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

WESTERN PIPISTRELLE *Pipistrellus hesperus*
Family: VESPERTILIONIDAE Order: CHIROPTERA Class: MAMMALIA
M031

Written by: J. Harris
Reviewed by: P. Brown
Edited by: D. Alley, R. Duke
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DISTRIBUTION, ABUNDANCE, AND SEASONALITY

The western pipistrelle is a common to abundant resident of deserts and arid grasslands and woodlands. In California, this species occurs in the Central Valley, foothills, and Coast Ranges from Tehama Co. to Mexico, and in the deserts from Alpine Co. to Mexico. Extreme eastern Modoc Co. is also inhabited. Scattered populations exist in Siskiyou, Lassen, and Trinity counties. Occupies all desert, brush, grassland, and woodland habitats up through mixed conifer forests. The most abundant bat in desert regions. Common in arid brushlands, grasslands, and woodlands, and uncommon in conifer forests. This species is a yearlong resident in California.

SPECIFIC HABITAT REQUIREMENTS

Feeding: Feeds on a wide variety of flying insects, including moths, Diptera, Homoptera, Hymenoptera, Hemiptera, and Coleoptera. The primary food varies between studies (Ross 1967, Black 1974, Whitaker et al. 1981), but soft-bodied prey are the major foods. Flight is slow and fluttery. Feeds at low to moderate heights. Often found foraging over water, in rocky canyons, and along cliff faces.

Cover: Roosts primarily in rock crevices, occasionally in mines and caves, and rarely in buildings. Suitable roosts are most often found in rocky canyons and cliffs.

Reproduction: Born and reared singly, or in small maternity colonies in rock crevices.

Water: Produces a very concentrated urine, and maintains positive water balance for 1.5 wk without water (Geluso 1978). Lactating females may require frequent water. They comprise a large proportion of individuals taken over water sources. All individuals probably require occasional water.

Pattern: Prefers rocky canyon walls and cliffs in arid habitats.

SPECIES LIFE HISTORY

Activity Patterns: Nocturnal, reduced activity in winter. This species emerges earlier than other bats. It may be seen as early as 45 min before sunset, and often is seen after sunrise. Most activity is in the first 1-2 hr after sunset. Reported temperatures during activity range from -5°C to 33°C (23-92°F). Optimum temperature for activity is 16° C to 30° C (61 -86° F). Strong winds inhibit activity. Active at any time of year, but peak activity occurs in the summer months. Peak activity in winter coincides with higher temperatures. Individuals active in winter are mostly males. This species uses hypothermia to conserve energy during periods of cold temperature (Cockrum and Cross 1964, Cox 1965, Jones 1965, O'Farrell et al. 1967, Bradley and O'Farrell 1969, O'Farrell and Bradley 1970).

Seasonal Movements/Migration: Yearlong resident in California. May make local movements, but no data found on movements.

Home Range: No data found.

Territory: No data found .

Reproduction: Pregnant females are found in May and June. Births are in June and July, with a peak in mid-June. The single yearly litter has 1 or 2 young. Lactating females are found in June and July. Most young are capable of flight in July.

Niche: This small, maneuverable bat takes small, mostly soft-bodied insects at medium to low heights. Found foraging with a number of bat species, and has been seen foraging among violet-green swallows. Possible predators include owls and large bats.

Comments: Like many bats, this species is sensitive to disturbance of roost sites.

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