

FOOD HABITS: Searches or waits for insects and other invertebrates under surface objects.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Lynch 1974.



Tailed Frog

A016 (*Ascaphus truei*)

STATUS: No official listed status. Status needs study.

DISTRIBUTION/HABITAT: Edge of its range in the McCloud River drainage, Shasta County, and not reported in the Sierra Nevada. Found in fast-moving streams from ponderosa pine to red fir type in all successional stages. Prefers riparian deciduous and mixed-conifer types.

SPECIAL HABITAT REQUIREMENTS: Permanent streams for breeding.

BREEDING: Eggs laid in cool streams in summer; mates in August and September. Mean clutch size 40 (range 35 to 50).

TERRITORY/HOME RANGE: Not territorial. Home range unknown.

FOOD HABITS: Adults wait for prey (insects and other invertebrates) in streams and on wet forest surfaces. Larvae eat algae and pollen.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1972; Bury 1968, Metter 1968.



Western Spadefoot

A017 (*Scaphiopus hammondi*)

STATUS: No official listed status. Habitat loss because of agricultural conversion.

DISTRIBUTION/HABITAT: Common in grassland at lower elevations. Found above 1000 ft (305 m) in only a few areas, such as the San Joaquin Experimental Range, Madera County.

SPECIAL HABITAT REQUIREMENTS: Winter-spring ponds.

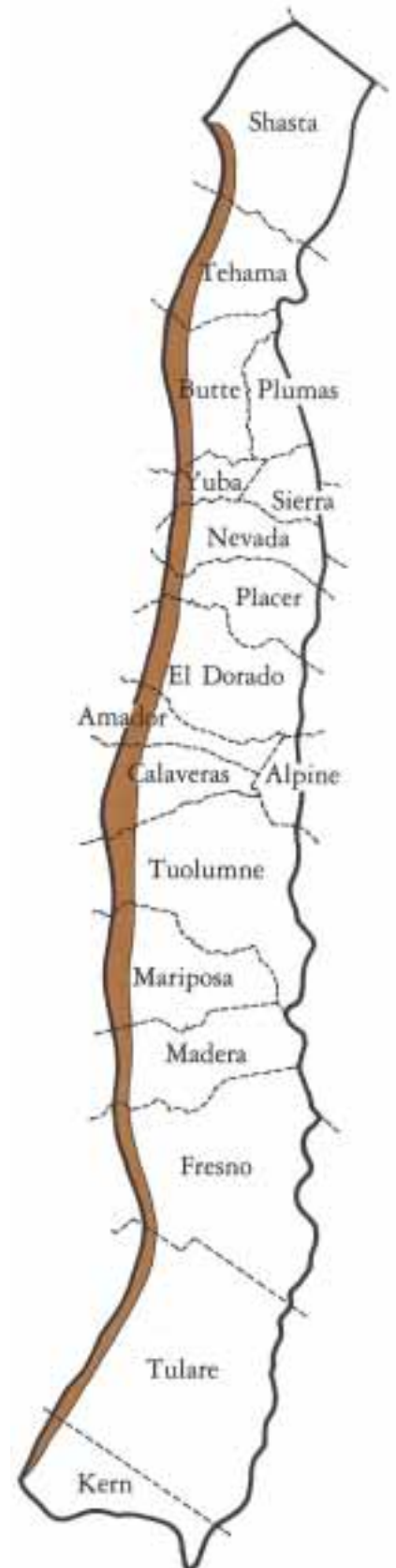
BREEDING: Eggs laid in vernal pools (ponds) and occasionally in slow streams from February to April, with peak activity in March. Mean clutch size 400 (range 300 to 500).

TERRITORY/HOME RANGE: Territory restricted to vicinity of calling male. Home range suspected to be up to 1 acre (0.4 ha).

FOOD HABITS: Waits for insects and other invertebrates on surface of ponds.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1966, 1972.



Western Toad

A018 (*Bufo boreas*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Elevation range 1000 to 10,000 ft (305 to 3050 m) in mountain meadow and riparian deciduous types at lower elevations. Uncommon at higher elevations.

SPECIAL HABITAT REQUIREMENTS: Ponds, lakes, streams, or rivers for breeding.

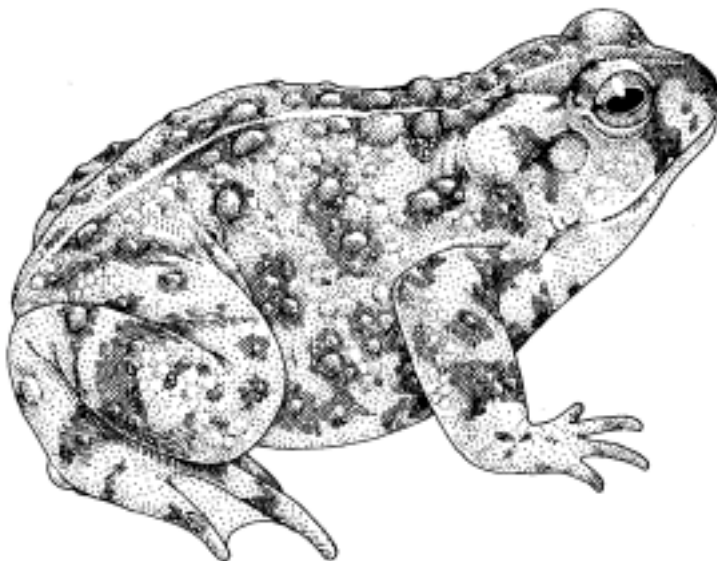
BREEDING: Eggs laid in open water from February to July, with peak activity in April. Peak activity varies with elevation and from year to year. Mean clutch size 10,000 (range 100 to 15,000).

TERRITORY/HOME RANGE: Territory limited to vicinity of calling male. Home range up to 0.5 acre (0.2 ha).

FOOD HABITS: Waits for prey (moving insects) on surface of ground or in shallow burrows.

OTHER: Common toad of California.

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Karlstrom 1962.



Yosemite Toad

A019 (*Bufo canorus*)

STATUS: No official listed status. Fragile; limited distribution of total species.

DISTRIBUTION/HABITAT: Restricted to central high Sierra Nevada. Prefers mountain meadow, lodgepole pine, and alpine meadow types. Also found in all successional stages of mixed-conifer, Jeffrey pine, and red fir types. Elevation range 6400 to 11,300 ft (1950 to 3440 m).

SPECIAL HABITAT REQUIREMENTS: Relatively warm-water ponds for breeding (usually in meadows).

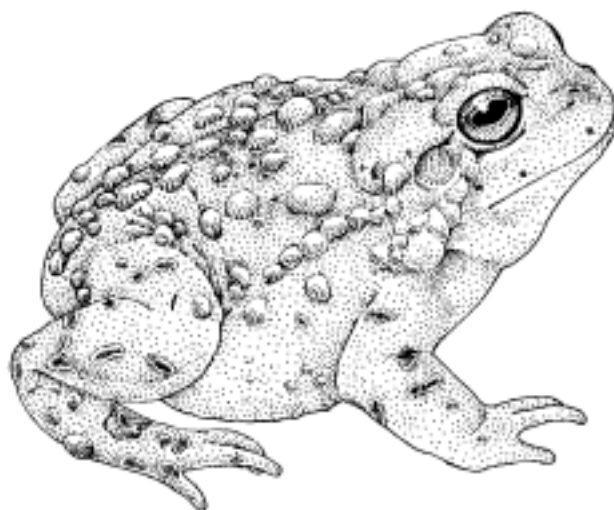
BREEDING: Eggs laid in ponds from April to June, with peak activity in late May (varies from year to year). Karlstrom (1962) indicates they lay "eggs in shallow water where heating effect [of sun] is pronounced." Water temperatures at egg-laying sites range from 45°F to 73° F (7°C to 23°C). Mean clutch size 8000 (range 6000 to 15,000).

TERRITORY/HOME RANGE: Territory restricted to vicinity of calling male. Suspected home range 0.5 acre (0.2 ha).

FOOD HABITS: Waits and pounces on insects and other invertebrates. Forages on the surface of ground.

OTHER: Endemic to the Sierra Nevada.

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Karlstrom 1962, 1973.



Pacific Treefrog

A020 (*Hyla regilla*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Widespread; found in all habitat types; more common in annual grassland, mountain meadow, and riparian deciduous types. Elevation range to 13,000 ft (3960 m).

SPECIAL HABITAT REQUIREMENTS: Ponds, lakes, streams, or rivers for breeding.

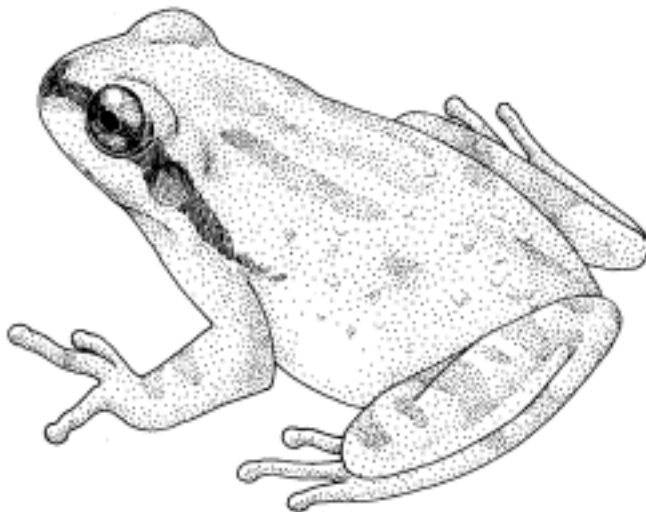
BREEDING: Eggs laid in ponds, lakes, streams, and rivers from February to July. Peak activity from March to June, but varies with elevation and from year to year. Mean clutch size 600 (range 500 to 700).

TERRITORY/HOME RANGE: Territory restricted to vicinity of calling male. Home range unknown.

FOOD HABITS: Waits for and pounces on small insects and other invertebrates in moist areas (meadows and stream edges).

OTHER: A subspecies found in forested areas of the Sierra Nevada; terrestrial and lives away from meadows and streams.

REFERENCES: Stebbins 1951, 1954a, 1966, 1972.



Red-legged Frog

A021 (*Rana aurora*)

STATUS: No official listed status. Fragile. Range recently reduced when Bullfrog introduced. Populations in the central and southern Sierra Nevada rare, perhaps extinct. Detailed study underway.

DISTRIBUTION/HABITAT: Found in blue oak savannah, digger pine-oak, and chaparral habitat types. Prefers riparian deciduous. Primarily found from Mariposa County northward. Elevation range 1000 to 6000 ft (305 to 1830 m). Few present locations known above 1000 ft (305 m).

SPECIAL HABITAT REQUIREMENTS: Quiet pools in permanent streams; pools at least 3 ft (1 m) deep.

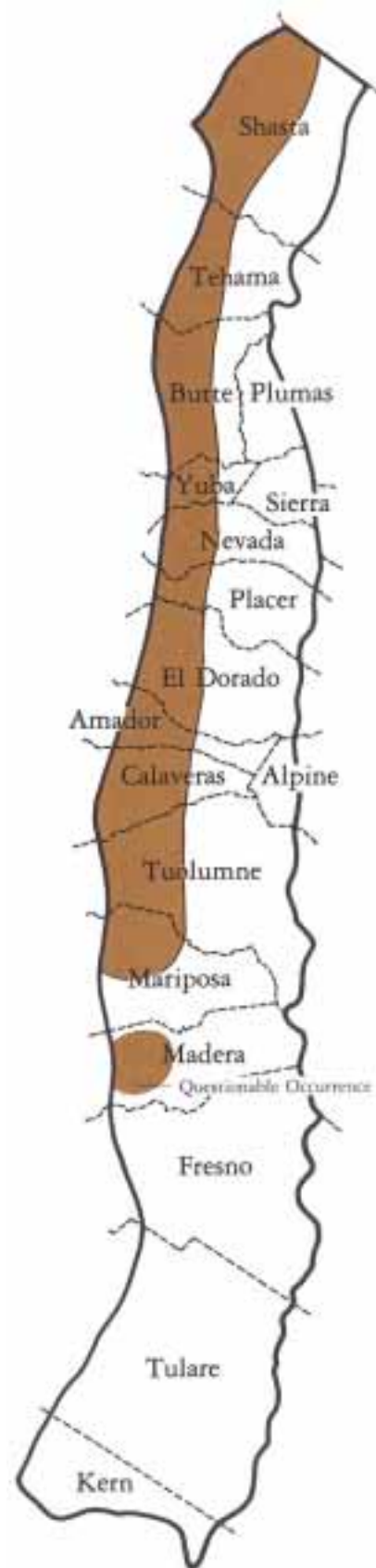
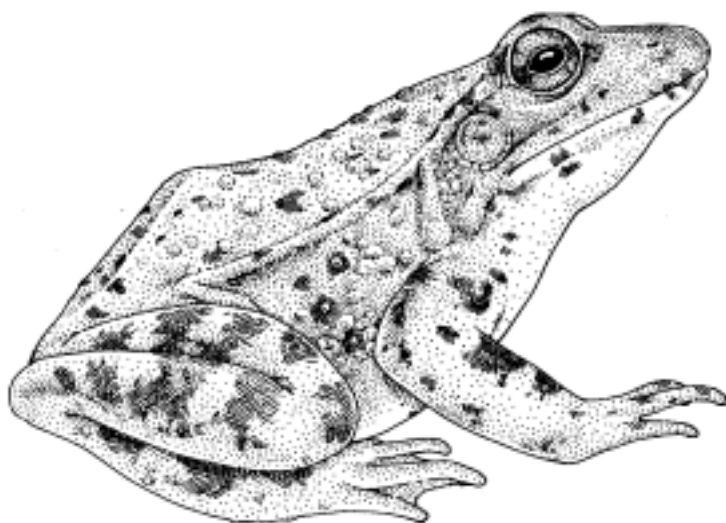
BREEDING: Eggs laid in February and March in pools of permanent, slow-moving streams. Mean clutch size 300 (range 100 to 600).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Waits for and pounces on insects and other small animals near water's edge.

OTHER:

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Altig and Dumas 1972.



Cascades Frog

A022 (*Rana cascadae*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Limited distribution in the western Sierra Nevada Zone, from northern tip of Butte County northward. Found in forested types-mixed conifer, Jeffrey pine, red fir, and lodgepole pine; prefers mountain meadow, riparian deciduous, and alpine meadow types. Elevation range 1000 to 9000 ft (305 to 2740 m).

SPECIAL HABITAT REQUIREMENTS: Ponds, lakes, streams, or rivers.

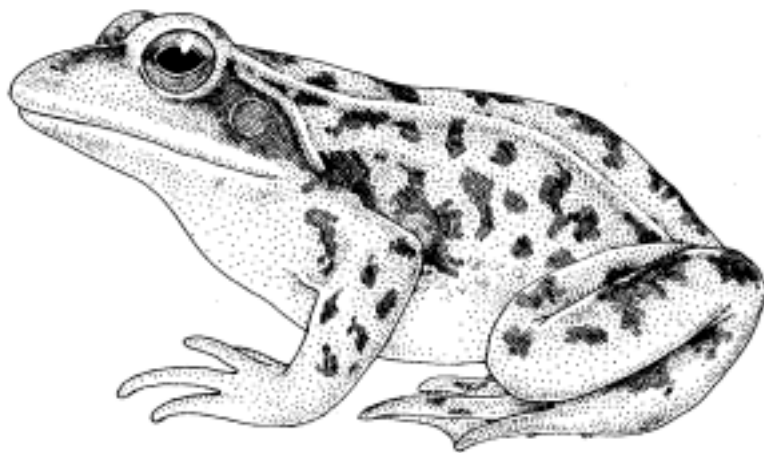
BREEDING: Eggs laid in streams, rivers, ponds, and lakes from March to June, with peak activity in April. Mean clutch size 300 (range 100 to 600).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Waits for and pounces on insects and other small animals in water (ponds and streams).

OTHER: Best work done in Washington, but data may not apply to California.

REFERENCES: Slater 1939, Stebbins 1951, 1954a, 1966, 1972; Altig and Dumas 1971.



Leopard Frog

A023 (*Rana pipiens*)

STATUS: No official listed status. Reported in Lake Tahoe Basin, El Dorado County. Present status unknown.

DISTRIBUTION/HABITAT: Found in mountain meadow, riparian deciduous, and mixed-conifer types. Distribution limited to Tahoe Basin. Elevation range 6200 to 7000 ft (1890 to 2130 m).

SPECIAL HABITAT REQUIREMENTS: Streams, rivers, ponds, or lakes.

BREEDING: Eggs laid in open water in May and June, with peak activity around June 1. Mean clutch size 4000 (range 3000 to 6000).

TERRITORY/HOME RANGE: Not territorial, except in vicinity of male. Home range unknown.

FOOD HABITS: Waits for and pounces on insects and other small animals near open water.

OTHER: An introduced species in the Sierra Nevada; might displace native frogs; could be considered a pest.

REFERENCES: Bryant 1917, Stebbins 1954a.



Foothill Yellow-legged Frog

A024 (*Rana boylei*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Native of foothill streams. Found the entire length of the Sierra Nevada in streams and mountain meadows from 1000 to 6000 ft (305 to 1830 m).

SPECIAL HABITAT REQUIREMENTS: Permanent foothill streams.

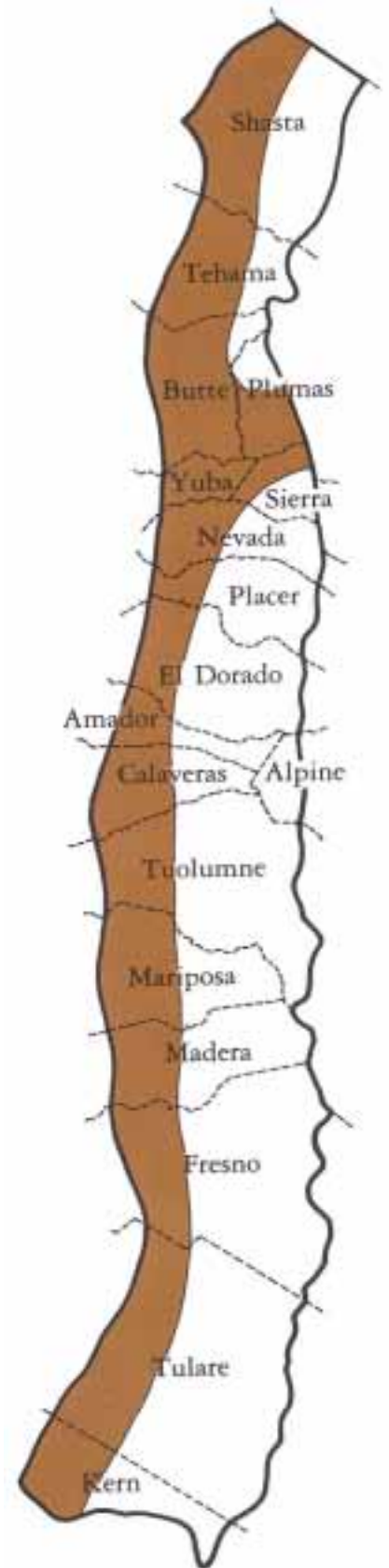
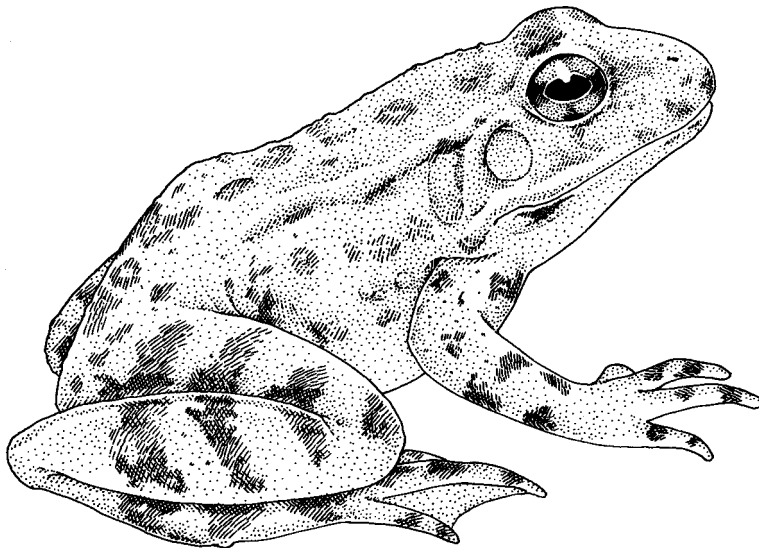
BREEDING: Eggs laid in streams, often where water moves over rocks at increased flow, in April and May. Mean clutch size 200 to 300 eggs (range 100 to 1000).

TERRITORY/HOME RANGE: Not territorial. Home range thought to be small.

FOOD HABITS: Waits for and pounces on any small animal moving at stream edge or in water.

OTHER: Affected by reduced flow in foothill streams.

REFERENCES: Zweifel 1955, 1968a.



Mountain Yellow-legged Frog

A025 (*Rana muscosa*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found year-round in streams, rivers, ponds, and lakes from 5000 to 13,000 ft (1520 to 3960 m). Prefers mountain meadow, riparian deciduous, and alpine meadow types. Distributed from the southern Sierra Nevada north to Plumas and Butte Counties.

SPECIAL HABITAT REQUIREMENTS: Permanent streams, rivers, ponds, and lakes.

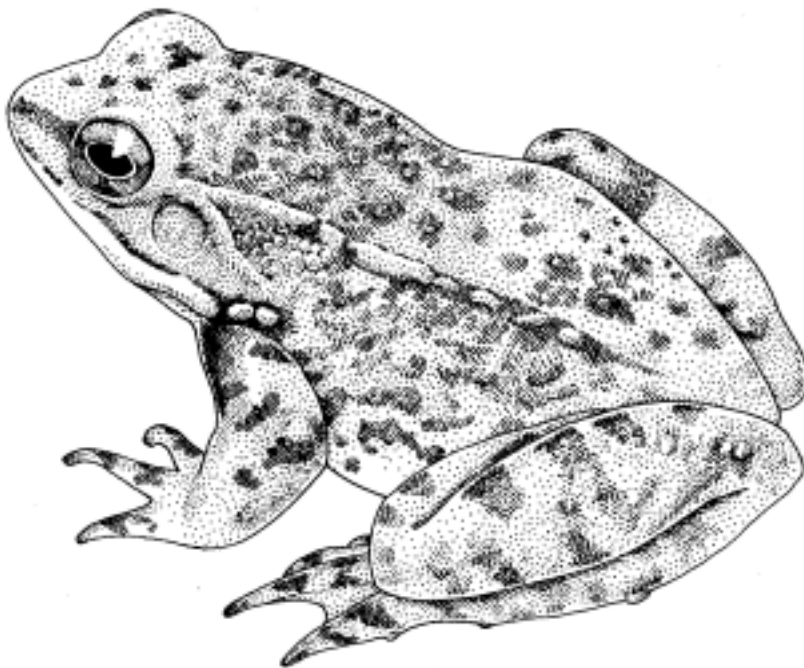
BREEDING: Eggs laid in rivers, streams, ponds, and lakes from May to July, with peak activity in June. Mean clutch size 200 to 300 (range 100 to 500).

TERRITORY/HOME RANGE: Not thought to be territorial; home range thought to be small.

FOOD HABITS: Waits for and pounces on small animals at stream and lake edges.

OTHER: Numbers reduced when trout introduced into high lakes.

REFERENCES: Zweifel 1955, 1968b.



Bullfrog

A026 (*Rana catesbeiana*)

STATUS: No official listed status. Game species (State of California).

DISTRIBUTION/HABITAT: Found year-round in ponds, pools, lakes, ditches, and streams in annual grassland, blue oak savannah, digger pine-oak, and chaparral types. Also found in forested types up to 6000 ft (1830 m). Distributed the entire length of the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Ponds, pools, lakes, ditches, rivers, and streams.

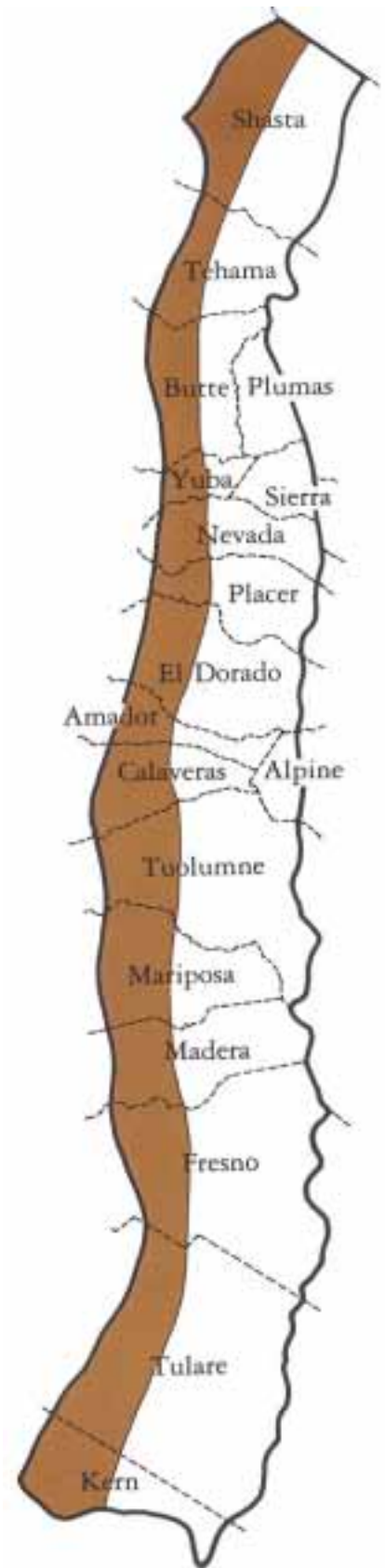
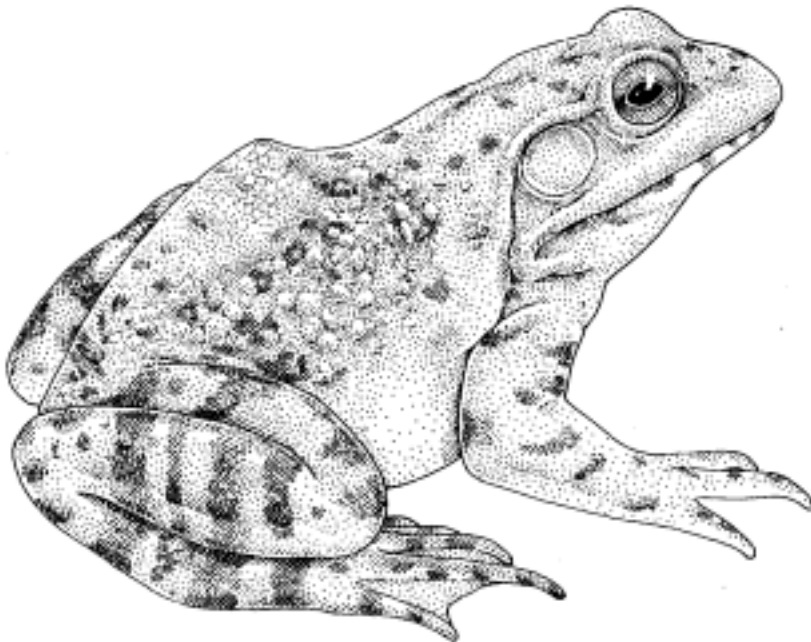
BREEDING: Eggs laid in permanent water from April to June, with peak activity in May. Clutch size numbers in the thousands.

TERRITORY/HOME RANGE: Territory restricted to the vicinity of calling male. Home range size unknown.

FOOD HABITS: A voracious feeder, waits for and pounces on anything it can catch and swallow near pond edges and streams.

OTHER: An introduced species in the Sierra Nevada. Known to be detrimental to native species of frogs. Only a few populations above 4000 ft (1220 m).

REFERENCES: Stebbins 1951, 1954a, 1966, 1972; Moyle 1973.



Western Pond Turtle

R001 (*Clemmys marmorata*)

STATUS: No official listed status

DISTRIBUTION/HABITAT: Found year-round in ponds and streams, primarily in the foothills. Also found in suitable habitat in forested types up to 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS: Permanent streams, rivers, ponds, and lakes (may survive long periods of drought by burrowing into mud).

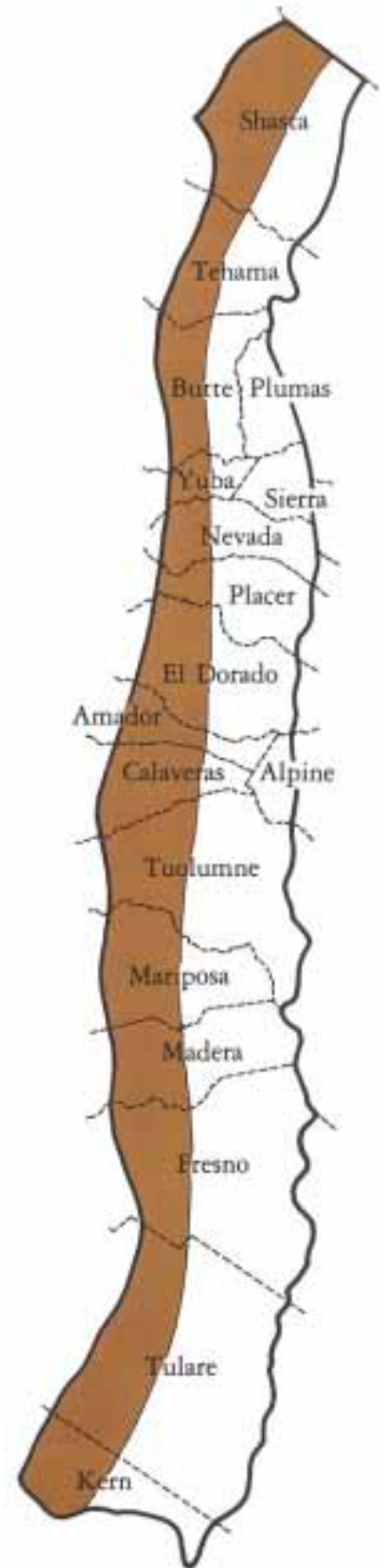
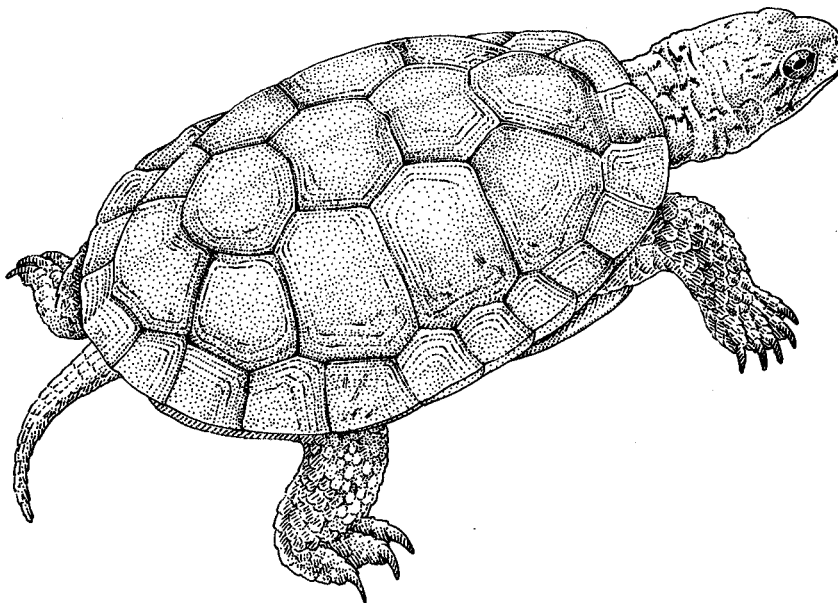
BREEDING: Eggs laid in moist sand or soil from March to May, with peak activity in April. Mean clutch size 7 (range 5 to 11).

TERRITORY/HOME RANGE: May not be territorial. Home range thought to be small.

FOOD HABITS: Searches for aquatic plants, carrion, and insects in streams and ponds.

OTHER: Only turtle in this management area.

REFERENCES: Stebbins 1954a, 1966, 1972; Bury 1970, 1972.



Western Fence Lizard

R002 (*Sceloporus occidentalis*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found throughout the Sierra Nevada in all successional stages of numerous habitat types up to 9000 ft (2740 m). Prefers annual grassland, blue oak savannah, digger pine-oak, chaparral, and riparian deciduous types. Also found in forested areas.

SPECIAL HABITAT REQUIREMENTS: Rock outcrops and friable soil for breeding.

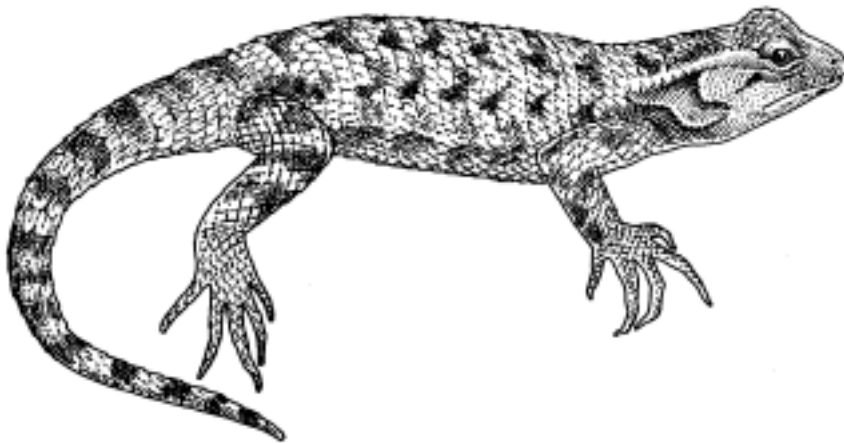
BREEDING: Eggs laid in damp, well-aerated soil from mid-May to mid-July, with peak activity in June. Mean clutch size 9 (range 5 to 15).

TERRITORY/HOME RANGE: Territory thought to be within 25 ft (7.5 m) radius of adult male. Home range estimated to be up to 0.25 acre (0.1 ha).

FOOD HABITS: Waits and searches for insects in rock outcrops.

OTHER: Subspecies, *S. o. taylori*, endemic to the central high Sierra Nevada.

REFERENCES: Stebbins 1954a, 1966, 1972.



Sagebrush Lizard

R003 (*Sceloporus graciosus*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found in forested areas throughout the Sierra Nevada. Prefers mixed-conifer type in shrub seedling and open, pole-size successional stages. Also found in the black oak woodland and Jeffrey pine types. Elevation range 6000 to 9000 ft (1830 to 2740 m).

SPECIAL HABITAT REQUIREMENTS: Rock outcrops and friable soil for breeding.

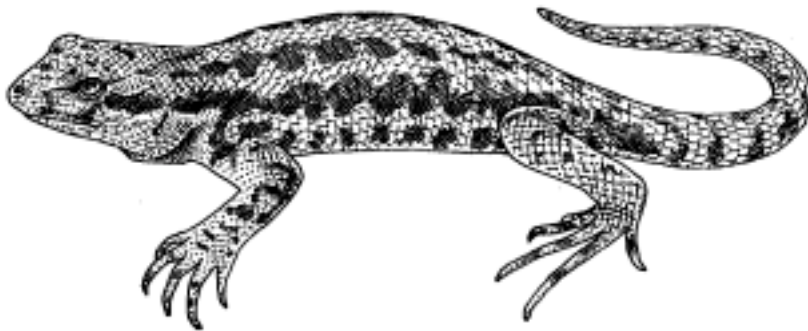
BREEDING: Eggs laid in loose, well-aerated soil in June and July, with peak activity in late June. Mean clutch size 3 or 4 (range 2 to 7).

TERRITORY/HOME RANGE: Territory thought to be within 25 ft (7.5 m) radius of adult male. Home range estimated to be up to 0.5 acre (0.2 ha).

FOOD HABITS: Waits and searches for insects and other small animals in rock outcrops and around bushes.

OTHER:

REFERENCES: Stebbins 1944, 1954a, 1966, 1972.



Side-blotched Lizard

R004 (*Uta stansburiana*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Generally found below 1000 ft (305 m) from Mariposa County southward. Found on the San Joaquin Experimental Range, Madera County, up to 2000 ft (610 m) in annual grassland, blue oak savannah, and digger pine-oak types. No optimum habitat in the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Friable soil for breeding.

BREEDING: Eggs laid in loose, well-aerated soil from March to June, with peak activity in May. Mean clutch size 4 (range 2 to 5).

TERRITORY/HOME RANGE: May not be territorial. Home range estimated to be up to 0.5 acre (0.2 ha).

FOOD HABITS: Searches for insects on ground surface.

OTHER:

REFERENCES: Stebbins 1954a, Newman and Duncan 1973.



Coast Horned Lizard

R005 (*Phrynosoma coronatum*)

STATUS: No official listed status. Considered fragile.

DISTRIBUTION/HABITAT: Few specimens from the Sierra Nevada, particularly above 1000 ft (305 m). Distributed from Butte County south to Fresno County. Limited habitat in annual grassland, blue oak savannah, and digger pine-oak types. May range up to 4000 ft (1220 m).

SPECIAL HABITAT REQUIREMENTS: Friable soil for breeding.

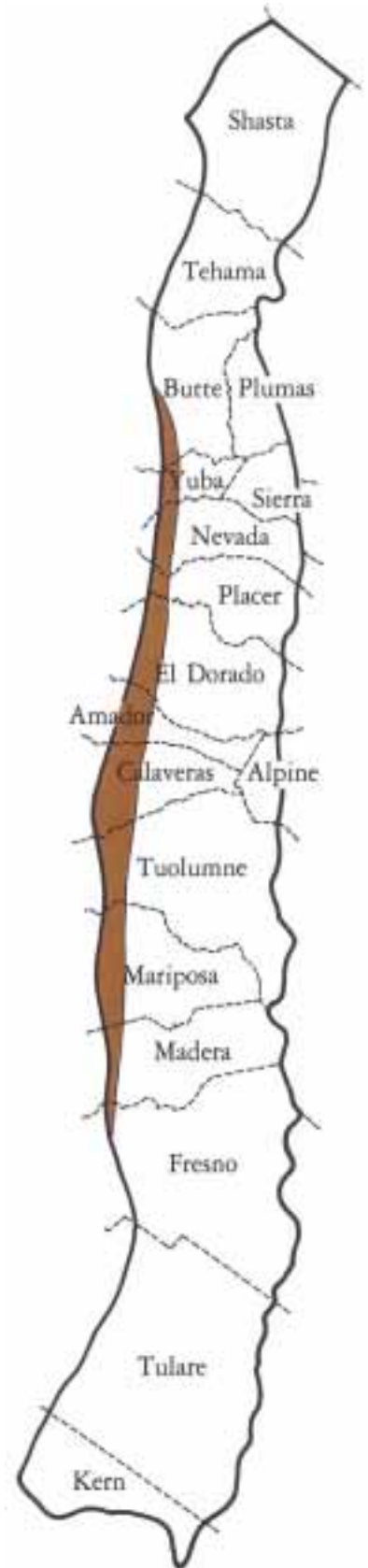
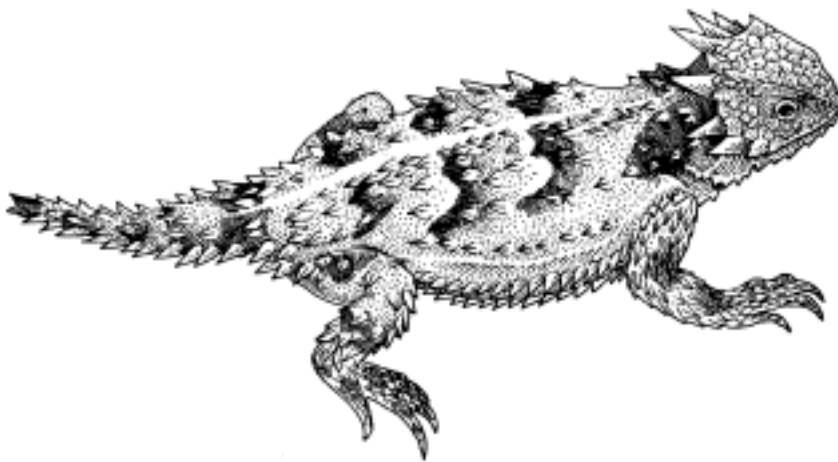
BREEDING: Eggs laid in loose, well-aerated soil from April to June, with peak activity in May. Mean clutch size 11 (range 6 to 16).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown, but thought to be small.

FOOD HABITS: Waits and searches for insects on ground surface and under surface objects.

OTHER: Notes of sightings above 1000 ft (305 m) should be recorded.

REFERENCES: Stebbins 1954a.



Gilbert's Skink

R006 (*Eumeces gilberti*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Primarily found in foothills up to 6500 ft (1980 m), in all successional stages of numerous habitat types. Prefers chaparral, black oak woodland, and riparian deciduous. Distributed from Butte County southward.

SPECIAL HABITAT REQUIREMENTS:

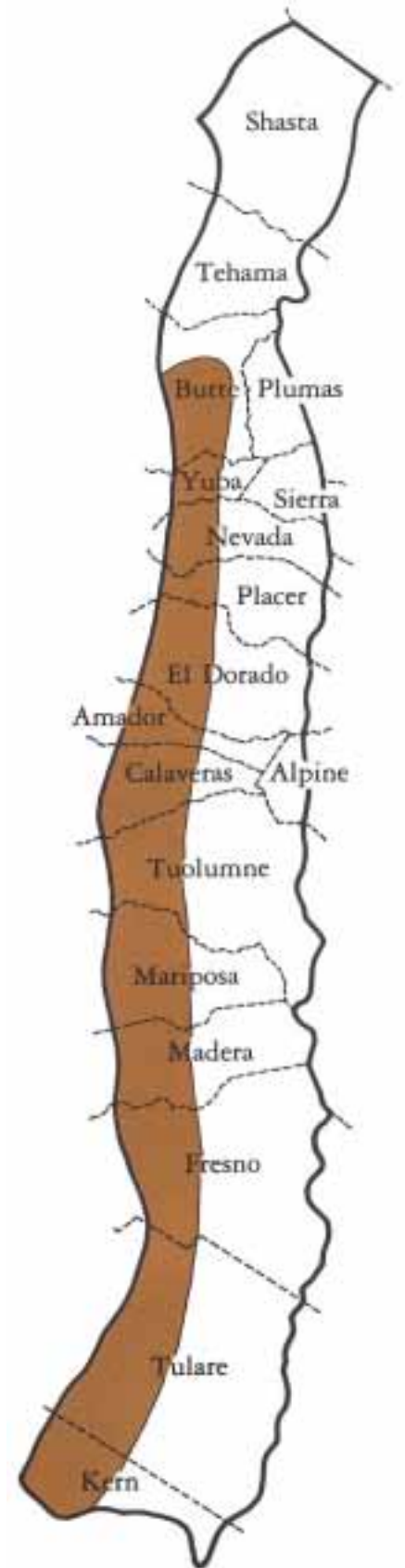
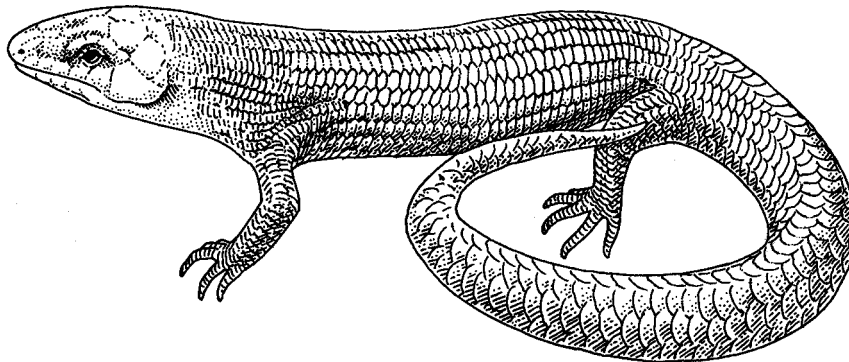
BREEDING: Eggs laid in chambers in loose, aerated soil in June and July, with peak activity around July 1. Mean clutch size 7 (range 5 to 10).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be 1 acre (0.4 ha).

FOOD HABITS: Searches for insects and other small animals under leaves and other surface objects.

OTHER:

REFERENCES: Stebbins 1954a.



Western Skink

R007 (*Eumeces skiltonianus*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Primarily found in foothills of the Sierra Nevada from Amador County northward. May range up to 7000 ft (2130 m) in the forested types. Inhabits all successional stages; prefers chaparral, black oak woodland, and riparian types.

SPECIAL HABITAT REQUIREMENTS:

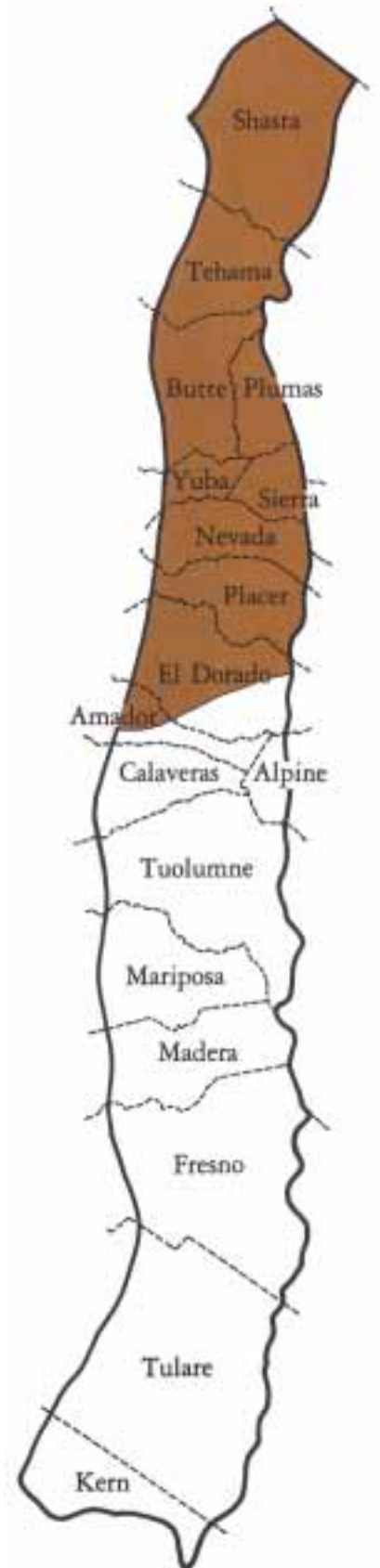
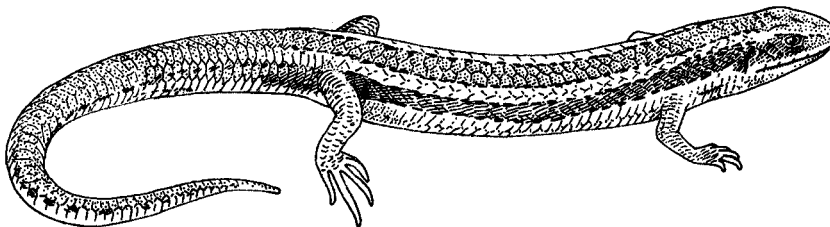
BREEDING: Eggs laid in chambers in loose, aerated soil in June and July, with peak activity around July 1. Mean clutch size 7 (range 5 to 10).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be 1 acre (0.4 ha).

FOOD HABITS: Searches for insects and other small animals under leaves and other surface objects.

OTHER:

REFERENCES: Stebbins 1954a.



Western Whiptail

R008 (*Cnemidophorus tigris*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found in openings in vegetation from foothills to mixed-conifer forests. Prefers annual grassland, chaparral, and early successional stages of blue oak savannah and digger pine-oak types. Distributed the length of the Sierra Nevada up to 7500 ft (2290 m).

SPECIAL HABITAT REQUIREMENTS:

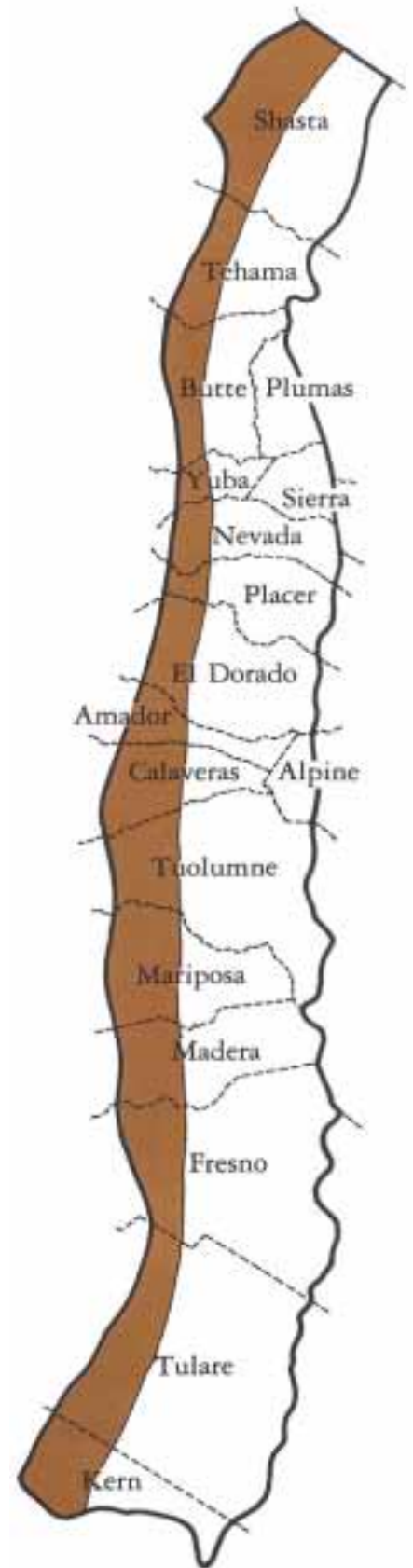
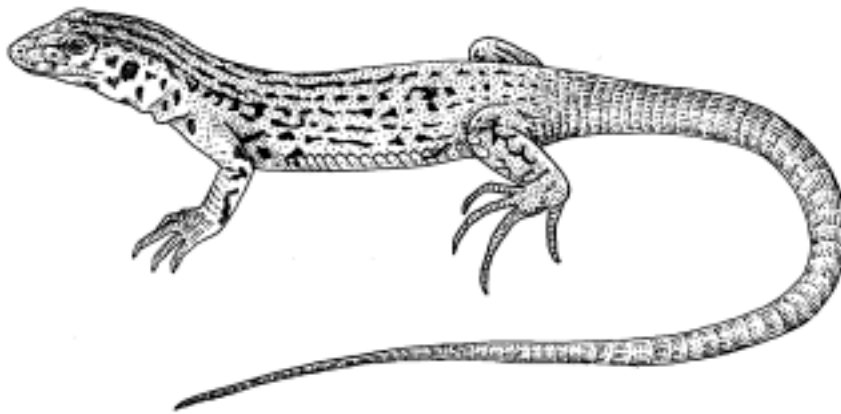
BREEDING: Eggs laid in loose, well-aerated soil in May and June, with peak activity around June 1. Mean clutch size 5 (range 2 to 8).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be 1 acre (0.4 ha).

FOOD HABITS: Searches for and stalks insects and other small animals on ground surface.

OTHER:

REFERENCES: Stebbins 1954a.



Southern Alligator Lizard

R009 (*Gerrhonotus multicarinatus*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Primarily a foothill species, but can be found up to 6000 ft (1830 m) in the mixed-conifer type. Prefers chaparral and riparian deciduous types. Distributed the length of the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS:

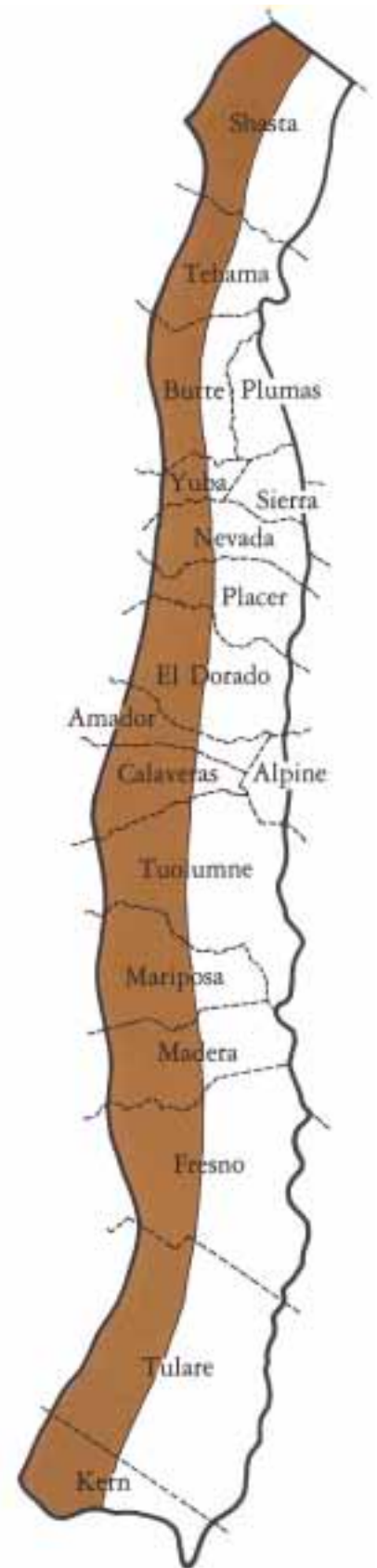
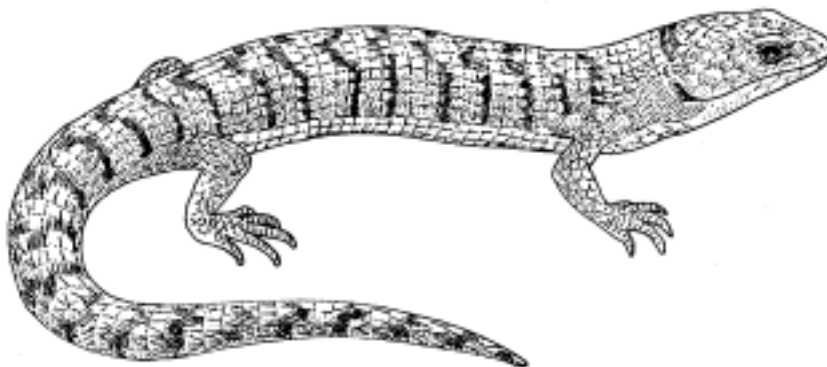
BREEDING: Eggs laid in loose, well-aerated soil from April to June, with peak activity in May. Mean clutch size 12 (range 6 to 20).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range estimated to be 2 acres (0.8 ha).

FOOD HABITS: Searches for insects and other small animals on ground surface and under surface objects.

OTHER:

REFERENCES: Stebbins 1954a.



Northern Alligator Lizard

R010 (*Gerrhonotus coeruleus*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Primarily found in forest areas. Prefers pole to mature successional stages of ponderosa pine, black oak woodland, and mixed-conifer types. Also found in other forested types the length of the Sierra Nevada. Elevational range 1000 (at least in northern counties) to 11,000 ft. (305 to 3350 m).

SPECIAL HABITAT REQUIREMENTS:

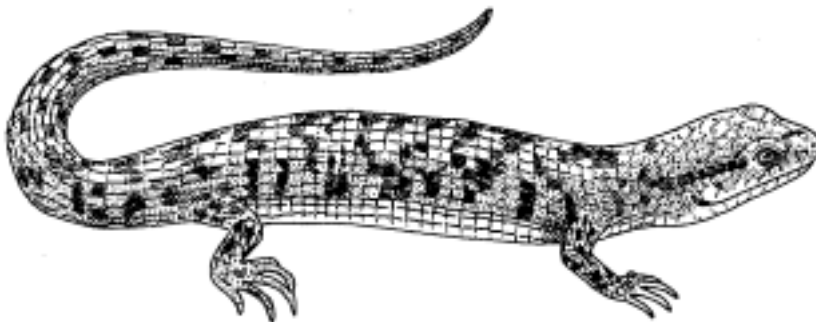
BREEDING: Mates in May and June, with peak activity varying from year-to-year. Young born in fall without use of nest. Mean number of young born 5 (range 2 to 15).

TERRITORY/HOME RANGE: Not territorial. Home range thought to be 1 acre (0.4 ha).

FOOD HABITS: Searches under surface objects for insects and other small animals.

OTHER:

REFERENCES: Stebbins 1954a, Lais 1976.



California Legless Lizard

R011 (*Anniella pulchra*)

STATUS: No official listed status. Considered fragile.

DISTRIBUTION/HABITAT: Restricted to areas of bush lupine in Kaweah River drainage; possibly also found in lower Kern River drainage. Prefers riparian deciduous type. Elevation range unknown, possibly up to 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS: Sandy streams or riverbanks.

BREEDING: Mates from April to June, with peak activity in May. Young born in damp, loose soil in fall. Mean number of young 2 (range 1 to 4).

TERRITORY/HOME RANGE: Not territorial. Home range unknown, probably restricted.

FOOD HABITS: Searches in loose soil for insects, particularly larvae.

OTHER: Burrowing animal; watch for during excavations.

REFERENCES: Stebbins 1954a.



Rubber Boa

R012 (*Charina bottae*)

STATUS: No official listed status. Considered stable.

DISTRIBUTION/HABITAT: Found near streams and meadows in all forested types; prefers pole to mature successional stages of ponderosa pine, black oak woodland, and mixed-conifer types. Distributed the length of the Sierra Nevada. Elevation range 5000 to 9000 ft (1520 to 2740 m).

SPECIAL HABITAT REQUIREMENTS:

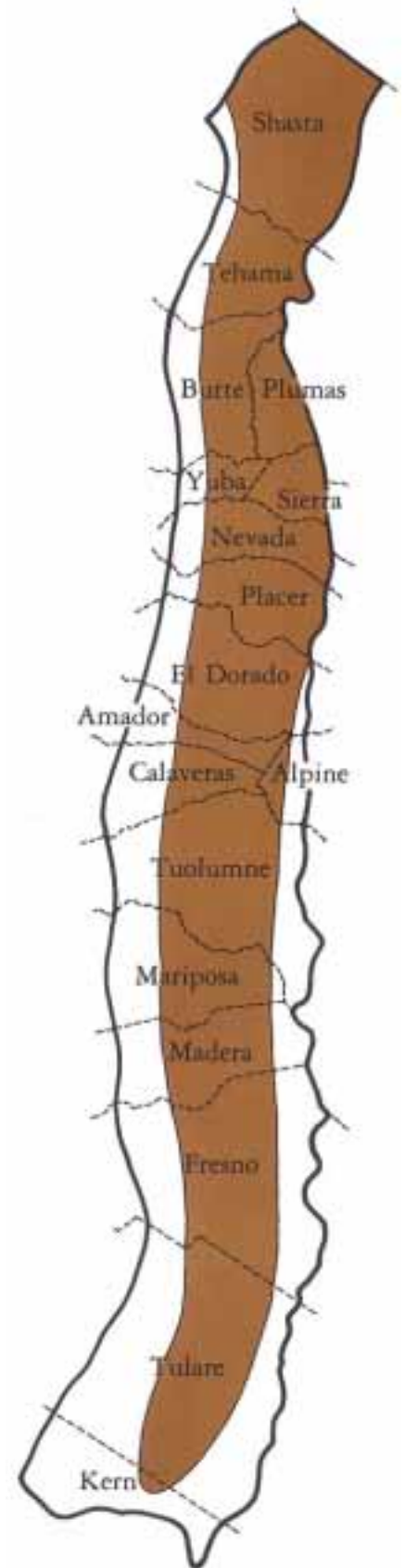
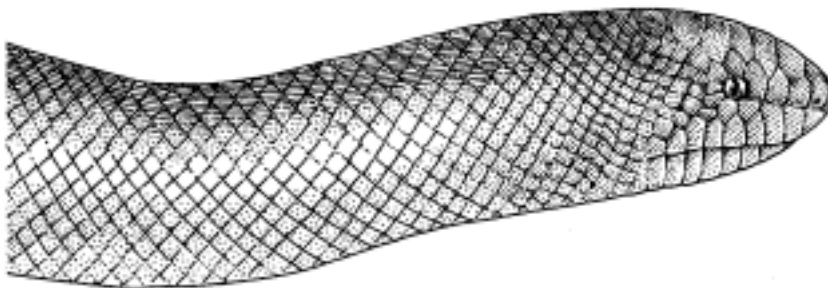
BREEDING: Mates from April to June, with peak activity in May. Young born in early fall in loose, aerated soil. Mean number of young 4 (range 1 to 6).

TERRITORY/HOME RANGE: Not territorial. Home range unknown.

FOOD HABITS: Searches for mice, young birds, lizards, and snakes on forest floor and near meadow types.

OTHER: Good burrower.

REFERENCES: Stebbins 1954a.



Ringneck Snake

R013 (*Diadophis punctatus*)

STATUS: No official listed status. Uncommon.

DISTRIBUTION/HABITAT: Usually found on north-facing slopes of foothill canyons; also found up to 6000 ft (1830 m) in mixed-conifer types. Prefers annual grassland, chaparral, and riparian deciduous types. Distributed the length of the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Moist soil related to north-facing slopes.

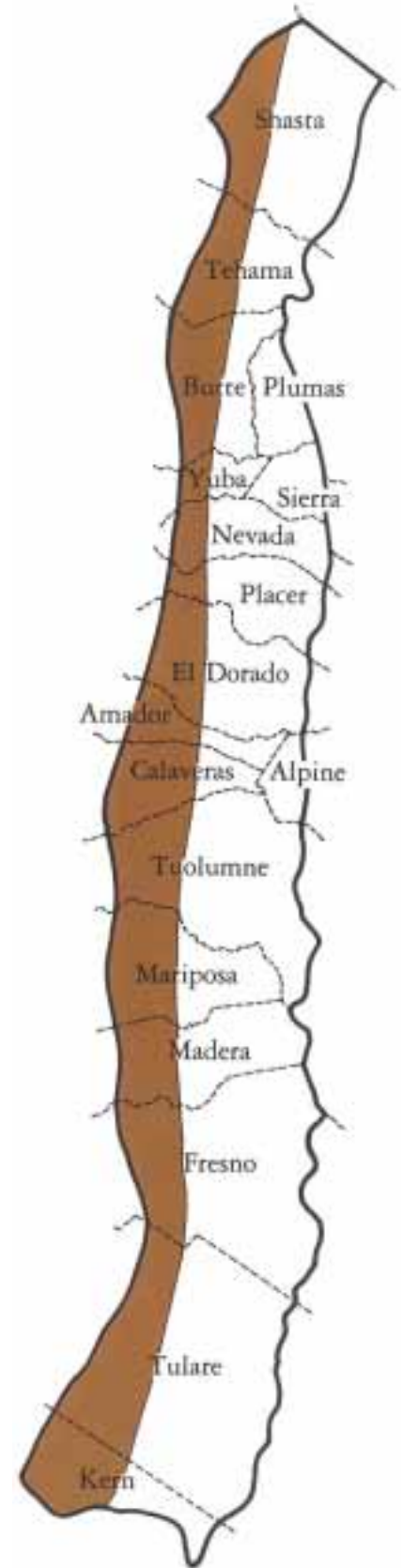
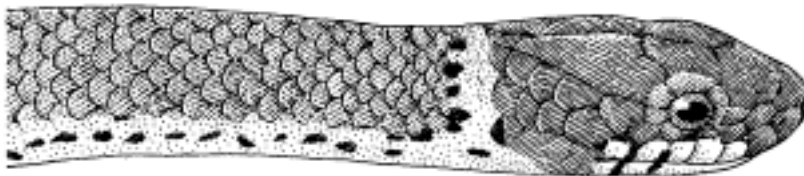
BREEDING: Eggs laid in loose, well-aerated soil from April to June, with peak activity in May. Mean clutch size 2 (range 1 to 4).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Eats mainly slender salamanders; also treefrogs and small lizards.

OTHER:

REFERENCES: Stebbins 1954a.



Sharp-tailed Snake

R014 (*Contia tenuis*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found in all successional stages of numerous habitat types up to 7000 ft (2130 m) the length of the Sierra Nevada. Optimum habitat found in riparian deciduous and mountain meadow types. Not found in annual grassland and blue oak savannah types.

SPECIAL HABITAT REQUIREMENTS: Litter and other surface objects.

BREEDING: Mates from April to June, with peak activity in May. Eggs laid in summer in loose soil; mean clutch size 3 or 4 (range 2 to 8).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range is unknown; thought to be restricted.

FOOD HABITS: Searches under surface objects for small slugs, slender salamanders, and insects.

OTHER:

REFERENCES: Stebbins 1954a.



Racer

R015 (*Coluber constrictor*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Primarily grassland up into forested areas. Optimum habitat in annual grassland and early successional stages of blue oak savannah types. Most common in the northern Sierra Nevada, with few specimens collected south of Lake Tahoe, El Dorado County. Elevation range to 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS:

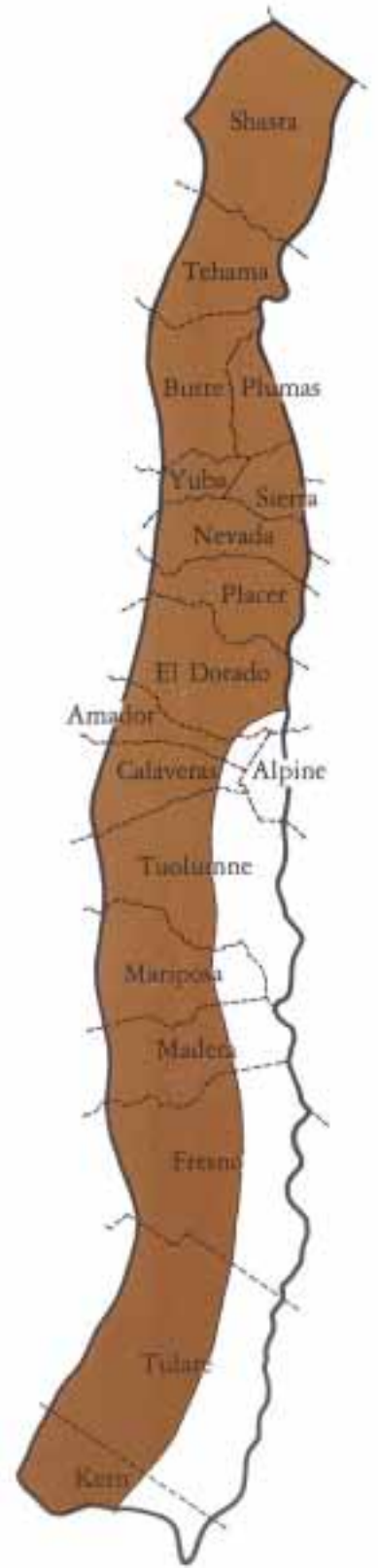
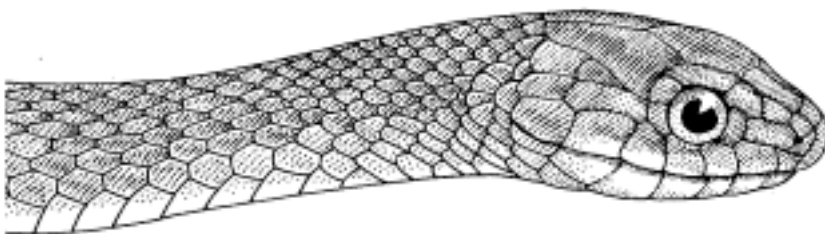
BREEDING: Mates in April and May. Eggs laid in early summer in loose, aerated soil; mean clutch size 18 to 20 (range 12 to 24).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown, may be extensive.

FOOD HABITS: Searches on ground surface for mice, fledgling birds, and lizards.

OTHER:

REFERENCES: Stebbins 1954a.



Coachwhip

R016 (*Masticophis flagellum*)

STATUS: No official listed status. Very few records from the Sierra Nevada.

DISTRIBUTION/HABITAT: Not usually found in the Sierra Nevada above 1000 ft (305 m). No optimum habitat in the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS:

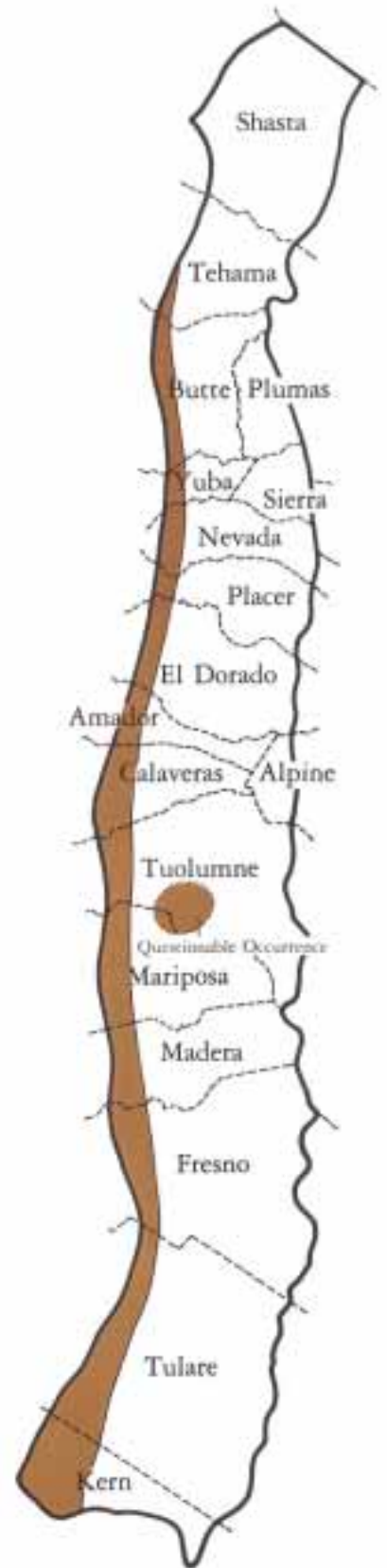
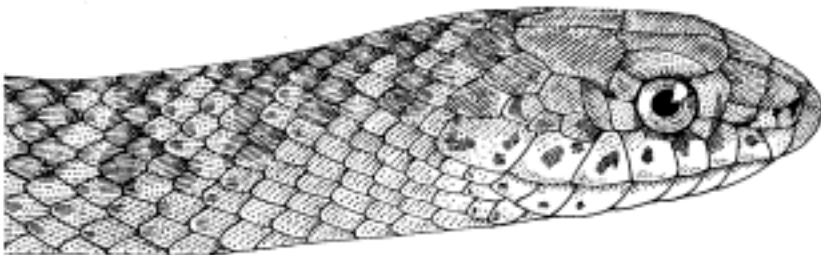
BREEDING: Mates in April and May, with peak activity near April 1. Mean clutch size 8 (range 4 to 11).

TERRITORY/HOME RANGE: Not territorial. Home range unknown, thought to be large.

FOOD HABITS: Stalks and searches for rodents, birds, bird eggs, and lizards on ground surface and under objects.

OTHER: Reported at 4000 ft (1220 m) in Yosemite Valley, Tuolumne County.

REFERENCES: Stebbins 1954a, 1966, 1972; Wilson 1973.



Striped Racer

R017 (*Masticophis lateralis*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Primarily chaparral with optimum habitat also in riparian deciduous type. Less commonly found in other habitat types. Found the length of the Sierra Nevada up to 5500 ft (1680 m).

SPECIAL HABITAT REQUIREMENTS:

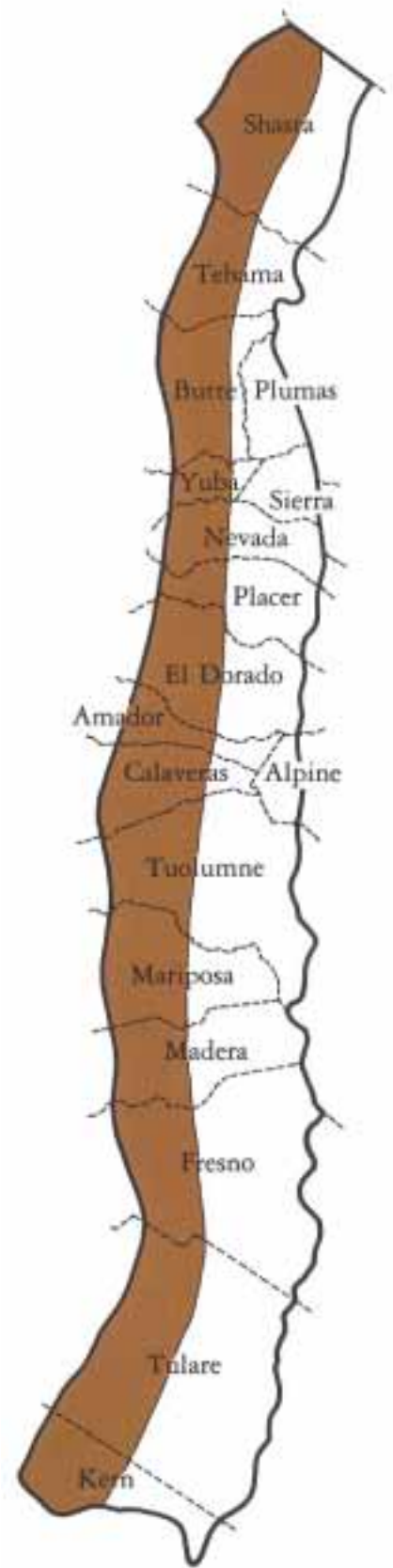
BREEDING: Mates in April and May, with peak activity near May 1. Eggs laid in summer in loose, well-aerated soil. Mean clutch size 6 (range 4 to 10).

TERRITORY/HOME RANGE: Territory unknown; may not be territorial. Home range unknown; may be extensive.

FOOD HABITS: Searches in bushes and on ground surface for snakes, lizards, rodents, and fledgling birds.

OTHER:

REFERENCES: Stebbins 1954a.



Gopher Snake

R018 (*Pituophis melanoleucus*)

STATUS: No official listed status. A common, widespread species.

DISTRIBUTION/HABITAT: Found in many habitats the length of the Sierra Nevada up to 7000 ft (2130 m). Optimum habitat in blue oak savannah, digger pine-oak, chaparral, and riparian deciduous types.

SPECIAL HABITAT REQUIREMENTS:

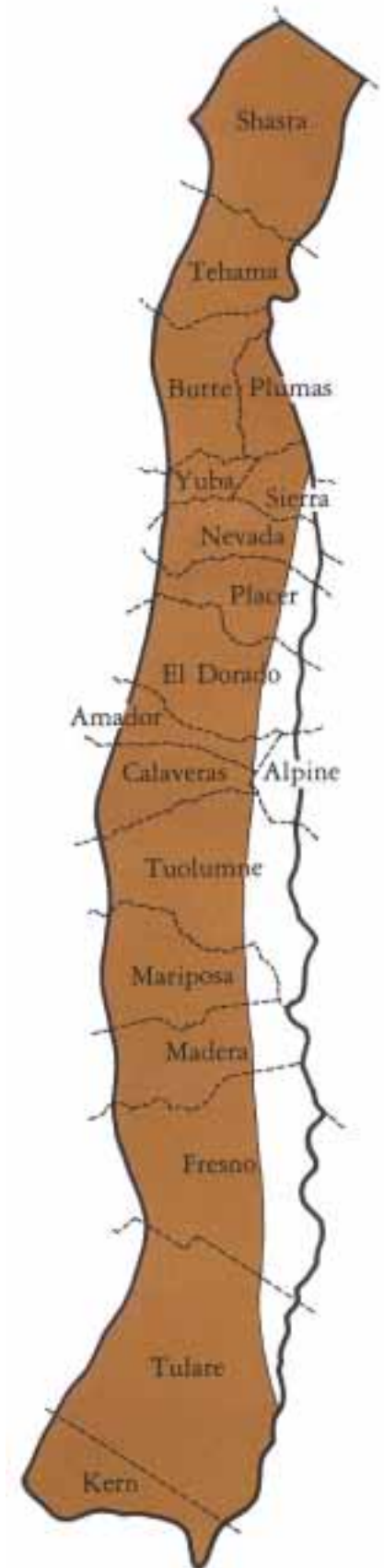
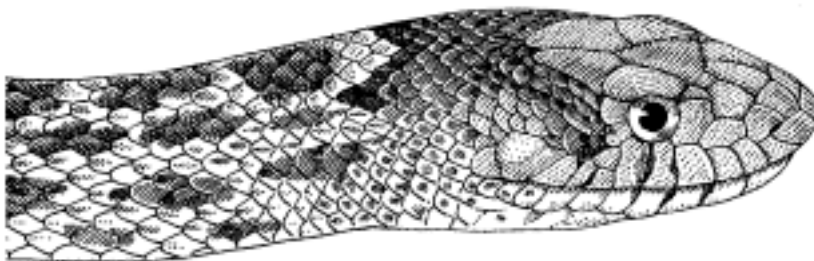
BREEDING: Mates from April to June, with peak activity in May. Eggs laid in damp, loose, well-aerated soil in summer. Mean clutch size 7 (range 3 to 12).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Searches on surface and under objects for small mammals (squirrels, mice, gophers, and others).

OTHER:

REFERENCES: Stebbins 1954a.



Common Kingsnake

R019 (*Lampropeltis getulus*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Found the length of the Sierra Nevada in annual grasslands, blue oak savannah, digger pine-oak, chaparral, and riparian deciduous types. Also found in forested areas up to 6000 ft (1830 m). Observed in all successional stages of its many habitats.

SPECIAL HABITAT REQUIREMENTS:

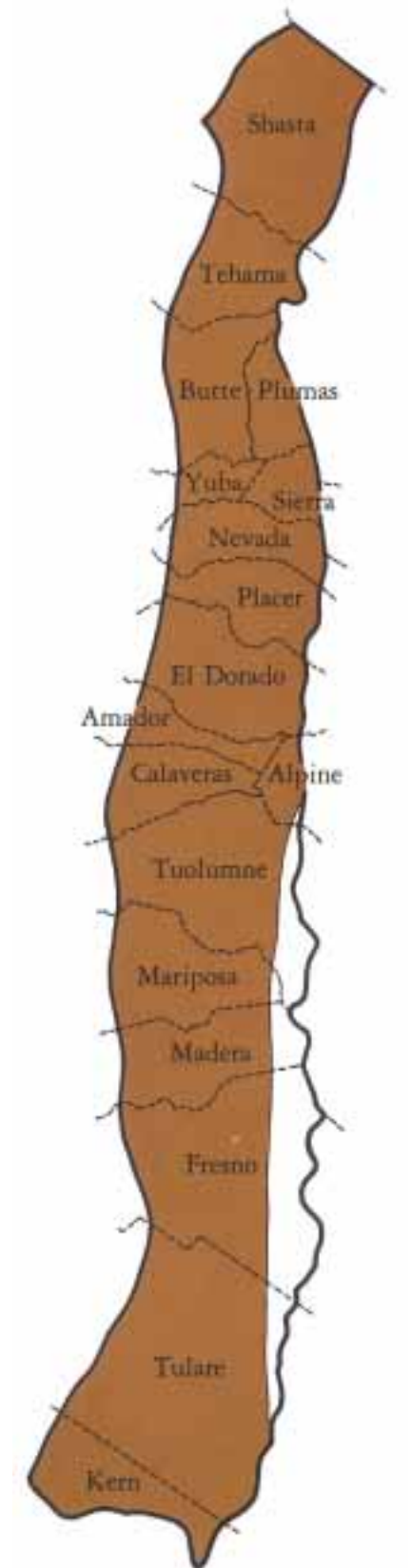
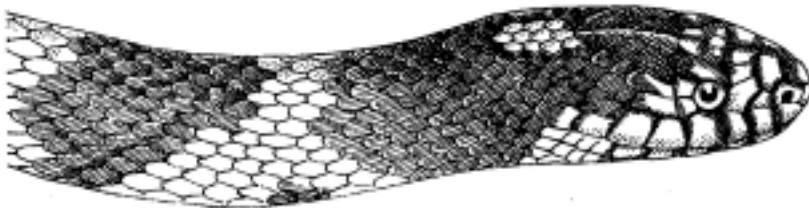
BREEDING: Mates from March to May, with peak activity in April. Eggs laid in loose, well-aerated soil in summer. Mean clutch size 9 (range 6 to 12).

TERRITORY/HOME RANGE: Territory unknown; may not be territorial. Home range unknown; may be extensive.

FOOD HABITS: Searches under surface objects for snakes, lizards, and mice.

OTHER:

REFERENCES: Stebbins 1954a.



California Mountain Kingsnake

R020 (*Lampropeltis zonata*)

STATUS: No official listed status; may be considered fragile.

DISTRIBUTION/HABITAT: Usually found near streams of upper foothills the length of the Sierra Nevada. Found in numerous habitats; optimum habitats are mountain meadow and riparian deciduous types. Elevation range 1000 to 6500 ft (305 to 1980 m).

SPECIAL HABITAT REQUIREMENTS:

BREEDING: Mates in April and May, with peak activity near May 1. Eggs laid in loose, well-aerated soil in summer. Mean clutch size 6 (range 4 to 8).

TERRITORY/HOME RANGE: Territory unknown; may not be territorial. Home range unknown.

FOOD HABITS: Searches under surface objects for lizards, small snakes, and bird eggs.

OTHER: Bright colors make this species a target of pet collectors.

REFERENCES: Stebbins 1954a, Zweifel 1974.



Long-nosed Snake

R021 (*Rhinocheilus lecontei*)

STATUS: No official listed status. May be considered fragile.

DISTRIBUTION/HABITAT: Seldom recorded above 1000 ft (305 m). No optimum habitat in the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS:

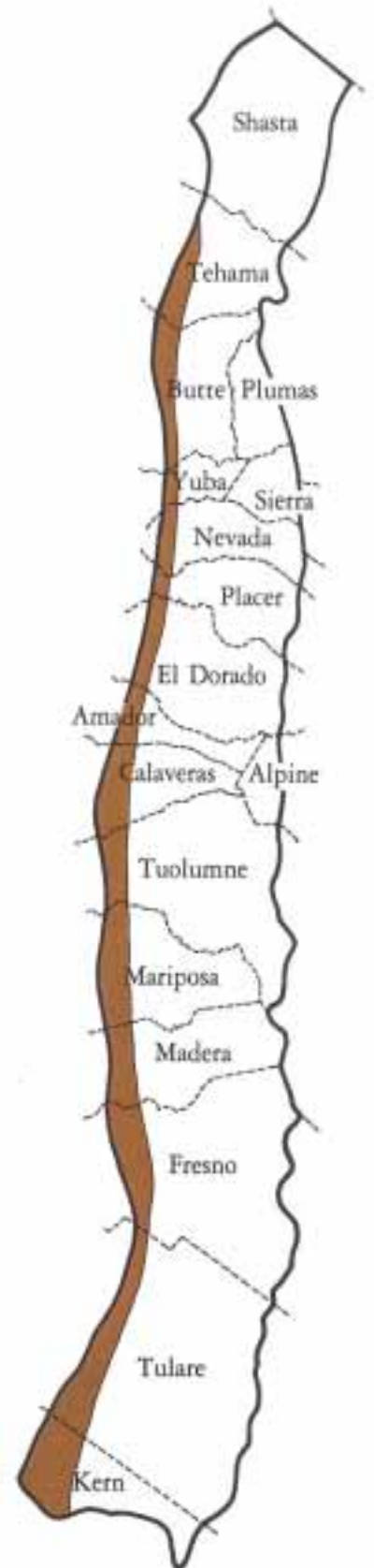
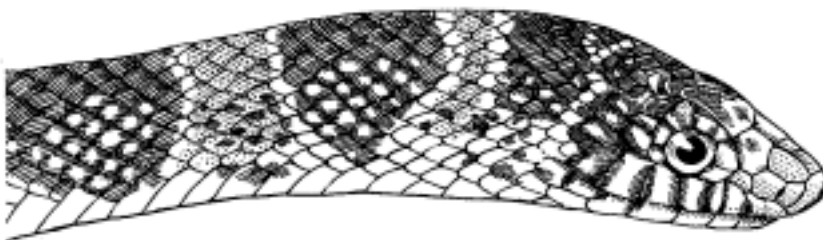
BREEDING: Mates from March to May, with peak activity in April. Eggs laid in loose, moist, well-aerated soil. Mean clutch size 5 (range 3 to 8).

TERRITORY/HOME RANGE: Not territorial. Home range unknown.

FOOD HABITS: Stalks and searches for lizards, small mammals, and insects on ground surface and under objects.

OTHER: Once recorded at San Joaquin Experimental Range, Madera County.

REFERENCES: Stebbins 1954a, 1966, 1972; Medica 1975.



Common Garter Snake

R022 (*Thamnophis sirtalis*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Usually found in foothill streams and ponds, with optimum habitat in annual grassland, blue oak savannah, digger pine-oak, chaparral, and riparian deciduous types. Found the length of the Sierra Nevada at elevations up to 6000 ft (1830 m).

SPECIAL HABITAT REQUIREMENTS: Streams, rivers, ponds, or lakes.

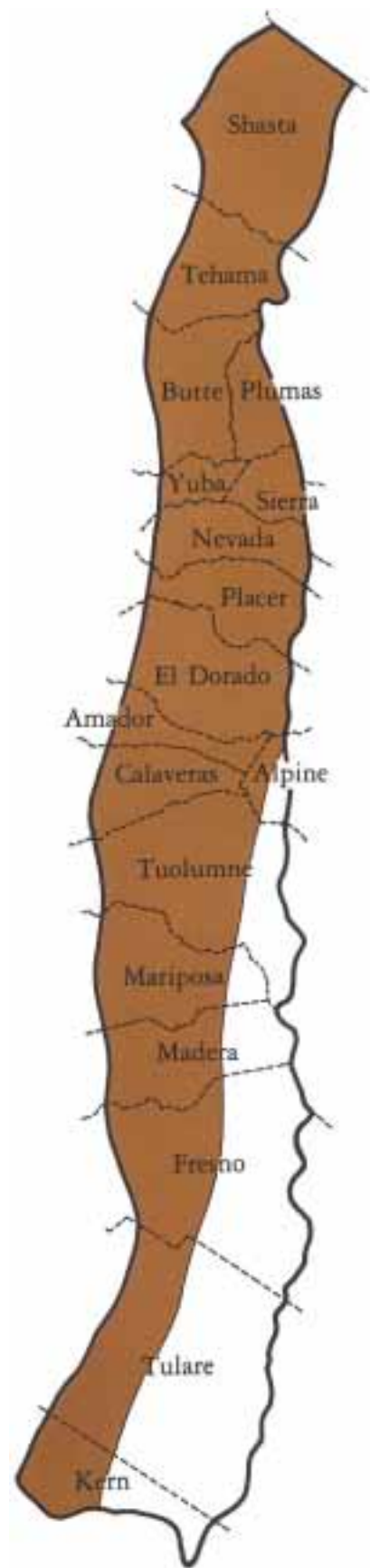
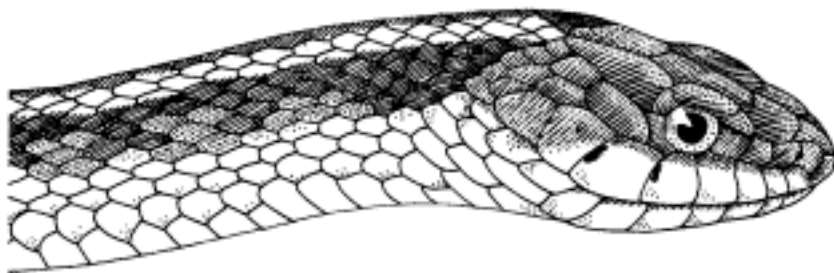
BREEDING: Mates from mid-March to June, with peak activity in April. Young born in summer without nest. Mean number of young born 24 (range 8 to 51).

TERRITORY/HOME RANGE: Territory unknown, may not be territorial. Home range unknown.

FOOD HABITS: Searches in streams and along stream edges for treefrogs, fish, and mice.

OTHER:

REFERENCES: Stebbins 1954a, 1966, 1972; White and Kolb 1974.



Western Terrestrial Garter Snake

R023 (*Thamnophis elegans*)

STATUS: No official status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Found in streams and lakes primarily in the mid- and high-Sierra Nevada. Optimum habitat in riparian deciduous, mountain meadow, and alpine meadow types; may be found in all successional stages of all habitat types from 1000 (at least in northern counties) to 12,000 ft (305 to 3660 m) northward from mid-Tulare County.

SPECIAL HABITAT REQUIREMENTS: Permanent streams, rivers, ponds or lakes for feeding.

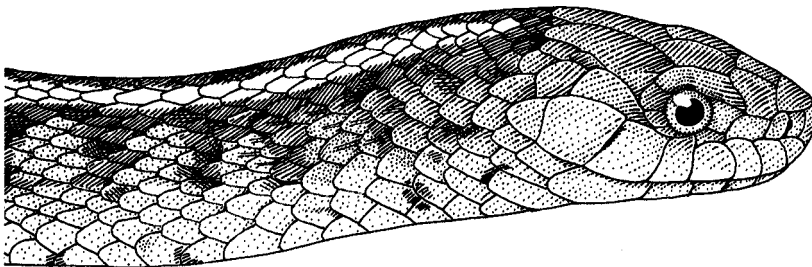
BREEDING: Mates from April to June, with peak activity in May, depending on year and elevation. Young born without nest in summer. Mean number of young born 20 (range 12 to 30).

TERRITORY/HOME RANGE: Territory unknown; may not be territorial. Home range unknown, probably restricted.

FOOD HABITS: Waits and searches for tadpoles, yellow-legged frogs, treefrogs, and fish in lakes, streams, and meadows; also catches mice.

OTHER:

REFERENCES: Stebbins 1954a, White and Kolb 1974.



Western Aquatic Garter Snake

R024 (*Thamnophis couchi*)

STATUS: No official listed status.

DISTRIBUTION/HABITAT: Usually found in foothill streams and ponds; optimum habitat in blue oak savannah, digger pine-oak, chaparral, mountain meadow, and riparian deciduous types. Also found in forested types up to 6000 ft (1830 m) throughout the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Permanent streams, rivers, ponds, or lakes.

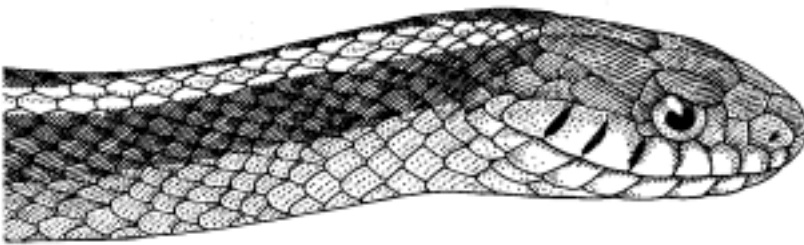
BREEDING: Mates from mid-March to early June, with peak activity in April. Young born without nest in summer. Mean number born 20 (range 10 to 30).

TERRITORY/HOME RANGE: Territory unknown, may not be territorial. Home range unknown.

FOOD HABITS: Searches in streams and along stream edges for fish, frogs, and mice.

OTHER:

REFERENCES: Stebbins 1954a.



Western Black-headed Snake

R025 (*Tantilla planiceps*)

STATUS: No official listed status. May be considered fragile.

DISTRIBUTION/HABITAT: Restricted to Kaweah River drainage, Tulare and Kern Counties, below 2000 ft (610 m). No optimum habitat known in the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Unknown.

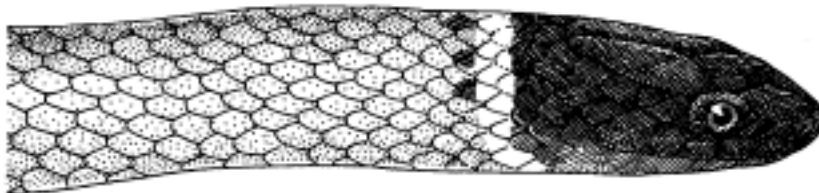
BREEDING: Eggs laid from May to June, with peak activity in June. Mean clutch size 1 or 2 (range unknown in Sierra Nevada). Nest site requirements unknown in Sierra Nevada.

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown.

FOOD HABITS: Searches for insects, particularly beetle larvae, under surface objects.

OTHER: Few specimens collected from the Sierra Nevada. Very little known.

REFERENCES: Stebbins 1954a, Tanner 1966, Basey 1976.



Night Snake

R026 (*Hypsiglena torquata*)

STATUS: No official listed status. May be considered fragile.

DISTRIBUTION/HABITAT: Found infrequently in numerous habitats up to 6000 ft (1830 m) throughout the Sierra Nevada. Optimum habitat the chaparral type.

SPECIAL HABITAT REQUIREMENTS: Crevices in rock outcrops.

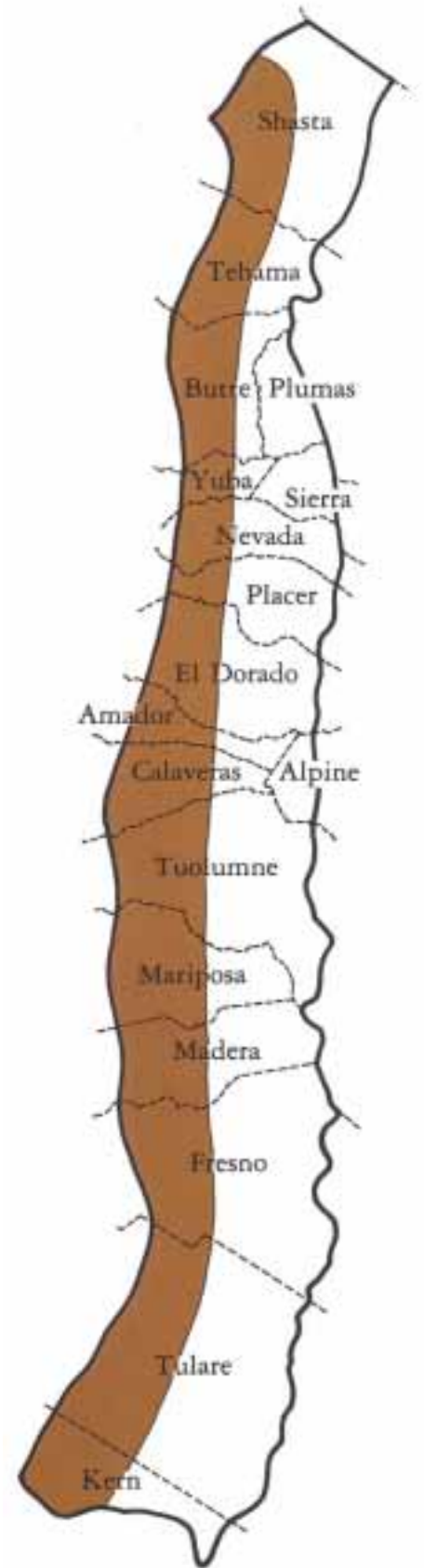
BREEDING: Breeds from April to July, with peak activity in May. Eggs laid in rocky areas where cracks run underground; also found in mines. Mean clutch size 5 (range 4 to 8).

TERRITORY/HOME RANGE: Not thought to be territorial. Home range unknown, may be restricted.

FOOD HABITS: Searches under surface objects and underground for small lizards and slender salamanders.

OTHER: Needs further research on habitat requirements; should be watched for in roadbuilding operations. Little known about requirements for survival.

REFERENCES: Stebbins 1954a.



Western Rattlesnake

R027 (*Crotalus viridis*)

STATUS: No official listed status. Common in preferred habitat.

DISTRIBUTION/HABITAT: Often found in rock outcrops in many habitats. Optimum habitat in annual grassland, blue oak savannah, digger pine-oak, chaparral, and riparian deciduous types. May be found in other habitat types up to 11,000 ft (3350 m). Distributed the length of the Sierra Nevada.

SPECIAL HABITAT REQUIREMENTS: Rock outcrops.

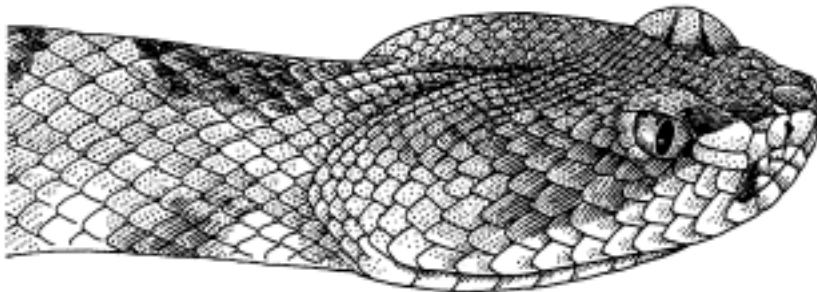
BREEDING: Mates from March to May, with peak activity usually in April, but peak varies from year to year. Young born without nest in fall. Mean number born 11 (range 4 to 21).

TERRITORY/HOME RANGE: Probably not territorial. Home range estimated to be 3 acres (1.2 ha). (Fitch and Glading 1947).

FOOD HABITS: Waits and searches on ground surface and in burrows for rodents (ground squirrels and mice primarily).

OTHER:

REFERENCES: Fitch and Glading 1947, Fitch 1949, Klauber 1972.



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