American Pipit

Anthus rubescens

REGULATORY STATUS

USFWS: Migratory Bird USFS R2: No special status USFS R4: No special status Wyoming BLM: No special status State of Wyoming: Protected Bird

CONSERVATION RANKS

USFWS: No special status WGFD: NSS4 (Bc), Tier III WYNDD: G5, S2 Wyoming Contribution: LOW IUCN: Least Concern PIF Continental Concern Score: 9

STATUS AND RANK COMMENTS

American Pipit (*Anthus rubescens*) does not have any additional regulatory status or conservation rank considerations beyond those listed above.

NATURAL HISTORY

Taxonomy:

American Pipit has four recognized subspecies based on differences in body size, plumage color and pattern, and leg color ¹⁻⁹, although inclusion of the Siberian subspecies is disputed ¹⁰. The subspecies likely to be found breeding in Wyoming is *A. r. alticola* ¹⁰.

Description:

American Pipit is a small (15–17 cm) ground-dwelling songbird that typically inhabits sparsely vegetated or open habitat and is identifiable in the field ¹⁰. It has a short, slender bill; long legs; and elongated hallux nails (hind claws). Adult males and females are difficult to distinguish visually. American Pipit has grayish-brown upperparts, a faintly or boldly streaked underside, and pale lores. Juveniles are more streaked than adults, but molt by late summer or early fall to look similar to adults. Pipits can be distinguished from other ground-dwelling passerines that occur in the same habitat by their slender bill, tail feathers that have an outer white edge, and bobbing tail motion. The only other pipit in Wyoming is Sprague's Pipit (*A. spragueii*), which has a shorter tail, streaked or scaled upperparts, bright pink legs, lighter colored faced which lacks a dark auricular patch, and does not exhibit the tail bob that the American Pipit does. Additionally, in the winter, American Pipit is found in sizable flocks while Sprague's Pipit is typically solitary. American Pipit is more often found in wetter habitats (i.e., muddy fields, pond edges) than Sprague's Pipit (i.e., dry, grassy areas).

Distribution & Range:

American Pipit migrates through Wyoming in the spring and fall and is a summer resident. The species has been observed in 27 of Wyoming's 28 latitude/longitude degree blocks, of which confirmed or suspected breeding has been documented in only 6¹¹. Most observations of American Pipit in Wyoming have occurred at lower elevations during spring and fall migration ¹¹. American Pipit winters along the Atlantic and Pacific Coasts, in the southern United States, and throughout Mexico ¹⁰.

<u>Habitat</u>:

In Wyoming, American Pipit is found in alpine meadows composed of sedges (*Carex* spp.), Dwarf Willow (*Salix herbacea*), and hairgrass (*Deschampsia* spp.), as well as in fell fields associated with plants such as catchfly (*Silene* spp.), clover (*Trifolium* spp.), phlox (*Phlox* spp.), and sandwort (*Arenaria* spp.)¹². American Pipit has also been recorded at 2,900 m in high elevation subalpine meadows in Wyoming ¹³. During migration, American Pipit has been reported in Black-tailed Prairie Dog (*Cynomys ludovicianus*) colonies ¹⁴, dry vernal pools ¹⁵, plowed fields, stubble fields, mud flats, and river courses ¹⁶. Winter habitat is similar to that used during migration.

Phenology:

In the spring, American Pipit migrates to alpine meadows between April and mid-May in Wyoming ¹⁷. It moves to lower elevations in the fall, from mid-September to late October. Pair formation in Wyoming begins early to mid-May, and nesting begins as soon as snow and meltwater withdraw ¹⁰. The first and only clutch is initiated in June in Wyoming, with peak hatching occurring late June to mid-July ¹⁷⁻¹⁹. Less than 0.35% of clutches were initiated after 15 July in Wyoming ^{19, 20}. Egg laying is triggered by air temperature and typically begins one to three days after nest completion ^{17, 21}. Usually one egg is laid per day, but a day is sometimes skipped ¹⁰. Incubation period is 14 days ^{17, 21}. In Wyoming, hatching occurs in late June and throughout July ^{17, 18}. Nestlings are altricial at hatching and leave the nest after 14 days ^{10, 17}.

Diet:

The majority of the American Pipit diet consists of arthropods, primarily insects, although seed consumption is documented in the fall and winter ^{16, 17, 22}. Types of animals consumed include: spiders, flies, butterflies and moths, grasshoppers, ants, mayflies, lacewings, dragonflies, caddisflies, and stoneflies ²²⁻²⁸. It is possible that American Pipit eats snow to obtain water ¹⁰.

CONSERVATION CONCERNS

Abundance:

Continental: WIDESPREAD BUT PATCHY

Wyoming: UNCOMMON

Using North American Breeding Bird Survey (BBS) data, the Partners in Flight Science Committee estimated the global population of American Pipit to be 20 million birds ²⁹. Although a population estimate is not listed for Wyoming due to the limited number of BBS routes on which this species is detected, Wyoming's estimated percent of the global population is 0.60% ³⁰. An estimated 131,823 pairs (range of estimates: 35,022–241,945) was given for Colorado ³¹. The statewide rank of UNCOMMON is based on the limited area of the state known to be occupied in any given season, and the relatively small coverage of suitable habitat within that area. However, within suitable habitat in the occupied area, American Pipit appears to be common and is usually encountered during surveys that could be expected to indicate its presence 11 .

Population Trends:

Historic: UNKNOWN

Recent: UNKNOWN

Population trends are not available for American Pipit in Wyoming due to low detection rates during monitoring surveys. Currently, there are no North American BBS trend data for American Pipit due to a lack of observations. Nationwide Christmas Bird Count results suggest a significant decline in the west (CA, OR), and slight, but non-significant declines in the central (NM, TX) and eastern regions (FL, GA)¹⁰.

Intrinsic Vulnerability:

MODERATE VULNERABILITY

American Pipit is moderately vulnerable due to its use of subalpine, alpine, and arctic habitats for breeding ¹⁰. Declines in the quality and availability of these environments in Wyoming would likely have detrimental impacts on American Pipit.

Extrinsic Stressors:

MODERATELY STRESSED

Stressors to American Pipit include climate change, natural weather events, and human disturbance/visitation. Subalpine, alpine, and arctic habitats are being altered by climate change, thereby reducing the available breeding habitat of American Pipit. In the Beartooth Mountains of Wyoming, a snow storm buried nests for over 24 hours, killing 79% and 7% of nestlings in alpine and subalpine habitats, respectively ¹³. Larger clutch sizes are produced with earlier nesting dates ²⁰. Later nest initiation caused by poor weather conditions could cause decreased clutch size and/or nest failure. Additionally, American Pipit will sometimes abandon nests during nest building, egg laying, and in early incubation stages if disturbed, but rarely, if ever, abandons nestlings ¹⁷. Sites that are visited by human researchers more frequently have recorded a higher number of lost nests due to predation than sites visited less frequently ³². Nest markers used by researchers, such as flags or wooden stakes, have been targeted by Common Ravens (*Corvus corax*) that successfully flush incubating and brooding females from marked nests ¹⁰.

KEY ACTIVITIES IN WYOMING

The Wyoming Game and Fish Department (WGFD) classifies American Pipit as a Species of Greatest Conservation Need (SGCN). Current statewide efforts for monitoring annual detections and population trends of breeding birds in Wyoming are not robust enough to support estimates of occupancy, density, or population trend for American Pipit. No systematic survey for American Pipit has been conducted in Wyoming, and there are no new or on-going research or monitoring projects designed specifically for this species in the state.

ECOLOGICAL INFORMATION NEEDS

Factors that may affect populations of American Pipit include incompatible human activities in fragile alpine grassland and tundra habitats, such as livestock grazing, particularly by domestic sheep; outdoor recreation; and mining activities ³³. In addition, climate change could alter alpine environments by raising the treeline elevation, which may lead to local population extinctions ¹⁰, ³³.

MANAGEMENT IN WYOMING

This section authored solely by WGFD; Andrea C. Orabona. The WGFD classifies American Pipit as a SGCN due to insufficient information on population status and trends and limited alpine grassland breeding habitat in the state. Two separate but compatible survey programs are in place to monitor populations of many avian species that breed in Wyoming; the BBS ³⁴ and the multi-partner Integrated Monitoring in Bird Conservation Regions ³⁵. While these monitoring programs provide robust estimates of occupancy, density, or population trend for many species in Wyoming, American Pipit may require a targeted, species-specific survey method to obtain these data.

CONTRIBUTORS

Brian M. Zinke, WGFD Andrea C. Orabona, WGFD Kaylan A. Hubbard, WYNDD

REFERENCES

- [1] Ridgway, R. (1904) The Birds of North and Middle America, Part III, U.S. National Museum Bulletin No. 50.
- [2] Todd, W. E. C. (1935) Geographical variation in the American Tit Lark, *Proceedings of the Biological Society of Washington 48*, 63-66.
- [3] King, B. (1981) The field identification of North American pipits, American Birds 35, 778-788.
- [4] Parkes, K. C. (1982) Further comments on the field identification of North American Pipits, *American Birds 36*, 20-22.
- [5] Glutz, U. N. (1985) Handbuch der Vogel Mitteleuropas, Part 1. Vol. 10/11, Aula-Verlag, Wiesbaden, Germany.
- [6] Miller, J. H., and Green, M. T. (1987) Distribution, status, and origin of Water Pipits breeding in California, *Condor 89*, 788-797.
- [7] Phillips, A. R. (1991) The known birds of North and Middle America, Part II, A. R. Phillips, Denver, Colorado.
- [8] Gibson, D. D., and Kessel, B. (1997) Inventory of the species and subspecies of Alaska birds, *Western Birds 28*, 45-95.
- [9] Alström, P., and Mild, K. (2003) Pipits and wagtails, Princeton University Press, Princeton, New Jersey.
- [10] Hendricks, P., and Verbeek, N. A. (2012) American Pipit (Anthus rubescens), In The Birds of North America (Rodewald, P. G., Ed.), Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: https://birdsna.org/Species-Account/bna/species/amepip.
- [11] Orabona, A. C., Rudd, C. K., Bjornlie, N. L., Walker, Z. J., Patla, S. M., and Oakleaf, R. J. (2016) Atlas of Birds, Mammals, Amphibians, and Reptiles in Wyoming, Wyoming Game and Fish Department Nongame Program, Lander, Wyoming.
- [12] Pattie, D. L., and Verbeek, N. A. M. (1966) Alpine birds of the Beartooth Mountains, Condor 68, 167-176.
- [13] Hendricks, P., and Norment, C. J. (1992) Effects of a severe snowstorm on subalpine and alpine populations of nesting American Pipits, *Journal of Field Ornithology* 63, 331-338.
- [14] Tyler, J. D., and Shackford, J. S. (2002) Vertebrate associations of Black-tailed Prairie Dogs in Oklahoma, *Proceedings of the Oklahoma Academy of Science* 82, 41-47.
- [15] Silveira, J. G. (1998) Avian use of vernal pools and implications for conservation practice, In *Ecology,* conservation, and management of vernal pool ecosystems - Proceedings from a 1996 conference (Witham, C. W., Bauder, E. T., Belk, D., Ferren, W. R., Jr., and Ornduff, R., Eds.), pp 92-106, California Native Plant Society, Sacramento, California.
- [16] Bent, A. C. (1950) Life histories of North American wagtails, shrikes, vireos, and their allies, U.S. National Museum Bulletin No. 197.
- [17] Verbeek, N. A. M. (1970) Breeding ecology of the Water Pipit, Auk 87, 425-451.
- [18] Hendricks, D. P. (1993) Clutch- and egg-size variation of American Pipits in alpine environments, Washington State University, Pullman, Washington.
- [19] Hendricks, P. (2003) Spring snow conditions, laying date, and clutch size in an alpine population of American Pipits, *Journal of Field Ornithology* 74, 423-429.

- [20] Hendricks, P. (1997) Geographical trends in clutch size: a range-wide relationship with laying date in American Pipits, *Auk 114*, 773-778.
- [21] Conry, J. A. (1978) Resource utilization, breeding biology, and nestling development in an alpine tundra passerine community, University of Colorado, Boulder, Colorado.
- [22] Knowlton, G. F. (1944) Pipits eat injurious insects, Auk 61, 137-138.
- [23] Gross, W. (1932) Home-life of the American Pipit, *Bird-Lore 34*, 309-314.
- [24] Pickwell, G. (1947) The American Pipit in its arctic-alpine home, Auk 64, 1-14.
- [25] Hayward, C. L. (1952) Alpine biotic communities of the Uinta Mountains, Utah, *Ecological Monographs 22*, 93-118.
- [26] Edwards, J. S. (1972) Arthropod fallout on Alaskan snow, Arctic and Alpine Research 4, 167-176.
- [27] Hendricks, P. (1986) Avian predation of alpine butterflies, Journal of the Lepidopterists Society 40, 129.
- [28] Hendricks, P. (1987) Habitat use by nesting Water Pipits (*Anthus spinoletta*): a test of the snow-field hypothesis, *Arctic and Alpine Research 19*, 313-320.
- [29] Partners in Flight Science Committee. (2012) Species Assessment Database, http://rmbo.org/pifassessment/.
- [30] Partners in Flight Science Committee. (2013) Population Estimates Database, version 2013, <u>http://rmbo.org/pifpopestimates</u>.
- [31] Kingery, H. E., (Ed.) (1998) *Colorado Breeding Bird Atlas*, Colorado Bird Atlas Partnership and Colorado Division of Wildlife, Denver, Colorado.
- [32] Miller, J. H. (1988) Breeding ecology and nestling development of Rosy Finches and Water Pipits in the Sierra Nevada, California, Special Paper No. 5, Environmental Field Program, University of California, Santa Cruz, California.
- [33] Faulkner, D. W. (2010) Birds of Wyoming, Roberts and Company Publishers, Greenwood Village, CO.
- [34] Sauer, J. R., Hines, J. E., Fallon, J. E., Pardieck, K. L., Ziolkowski, D. J., Jr., and Link, W. A. (2014) The North American Breeding Bird Survey, Results and Analysis 1966 - 2013. Version 01.30.2015, USGS Patuxent Wildlife Research Center, Laurel, MD.
- [35] Bird Conservancy of the Rockies. (2016) The Rocky Mountain Avian Data Center [web application], Brighton, CO. <u>http://adc.rmbo.org</u>.



Figure 1: Adult American Pipit in Larimer County, Colorado. (Photo courtesy of Shawn Billerman)



Figure 2: North American range of *Anthus rubescens*. (Map courtesy of Birds of North America, <u>http://bna.birds.cornell.edu/bna</u>, maintained by the Cornell Lab of Ornithology)



Figure 3: Photo not available.



American Pipit (Anthus rubescens)

Figure 4: Range and predicted distribution of Anthus rubescens in Wyoming.