

Solitary Sandpiper

Class: Aves
Order: Charadriiformes

Tringa solitaria cinnamomea

Note: Only one subspecies, *Tringa solitaria cinnamomea*, occurs in Alaska.

Review Status: Peer-reviewed

Version Date: 21 February 2019

Conservation Status

NatureServe: Agency:

G Rank: G5 ADF&G: Species of Greatest Conservation Need IUCN: Least Concern Audubon AK: Yellow

S Rank: S4B USFWS: Bird of Conservation Concern BLM:

Final Rank		
Conservation category: VII. Yellow		
low status and either high biological vulnerability or high action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	3
Biological	-50 to 50	-24
Action	-40 to 40	4
Higher numerical scores denote greater concern		

Status - variables measure the trend in a taxon’s population status or distribution. Higher status scores denote taxa with known declining trends. Status scores range from -20 (increasing) to 20 (decreasing).

Score

Population Trend in Alaska (-10 to 10)

3

There is some evidence from the Breeding Bird Survey (BBS) that this species is declining in Alaska (Handel and Sauer 2017), though results were not statistically significant. The Alaska Shorebird Group (2019) considers the population trend as Unknown. Across its North American range, trends are difficult to assess because most of this species' range is not covered by BBS (or other multi-species surveys) and trends are highly variable across years (Andres et al. 2012a; Sauer et al. 2013). We rank this question as 0.5 * Unknown + 0.5 * B to acknowledge the fact that this species may be undergoing declines that we are unable to detect.

Distribution Trend in Alaska (-10 to 10)

0

Unknown.

Status Total: 3

Biological - variables measure aspects of a taxon’s distribution, abundance and life history. Higher biological scores suggest greater vulnerability to extirpation. Biological scores range from -50 (least vulnerable) to 50 (most vulnerable).

Score

Population Size in Alaska (-10 to 10)

-10

The global population of *T. s. cinnamomea* is estimated at 63,000 individuals (ASG 2019). Alaska is home to 79% of the global population (~49,770 individuals; ASG 2019).

<i>Range Size in Alaska (-10 to 10)</i>	-10
<p>Widespread breeder in central Alaska from southcentral to the Brooks Range and from Canada west to the Kenai Peninsula, the eastern Aleutian Islands, and in inland areas of western Alaska (Moskoff 2011). Rare breeder north of the Brooks Range (Irving 1960; Swem et al. 1992; Moskoff 2011). Overwinters in the Caribbean and in Central and South America (Moskoff 2011). Preliminary results from geolocator data show that many birds breeding in Anchorage spend the non-breeding season in Argentina (L. McDuffie, USFWS, pers. comm). Estimated range in Alaska is >400,000 sq. km.</p>	
<i>Population Concentration in Alaska (-10 to 10)</i>	-10
<p>Solitary sandpipers nest solitarily, though multiple pairs will nest in the same wetland under optimal conditions (L. McDuffie, USFWS, pers. comm.). They migrate alone or in very small flocks (Moskoff 2011).</p>	
<i>Reproductive Potential in Alaska</i>	
<u>Age of First Reproduction (-5 to 5)</u>	0
Unknown.	
<u>Number of Young (-5 to 5)</u>	1
<p>Few data are available for Alaska. In Anchorage, AK, all nests that were found had 4 eggs (n=6; L. McDuffie, USFWS, pers. comm.). Elsewhere in North America, lays a single, 4-egg clutch per year (Jehl 1971; Oring 1973; Moskoff 2011).</p>	
<i>Ecological Specialization in Alaska</i>	
<u>Dietary (-5 to 5)</u>	0
<p>In North America, consumes aquatic invertebrates such as midges, beetles, mosquito larvae, and worms (Moskoff 2011). Diet for Alaska is unknown but likely similar, based on observations in Anchorage (L. McDuffie, USFWS, pers. comm.). Data on prey preferences and selection are not available. We therefore rank this question as Unknown until dietary specialization can be assessed.</p>	
<u>Habitat (-5 to 5)</u>	5
<p>Breeds in boreal forests of northern North America. Nests in spruce forests near wetlands and lakes (Collins et al. 2001; Oring 1973; Spindler and Kessel 1980; Armstrong 2008; Moskoff 2011) and relies on old or abandoned nests of other birds such as rusty blackbirds, American robins, gray jays, and bohemian waxwings (Oring 1973). Because of its reliance on abandoned nests, we have ranked this species as A- Not adaptable, as recommended in the ASRS Instruction Manual.</p>	
Biological Total: -24	

Action - variables measure current state of knowledge or extent of conservation efforts directed toward a given taxon. Higher action scores denote greater information needs due of lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

Score

<i>Management Plans and Regulations in Alaska (-10 to 10)</i>	-10
<p>Protected under the Migratory Bird Treaty Act (MBTA 1918). Closed to recreational harvest and subsistence harvest (ADFG 2018e; AMBCC 2018).</p>	
<i>Knowledge of Distribution and Habitat in Alaska (-10 to 10)</i>	2
<p>General habitat associations and distribution are known through multi-species surveys (e.g. ALMS, BBS, Spindler and Kessel 1980; Petersen et al. 1991; Tibbitts et al. 2006; Ruthrauff et al. 2007; Handel and Sauer 2017). However, because this species is rarely observed and is widespread across the state, we have an incomplete understanding of its breeding distribution (Moskoff 2011). Little is known about migration patterns, though an ongoing tracking study is addressing some of these knowledge gaps (Johnson and McDuffie 2018).</p>	

<i>Knowledge of Population Trends in Alaska (-10 to 10)</i>	2
Only monitored in parts of its Alaskan range through the Breeding Bird Survey and data are too scant for determining short-term trends (Handel and Sauer 2017). BBS data is also inadequate for detecting trends elsewhere in this species' range (Andres et al. 2012a; Sauer et al. 2013).	
<i>Knowledge of Factors Limiting Populations in Alaska (-10 to 10)</i>	10
Very little is known about the ecology of this species and the factors that limit its population dynamics in Alaska or elsewhere. Data are needed on habitat and dietary requirements, reproductive success and survival, and major causes of mortality. Hunting is prohibited in Alaska. Solitary sandpipers have likely not been impacted by hunting elsewhere in their range (Wege et al. 2014), especially since they tend not to flock (Moskoff 2011).	
Action Total:	4

Supplemental Information - variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or management questions.

Harvest:	None or Prohibited
Seasonal Occurrence:	Breeding
Taxonomic Significance:	Monotypic species
% Global Range in Alaska:	>10%
% Global Population in Alaska:	≥75%
Peripheral:	No

References

- Alaska Department of Fish and Game (ADFG). 2020c. 2020-2021 Migratory game bird hunting regulations summary. Anchorage, AK, USA.
- Andres, B. A., P. A. Smith, R. G. Morrison, C. L. Gratto-Trevor, S. C. Brown, and C. A. Friis. 2012a. Population estimates of North American shorebirds, 2012. Wader Study Group Bulletin 119(3):178-194.
- Armstrong, R. H. 2008. Guide to the birds of Alaska, 5th edition. Alaska Northwest Books, Anchorage, AK, USA.
- Alaska Shorebird Group (ASG). 2019. Alaska Shorebird Conservation Plan, Version III. Alaska Shorebird Group, Anchorage, AK, USA. Available online: <https://www.fws.gov/alaska/mbsp/mbm/shorebirds/plans.htm>
- Collins, W. B., D. Williams, and T. Trapp. 2001. Spruce beetle effects on wildlife, 1 July 1997-30 June 2001. Federal aid in wildlife restoration research final performance report, grants W-27-1 through W-27-4, study 1.53, Division of Wildlife Conservation, Alaska Department of Fish and Game, Juneau, AK, USA.
- Handel, C. M. and Sauer, J. R. 2017. Combined analysis of roadside and off-road breeding bird survey data to assess population change in Alaska. The Condor 119(3):557-575. DOI: 10.1650/CONDOR-17-67.1
- Irving, L. 1960. Birds of Anaktuvuk Pass Kobuk and Old Crow: A study in arctic adaptation. U.S. National Museum Bulletin 217, Washington, D.C., USA.
- Jehl, J. R. 1971. Patterns of hatching success in subarctic birds. Ecology 52(1):169-173. DOI: 10.2307/1934750
- Johnson, J., and L. McDuffie. 2018. Migratory movements of solitary sandpiper (*Tringa solitaria*). Pages 50-51 in Kennedy, L., ed. Annual summary compilation: new or ongoing studies of Alaska shorebirds. Alaska Shorebird Group, Anchorage, AK, USA. Available online: https://www.fws.gov/alaska/mbsp/mbm/shorebirds/working_group.htm
- Migratory Bird Treaty Act (MBTA). 1918. U.S. Code Title 16 §§ 703-712 Migratory Bird Treaty Act.

- Moskoff, W. 2011. Solitary Sandpiper (*Tringa solitaria*), version 2.0. In A. F. Poole, ed. *The Birds of North America*, Cornell Lab of Ornithology, Ithaca, NY, USA. DOI: 10.2173/bna.156
- Oring, L. W. 1973. Solitary sandpiper early reproductive behavior. *The Auk* 90(3):652–663. DOI: 10.2307/4084164
- Petersen, M. R., D. N. Weir, and M. H. Dick. 1991. Birds of the Kilbuck and Ahklun Mountain region, Alaska. *North American Fauna* 76:1-158.
- Ruthrauff, D. R., T. L. Tibbitts, R. E. Gill, and C. M. Handel. 2007. Inventory of montane-nesting birds in Katmai and Lake Clark National Parks and Preserves. Report NPS/AKRSWAN/NRTR-2007/02, U.S. Geological Survey Alaska Science Center, Anchorage, AK, USA.
- Sauer, J. R., W. A. Link, J. E. Fallon, K. L. Pardieck, and D. J. Ziolkowski. 2013. The North American Breeding Bird Survey 1966–2011: Summary analysis and species accounts. *North American Fauna* 79:1–32. DOI: 10.3996/nafa.79.0001
- Spindler, M. A., and B. Kessel. 1980. Avian populations and habitat use in interior Alaska taiga. Final report, University of Alaska Museum, Fairbanks, AK, USA.
- Swem, T. R., C. M. White, and R. J. Ritchie. 1992. Comments on the status of certain birds on the North Slope of Alaska. *Northwestern Naturalist* 73(3):84–87.
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2006. Inventory of montane-nesting birds in the Arctic Network of National Parks, Alaska. Report NPS/AKARC/NRTR-2006/02/, Arctic Network Inventory and Monitoring Program, National Park Service, Alaska Region, Fairbanks, AK, USA.
- Wege, D. C., W. Burke, and E. T. Reed. 2014. *Migratory shorebirds in Barbados: Hunting, management and conservation*. BirdLife International, Cambridge, UK.

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