

Species Status Assessment

Class: Birds
Family: Emberizidae
Scientific Name: *Ammodramus henslowii*
Common Name: Henslow's sparrow

Species synopsis:

Henslow's sparrow occurs roughly from New York to Minnesota and southward to Kansas in the west and Pennsylvania in the east. This is a grassland bird that prefers tall, dense grassy fields with no woody plants, some standing dead vegetation, and a thick litter layer (Herkert et al. 2002). It is found largely in pastures, both active and inactive (Smith 1988), and tolerates wet conditions (Bull 1974). The largest concentration of Henslow's sparrow occurs in Jefferson County. Other occurrences are scattered in the western part of the state; most of the records from eastern New York disappeared in the past 20 years.

Breeding Bird Survey data for the United States from 1966-2011 show a decline of 0.7% per year. BBS data for New York from 1966-2011 show that Henslow's sparrow populations are decreasing at a rate of approximately 10.5% per year (Sauer et al. 2012). Breeding Bird Atlas data for New York documented an 80% decline in occupancy from 1980-85 to 2000-05 (McGowan and Corwin 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** G4
- ii. **New York** S3B **Tracked by NYNHP?** Yes

Other Rank:

Partners in Flight – Tier I

Species of Northeast Regional Conservation Concern (Therres 1999)

Henslow’s sparrow was considered for listing as federally Endangered by the USFWS in 1998, but the petition was rejected due to increasing populations in the core of the range.

Status Discussion:

The Henslow’s sparrow is a rare to uncommon and local breeder in New York at lower elevations. Henslow’s sparrow is ranked as Vulnerable in New York and as Critically Imperiled in Vermont, Massachusetts, New Jersey, and Quebec. It has been extirpated in Connecticut.

II. Abundance and Distribution Trends

a. North America

i. Abundance

 X declining ___increasing ___stable ___unknown

ii. Distribution:

 X declining ___increasing ___stable ___unknown

Time frame considered: 1966-2008

b. Regional

i. Abundance

 X declining ___increasing ___stable ___unknown

ii. Distribution:

 X declining ___increasing ___stable ___unknown

Regional Unit Considered: Eastern BBS

Time Frame Considered: 1966-2008

ONTARIO Not Present _____ No data _____

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: 1980-85 to 2001-05

Listing Status: Endangered

PENNSYLVANIA Not Present _____ No data _____

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: 1984-89 to 2004-08

Listing Status: Not Listed SGCN? Yes

QUEBEC Not Present No data _____

i. Abundance

declining increasing stable unknown

ii. Distribution:

declining increasing stable unknown

Time frame considered: Extirpated since 1960s

Listing Status: Not Listed

Trends Discussion:

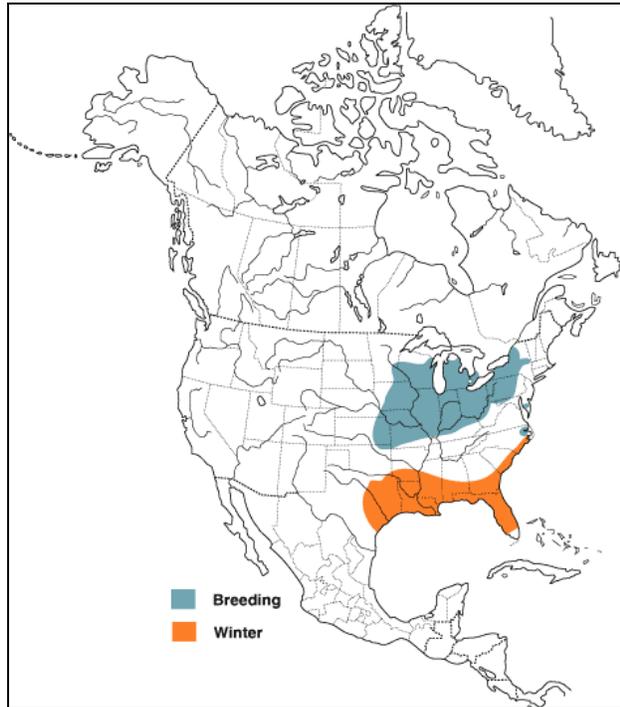


Figure 1. Range of the Henslow's sparrow in North America (Birds of North America Online 2013).

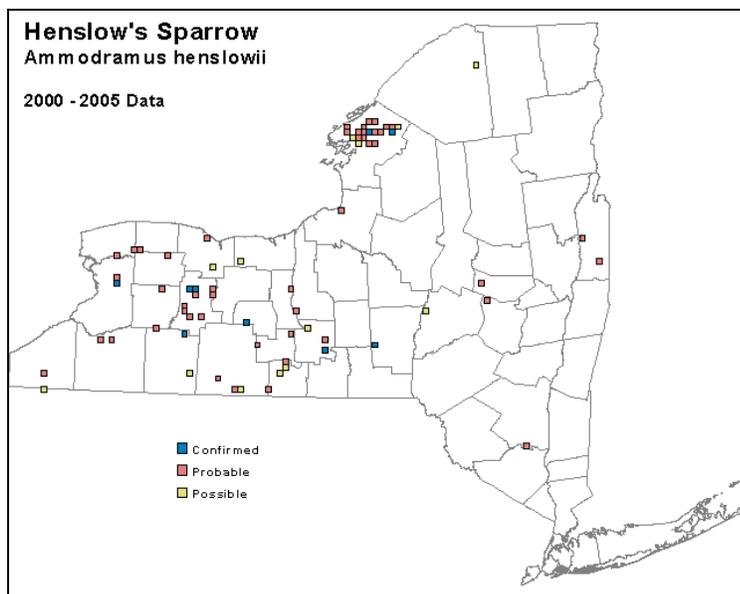


Figure 2. Henslow's sparrow occurrence in New York State during the second Breeding Bird Atlas (McGowan and Corwin 2008).

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>348 blocks</u>	<u>7%</u>

Details of historic occurrence:

The first Breeding Bird Atlas (1980-85) documented occupancy in 348 blocks statewide (Andrle and Carroll 1988).

Current	<u># of Animals</u>	<u># of Locations</u>	<u>% of State</u>
	_____	<u>70 blocks</u>	<u>1%</u>

Details of current occurrence:

The second Breeding Bird Atlas (2000-05) documented occupancy in 70 blocks statewide, a decline of 80% in twenty years (McGowan and Corwin 2008).

New York's Contribution to Species North American Range:

Distribution (percent of NY where species occurs)

- 0-5%
- 6-10%
- 11-25%
- 26-50%
- >50%

Abundance (within NY distribution)

- abundant
- common
- fairly common
- uncommon
- rare

NY's Contribution to North American range

- 0-5%
- 6-10%
- 11-25%
- 26-50%

___ >50%

Classification of New York Range

___ Core

X Peripheral

___ Disjunct

Distance to core population:

IV. Primary Habitat or Community Type:

1. Pasture/Hay
2. Old Field Managed Grasslands
3. Wet Meadow/Shrub Swamp

Habitat or Community Type Trend in New York:

X Declining ___ Stable ___ Increasing ___ Unknown

Time frame of decline/increase: Since mid-1960s

Habitat Specialist? X Yes ___ No

Indicator Species? ___ Yes X No

Habitat Discussion:

The Henslow's sparrow is a grassland species, preferring tall, dense, grassy fields with little woody vegetation; wet grasslands are also used (NYNHP 2011). Peterson (1983) found them in large, ungrazed fields with a variety of moisture regimes and without woody invasion. They were often found on hilltops. Bull (1974) described their habitat preference in New York as "grassy fields and meadows with scattered bushes and herbaceous plants, both in wet and dry situations."

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:

No data is available on either annual or lifetime reproductive success of Henslow's sparrows. Reports of apparent nest success (= number of nests that fledge at least one young/total number of nests found) range from 19% ($n = 16$ nests; T. McCoy unpubl., cited in Burhans 2001) to 54.5% ($n = 11$; Robins 1971). Henslow's sparrows are thought to be capable of raising at least two broods/year based on length of breeding season (Herkert et al. 2002).

Also, little information is available on lifespan and survivorship: Only ten banded individuals were recaptured in later studies (Burhans 2001). Of these, six were recaptured one year following banding; two were recaptured in the same year; and two were recaptured two years after banding (data from Bird Banding Laboratory 1933–1999, K. Klimkiewicz pers. comm., cited in Burhans 2001).

VI. Threats:

Land-use changes are a significant threat to grassland bird populations on regional and continental scales. From 1940 to 1986 in 18 northeastern states, the area in hay fields declined from 12.6 to 7.1 million ha. During the same period, hay fields planted to alfalfa and alfalfa mixtures, a vegetation type not typically used by many species of grassland birds, increased from 20% to 60% (Bollinger and Gavin 1992).

Since the mid-1940s, the eastward expansion of grassland birds has reversed in northeastern U.S. and southern Ontario as agricultural lands have been abandoned, reverting to deciduous forest (Robbins et al. 1986, Hussell 1987). Sibley (1988) noted that declines had resulted from the replacement of grain crops by corn and alfalfa, despite the use of corn fields for breeding noted by other authors.

Declines in some areas have been attributed to decrease in hayfield area, earlier and more frequent hay-cropping, and shift from timothy and clover to alfalfa; earlier, agricultural practices that converted wooded land to open land resulted in an increase in range (Bollinger et al. 1990, Bollinger and Gavin 1992). In New York, primary disturbance to nesting is hay-cropping; 100% of nests with eggs and young nestlings affected by mowing were abandoned or destroyed, but proportion of young lost declined with age of nestlings (Bollinger et al. 1990). A threat to the grasslands in New York is a failure to address the viability of dairy farming, especially smaller family farms (NYSDEC 2005). Fire-dependent pine barren type communities also support grassland species. Fire suppression can make them less suitable.

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).

Henslow's sparrow was classified as "presumed stable" to predicted climate change in an assessment of vulnerability conducted by the New York Natural Heritage Program (Schlesinger et al. 2011).

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

No **Unknown**

Yes

Henslow's sparrow 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.

Henslow's sparrow is protected under the Migratory Bird Treaty Act of 1918. The Freshwater Wetlands Act provides protection for wetlands greater than 12.4 acres in size under Article 24 of the NYS Conservation Law.

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

The NYSDEC's Best Management Practices (BMPs) for grassland birds should be used to guide habitat management on grassland habitat or habitat to be converted into grassland. The management goal of these BMPs is to maintain the open, grassy conditions necessary for successful breeding by grassland birds and to avoid disturbance to nesting birds. Techniques may include seeding, mowing, and removal of trees and shrubs including invasive species. Typically, land should be managed for a minimum of 5 years to begin showing benefits for grassland birds. These BMPs form the basis for specific 5-year Site Management Plans for landowners selected to receive technical and financial assistance through LIP (NYSDEC 2013).

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

Andrle, R. F. and J.R. Carroll, eds. 1988. The atlas of breeding birds in New York State. Cornell University Press. 551 pp.

Bull, John. 1974. Birds of New York State. Doubleday, Garden City, New York. 655 pp.

Burhans, D. E. 2001. Conservation assessment for Henslow's Sparrow *Ammodramus henslowii*. U.S. Dep. Agric. For. Serv., North Central Res. Sta. Columbia, MI.

Heckert, J.R., P.D. Vickery, and D.E. Kroodsma. 2002. Henslow's sparrow (*Ammodramus henslowii*). In *The Birds of North America*, no. 672 (A. Poole and F. Gill, Eds.). The Birds of North America, Inc., Philadelphia, PA.

McGowan, K.J. and K. Corwin, eds. 2008. The atlas of breeding birds in New York State: 2000-2005. Cornell University Press, Ithaca, NY. 688 pp.

Mineau, P. and M. Whiteside. 2013. Pesticide acute toxicity is a better correlate of U.S. grassland bird declines than agricultural intensification. *PloS ONE* 8: 1-8.

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 7 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 7 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 7 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 7 June 2013.

New York Natural Heritage Program (NHNHP). 2011. Online Conservation Guide for *Ammodramus henslowii*. Available from: <http://www.acris.nynhp.org/guide.php?id=7106>. Accessed March 16th, 2012.

Peterson, A. 1983. Observations of habitat selection by Henslow's sparrow in Broome County, New York. *Kingbird* 33:155-164.

Post, T. 2004. State wildlife comprehensive plan- draft species group report for grassland birds. In: New York State Department of Environmental Conservation. Comprehensive wildlife conservation strategy species reports for: Birds. 114 pgs.

Robins, J. D. 1971. A study of the Henslow's Sparrow in Michigan. *Wilson Bull.* 83:39-48.

Sauer, J. R., J. E. Hines, J. E. Fallon, K. L. Pardieck, D. J. Ziolkowski, Jr., and W. A. Link. 2012. The North American Breeding Bird Survey, Results and Analysis 1966 - 2011. Version 07.03.2013 USGS Patuxent Wildlife Research Center, Laurel, MD.

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.

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

Date last revised: July 2014