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

GREAT PLAINS TOAD *Anaxyrus cognatus*
Family: BUFONIDAE Order: ANURA Class: AMPHIBIA
A037

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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Great Plains toads are uncommon residents of the southeastern portion of California, from Imperial Co. north to the extreme eastern portions of Riverside and San Bernardino cos and in the Salton Basin. These toads inhabit a variety of arid and semi-arid habitats; primarily found in grassy understories of desert habitats, as well as orchards and irrigated lowlands. This species is also found in desert riparian, wash, scrub, alkali scrub, succulent shrub, and several other associated habitats. Never very common in terrestrial habitats. Active during spring and summer (Wright and Wright 1949, Behler and King 1979, Stebbins 1985).

SPECIFIC HABITAT REQUIREMENTS

Feeding: This species is known to feed on moths, caterpillars, flies, beetles and other insects. In southeastern Arizona, Great Plains toads feed primarily on ants (48%), termites (26%), and beetles (20%). Up to 22 feedings are required to accumulate the year's fat reserve (Dimmitt and Ruibal 1980). Most of the feeding occurs during spring and summer moist periods (Bragg and Smith 1943, Stebbins 1985).

Cover: This species requires loose soil for easy burrowing (Behler and King 1979).

Reproduction: Primarily uses clear, shallow, temporary pools, or quiet areas of streams, irrigation ditches or flooded fields (Bragg and Smith 1943, Stebbins 1954,1985, Mayhew 1968). Water temperature must be between 18 and 34° C (64-94° F) for normal embryonic development. Seventy-two hours are required for hatching of toad eggs (Ballinger and McKinney 1966), and larval development takes 30-75 days, depending on the water temperature (Bragg 1940, Wright and Wright 1949).

Water: Needs standing clear water for breeding (see habitat requirements above).

Pattern: Arid areas of friable soil with clear, quiet standing water during the breeding season.

SPECIES LIFE HISTORY

Activity Patterns: This species is primarily nocturnal. Sometimes diurnal during cloudy, rainy days. It is active in the spring and summer when the temperature is above 21° C (70° F) (Brattstrom 1963), and will aestivate during the hottest part of the summer (Bragg and Smith 1943).

Seasonal Movements/Migration: Adults of this species will move overland after breeding (King 1932).

Home Range: No information.

Territory: No information.

Reproduction: Breeding occurs from April to September after heavy rains (Mayhew 1968). Adults breed in large congregations. Up to 20,000 eggs are laid by a single female. Larvae metamorphose 28 to 45 days after hatching (Bragg

and Smith 1943). Individuals reach sexual maturity in 2 to 4 years (Porter 1972).

Niche: Egg mortality in this species may be as high as 65% (Bragg and Bressler 1951). Mortality of tadpoles is caused by predation from water beetle larvae and spadefoot toads, or by desiccation (Bragg 1940).

Comments: Other common names used for this species are: Say's toad, plains toad, Texas toad, western plains toad.

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