

Argentine Horned Frog AKA Pac-Man Frog

Class:	Order:	Family:	<i>Genus species:</i>
Amphibia	Anura	Leptodactylidae	<i>Ceratophrys ornate</i>

Geographic Range: The Argentine Horned Frog is native to the floors of the South American rainforests; particularly Argentina, Uruguay, and eastern Brazil.

Habitat: The Argentine Horned Frog lives in a very moist environment such as the rainforest. It also likes to burrow into leafy, muddy vegetation found on the rainforest floor.

Niche: Argentine Horned Frogs are nocturnal creatures.

Diet: The Argentine Horned Frog is known as the garbage disposal of the rainforest as it will eat anything that comes near its overly large mouth. Argentine Horned Frogs' diets mainly consists of large insects, lizards, mice, and even other Argentine Horned Frogs. The frog is rather sedentary and will eat anything that comes directly to its mouth.

Physical Characteristics and Adaptations:

Description: The Argentine Horned Frog is rather plump, and its body is nearly as wide as it is long. The frog received the nickname of the Pac-Man Frog due to its oversized mouth, which resembles the arcade character Pac-Man. The mouth of the frog is as wide as its head. The body color varies but includes vibrant greens, reds, yellows, oranges, and black. The coloration is part of a camouflaging adaptation to blend into the rainforest floor.

Weight: Females are slightly larger than males, measuring an average of 6.5 inches in length. Males measure an average of 4.5 inches in length. The weight of the frog can reach up to one pound.

Habits and Adaptations: The Argentine Horned Frog has small wart-like protrusions on its body, which help the frog blend into the rainforest floor. Since the Argentine Horned Frog lives in a very moist environment, it enters six-month hibernation periods when the weather conditions are very dry.

Dentition: The Argentine Horned Frog has vomerine teeth (upper jaw) as well as teeth on the outside of the jaw.

Social Behavior: Although the Argentine Horned Frog has a friendly nickname, it is actually quite aggressive. The Pac-Man Frog is a well-known cannibalistic species and frequently makes a meal out of smaller Pac-Man Frogs that come close to its mouth.

Reproduction: Reproduction is sexual. Males usually call out to the females, and females deposit approximately 2,000 eggs that are attached to underwater vegetation.

Within two weeks of the egg deposit, the eggs hatch. The tadpole period is very short, and it is only one month before the tadpoles have become fully formed frogs.

Miscellaneous: The Argentine Horned Frog sleeps with its eyes open.

SERC Animal: Dexter

California Toad

Class:	Order:	Family:	<i>Genus species:</i>
Amphibia	Anura	Bufonidae	Anaxyrus boreas halophilus

Geographic Range: California and/or Nevada

Habitat: Typically, California Toads can be found near marshes, springs, creeks, lakes, meadows, woodlands, or forests. During the warmer seasons (spring and summer), California Toads can also be found on logs or rocks near water.

Niche: California Toads are both diurnal (awake during the day) and nocturnal (awake at night), depending on the season. During winter, they are diurnal, and during summer, they are nocturnal.

Diet: California Toads' diets consist primarily of insects and invertebrates. Tadpoles' diets include algae and disintegrated material/debris.

Physical Adaptations and Characteristics:

Description: California Toads have greenish-tan skin along with hints of reddish brown, gray, and yellow. A small light-colored stripe runs down their backs. California Toads' skin is normally dry and covered in warts; however, males have less blotches of color and smoother skin than females. Younger California Toads have no stripe down their back as it matures with age.

Weight: When California Toads are full grown, their weight should be between four and seven ounces.

Habits and Adaptations: California Toads are covered in bumps, otherwise known as warts. These warts secrete poisonous liquid whenever the toad feels threatened. Additionally, California Toads, when threatened, will suck in air and puff up, making it more difficult for predators to swallow them.

Dentition: California Toads do not have teeth. They use the sticky tip of their tongue to catch their prey.

Social Behavior: California Toads are independent animals. Other than mating, California Toads do not interact with each other or other animals.

Reproductive Information: Reproduction takes place in water, and fertilization is external. Adults must be between four and six years old to breed. California Toads mate and lay eggs from January until early July. Egg-laying occurs in still water (pools, ponds, etc.), and eggs hatch within three to ten days (depending on elevation).

Life Span: California Toads live for ten or more years in the wild.

Miscellaneous: Male California Toads make breeding calls during the months when breeding takes place. Calls are generally to inform other males of their presence, not to attract females. Both male and female California Toads may make a call when touched or picked up by a human.

SERC Animal: Princess Mikey

Coastal Range Newt AKA Gold Belly Newts

Class:	Order:	Family:	<i>Genus species:</i>
Amphibia	Caudata	Salimandridae	Taricha torosa

Geographic Range: The Coastal Range Newt is endemic to California and is found along the coast as well as coastal mountain ranges from Mendocino County to San Diego County.

Habitat: The Coastal Range Newt makes its home in wet forests, oak forests, chaparral, and rolling grasslands throughout Northern California. In Southern California, Coastal Range Newts make their homes in drier chaparral areas, oak woodlands, and dry grasslands.

Niche: The Coastal Range Newt lives a double life on land and by water. During the non-breeding months of the year, the newt lives a terrestrial life. However during mating season, the newt migrates, sometimes miles, to a body of water and lives an aquatic life.

Diet: As adults, the Coastal Range Newt eats small invertebrates; mainly worms, snails, slugs, and sow bugs, as well as other insects and other amphibian eggs and larvae. As larvae, Coastal Range Newts eat small aquatic invertebrates and decomposing organic matter.

Physical Characteristics and Adaptations:

Description: The Coastal Range Newt has a yellowish-brown to dark brown colored back with a pale yellowish-orange belly. The eyelids have a slightly lighter color than the rest of the head, and the iris of the eyes is traditionally a silvery to pale yellow color. When looking at the newt from above, it appears as if its eyes protrude from the top of its head.

Weight: The weight of the Coastal Range Newt is not well known, but the average size is 5-8 inches long.

Habits and Adaptations: The newt is poisonous, an evolutionary development to ward off predators. The poison produced by the newt is Tetrodotoxin and is secreted through the skin.

Dentition: The upper teeth, or vomerine teeth, are in the shape of a Y. When eating underwater, the Coastal Range Newt protrudes its tongue and uses throat suction to swallow the food.

Social Behavior: Coastal Range Newts are very aggressive and show their aggression through the Unken Reflex. When performing the Unken Reflex, the newt lifts its head up and points its tail straight out to display the bright color of its belly. The newt has also demonstrated a series of sounds, only performed in the company of other newts. When a

newt is in an unfamiliar location or confronted by another newt, it produces a clicking sound. A squeaking sound is produced when a newt is picked up, and during breeding, the newt makes a pronounced whistling sound.

Reproductive Information: The Coastal Range Newt's reproduction is completely aquatic and takes place for 6-12 weeks during the rainy season, primarily starting in December. Both sexes migrate to water, but males arrive earlier than females. The newt typically migrates back to the same water where it hatched. When males arrive at the breeding ground, and they transform into their aquatic phase, which involves smoothing of the skin, lightening color of the skin, swelling of the cloacal lips, and enlarging of the tail. When females transform, the only change is the smoothing of the skin.

During breeding season, the males wait in the water for the females. When a female enters the water, many males pursue her and fight over her until one is able to grab on. This newt cannot be removed by the others. Then, a process called amplexus begins. During amplexus, the male clutches the female from above. The male then leaves a spermatophore, and the female picks it up with her cloaca.

Females lay an egg sack and attach it to underwater plants, branches, or rocks. Each egg sack contains anywhere from 7-47 eggs. The incubation period is 14-52 days. The larval stage lasts for several months, generally from March to October. The larvae transform and begin to live on land at the end of the summer or early fall. This metamorphosis takes approximately two weeks, where the tail fin is absorbed and the gills are reduced.

Life Span: The life span of the Coastal Range Newt is not well documented, but it is estimated to be approximately 20 years.

Miscellaneous: The Coastal Range Newt has a conservation status of threatened-protected.

SERC Animal: Ernie

Pacific Chorus Frog AKA Pacific Tree Frog

Class:	Order:	Family:	<i>Genus species:</i>
Amphibia	Anura	Hylidae	Pseudacris Regalia

Geographic Range: The Pacific Chorus Frog frequents the West coast of the United States from Northern California, Oregon and Washington, to British Columbia in Canada.

Habitat: The Pacific Chorus Frog is typically found in ponds, streams, and lakes but can sometimes be found further from water sources. It is also found in woodlands, grasslands, chaparral, pasture land, and sometimes backyards in urban areas. Its habitats consist of a variety of climates, vegetations, and altitudes.

Niche: Pacific Chorus Frogs are insectivorous and help control the rising population of insects. Also, many animals rely heavily on Pacific Chorus Frogs as their primary prey. The Pacific Chorus Frog has a number of predators including Garter Snakes, other species of frogs, raccoons, Virginia opossums, fish, and birds. The primary predator of the Pacific Chorus Frog's tadpoles are mosquito fish, other fish, and some aquatic invertebrates. The Pacific Chorus Frog is nocturnal but can also be active during the day (especially during mating season).

Diet: The Pacific Chorus Frog eats spiders, beetles, flies, ants, and other insects/arthropods.

Physical Characteristics and Adaptations:

Description: The Pacific Chorus Frog is a small tree frog with a large head, slim waist, and round padded toes. It has limited webbing between toes and long slender legs. Its body color varies amongst green, tan, grey brown, reddish, and cream colors and has the ability to vary the intensity of those colors. It also possesses a wide dark strip through the middle of each eye.

Weight: The Pacific Chorus Frog weighs between .35 to .45 grams.

Habits and Adaptations: The Pacific Chorus Frog's tadpoles have the ability to adapt their bodies' shapes depending on the chemicals they detect in the air, which signal different predators. For example, they enlarge their tails when they smell Predaceous Diving Beetles in order to distract strikes from the body of the tadpole toward the tail. These distinct responses are reactions to each predator's foraging strategies. Also, the frog's body colors allow it to thrive better in its environment. The green-colored frogs are able to absorb more solar radiation, which can be beneficial in cold and aquatic habitats, while the brown-colored frogs absorb less solar radiation, which helps in hotter, more terrestrial habitats. The Pacific Chorus Tree Frog is also able to change colors depending on environmental conditions and their needs to avoid predation. The Pacific Chorus Frog also has small, sticky padded toes, which allow the frog to climb slick surfaces. For feeding, the tongue is covered by a sticky secretion that allows the Pacific Chorus Frog to

capture insects as well as any debris or dirt near the insect.

Dentition: The Pacific Chorus Frog possesses no teeth.

Social Behavior: The Pacific Chorus Frog is active in both the day and the night, becoming mostly nocturnal during dry periods. During wet weather, they have a tendency to move around in low vegetation. In milder, more moderate climates, these frogs are known to be active year-round; however, in more extreme climates, they have a tendency to hibernate in moist shelters such as dense vegetation, crevices, mammal burrows, and even buildings. Pacific Chorus Frogs are typically very vocal during mating season, and the females use calls to attract potential males. Male frogs typically tend to not overlap mating calls though, which is an indicator of advanced social interactions.

Reproductive Information: The Pacific Chorus Frog breeds in an aquatic environment and fertilizes their eggs externally. Their breeding season occurs between November and July, depending on the location. Adults become reproductively mature within their first year. Males use their mating calls while in or near the water at night and are territorial of their sites, protecting their areas by using an encounter call or by physically butting or wrestling another male frog. Females lay between 400-750 eggs in small, loose irregular clusters of 10-80 eggs each. These clusters are latched onto sticks, stems or grass in quiet, shallow waters. After fertilization, eggs are hatched within two or three weeks.

Life Span: The Pacific Chorus Frog's average lifespan is about six years.

Miscellaneous: The Pacific Chorus Frog's croaking sound is what we typically associate with the frog's "ribbit" calls. Female frogs are put at about 16.5 cm in size while males are placed at around 11.5 cm. The Pacific Chorus Frog also goes by another name, the Pacific Tree Frog; however, they are rarely found in trees, hence the name adaptation. They do, however, possess sticky padded toes, which allow them to climb up tree surfaces as well as anything else that is smooth and slick.

SERC Animal: Lolli