

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

SIDE-BLOTCHED LIZARD

Uta stansburiana

Family: PHRYNOSOMATIDAE
R024

Order: SQUAMATA

Class: REPTILIA

Written by: L. Palermo

Reviewed by: T. Papenfuss

Edited by: R. Duke, D. Alley

Updated by: CWHR Program Staff, March 2000

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The side-blotched lizard is common to abundant throughout arid and semi-arid regions of the state, excluding most of northern California, the Sacramento Valley, the Sierra-Cascade ranges, and several of the Channel Islands. Its elevation range extends from below sea level to over 2440 m (8000 ft) (Macey and Papenfuss 1991). Prefers open habitats including desert, coastal scrub, chaparral, grass, juniper, pine-juniper, Joshua tree and valley-foothill (Stebbins 1954, 1972).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Side-blotched lizards eat a wide variety of insects and other arthropods (Stebbins 1954, Miller and Stebbins 1964, Tinkle 1967b, Parker and Pianka 1975). Little time is spent foraging. Lizards feed opportunistically on any moving insect of suitable size that passes nearby as they bask or move about their home range (Tinkle 1967b). Food also includes scorpions, spiders, mites, ticks and sowbugs (Stebbins 1985). Some vegetable material is eaten either accidentally or possibly for water (Hoff and Kay 1970).

Cover: Seldom climbs (Stebbins 1954). It, therefore, must hide in rock crevices and under other objects of sufficient size.

Reproduction: Little is known about oviposition sites. In the lab, eggs are deposited in moist sand (Tinkle 1967b). Mautz (1982) found 3 clutches in soil 0, 11, and 12 cm (0, 27.5, and 30 in) beneath a large stone.

Water: Water is probably obtained from food (Mayhew 1968). Vegetable material may be eaten as a source of water.

Pattern: Open habitats are preferred. It is uncommon or absent from dense chaparral or other dense plant growth.

SPECIES LIFE HISTORY

Activity Patterns: Diurnal, ground dwelling. The peak activity period is late afternoon, although there is some activity all day. Side-blotched lizards usually bask in the morning, retreat to the shade of bushes midday, and move about their home range in the late afternoon. Males more actively patrol their home range than females (Tinkle 1967b). Lizards are active all year, although activity during the winter is dependent on temperature (Stebbins 1954, Tinkle 1967b).

Seasonal Movements/Migration: No data.

Home Range: Home range size varies with year, with location, and inversely with density. Home ranges of males are larger than home ranges of females. Male and female home range sizes vary from 400 to 800 m² (0.05 to 0.20 ac) and 65 to 490 m² (0.02 to 0.12 ac), respectively (Jorgensen and Tanner 1963, Tinkle 1967a, 1967b, Turner et al. 1970, Parker 1974, Rose 1982 Stamps 1983). The highest density of adults occurs in the spring during the breeding season and declines thereafter. Adult mortality may be over 90%, with virtually complete annual turnover of adults in some populations (Tinkle 1967a, Fitch 1970, Parker 1974). Spring adult densities range from 30 to 83 per ha (8 to 33 per ac) depending on year and location (Jorgensen and Tanner 1963, Tinkle 1967a, 1967b, Turner et al. 1970, Parker 1974, Rose 1982). Juvenile densities are greatest in July, ranging from 150 to 297 per ha (60 to 119 per ac) and decline thereafter. Juvenile mortality is 80 to 85% (Tinkle 1967a, Turner et al. 1970).

Territory: Both male and female side-blotched lizards defend home ranges. Aggressiveness declines during the winter months in favored winter retreats where food may also be concentrated (Tinkle 1967b).

Reproduction: The breeding season lasts from March to August. Mating occurs from April to May; egg deposition occurs from late April to August. Females store sperm for delayed fertilization. Side-blotched lizards are monogamous (Tinkle 1967b). Clutch size is positively related to size of female, winter rainfall and spring annual production, and inversely related to season and density. Clutch size varies from 1 to 8 eggs (av = 4). One to 7 clutches per year are produced (Stebbins 1954, Tinkle 1967a, 1967b, Fitch 1970 Medica and Turner 1976, Goldberg 1977, Turner et al. 1982). Hatchlings appear from June to late September (Stebbins 1954, Spoecker 1967, Tinkle 1967a, 1967b, Fitch 1970, Medica and Turner 1976, Goldberg 1977) Development time also decreases with season and is 61 to 77 days (Tinkle 1967b, Fitch 1970, Goldberg 1977). Males and females reproduce the first spring following hatching at approximately 43 mm (1.72 in) snout-vent length (Tinkle 1967a, 1967b, Fitch 1970, Parker 1974. Goldberg 1977).

Niche: Predators of side-blotched lizards are numerous, resulting in high mortality. Snake predators include rattlesnakes and sidewinders, coachwhips racers, gopher snakes, kingsnakes, patch-nosed snakes, long-nosed snakes and night snakes. Lizards that eat side-blotched lizards include whiptails, desert spiny and leopard lizards. Burrowing owls, American kestrels, roadrunners, and loggerhead shrikes also eat side-blotched lizards (Stebbins 1954, Tinkle 1967b).

REFERENCES

- Fitch, H. S. 1970. Reproductive cycles in lizards and snakes. Univ. Kans. Mus. Nat. Hist. Misc. Publ. 52:1-247.
- Goldberg, S. R. 1977. Reproduction in a mountain population of the side-blotched lizard, *Uta stansburiana* (Reptilia, Lacertilia, Iguanidae). J. Herpetol. 11:31-35.
- Hoff, C. L., and F. R. Kay. 1970. Herbivorous feeding in the lizard *Uta stansburiana stejnegeri*. Southwest. Nat. 15:137-138.
- Jorgensen, C. D., and W. W. Tanner. 1963. The application of the density probability function to determine the home ranges of *Uta stansburiana stansburiana* and *Cnemidoporus tigris tigris*. Herpetologica 19:105-115.
- Macey, J. R. and T. J. Papenfuss. 1991. Reptiles. Pages 291-360 in C.A. Hall, Jr., editor. Natural History of the White-Inyo Range eastern California. Univ. Calif. Press, Berkeley, California. 536 pp.
- Mautz, W. J. 1982. Observations on an oviposition site of the side-blotched lizard, *Uta stansburiana*. J. Herpetol. 16:331-332.
- Mayhew, W. W. 1968. The biology of desert amphibians and reptiles. Pages 195-356 in G. W. Brown, Jr., ed. Desert Biology, Vol. 1. Academic Press, New York. 638pp.
- Medica, P. A., and F. B. Turner. 1976. Reproduction by *Uta stansburiana* (Reptilia, Lacertilia, Iguanidae) in southern Nevada. J. Herpetol. 10:123-128.
- Miller, A. H., and R. C. Stebbins. 1964. The lives of desert animals in Joshua Tree

- National Monument. Univ. California Press, Berkeley. 452pp.
- Parker, W. S. 1974. Home range, growth, and population density of *Uta stansburiana* in Arizona. *J. Herpetol.* 8:135-139.
- Parker, W. S., and E. R. Pianka. 1975. Comparative ecology of populations of the lizard *Uta stansburiana*. *Copeia* 1975:615-632.
- Rose, B. R. 1982. Lizard home ranges: methodology and functions. *J. Herpetol.* 16:253-269.
- Spoecker, P. D. 1967. Movements and seasonal activity cycles of the lizard *Uta stansburiana stejnegeri*. *Am. Midl. Nat.* 77:484-494.
- Stamps, J. A. 1983. Sexual selection, sexual dimorphism and territoriality. Pages 169-204 in R. B. Huey, E. R. Pianka, and T. W. Schoener, eds. *Lizard Ecology: Studies of a Model Organism*. Harvard Univ. Press, Cambridge. 501pp.
- Stebbins, R. C. 1954. *Amphibians and reptiles of western North America*. McGraw-Hill, New York. 536pp.
- Stebbins, R. C. 1972. *California amphibians and reptiles*. Univ. California Press, Berkeley. 152pp.
- Stebbins, R. C. 1985. *A field guide to western reptiles and amphibians*. 2nd ed., revised. Houghton Mifflin, Boston. 336pp.
- Tinkle, D. W. 1967a. Home range, density, dynamics, and structure of a Texas population of the lizard *Uta stansburiana*. Pages 5-29 in W. W. Milstead, ed. *Lizard Ecology: A Symposium*. Univ. Missouri Press, Columbia. 300pp.
- Tinkle, D. W. 1967b. The life and demography of the side-blotched lizard, *Uta stansburiana*. *Univ. Mich. Mus. Zool. Misc. Publ.* 132:21-182.
- Turner, F. B., G. A. Hoddenbach, P. A. Medica, and J. R. Lannom, Jr. 1970. The demography of the lizard, *Uta stansburiana* Baird and Girard, in southern Nevada. *J. Anim. Ecol.* 39:505-519.
- Turner, F. B., P. A. Medica, K. W. Bridges, and R. I. Jennrich. 1982. A population model of the lizard *Uta stansburiana* in southern Nevada. *Ecol. Monogr.* 52:243-259.