## California Wildlife Habitat Relationships System

# California Department of Fish and Wildlife California Interagency Wildlife Task Group

SOUTHERN ALLIGATOR LIZARD Elgaria multicarinata

Family: ANGUIDAE Order: SQUAMATA Class: REPTILIA

R040

Written by: S. Morey Reviewed by: T. Papenfuss Edited by: R. Duke

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#### DISTRIBUTION, ABUNDANCE, AND SEASONALITY

Generally common in suitable habitats, the southern alligator lizard is widespread in northern and central California west of the Sierra-Cascade crest and in southern California west of the desert regions. Apparently absent from the extreme northwestern part of the state and from the southern Central Valley. Isolated populations are known from western Inyo and Mono cos. (Stebbins 1985). A desert extension of the range occurs along the Mojave River. Populations are also known from most of the Channel Islands. Elevational range is from sea level to 2250 m (7500 ft). Occurs most commonly in valley-foothill habitats, mixed chaparral, and in open areas of mixed conifer forest.

### SPECIFIC HABITAT REQUIREMENTS

Feeding: Alligator lizards take mostly insects and other arthropods as prey but will take larger food items, especially other lizards (Cunningham 1956). Evidence for their voracious feeding habits is provided by King (1931) who observed a captive adult female consume 20 immature grasshoppers, 11 katydids, 7 shield bugs and stink bugs, and 3 spiders at a single feeding. Cannibalism has been reported.

Cover: Cover is provided by surface objects such as rocks, logs, dense vegetation, and human debris. Refuge may also be taken in crevices and rock fissures. Individuals occasionally burrow in loose soil around or under surface objects such as flat rocks. This species sometimes climbs in dense, shrubby vegetation.

Reproduction: Little is known about specific habitat requirements for courtship, mating, and egg-laying in this lizard. Nussbaum et al. (1983) reports that eggs are deposited in "burrows or in stable talus." Eggs are reported by Shaw (1943) to have been laid in the burrow of a pocket gopher.

Water: No information on water requirements. This lizard occurs in areas of low rainfall and often far from any source of standing water. Dawson and Templeton (1966) report relatively high rates of evaporative water loss at normal active body temperature.

Pattern: This species occurs most commonly in open canopy stages of suitable habitats.

#### SPECIES LIFE HISTORY

Activity Patterns: Basically diurnal, this species is active at cooler temperatures than most other lizards with which it coexists. Active southern alligator lizards have

been found by Brattstrom (1965) with body temperatures as low as 11° C (52° F). They are active earlier and later in the day than most lizards, sometimes venturing onto warm roads at night. Activity is reduced during the hot periods of summer. In cooler areas a period of winter inactivity occurs but elsewhere individuals may be active all winter long.

Seasonal Movements/Migration: Predictable seasonal movements have not been recorded for this species in California.

Home Range: No information is available regarding the nature of the home range.

Territory: No evidence for the territorial defense of resources has been reported.

Reproduction: In southern California, the first clutch of eggs is laid early in June and hatches in about 11 weeks (Goldberg 1972). Two or even three clutches eggs may be laid by females during a single season (Burrage 1965). Clutch size is about 12 with larger females laying more, larger eggs than small females (Goldberg 1972).

Niche: Racers, rattlesnakes, garter snakes, loggerhead shrikes, red-tailed hawks, and domestic cats have been reported among the predators of alligator lizards. Competition with other lizards for food, space, or othe resources is probably minimized by the unique physiological tolerances of this species, which allow them to be active at different times and to utilize different microhabitats than other lizards. Competition may be further reduced because of the large range of prey size available to alligator lizards.

#### **REFERENCES**

Brattstrom, B. H. 1965. Body temperatures of reptiles. Am. Midl. Nat. 73:376-422.

Burrage, B. R. 1965. Notes on the eggs and young of the lizards gerrhonotus multicarinatus webbi and g. m. nanus. Copeia 1965:512.

Cunningham, J. D. 1956. Food habits of the san diego alligator lizard. Herpetologica 12:225-230.

Dawson, W. R., and J. R. Templeton. 1966. Physiological responses to temperature in the alligator lizard, gerrhonotus multicarinatus. Ecology 47:759-765.

Goldberg, S. R. 1972. Reproduction in the southern alligator lizard gerrhonotus multicarinatus. Herpetologica 28:267:273.

King, F. W. 1931. Food habits of alligator lizards. Yosemite Nat. Notes 10:76.

Nussbaum, R. A., E. D. Brodie, Jr., and R. M. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. Univ. Press of Idaho. 332pp.

Shaw, C. E. 1943. Hatching of the eggs of the san diego alligator lizard. Copeia 1943:194.

Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. Houghton Mifflin Company, Boston, Massachusetts. 336 pp.

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