

Lewis's Woodpecker (*Melanerpes lewis*)**Species Status Statement.**Distribution

The distribution of Lewis's woodpecker encompasses much of western North America, extending from southern British Columbia to southern New Mexico, and from coastal California through Colorado (Abele et al. 2004, Parrish et al. 1999, DeGraaf et al. 1991). This distribution roughly approximates that of ponderosa pine (*Pinus ponderosa*; Diem and Zeveloff 1980). Within its broad distribution, the actual occurrence of Lewis's woodpecker is spotty and discontinuous (Sauer et al. 2001).

Utah contains a substantial portion of the overall range of Lewis's woodpecker. The species is distributed statewide, with concentrations along mountain ranges and adjacent valleys (ebird 2019, Sauer et al. 2001). During the winter, these woodpeckers are found in the Wasatch Mountains, and in the southwest corner of the state (Vierling 2013).

Table 1. Utah counties currently occupied by this species.

Lewis's Woodpecker
ALL

Abundance and Trends

Population numbers and trends are difficult to ascertain with this species due to its patchy distribution (Abele et al. 2004). However, bird monitoring programs have noted declines for this species over much of its range, including Utah. The global abundance estimate of Lewis's woodpecker is 82,000, with roughly 95% living in the United States (Partners in Flight 2019). Breeding Bird Survey (BBS) data show range-wide abundance declines of 3.42% per year (95% CI: -7.32 to -1.59; Sauer et al. 2017) and an overall population loss of 67% from 1967 to 2015 (Rosenberg 2016). Lewis's woodpecker is much less common in Utah today than historically (Behle et al. 1985).

Currently, Lewis's woodpecker is:

- Identified by the U.S. Fish and Wildlife Service as a priority species at the continental and Bird Conservation Region scales on the Birds of Conservation Concern list (draft U.S. Fish and Wildlife Service 2017)
- Listed by Partners in Flight as "REVERSE DECLINE: Yellow Watch List 'D' – Species with population declines and moderate to high threats" (Rosenberg et al. 2016)
- Listed as *Least Concern* on the Red List of Threatened Species by the International Union for Conservation of Nature

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Lewis's woodpecker is a habitat specialist, with primary breeding habitat being open ponderosa pine forests, and open cottonwood riparian areas above 6,500 ft (Saab and Veiriling 2001, Parrish et al. 1999). Breeding sites usually include a brushy understory with abundant perches. Lewis's woodpecker also breeds in low numbers in small, open patches of aspen in Utah (Vande Voort 2011). Where they reside, individuals seek high densities of standing dead trees (snags) along with the aforementioned site conditions, which are most commonly found in stands with fairly recent fire history. Indeed, Lewis's woodpecker is often characterized as a post-fire specialist, though use of burned areas varies greatly with region, size of the burn, and severity of the fire. Nesting woodpeckers were found 19 to 22 years after fire in one burn, but not 7 or 30 year after fire in a similar region (Bock 1970). In Wyoming, woodpeckers were more abundant in a burned forest 8 years post-fire than a similarly sized burn 20 years post fire (Linder 1994). In Idaho, Lewis's woodpeckers settled in a large (100,000 ha), high intensity burn 2 to 3 years post-fire in large numbers, but did not settle in large numbers in a 24,000 ha burn in Montana until 5 years post-fire (Saab and Dudley 1996, Caton 1996).

This species, unlike most other woodpeckers, forages by aurally catching large, flying insects. Open forest canopies with brushy understories support abundant insect habitat, and provide perches from which the woodpeckers hunt (Vierling et al. 2013). Lewis's woodpeckers lack the robust bill physiology of most other woodpeckers, limiting their ability to drill into wood for insects and excavating cavities. Consequently, it prefers to nest in soft, decaying trees, or to use pre-existing cavities (Abele et al. 2004).

Some individuals, especially those in the northern extent of the range, migrate locally or regionally (Vierling et al. 2013). In winter, woodpeckers appear to occupy areas with ample food storage sites, such as cracked power poles, furrowed tree bark, and other large cracks and holes (Tashiro-Vierling 1994). Orchards and oak woodlots are also abundantly used in winter when insects are scarce (Bock 1970).

Threats to the Species

The primary threat to Lewis's woodpecker is the loss of breeding habitat through fire suppression and improper forest management (Abele et al. 2004). Fire suppression efforts over the last century have caused an increase in tree densities of ponderosa pine and mixed conifer forests. This has decreased the amount of suitable open-canopy breeding and foraging habitat for Lewis's woodpeckers (Parrish et al. 1999, Morgan 1994). Forest management practices that promote increasing canopy closure and increased tree density make habitat unsuitable for Lewis's woodpeckers, by reducing the available insect prey, decreasing accessible foraging areas, and limiting available cavities for nesting (Abele et al. 2004). Additional threats include improper livestock grazing, and competition from non-native species. These threats are less pervasive and often occur at more of a local scale than fire suppression and excessive timber

stocking. Poor grazing practices in some areas can remove essential ground cover necessary to support insect prey (Parrish et al. 1999). In addition, competition for nesting cavities by the invasive European starling has had a negative impact on Lewis's woodpecker populations (Parrish et al. 1999).

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).

Lewis's Woodpecker
High
Improper Forest Management
Inappropriate Fire Frequency and Intensity

Rationale for Designation.

Notwithstanding the small population, Utah represents a substantial portion of the overall distribution of Lewis's woodpecker. This species has experienced a significant long-term decline in population size over the last several decades, and no longer persists in large portions of its historical range. Lewis's woodpecker is a habitat specialist with primary breeding habitat in ponderosa pine and open riparian areas. Fire suppression, and forest management practices that increase canopy cover and tree density and remove snags used for nesting, threaten its breeding habitat. The loss and degradation of riparian deciduous woodlands threatens post-breeding dispersal and wintering habitat.

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 Lewis's woodpecker would have statewide impacts to forest management, prescribed fire, wildfire rehabilitation, summer livestock grazing, and projects in mid- and high-elevation riparian vegetation areas. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

Literature Cited.

Abele, S.C., V.A. Saab, and E.O. Garton. 2004. Lewis's Woodpecker (*Melanerpes lewis*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Available:

<http://www.fs.fed.us/r2/projects/scp/assessments/lewiswoodpecker.pdf> Accessed: 24 February 2019.

Behl, W.H., E.D. Sorensen, C.M. White. 1985. Utah Birds: A Revised Checklist. Occasional Publication No. 4, Utah Museum of Natural History. University of Utah, Salt Lake City, Utah, USA.

Bock, C.E. 1970. The Ecology and Behavior of the Lewis Woodpecker (*Asyndesmus lewis*). University of California Publications in Zoology 92. University of California Press, Berkeley, California, USA.

Caton, E.M. 1996. Cavity nesting birds in a post-fire habitat in northwestern Montana. PhD Thesis, University of Montana, Missoula, Montana, USA.

DeGraaf, R.M., V.E. Scott, R.H. Hamre, L. Ernst, and S.H. Anderson. 1991. Forest and rangeland birds of the United States natural history and habitat use. U.S. Department of Agriculture, Forest Service, Agriculture Handbook 688. Washington, D.C., USA.

Diem, K.L. and S.I. Zeveloff. 1980. Ponderosa pine bird communities. In Workshop proceedings: management of western forests and grasslands for nongame birds., edited by R. M. DeGraaf. Ogden, UT: Intermountain For. and Range Exp. Stn., Rocky Mtn. For. and Range Experimental Station, and Intermountain Region U.S. Dep. Agric., For. Serv.

eBird Basic Dataset. Version: EBC_relMay2018. Cornell Lab of Ornithology, Ithaca, New York, USA. May 2018.

Linder, K.A. 1994. Habitat utilization and behavior of nesting Lewis's Woodpeckers (*Melanerpes lewis*) in the Laramie range, southeast Wyoming. Master's Thesis, University of Wyoming, Laramie, Wyoming, USA.

Morgan, P. 1994. Dynamics of ponderosa and Jeffrey pine forests. Pages 467-73 in G.D. Hayward and J. Verner, editors. Flammulated, boreal and great gray owls in the United States: a technical conservation assessment. USDA Forest Service General Technical Report RM-252, Fort Collins, Colorado, USA.

Parrish, J., F.P. Howe, R.E. Norvell. 1999. Utah Partners in Flight Avian Conservation Strategy. Publ. N. 99-40. Utah Partners in Flight Program, Utah Division of Wildlife Resources, Salt Lake City, Utah, USA.

Partners in Flight. 2019. Population Estimates Database, version 3.0. Available at <http://pif.birdconservancy.org/PopEstimates>.

Rosenberg, K.V., J.A. Kennedy, R. Dettmers, R.P. Ford, D. Reynolds, J.D. Alexander, C.J. Beardmore, P.J. Blancher, R.E. Bogart, G.S. Butcher, A.F. Canfield, A. Couturier, D.W. Demarest, W.E. Easton, J.J. Giocomo, R.H. Keller, A.E. Mini, A.O. Panjabi, D.N. Pashley, T.D. Rich, J.M. Ruth, H. Stabins, J. Stanton, and T. Will. 2016. Partners in Flight Landbird Conservation Plan: 2016 revision of Canada and continental United States. Partners in Flight Science Committee. 119 pp.

Saab, V.A. and J. Dudley. 1996. Why do burned forests provide conditions for nest site convergence among cavity-nesting birds? 114th Meeting of the American Ornithological Union, 13-17 August 1996, Boise, Idaho, USA.

Saab, V.A. and K.T. Veiriling. 2001. Reproductive success of Lewis's Woodpecker in burned pine and cottonwood riparian forests. *Condor* 103:491-501.

Salafsky, N., D. Salzer, A.J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S.H.M. Butchart, B. Collen, N. Cox, L.L. Master, S. O'Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22: 897–911.

Sauer, J.R., J.E. Hines, G. Gough, I. Thomas, and B.G. Peterjohn. 2001. The North American Breeding Bird Survey results and analysis. USGS, National Biological Survey, Patuxent Wildlife Research Center, Laurel, Maryland, USA.

Tashiro-Veiriling, K. 1994. Population trends and ecology of Lewis's Woodpecker (*Melanerpes lewis*) in southeastern Colorado. M.A. Thesis. University of Colorado, Boulder, Colorado, USA.

Utah Division of Wildlife Resources [UDWR]. 2015. Utah Wildlife Action Plan: A plan for managing native wildlife species and their habitats to help prevent listing under the Endangered Species Act. Publication number 15---14. Utah Division of Wildlife Resources, Salt Lake City, Utah, USA.

Vande Voort, Amy M. 2011. Habitat characteristics and occupancy rates of Lewis's Woodpecker in aspen. M.S. Thesis. Utah State University, Logan, Utah, USA.

Veiriling, K.T., V.A. Saab, and B.W. Tobalske. 2013. Lewis's Woodpecker (*Melanerpes lewis*), version 2.0. *In* The Birds of North America (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, New York, USA. <https://doi.org/10.2173/bna.284>