

Flammulated Owl (*Psiloscopus flammeolus*)

Species Status Statement.

Distribution

This small migratory owl breeds throughout the western United States and parts of Mexico, and is thought to winter in southern Mexico and parts of Central America (Linkhardt and McCallum 2013). Within Utah, it is patchily distributed, occurring during the breeding season only where habitat is favorable. Breeding populations are concentrated in the southwestern and north central areas of the state.

Table 1. Utah counties currently occupied by this species.

Flammulated Owl	
BEAVER	RICH
BOX ELDER	SALT LAKE
CACHE	SAN JUAN
CARBON	SANPETE
DAVIS	SEVIER
DUCHESNE	SUMMIT
GARFIELD	TOOELE
GRAND	UINTAH
IRON	UTAH
KANE	WASATCH
MILLARD	WASHINGTON
MORGAN	WAYNE
PIUTE	WEBER

Abundance and Trends

Information on this nocturnal, insectivorous owl is limited, with little understanding of population status and dynamics. Current estimates put the global flammulated owl population at 5,500 individuals (Partners in Flight 2019), with a decreasing trend (Birdlife International 2016). Occurrence of this species corresponds strictly to its forest habitat, but suitable habitat may go unoccupied for unknown reasons (Linkhart and McCallum 2013). Managers consider it common where it does occur, however it often occurs in low densities. Status and trend in Utah are unknown.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Flammulated owl habitat is montane forests, particularly ponderosa pine, with high abundance of large insects such as moths, open areas for aerial foraging, and patches of dense conifer and aspen stands for nesting, and deciduous riparian habitats for foraging (Linkhardt and McCallum 2013). In most of their range, ponderosa pine is the dominant tree species, but in Utah, mixed Douglas fir and aspen stands also provide suitable breeding habitat. These small owls are secondary cavity nesters, and therefore require premade tree cavities for nest sites. They rely on primary cavity nesters such as flickers and other larger woodpeckers to excavate these nest cavities. During migration, flammulated owls may use low elevation sites as transit corridors, especially when traveling through areas without montane habitat (Linkhardt and McCallum 2013).

Threats to the Species

Although poorly understood, habitat destruction and fragmentation, and declines in insect abundance as a food source threaten flammulated owl populations. While not always successful, the occasional use of artificial cavities indicates that this species may be nest cavity limited (Linkhardt and McCallum 2013). Inappropriate forest and fire management (Franzreb and Ohmart 1978) are the largest potential sources of threats to the creation and maintenance of nesting and foraging habitat. Other potential problems arise from reduction of cavity excavator species, and direct competition for cavities from invasive cavity-using species such as European starling.

Human destruction of suitable breeding habitat may contribute to overall declines in this species. This species has high nest site fidelity (Linkhart and McCallum 1987a), and disturbance or destruction of nest sites may impact breeding success of owls within the locality. Average breeding lifespan appears to be short compared to overall lifespan (8 – 14 year total lifespan; <40% of total lifespan spent breeding), and disturbance during nesting attempts may drastically reduce overall fecundity for this species (Linkhardt and McCallum 2013). Additionally, clutch size is small, and this species is not thought to re-nest within the same breeding season in the event of nest failure due to disturbance or poor weather.

Decreases in overall insect abundance (Harris et al. 2019) may also impact flammulated owl populations. As primarily insectivorous birds, they rely on nocturnal grasshoppers, moths, and beetles for food. Flammulated owls may take small mammals or birds when insects are scarce, although this is considered rare (Linkhardt and McCallum 2013), and their reliance on declining insects as a food source may put them at risk for population declines.

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).

Flammulated Owl
No Identified Threats - Data Gaps Only

Rationale for Designation.

Flammulated owl is a priority species for the Partners in Flight Program, and for four Regions of the US Forest Service. It is also a Species of Special Concern in Canada (Linkhart and McCallum 2013). In Utah, distribution, abundance, and status of threats all remain poorly understood for this small forest owl. Taking action to fill these data gaps will help prevent the possibility of Endangered Species Act listing of this species.

Economic Impacts of Sensitive Species Designation.

Sensitive species designation is intended to facilitate coordinated management of this species which is recommended to prevent Endangered Species Act listing and lessen related economic impacts. An ESA listing of flammulated owl would impact the management and development of forest resources, the use of prescribed fire, wildfire rehabilitation, permitted livestock grazing in forested areas, and as activities and projects that might affect riparian vegetation above approximately 6,500ft. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

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