

## Western Bat Working Group

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### Species Accounts

Developed For the 1998 Reno Biennial Meeting

Updated at the 2005 Portland Biennial Meeting

### *Pipistrellus hesperus*

### WESTERN PIPISTRELLE

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I. DISTRIBUTION: *Pipistrellus hesperus*, a member of the Family Vespertilionidae, occurs from the desert lowlands of the southwestern United States, with its range extending into southern Washington. In Mexico, it ranges throughout Baja California and on the mainland to Michoacan and Hidalgo. While most commonly associated with arid, desert landscapes, it also occurs in association with significant rock features in lower elevation mixed conifer forest in mountain ranges in California and up to fir-spruce forest in Arizona.

II. STATUS: Global Rank - G5. State Ranks: AZ - S5; CA - S5; CO - S4; ID - S3; NM - S5; NV - S?; OR - S4; TX - S5; UT - S4; WA - S4?.

III. IDENTIFYING CHARACTERISTICS AND LIFE HISTORY: *P. hesperus* is the smallest of all North American bats, and can be distinguished from the small *Myotis* species (*californicus* or *ciliolabrum*) by the club-shaped tragus compared to the pointed tragus of *Myotis*. All three of these small bats have a keeled calcar. In Texas, there is a slight overlap in range with the eastern pipistrelle (*P. subflavus*) which is larger, with an unkeeled calcar and tricolored fur. Western pipistrelles are also commonly known as canyon bats due to their association with rocky canyons and outcrops (usually at elevations below 2,000 meters), where they roost in small crevices. Occupied crevices may also be in mines and caves. They have been observed at dusk flying over creosote bush scrub several miles from rocky areas, and it is postulated that they may roost under rocks or in rodent burrows. They emerge early in the evening, often before sunset, and may be active after sunrise. Near rocky canyons, their small fluttery forms can fill the sky in the fading desert light. They are often the first bats captured in an evening in mist nets set over isolated desert water holes or across mine entrances as they enter to night roost. Stomach content analysis suggest they feed on small swarming insects such as flying ants, mosquitoes, fruit flies, leafhoppers and ants. During cooler winter months, pipistrelles hibernate in rock crevices (sometimes in mines), although on warm winter days, they may emerge to forage during the day. It is reported that females give birth to twins in late May through June, and mothers with their young may roost alone or in groups of less than 20 individuals. The young are volant within a month.

IV. THREATS: Destruction of rocky areas due to renewed mining or other development activities (road construction, housing developments, water impoundments) can kill roosting bats and remove roosting habitat.

V. GAPS IN KNOWLEDGE: Since this bat is too tiny to carry a transmitter, no data exists on individual foraging areas or range. Although *P. hesperus* is a ubiquitous bat throughout the arid southwest, limited information is available on social structure, microhabitat roost requirements, roost fidelity, or longevity. Without more knowledge of natural history, it is difficult to assess potential threats to this species.

VI. SELECTED LITERATURE:

Barbour, R. W., and W. H. Davis. 1969. Bats of America. University of Kentucky Press, Lexington, KY, 286 pp.

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Hayward, B. J., and S. P. Cross. 1979. The natural history of *Pipistrellus hesperus* (Chiroptera: Vespertilionidae). Western New Mexico University. Office of Research, 3:1-36.

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