

REPORT on 5 SPECIES of Threatened or Rare Birds at the Stafford Landfill Cap Grassland

This report describes our findings during a visit to the area of the Stafford Landfill Cap Grassland (SLCG) on 24 July 2012 from 6:15 until 8:15 a.m. We approached the area from the village of Warren Grove, by travelling through the Stafford Forge Wildlife Management Area along Hay Road.

We observed 3 State of NJ Threatened and 2 State of NJ Species of Special Concern birds, as designated in New Jersey by the New Jersey Department of Environmental Protection Endangered and Non-Game Species Program (ENSP), utilizing the grassland habitat of the SLCG. Using digital cameras with telescopic lenses and highly sensitive audio recording equipment, we documented evidence of breeding and/or habitat use by each species, as follows:

Grasshopper Sparrow, *Ammodramus savannarum* - THREATENED

We gathered indisputable positive evidence of successful breeding by Grasshopper Sparrows during 2012 within the grassland habitat of the SLCG. All three of us observed numerous adults and juveniles on the SLCG. Adults have successfully reared nestlings to the fledgling stage at the site in 2012, as evidenced by the numerous juvenile birds flying, foraging, and calling. Also, there were at least 3 territories still with territorial, singing adults that are in the process of rearing second broods. We collected photographs (the one shown below is a territorial singing adult perched atop one of the landfill cap vent pipes). Primary vocalization noted is described as two staccato notes followed by a long, insect-like buzz. Secondary calls were noted - contact trills and flight songs. The primary vocalization is proof positive that this colony is well established as the birds only perform it in the context of maintaining pair bonds throughout the breeding season (Smith, R. L. 1959. The Songs of the Grasshopper Sparrow. Wilson Bull. 71:141-152.). We also collected audio of the singing Grasshopper Sparrows, as well as video of family groups of adult and juvenile Grasshopper Sparrows foraging and flying among the grasses and other herbaceous plants.



Adult Grasshopper Sparrow, *Ammodramus savannarum*, singing from a landfill cap vent pipe in the grassland.
Approx 7:30 AM, July 24, 2012

American Kestrel, *Falco sperverius*: THREATENED:

An adult female American Kestrel was observed hunting in flight immediately over the grassland habitat of the SLCG at approximately 6:45 AM by all three of us. The small falcon left the immediate vicinity of the grassland and entered the recently-burned (wildfire in May 2007) pitch pine / shrub oak forest of Stafford Wildlife Management Area to the south. Due to the abundance of dead trees immediately adjacent to the grassland of the SLCG, this forest within the publicly-owned Stafford Wildlife Management Area (WMA), within the Preservation Area of the Pinelands Comprehensive Management Plan, presents numerous potential nesting and roosting cavities, as well an abundance of resting places on dead branches, with excellent, unobstructed views of the surrounding feeding habitat of regenerating pine-oak forest. Every aspect of the kestrel's life history requirements was noted:

1. Common prey items (butterfly, grasshoppers, cicadas, passerine birds, small mammal burrows);
2. Tree Cavities along periphery of site;
3. Perching and foraging posts – abundant;
4. Large open foraging areas

At approximately 8 AM, probably the same female American Kestrel was seen by Virazzi, returning from the southern wooded area where it was last seen, and hunting along the western edge of the grassland. This female bird probably has an active nest cavity located very close by within the Stafford WMA forest, and uses the grassland habitat for foraging.

American Kestrels, colloquially known as Sparrow Hawks, often rely on small grassland birds as prey items, such as the Grasshopper Sparrows, Field sparrows, Chipping Sparrows, and other species found at the SLCG. Actions detrimental to the SLCG grassland bird community, especially the small sparrow species, such as the installation of a solar electric generating facility, will also adversely impact the NJ threatened American Kestrels that are nest in trees on Stafford WMA around the periphery of the grassland and spending considerable time within the grassland hunting for prey. The American Kestrel has suffered a drastic and steep decline in NJ during the last two decades, and was recently added to the Threatened species list by the state ENSP.

Eastern Meadowlark, *Sturnella magna*: SPECIAL CONCERN:

We gathered indisputable positive evidence of successful breeding by Eastern Meadowlark during 2012 within the grassland habitat of the SLCG. All three of us observed numerous adults and juveniles, a total of about 8 birds in what appeared to be 2 family groups on the SLCG. Adults have successfully reared nestlings to the fledgling stage at the site in 2012, as evidenced by the numerous juvenile birds flying, foraging, and calling. Also, there were at least 2 territories still with territorial, singing adult males that are in the process of attempting to rear second broods of young. These two males were identified by via their plaintive, flutelike whistle calls. Several other Eastern meadowlarks were producing vocalizations commonly issued by both sexes of adults and immature birds. Since male meadowlarks are polygamous, this infers a small population of 2 males, each with 2 females with some fledged immature birds.

We collected photographs (the one shown below is a territorial singing adult perched atop one of the landfill cap vent pipes). We also collected audio of the singing territorial adult Meadowlarks, as well as call notes from members of the actively foraging family groups. We also collected video of family groups of adult and juvenile meadowlarks foraging and flying among the grasses and other herbaceous plants.



Adult Eastern Meadowlark, *Sturnella magna*, singing from a landfill cap vent pipe in the grassland.

Approx 7:00 AM, July 24, 2012

Horned Lark, *Eremophila alpestris*: THREATENED:

Virrazzi detected the territorial song of an adult Horned Lark along the eastern edge of the SLCG. The bird was at too great a distance to be observed visually or photographed, but the song is unique and diagnostic. Horned Larks have been observed during the breeding season at the Stafford Landfill site for many years, and they were reported as breeding at the site in the August 10, 2010 report of Herpetological Associates regarding this grassland habitat. (Report of Herpetological Associates, titled *Evaluation of the Proposed Solar Panels on Native Wildlife at Stafford Park Landfill Site in Stafford Township, Ocean County, New Jersey – HA File Number 2006.19-SP, dated August 10, 2010*).

Our observation supports the conclusion of Herpetological Associates that the Horned Lark is a breeding species at the SLCG, as the habitat remains suitable and appropriate and a territorial song was detected.

Spotted Sandpiper, *Actitis macularia*: SPECIAL CONCERN:

All 3 of us observed multiple individuals of Spotted Sandpiper in the detention basins and along the wet, low, drainage ditches that traverse the grassland habitat on the SLCG. Although it is likely that the Spotted Sandpiper was a breeding species in 2012 at the SLCG, it is possible that the birds observed were migratory individuals, as the southbound sandpiper migration begins is underway by late July. Blaine Rothauser used a portable calling device in order to assess the context in which the birds were utilizing the site. The fact that an individual spotted sandpiper immediately responded to its own territorial call is strong suggestive evidence that the birds have fidelity to the area for purposes of breeding. Songs are used in sexual circumstances, in advertising and defending territories, and in maintaining pair

bonds. The SLCG, with its mix of detention ponds, wet ditches, and upland grass habitat, is suitable breeding habitat for the Spotted Sandpiper.



Spotted Sandpiper at Detention Pond on the SW corner of the SLCG

Close-up of same Spotted Sandpiper

In summary, the Stafford Landfill Cap Grassland (SLCG) was found to compare favorably to the premiere grassland bird habitat site in the entire Atlantic coastal region of southern NJ (The Lakehurst Naval Air Base Grassland). Species **diversity** and population **densities** of rare (Threatened and Special Concern) birds per unit area, as ranked by the State of New Jersey Endangered and Non-Game Species Program, are compatible with breeding sites known to be critical and essential to rare grassland bird species conservation in New Jersey.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Emile DeVito".

Emile DeVito, Ph.D.

A handwritten signature in cursive script, appearing to read "Blaine Rothausen".

Blaine Rothausen

A handwritten signature in cursive script, appearing to read "Fred Virrazzi".

Fred Virrazzi

Credentials of Experts Preparing this Report:

Emile DeVito, Ph.D.

Manager of Science and Stewardship, NJ Conservation Foundation, 23 years

Member, New Jersey Endangered and Non-Game Species Advisory Committee

Recognized as an expert on the birds of New Jersey by the New Jersey Department of Environmental Protection

Endangered and Non-Game Species Advisory Committee; has participated in the Delphi Process every time since the inception of the Delphi ranking program in the 1990s.

Ph.D., Ecology, 1988, Univ. of Wisconsin.

Thesis topic and location: Bird community structure and vegetation patterns in the NJ Pine Barrens.

32 years experience studying birds, managing and restoring habitats for rare plant and animal species in New Jersey.

Blaine Rothausen

Pertinent professional experience with grassland birds:

1. Fish and Wildlife Great Swamp Nat. Wildlife Refuge - Bluebird nest box monitoring and data collection 1993/94;
2. Alpha Grassland Bird Survey (Alpha NJ) for Twp. of Alpha 2003 - 3 week analysis of grassland birds of 1,600 acres;
3. Grassland Bird Survey - Brooklake Country Club, Florham Park 2009;
4. Kestrel Box monitoring Conservation Management Area's - Florham Park - 2006- present;
5. Lakehurst Naval Base - Grassland Bird Monitoring and photographic assignment - Parachute Jump Zone - 2007-2011;
6. Grassland Bird Survey - Creamery Farm, Phil Harden Road – Fredon Twp., NJ. 2010;
7. Pilesgrove Twp. Grassland Bird Survey to update NRI - Joint EC Woodstown/Pilesgrove Twp. 2011;
8. Grassland Bird Survey - Sharkey's Landfill - Troy Meadows, Parsippany NJ -Wildlife Preserve, Inc. 2012;
9. As a professional wildlife photographer and conservation biologist, Mr. Rothauser has photographed and documented for the NJ ENSP grassland birds and many other rare animal taxa throughout the state of NJ - all T&E grassland birds have been photographed in a variety of habitats throughout NJ , for example as seen in the following photograph:

State Threatened Savannah Sparrow:



Fred Virrazzi

BA in Zoology, currently works for the federal government, and has had 11 years experience working for US Customs, identifying and intercepting a wide-array of diverse animal and plant taxa.

On the Executive Board of two conservation-centric NGOs, including National Biodiversity Parks, which owns a wetland and grassland preserve in Plumsted Twp., Ocean County, NJ.

Over thirty years of avian fieldwork experience, including:

Seven years as Supervisor for the 1,200 acre Lakehurst Naval Base Grassland Bird Project;

Four years as Lead Investigator under ESA and US National Park Service permits to study endangered avian species;

Holds numerous avian diversity identification records in NJ, recognized by ABA (American Birding Association) and NJAS (New Jersey Audubon Society);

Has been awarded top honors four times in NJAS' *World Series of Birding* competition

Has studied birds in 49 states, 4 continents and scores of countries