

Species Status Assessment

Class: Birds
Family: Troglodytidae
Scientific Name: *Cistothorus platensis*
Common Name: Sedge wren

Species synopsis:

Previously known as the short-billed marsh wren, the sedge wren is an inhabitant of wet meadows, hay fields, and marshes. This wren's use of ephemeral habitats drives its tendency to abandon areas as they become too wet or too dry and move to new areas. Within a season, sedge wrens may raise one brood in May and June and then move to a southern or northeastern part of the range to raise a second brood in July and August. This pattern can make detection and monitoring by traditional methods unreliable. Little is known of the life history or demographics of this species.

In the Prairie Pothole region, where sedge wren is most abundant, Breeding Bird Survey data show increasing long-term and short-term trends: 5.6% increase per year from 1966 to 2010 and 1.0% increase per year from 2000 to 2010. Significant declining trends were noted in the Northeast beginning in the 1950s due to destruction of wetlands. In response to this decline, sedge wren is now listed as Endangered in Connecticut, Massachusetts, New Jersey, Pennsylvania, and Vermont. It is listed as Threatened in New York.

In New York, where it is at the far eastern edge of its range, sedge wren was historically a sparse nester and it remains so today. Since the mid-1980s, sedge wren occupancy in New York has increased by 26% as documented by the second Breeding Bird Atlas, though McGowan (2008) cautions that this species may have been overlooked during the first Atlas. Breeding occurs primarily on the Great Lakes Plain and a consistently-breeding population appears to be establishing itself in St. Lawrence and Jefferson Counties. As a species far outside of its main range, however, sedge wren can be expected to remain uncommon in New York (McGowan 2008).

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:

USFWS – Birds of Concern
Partners in Flight – Regional Concern
Species of Northeast Regional Conservation Concern (Therres 1999)
IUCN Red List Category: LC - Least concern

Status Discussion:

Sedge wren is a rare to uncommon local breeder and migrant in New York. Sedge wren is ranked as Critically Imperiled in every northeastern state except New York, where it is ranked as Vulnerable. It is ranked as Apparently Secure in Ontario and as Imperiled in Quebec.

II. Abundance and Distribution Trends

a. North America

i. Abundance

 declining X increasing stable unknown

ii. Distribution:

 declining increasing stable X unknown

Time frame considered: 2000-2010

b. Regional

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Regional Unit Considered: Eastern BBS

Time Frame Considered: 2000-2010

c. Adjacent States and Provinces

CONNECTICUT Not Present No data

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: Rare and sporadic since 1960s

Listing Status: Endangered SGCN? Yes

MASSACHUSETTS Not Present No data

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: 10 breeding season 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: "very rare breeder"

Listing Status: Endangered SGCN? Yes

ONTARIO **Not Present** _____ **No data** _____

i. Abundance

____ declining X increasing ____ stable ____ unknown

ii. Distribution:

____ declining X increasing ____ stable ____ unknown

Time frame considered: 1981-85 to 2001-05

Listing Status: Not Listed

PENNSYLVANIA **Not Present** _____ **No data** _____

i. Abundance

____ declining ____ increasing ____ stable X unknown

ii. Distribution:

 X declining ____ increasing ____ stable ____ unknown

Time frame considered: Since 1980s

Listing Status: Endangered SGCN? Yes

Trends Discussion:

Breeding Bird Survey data for North America show a non-significant increasing trend of 1.8% per year for 1966-2010 and 0.9% per year for 2000-2010. Trends in the Prairie Pothole region, where sedge wrens are most abundant, are increasing by 5.6% per year for 1966-2010 and by 1.0% per year for 2000-2010. BBS data in New York and the Northeast are too sparse for meaningful analysis.

Since the 1950s, Christmas bird counts and Breeding Bird Survey data have revealed alarming declines of sedge wren in the Northeast, the result of filling and dredging of wetland habitats, and the spread of invasive *Phragmites*.



Figure 1. Range of the sedge wren in North America (Birds of North America Online 2013).

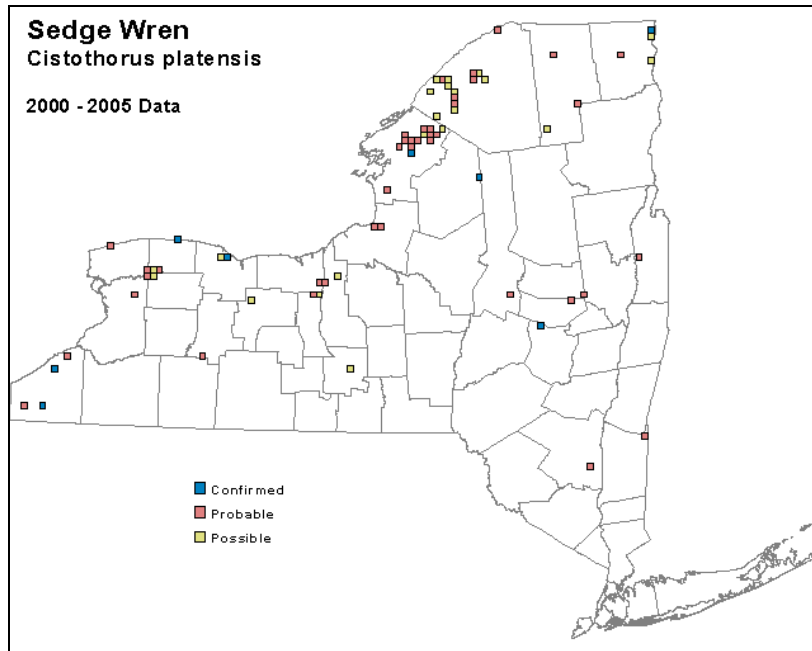


Figure 2. Sedge wren occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008).

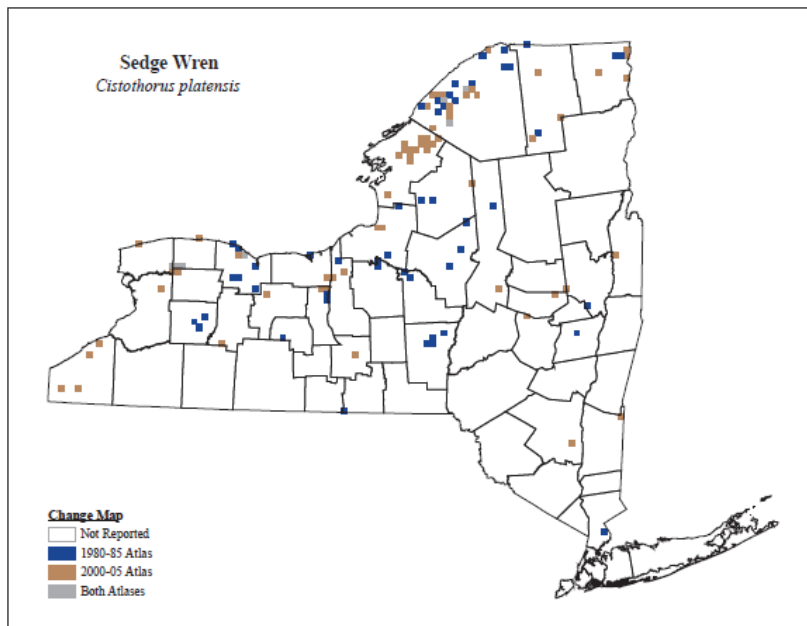


Figure 3. Change in sedge wren occurrence in New York State between the first Breeding Bird Atlas and the second Breeding Bird Atlas (McGowan and Corwin 2008).

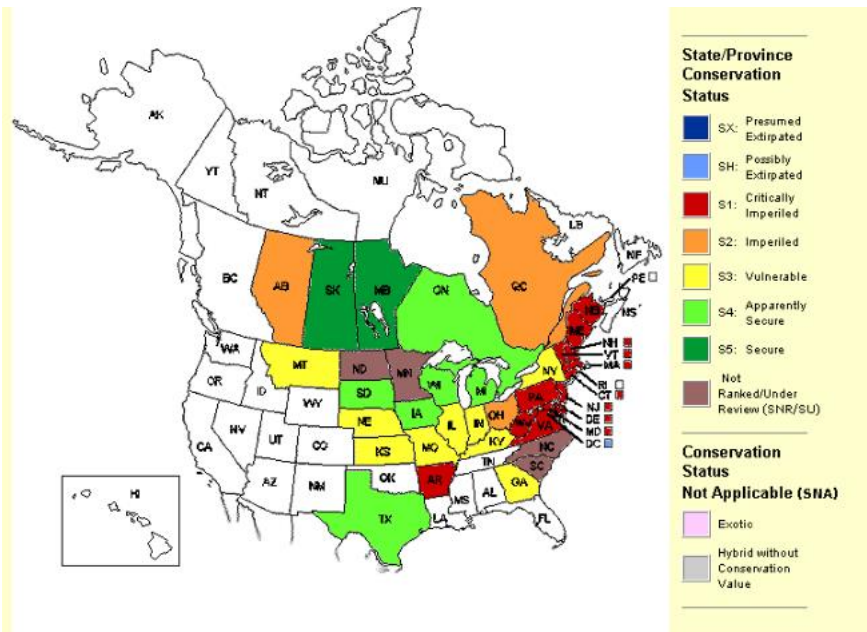


Figure 4. Conservation status of the sedge wren in North America (NatureServe 2012).

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>57 blocks</u>	<u>1%</u>

Details of historic occurrence:

The first Breeding Bird Atlas (1980-85) documented occupancy in 57 survey blocks statewide (1%).

Current	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
	_____	<u>72 blocks</u>	<u>1%</u>

Details of current occurrence:

The second Breeding Bird Atlas (2000-05) documented occupancy in 72 survey blocks statewide (1%), an increase of 26%.

New York's Contribution to Species North American Range:

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

IV. Primary Habitat or Community Type:

1. Old Field Managed Grasslands
2. Wet meadow/Shrub Swamp
3. Pasture/Hay
4. Open Alkaline Peatlands
5. Open Acidic Peatlands

Habitat or Community Type Trend in New York:

Declining Stable Increasing Unknown

Time frame of decline/increase: Since late 1800s

Habitat Specialist? Yes No

Indicator Species? Yes No

Habitat Discussion:

Sedge wrens breed in a variety of wetlands with dense tall sedges and grasses, avoiding areas with standing water and cattails. Such areas include wet meadows, hayfields, marshes, upland edges of ponds, and sphagnum bogs. In the Northeast where breeding occurs later in the summer than in the Prairie Pothole region, sedge wrens use permanently wet marshes with tussocks (Bagg and Eliot 1937).

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:

Sedge wrens are nomadic, breeding in the Prairie Pothole region in May and June, and then moving to southern and northeastern areas of its range before breeding again in July and August. Site tenacity is low due to the nature of their wet meadow habitat, which is subject to periods of drying. Multiple broods may be raised each year, possibly in different areas of the range as birds move to take advantage of changing habitat conditions.

Breeding is thought to occur in the first year after fledging as in other wrens. Causes of mortality are poorly known (Herkert et al. 2001)). Harvesting of hay and rice is known to destroy nests (King 1883, Roberts 1932, Meanley 1952, Frawley 1989) and may also kill some adults. Other sources of nest loss include predation, heavy rains, trampling by grazing cattle, and nest destruction by other sedge wrens (Walkinshaw 1935, Crawford 1977, Picman and Picman 1980, Burns 1982). Identity of nest predators is poorly known. Adults are known to experience fatal collisions with towers and buildings.

VI. Threats:

Sedge wren declines have been attributed to loss of habitat from filling of wetlands for conversion to agriculture, and ditching for mosquito control. About 1.9 million ha of palustrine emergent

wetlands, which include wet meadows important to nesting sedge wrens, were lost in U.S. between mid-1950s and mid-1970s (Tiner 1984, Herkert et al. 2009). Wetlands preferred by sedge wrens, such as sedge/grass meadows with moist or saturated soils, are the most easily drained and filled and have been the type of wetland most frequently destroyed by agriculture and urbanization (Tiner 1984).

Wetlands with *Phragmites* are avoided by sedge wren, so this invasive species has also been a cause of habitat loss and degradation. Fatal collisions with towers and buildings have been documented for sedge wren (Taylor et al. 1983).

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, sedge wren 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 sedge wren 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.

Sedge wren is protected under the Migratory Bird Treaty Act 1918. The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law. Sedge wrens use areas smaller than 12.4 acres, and some areas that are cut for hay or lightly grazed despite being somewhat wet—and thus suitable for sedge wren—were likely not mapped as wetlands.

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

Creation of dense nesting cover as a result of the North American Waterfowl Management Plan has helped establish sedge wren colonies in previously unoccupied areas at the northern edge of its range in Alberta (Prescott and Murphy 1999).

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.

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

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