

# Parastrellus hesperus

*This species is not complete.*

December 12, 2013 by Amber Lankford

Author(s) Expertise: 1

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<b>Sensitivity Factor</b>	<b>Sensitivity 1 - 7 (one being least sensitive, seven being most sensitive)</b>	<b>Confidence 1 - 5 (one being least sensitive, five being most sensitive)</b>
Generalist/Specialist	1 Low	1 Very Poor
Physiology	4 Medium-High	2 Poor
Life History	6 High	3 Fair
Habitat		2 Poor
Dispersal Ability	2 Medium-Low	1 Very Poor
Disturbance Regimes	3 Medium	1 Very Poor
Ecology	2 Medium-Low	1 Very Poor
Non-Climatic	3 Medium	1 Very Poor
Other (weight)		

Sensitivity Score : 36 Medium

## Sensitivity Score

$100 * [(0.5 * (\text{Dispersal Distance} + \text{Dispersal Barriers}) + \text{Disturbance Regimes} + (0.5 * \text{Generalist/Specialist}) + \text{Physiology} + (0.5 * \text{Life History}) + \text{Sensitive Habitats} + \text{Ecology} + \text{Non-Climatic Stressors} + (\text{Other} * \text{Weight}) / 49 + (7 * \text{Weight})]$

Note: if Sensitive Habitats are identified, this factor automatically gets a value of seven, otherwise it remains zero.

Confidence Score : 1 Very Poor

## Confidence Score

The Confidence Score is an average of the Confidence column above.

Overall User Ranking: 3 Medium

**Author Expertise:**

1 (low)

**Common Name:**

Western pipistrelle Canyon bat

**Is this Species completed:**

No

— Taxonomy —

This is a description of the whole group

**Scientific Name:**

*Parastrellus hesperus*

**Geography:**

Idaho

**Realm:**

Terrestrial

**Kingdom:**

Animal

**Phylum:**

Chordata

**Class:**

Mammalia

**Order:**

Chiroptera

**Family:**

Vespertilionidae

**Genus:**

*Parastrellus*

**Global Rank:**

G5 (1996)

**Rounded Global Rank:**

G5 - Secure

**IUCN:**

Least Concern ver 3.1 - 2008

— Generalist/Specialist —

**Broadly, where does this species fall on the spectrum of generalist to specialist? :**

1(generalist)

**Confidence in your assessment of the degree to which the species is a generalist or specialist:**

1 Very Poor

Physiology

**Species' physiological sensitivity:**

4

**Confidence in how physiologically sensitive the species is to climate change:**

2 Poor

**Please specify whether or not this species is physiologically sensitive to one or more of the following:**

precipitation

**Comments:**

Particularly in arid environments, western pipistrelle's roost near water. High protein diet and high evaporative water loss makes water availability important for this species

**Citations:**

Arroyo-Cabrales, J., and Castaneda, S.T.A. 2008. *Pipistrellus hesperus*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>.

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Life History

**Species' reproductive strategy:**

6

**Confidence in your assessment of the species' reproductive strategy:**

3 Fair

**Average length of time to reproductive maturity:**

1 year

**How many surviving young can an individual produce during a single reproductive event under optimal conditions?:**

1

**How many reproductive events can an individual undergo in a single year under optimal conditions?:**

1

Sensitive Habitats

**Confidence in whether the species depends on the listed sensitive habitat types:**

2 Poor

**Comments:**

Typically found in open, mostly treeless habitats. Roosts in rock outcrops and on rock faces in arid landscapes. Most abundant bat in deserts. Typical roosting sites include rock crevices, beneath rocks, in burrows, mines, and buildings. There is some suggestion that western pipistrelles may use burrows made by kangaroo rats (*Dipodomys* spp.) (Barbour and Davis 1969). The species winters in mines and caves

**Citations:**

Arroyo-Cabrales, J., and Castaneda, S.T.A. 2008. *Pipistrellus hesperus*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded 05 January 2014. Barbour, R.W., and W.H. Davis. 1969. *Bats of America*. The University of Kentucky Press, Lexington, Kentucky.

Dispersal Ability

**Maximum annual dispersal distance:**

50-75 km

**Confidence in maximum annual dispersal distance:**

1 Very Poor

**Within the context of dispersal distance above, do barriers to dispersal exist?:**

1 None

**Confidence in barriers to dispersal exists:**

1 Very Poor

**Comments:**

Dispersal not known, based on other bat species.

Disturbance Regimes

**How sensitive is this species to one or more disturbance regimes:**

3 somewhat sensitive

**Confidence in how sensitive is this species on one or more disturbance regimes:**

1 Very Poor

**Please check all disturbance regimes upon which the species is sensitive:**

Disease

Drought

**Please describe the disturbance regimes upon which the species is sensitive (frequency, timing, severity, duration):**

Because this species is found in more arid landscapes, drought may have a more significant effect on prey species.

**Comments:**

Not yet known if the species is affected by White nose syndrome

Ecological Relationships

**Please specify which of the following (if any) are sensitive to climate change for this species:**

forage

**Confidence in how sensitive the species is to other effects of climate change on its ecology:**

1 Very Poor

**Which types of climate and climate-driven changes in the environment affect these aspects of the species' ecology?:**

precipitation

**How sensitive is this species? ecological relationships to the effects of climate change?:**

2

**Comments:**

Loss of precipitation/moisture in arid landscapes may result in decreased prey abundance.

**Citations:**

Arroyo-Cabrales, J., and Castaneda, S.T.A. 2008. *Pipistrellus hesperus*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded 05 January 2014.

Interacting non-climatic stressors

**To what degree do other, non-climate-related threats, to the species make it more sensitive to climate change?:**

3

**Confidence in the degree to which non-climate-related threats affect the species' sensitivity to climate change:**

1 Very Poor

**Please check all of the stressors that make the species more sensitive to climate change:**

habitat loss or degradation

direct human conflict (including harvesting)

**Comments:**

Development activities that destroy rock areas such as re-opening mines, road construction (etc.) can remove roosting habitat.

**Citations:**

Arroyo-Cabrales, J., and Castaneda, S.T.A. 2008. *Pipistrellus hesperus*. In: IUCN 2013. IUCN Red List of Threatened Species. Version 2013.2. <[www.iucnredlist.org](http://www.iucnredlist.org)>. Downloaded 05 January 2014.

Overall User Ranking

**In your opinion, how would you rank the overall sensitivity of this species to climate change?:**

3

**Confidence in your overall assessment of the sensitivity of this species to climate change:**

1 Very Poor

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