

Species Status Assessment

Class: Birds
Family: Scolopacidae
Scientific Name: *Bartramia longicauda*
Common Name: Upland sandpiper

Species synopsis:

The upland sandpiper breeds primarily in the Great Plains region of the United States and Canada, with populations extending sparsely eastward to the Northeast. It is listed as Threatened or Endangered in 10 northeastern states. In New York, upland sandpiper is listed as Threatened and is among the rarest of grassland birds, second only to the Henslow's sparrow. The second Breeding Bird Atlas in New York documented a 65% decline in occupancy in the past 20 years; the number of survey blocks with confirmed breeding declined by 73%.

Changes in farming practices, development, and reforestation are responsible for the steady decline in the Northeast. Upland sandpipers have adapted their habitat requirements to utilize airports, reclaimed mine lands, capped landfills, and other human-made landscapes, suggesting that recovery potential is promising if suitable nesting and brood-rearing habitat is managed and increased.

I. Status

a. Current and Legal Protected Status

- i. **Federal** Not Listed **Candidate?** No
- ii. **New York** Threatened; SGCN

b. Natural Heritage Program Rank

- i. **Global** G5
- ii. **New York** S3B **Tracked by NYNHP?** Yes

Other Rank:

Partners in Flight – Rank IIA

IUCN Red List Category: LC - Least concern

U.S. Shorebird Conservation Plan – Species of High Concern

Species of Northeast Regional Conservation Concern (Therres 1999)

Status Discussion:

In New York the upland sandpiper is a widespread but uncommon breeder. It is a rare to fairly common migrant, especially inland in the fall. Upland sandpiper is ranked as Critically Imperiled in Massachusetts, Connecticut, New Jersey, and Pennsylvania. It is ranked as Imperiled in Vermont, and Vulnerable in Quebec and New York.

II. Abundance and Distribution Trends

a. North America

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: 1966-2010 and 2000-2010

b. Regional

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Regional Unit Considered: Lower Great Lakes/St. Lawrence Plains

Time Frame Considered: 1966-2010 and 2000-2010

c. Adjacent States and Provinces

CONNECTICUT **Not Present** _____ **No data** _____

i. Abundance

____ declining ____ increasing ____ stable X unknown

ii. Distribution:

____ declining ____ increasing ____ stable X unknown

Time frame considered: Rare: currently 8 pairs

Listing Status: _____ Endangered SGCN? Yes

MASSACHUSETTS **Not Present** _____ **No data** _____

i. Abundance

____ declining ____ increasing ____ stable X unknown

ii. Distribution:

 X declining ____ increasing ____ stable ____ unknown

Time frame considered: Rare: 14 occurrences since 1980

Listing Status: _____ Endangered SGCN? Yes

NEW JERSEY **Not Present** _____ **No data** _____

i. Abundance

____ declining ____ increasing ____ stable X unknown

ii. Distribution:

____ declining ____ increasing ____ stable X unknown

Time frame considered: 1970-87 active sites fell from 26 to 4

Listing Status: _____ Endangered SGCN? Yes

Trends Discussion:

Upland sandpiper was hunted extensively before the passage of the Migratory Bird Treaty Act in 1918. From 1870 to 1890, between 50,000 and 60,000 birds were shipped annually by train from Nebraska (Dinsmore 1994).

As an obligate grassland species, the upland sandpiper has declined in the Northeast and in New York over the past 50 years as habitat has been lost to reforestation. Breeding Bird Survey data for New York show a declining long-term (1966-2010) and short-term (2000-2010) trend of -5.3% per year; while both trends are significant, caution is advised due to low relative abundance.

The second Breeding Bird Atlas documented a -65% decline in occupancy from 1980-85 to 2000-05; the number of blocks in which breeding was confirmed declined by -73%

In North America, Breeding Bird Survey data show a significant long-term increase of 0.5% per year from 1966 to 2010, and a non-significant short-term increase of 1.2% per year from 2000 to 2010. In the Lower Great Lakes/St. Lawrence Plain BCR, the BBS trend is significantly declining at -2.9% per year for 1966 to 2010 and at -3.4% per year from 2000 to 2010.



Figure 1. Range of the upland sandpiper in North America (Birds of North America Online 2013).

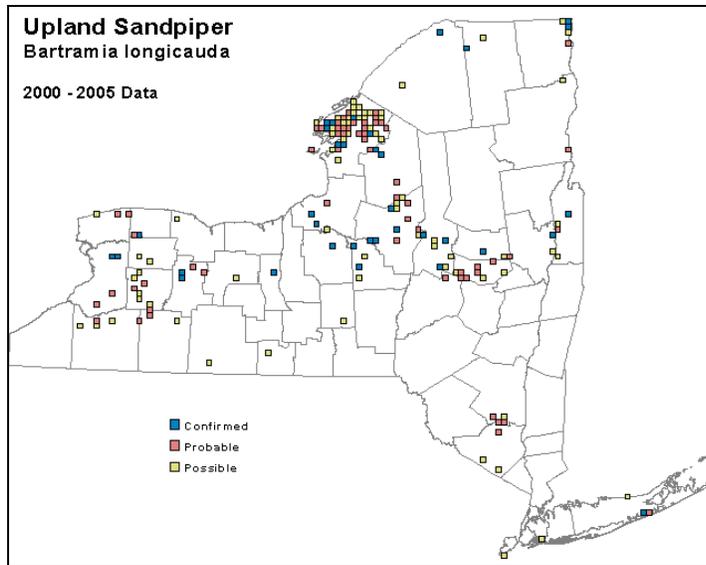


Figure 2. Upland sandpiper occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008).

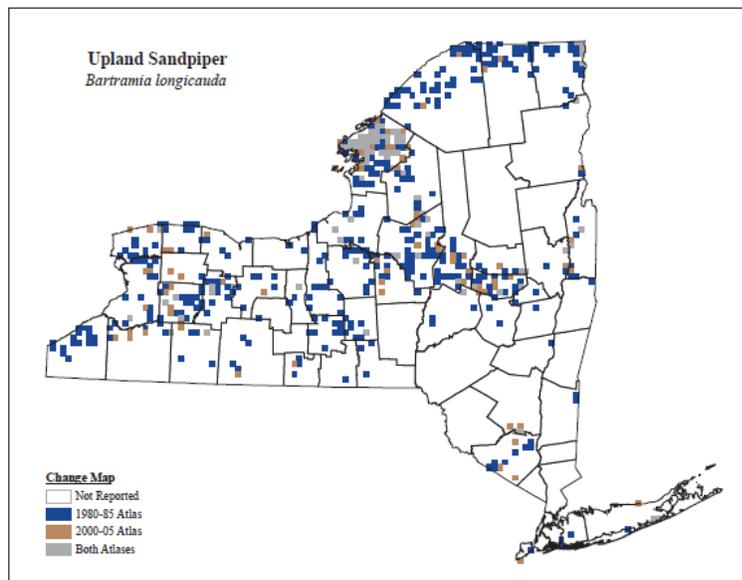


Figure 3. Change in upland sandpiper occurrence in New York State between the first Breeding Bird Atlas and the second Breeding Bird Atlas (McGowan and Corwin 2008).

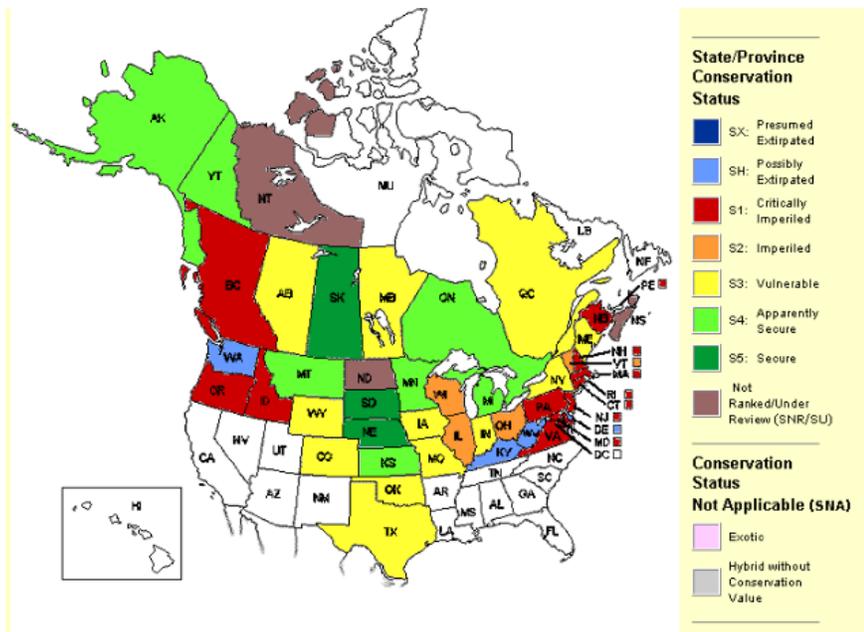


Figure 4. Conservation status of the upland sandpiper in North America (NatureServe 2012).

III. New York Rarity, if known:

| Historic | <u># of Animals</u> | <u># of Locations</u> | <u>% of State</u> |
|----------------------|----------------------------|------------------------------|--------------------------|
| prior to 1970 | _____ | _____ | _____ |
| prior to 1980 | _____ | _____ | _____ |
| prior to 1990 | _____ | <u>476 blocks</u> | <u>9%</u> |

Details of historic occurrence:

Bull (1974) noted upland sandpiper as declining, but still locally common in agricultural areas, despite its disappearance from Long Island. The first Breeding Bird Atlas (1980-85) documented occupancy in 476 survey blocks statewide (9%), with confirmed breeding in 129 blocks.

| Current | <u># of Animals</u> | <u># of Locations</u> | <u>% of State</u> |
|----------------|----------------------------|------------------------------|--------------------------|
| | _____ | <u>165 blocks</u> | <u>3%</u> |

Details of current occurrence:

The second Breeding Bird Atlas (2000-05) documented occupancy in 165 survey blocks statewide (3%), a decline of 65%. Breeding was confirmed in 38 blocks, a decline of 73%.

New York's Contribution to Species North American Range:

| % of NA Range in New York | Classification of New York Range |
|----------------------------------|---|
| <u> </u> 0-5% | <u> </u> Core |
| <u> X </u> 6-10% | <u> X </u> Peripheral |
| <u> </u> 11-25% | <u> </u> Disjunct |
| <u> </u> 26-50% | Distance to core population: |
| <u> </u> >50% | _____ |

IV. Primary Habitat or Community Type:

1. Pasture/Hay
2. Urban and Recreational Grasses
3. Native Barrens and Savanna
4. Old Field Managed Grasslands

Habitat or Community Type Trend in New York:

Declining Stable Increasing Unknown

Time frame of decline/increase: _____

Habitat Specialist? Yes No

Indicator Species? Yes No

Habitat Discussion:

The upland sandpiper is a grassland bird. Optimal breeding habitat contains a mixture of short grass areas for feeding and courtship, interspersed with taller grasses and forbs for nesting and brood cover. Vegetation height at the time of spring arrival should be 15-20cm (see NatureServe 2012). Other important habitat characteristics include fence posts, large expanses of open areas, little forest, and little topography (White 1983). Upland sandpipers are area-sensitive, preferring grasslands larger than 25 to 40 acres in size (Smith and Smith 1992).

In New York, breeding occurs in agricultural areas including old pastures and hayfields (Bull 1974). In most areas of New York where upland sandpiper is persisting there are a number of Amish families whose farming techniques remain less intensive. Upland sandpipers can also be found in mowed areas adjacent to airport runways and highways. Airfields appear to be an especially hopeful avenue for providing upland sandpiper habitat.

V. New York Species Demographics and Life History

- Breeder in New York**
 - Summer Resident**
 - Winter Resident**
 - Anadromous**
- Non-breeder in New York**
 - Summer Resident**
 - Winter Resident**
 - Catadromous**
- Migratory only**
- Unknown**

Species Demographics and Life History Discussion:

The age at first breeding and intervals between breeding events are not known. Reproductive success appears to be higher than other ground-nesting shorebirds. There are few data on survival. The two longest survivors among banding recoveries were five years (Clapp et al. 1982), and 8 years, 11 months (Houston et al. 1999). One brood is reared per season. There are no data on lifetime reproductive success. Data on reproductive success are sparse; mortality of flightless young is relatively high, but difficult to measure because young hide and are rarely seen.

In Kansas, from 2002 through 2005, Mong and Sandercock (2007) radio-marked 184 upland sandpipers, and color-banded an additional 138 birds. Annual return rates ranged from 20-50% over the study period.

VI. Threats:

The greatest threat to upland sandpipers is the loss of suitable habitat. This species is area-sensitive, requiring large expanses of grasslands, therefore fragmentation of habitat, as well as outright habitat loss, is a significant threat.

Declines are associated with plowing of natural grasslands (Houston and Bowen 2001). At present, loss, degradation, and fragmentation of habitat due to increased urbanization, changes in farming practices and natural forest succession pose the most serious threats to populations. Frequent

disturbance of pastures and hayfields (cut too often to allow breeding) is a problem in some areas. Extensive row-cropping and early crop-cutting probably pose threats to breeders (Byrd and Johnston 1991).

A study led by a Canadian toxicologist identified acutely toxic pesticides as the most likely leading cause of the widespread decline in grassland bird numbers in the United States. The 23-year assessment, which looked at five other causes of grassland bird decline besides lethal pesticide risk, including change in cropped pasture such as hay or alfalfa production, farming intensity or the proportion of agricultural land that is actively cropped, herbicide use, overall insecticide use, and change in permanent pasture and rangeland, concluded that lethal pesticides were nearly four times more likely to be associated with population declines than the next most likely contributor, changes in cropped pasture (Mineau and Whiteside 2013).

In an assessment of vulnerability to predicted climate change conducted by the New York Natural Heritage Program, upland sandpiper was identified as a second-priority species whose sensitivity should be assessed in the future (Schlesinger et al. 2011).

Are there regulatory mechanisms that protect the species or its habitat in New York?

No Unknown

Yes

The upland sandpiper is listed as a threatened species in New York and is protected by Environmental Conservation Law (ECL) section 11-0535 and the New York Code of Rules and Regulations (6 NYCRR Part 182). A permit is required for any proposed project that may result in a take of a species listed as Threatened or Endangered, including, but not limited to, actions that may kill or harm individual animals or result in the adverse modification, degradation or destruction of habitat occupied by the listed species. Upland sandpiper is also protected under the Migratory Bird Treaty Act.

Describe knowledge of management/conservation actions that are needed for recovery/conservation, or to eliminate, minimize, or compensate for the identified threats:

The population goal of the U.S. Shorebird Conservation Plan (Brown et al. 2001) is to increase the number of individuals to 470,000, a return to calculated 1980s numbers.

Grassland birds in New York will benefit from habitat management on private lands under programs such as New York's Landowner Incentive Program (LIP) for Grassland Protection and Management. The program provides incentives and technical advice to private landowners to enhance grassland habitat by following recommended mowing schedules and by removing trees, shrubs, and hedgerows. Increasing the LIP acreage in pasture or short grass habitats would be beneficial for upland sandpiper.

The following actions have been recommended for protection of upland sandpipers (see Houston et al. 2011): (1) Preserve adequate grassland as mosaic; (2) Delay mowing until 1 Jul; (3) Conduct controlled burns of hay lands every 3 years; (4) Allow moderate grazing on a rotational basis; (5) Avoid tilled crops such as wheat, corn, and cotton; (6) Provide perches such as fence posts; (7) Establish perennial cover.

The publication, *A Plan for Conserving Grassland Birds in New York* (Morgan and Burger 2008), identifies focus areas for coordinating grassland bird conservation efforts. Because grassland birds are sensitive to landscape-level factors and funding for conservation activities is limited, the best opportunity for achieving success is to concentrate efforts within regions of the state that support key residual populations of grassland birds. Suitable landcover classification datasets are needed to incorporate habitat availability into the delineation process.

Because the vast majority of remaining grassland habitat is privately owned, private lands incentive programs and educational programs should be a major component of the conservation effort. Protection of existing habitat for threatened and endangered species through enforcement of regulations pertaining to the taking of habitat is also a critical component of the conservation effort for these species (Morgan and Burger 2008).

Morgan and Burger (2008) recommend that further research is needed:

1. Methods and data for modeling distributions and abundance of grassland landcover across the landscape.
2. Impacts of management on productivity of grassland birds, to amplify existing information on grassland bird abundances associated with management.
3. Potential benefits of native grass species as grassland habitat in contrast with demonstrated benefit of non-native cool season grasses.

Conservation actions following IUCN taxonomy are categorized in the table below.

| Conservation Actions | |
|-----------------------------|---|
| Action Category | Action |
| Land/Water Protection | Site/Area Protection |
| Land/Water Protection | Resource/Habitat Protection |
| Land/Water Management | Site/Area Management |
| Land/Water Management | Invasive/Problematic Species Control |
| Land/Water Management | Habitat and Natural Process Restoration |
| Education and Awareness | Training |
| Education and Awareness | Awareness & Communications |
| Law and Policy | Policies and Regulations |

The Comprehensive Wildlife Conservation Strategy (NYSDEC 2005) includes recommendations for the following actions for grassland birds, which includes upland sandpiper.

Easement acquisition:

- ___ Identify ownership of grasslands in core focus areas, and focus Landowner Incentive Program (LIP) funding for use in conserving the most important privately-owned grasslands in the state, and distribute \$400,000 per year from LIP to conserve priority grasslands.

Habitat management:

- ___ Develop habitat management guidelines and action plans for priority focus grassland bird species.

Habitat research:

- ___ Evaluate the effects of specific farming and management practices, such as: timing of mowing, intensity of grazing, frequency of mowing, mowing versus haying versus prescribed fire, and width of buffer strips on productivity of grassland birds.

Other acquisition:

- ___ Incorporate priority grassland focus areas into the NYS Open Space Plan.

Other action:

- ___ Work with public land managers, including NRCS, USFWS, DEC and others, to better direct funding and other resources to the highest priority areas and projects for grassland habitat management. The ability to focus funding sources in core priority grasslands will be key. If the funding sources from National Resource Conservation Service (NRCS) cannot be adequately focused in priority areas, then this will cripple the ability to conserve the most critical grassland areas and will result in continued declines in grassland birds even within these focus areas.
- ___ Develop an outreach program to educate the public and land managers on the need for, and wildlife benefits, of grasslands. Also provide technical guidance on what and how to benefit grassland species. Outreach to private landowners will be a key first step to educate the

public about the importance of their lands to grassland birds. So much of this habitat exists on private lands that their cooperation will be the ultimate deciding factor on whether species declines can be halted. Their cooperation at the level needed for meaningful change will probably hinge on some form of subsidies.

Population monitoring:

- Develop and implement supplemental monitoring programs for grassland bird species that are not adequately sampled by BBS to determine precise population trends and evaluate effectiveness of conservation efforts. Use long term trend data to determine effectiveness of grassland conservation efforts.
- Complete inventory of potential grassland habitat for species present, distribution, and relative abundance of priority species.

Statewide management plan:

- Complete a comprehensive Grassland Bird Conservation Plan that coordinates research, management, and conservation efforts to more effectively conserve NY's grassland birds. Identify priority species and delineate priority focus areas for conservation and management.

VII. References

Bull, J. 1974. Birds of New York State. Doubleday/Natural History Press, Garden City, NY. [Reprinted by Cornell University Press, Ithaca, NY, 1985.]

Byrd, M. A., and D. W. Johnston. 1991. Birds. Pages 477-537 in K. Terwilliger, coordinator. Virginia's endangered species: proceedings of a symposium. McDonald and Woodward Publ. Co., Blacksburg, Virginia.

Clapp, R. B., M. K. Klimkiewicz, and J. H. Kennard. 1982. Longevity records of North American birds: Gaviidae through Alcidae. J. Field Ornithol. 53(2):81-124.

Houston, C. S., and D. E. Bowen, Jr. 2001. Upland Sandpiper (*Bartramia longicauda*). In the Birds of North America, No. 580 (A. Poole and F. Gill, editors). The Birds of North America, Inc., Philadelphia, PA. 32pp.

Houston, C. S., S. C. Drury, and G. Holroyd. 1999. Upland Sandpiper banding in North America. N. Am. Bird Bander 24:1-2.

McGowan, K.J. 2008. Upland sandpiper, *Bartramia longicauda*. Pages 242-43 in The second atlas of breeding birds in New York State (K.J. McGowan and K. Corwin, eds.). Cornell University Press, Ithaca, NY.

Mong, T. W. and B. K. Sandercock. 2007. Optimizing radio retention and minimizing radio impacts in a field study of Upland Sandpipers. Journal of Wildlife Management 71(3):971-980.

Morgan, M. R. and M. F. Burger. 2008. A plan for conserving grassland birds in New York: Final report to the New York State Department of Environmental Conservation under contract #C005137. Audubon New York, Ithaca, NY. <<http://ny.audubon.org/PDFs/ConservationPlan-GrasslandBirds-NY.pdf>>. Accessed 11 June 2013.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. <<http://www.natureserve.org/explorer>>. Accessed 11 June 2013.

New York State Department of Environmental Conservation (NYSDEC). 2005. New York State Comprehensive Wildlife Conservation Strategy. <<http://www.dec.ny.gov/index.html>>. Accessed 11 June 2013.

New York State Department of Environmental Conservation (NYSDEC). 2013. Best management practices for grassland birds. <<http://www.dec.ny.gov/pubs/86582.html>>. Accessed 11 June 2013.

Morrison, R. I. G., R. E. Gill, Jr., B. A. Harrington, S. Skagen, and G. W. Page. 2001. Estimates of shorebird populations in North America. Occas. Pap. 104. Can. Wildl. Serv. Ottawa.

Morrison, R. I. G., B. J. McCaffery, R. E. Gill, S. K. Skagen, S. L. Jones, G. W. Page, C. L. Gratto-Trevor, and B. A. Andres. 2006. Population estimates of North American shorebirds, 2006. Wader Study Group Bull. 111:67-85.

Schlesinger, M.D., J.D. Corser, K.A. Perkins, and E.L. White. 2011. Vulnerability of at-risk species to climate change in New York. New York Natural Heritage Program, Albany, NY.

Smith, D.G. and C.R. Smith. 1992. Henslow's sparrow and grasshopper sparrow: a comparison of habitat use in Finger Lakes National Forest, NY. Bird Observer 20(4):187-194.

Therres, G.D. 1999. Wildlife species of regional conservation concern in the northeastern United States. Northeast Wildlife 54:93-100.

Vickery, P. D., D. E. Blanco, and B. López-Lanús. 2010. Conservation Plan for the Upland Sandpiper (*Bartramia longicauda*). Version 1.1. Manomet Center for Conservation Sciences, Manomet, Massachusetts.

White, R. P. 1983. Distribution and habitat preference of the upland sandpiper (*Bartramia longicauda*) in Wisconsin. American Birds 37:16-22.

Date last revised: January 28, 2014