

Western Red Bat (*Lasiurus blossevillii*)**Species Status Statement.**Distribution

Western red bat ranges from northern California and northern Utah, southward at least to southern Mexico. The taxonomy of this species is currently unstable, lacking consensus concerning its relationship with a related species, eastern red bat (*Lasiurus borealis*). Depending upon one's taxonomic view, its distribution may (or may not) extend farther southward through Mesoamerica and well into South America (at least through the northern half of the continent), including Trinidad and Tobago and the Galapagos Islands.

The unresolved taxonomic questions concerning this species include bats in Utah. Most Utah records of red bats are from southern Washington County. All red bats found in Utah were long assumed to be western red bat. However, recent genetic analysis of a Utah County specimen, and morphological re-evaluation of a Carbon County specimen, have shown those two specimens to actually represent eastern red bat, *L. borealis* (Geluso and Valdez 2019). The same authors speculated that a Cache County record also may represent eastern red bat. Finally, acoustic records, questionably assigned to western red bat, have been reported from other parts of Utah.

Table 1. Utah counties currently occupied by this species.

<b>Western Red Bat</b>
MILLARD
WASHINGTON

Abundance and Trends

This is by far the rarest bat in Utah, with only 17 individuals (11 adults and six young) having been found. Nine of these Utah observations (three adults and six young) date from the 1930s, three from the 1940s, three from the 1950s, none from the 1960s, 1970s, 1980s, 1990s, and 2000s, and one (or possibly two, maybe the same individual) in the 2010s. The species is too rare and the sample too small to allow any definite conclusion concerning population trend. There was a gap of 55 years with no detections of this species in Utah between 1958 and 2013. Furthermore, all records of western red bat, *L. blossevillii*, in Utah (including all collected specimens) are now tainted by uncertain identifications. Indeed, not a single Utah individual has been confidently identified as *L. blossevillii* (as opposed to *L. borealis*, eastern red bat).

**Statement of Habitat Needs and Threats to the Species.**Habitat Needs

In Utah, nearly all observations of this species have come either from towns, or from cottonwood groves in lowland riparian areas. Although most authorities consider this bat a foliage-roosting species, two Utah roosting observations were from a cave and a mine.

### Threats to the Species

Two threats to all bats in Utah, including this species, are (1) dewatering, whether due to drought or to anthropogenic depletion of water, and (2) pesticide use, which reduces available prey and makes some remaining prey toxic to the bats. The loss of riparian habitat - particularly in the Virgin River drainage of Washington County, the origin of most putative Utah records of western red bat - may also be a threat to this species (Oliver 2000). Finally, this bat species is one of the bats most vulnerable to mortality caused by wind turbines for production of electrical energy.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

<b>Western Red Bat</b>
<b>High</b>
Agricultural Pollution
<b>Medium</b>
Acid Mine Drainage
Brush Eradication / Vegetation Treatments
Droughts

### **Rationale for Designation.**

The rarity of western red bat in Utah and elsewhere, and the threats to its continued existence in this state as well as elsewhere in its range, make its designation as a state Sensitive Species appropriate.

### **Economic Impacts of Sensitive Species Designation.**

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. The listing of other bat species in eastern states has prompted requirements for extensive regulatory compliance for a wide variety of project categories including transportation, utility rights-of-way, habitat management, and forest management.

**Literature Cited.**

Geluso, K., and E. W. Valdez. 2019. First records of the eastern red bat (*Lasiurus borealis*) in Arizona, Utah, and western New Mexico. *Occasional Papers[,] Museum of Texas Tech University* 361: 1–12.

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