PRELIMINARY CHECKLIST OF BREEDING BIRDS ON SCHODACK ISLAND STATE PARK

By Cathie A. Baumgartner and Bernard P. Carr
Terrestrial Environmental Specialists, Inc.
23 County Route 6, Suite A, Phoenix NY 13135
(315) 695-7228, E-Mail: TES@dreamscape.com

ABSTRACT

We present data on breeding birds of Schodack Island State Park (SISP) (Rensselaer, Greene, and Columbia counties). Quantitative data on breeding birds were collected using 5-minute point counts of birds in a 50-meter radius circle. The park is located on a peninsula in the upper Hudson River estuary. The peninsula resulted from the placement of dredge spoils from Hudson River navigation projects on original islands in the river. Over time, the dredge spoil areas have revegetated and the peninsula is largely forested. The forested communities show a relatively high bird species richness and species diversity.

INTRODUCTION

Schodack Island State Park consists of a major portion of a 7-mile-long peninsula of land, located near Castleton-on-Hudson, New York, formed by the deposition of dredge spoil from the Hudson River. Prior to the deposition of dredge spoil, there were three major islands and several smaller islands at this location. Bulkheads began to be installed on the island in the 1800's, and maintenance dredging added material to SISP through the early 1960's. The extreme portion of the peninsula, which is under control of the Corps of Engineers, continues to be used for dredge spoils and contains large open areas of bare sand. SISP covers 1,052 acres of land, of which a small proportion is proposed for park development. Primarily forested, but including expanses of freshwater tidal marsh, the park affords a relatively undisturbed and unstudied parcel of state land.

Previously relatively inaccessible, SISP is being developed with an access road, boat launch, day-use area and campground. Increased accessibility will afford the birdwatching public the opportunity to study, in all seasons, the assemblage of birds that use the parkland. This paper, therefore, constitutes a

preliminary checklist of breeding birds that occurred within a limited study area on SISP. English and scientific names of birds follow *The AOU Check-List of North American Birds* (AOU 1998).

METHODS

Breeding birds were surveyed on 27 May to 29 May and 23 Jun to 25 Jun, 1997 using 5-minute point counts of all birds seen or heard within a 50-meter-radius circle (Ralph et al. 1995) in a variety of vegetation communities. The communities were not sampled equally.

Limited accessibility and time constraints did not allow for study of nocturnal species such as owls, or in-depth study of freshwater tidal marsh species such as bitterns and rails.

COMMUNITY PROFILE DESCRIPTIONS

Community descriptions of vegetation cover types follow the *Ecological Communities of New York State* (Reschke 1990). Six communities were surveyed on park property and included successional old field, successional shrubland, dredge spoil forest, freshwater tidal marsh, freshwater tidal swamp, and floodplain forest.

Successional old field areas occur within a transmission line corridor that crosses the peninsula. This community is very limited in acreage on SISP property. Herbaceous species dominated in this area.

Successional shrubland areas are areas that were abandoned from agricultural use in the early 1970's. This community consisted of shrubs and a dense sapling layer.

The dredge spoil forest community consisted of deciduous forest that has developed on dredge spoil deposits. This community occupies the largest area of any community on SISP. Black locust (*Robinia pseudoacacia*), quaking aspen (*Populus tremuloides*), and eastern cottonwood (*Populus deltoides*) were the most common tree species. The shrub layer was dominated by dense honeysuckle (*Lonicera tatarica, Lonicera sp.*).

Freshwater tidal marsh areas are located on the eastern edge of the peninsula along Schodack Creek. These areas contained broad-leaf emergents and tall graminoids. Representative species included pickerelweed (*Pontederia cordata*), narrow-leaf cattail (*Typha angustifolia*), arrow arum (*Peltandra virginica*), and wild rice (*Zizania aquatica*).

Freshwater tidal swamp is a forested community that floods twice a day. This community contained silver maple (*Acer saccharinum*), willow (*Salix spp.*), ash (*Fraxinus pennsylvanica, F. nigra*), swamp white oak (*Quercus bicolor*), and eastern cottonwood.

Floodplain forest describes forested communities that are low-lying and occur next to the Hudson River. Eastern cottonwood, silver maple, green ash, and eastern sycamore *(Platanus occidentalis)* were common trees in the community. These forests appeared to be older than other forested communities, and contained the largest diameter trees on the peninsula.

RESULTS/OBSERVATIONS

The table presents the list of species observed during quantitative sampling of birds in May and June. With the exception of Blackpoll Warbler, we feel that these species represent breeding species in the park. The one Blackpoll Warbler, observed on May 27, 1998, was probably a late migrant. As might be expected, the forested vegetation communities supported a larger number of breeding species and a higher diversity of species than the less structurally complex vegetation communities.

DISCUSSION

With the exception of the Blackpoll Warbler (discussed above) and the Red-bellied Woodpecker, all of the species we observed had been recorded in the Atlas block in which the park is found (NYS Breeding Bird Atlas 1980-1985, data provided by the New York State DEC Natural Heritage Program). In our survey, Red-bellied Woodpeckers were observed in two forested communities, and based on these and observations made during other field work in the park, this species was fairly common.

Other species which are known breeders or probable breeders in the park were observed during other field work in May and June, but were not encountered during quantitative sampling. These include Great Blue Heron, Wood Duck, Virginia Rail, Spotted Sandpiper, Tree Swallow, Tufted Titmouse, and Black-and-white Warbler.

The successional old field areas are too small and contain too many shrubs to support grassland species. Most of the species recorded in this habitat are edge or shrub species such as the Yellow Warbler and Common Yellowthroat.

The successional shrubland community has a moderate species richness. Gray Catbird, Yellow Warbler, Common Yellowthroat, Northern Cardinal, and Song Sparrow are representative species in this community.

The freshwater tidal marsh contains marsh nesting species and species that utilized the edge of this community. Willow Flycatcher, Marsh Wren, Swamp Sparrow and Red-winged Blackbird were representative species. Taped playback methods were not used in sampling this community, however, we would expect that several bitterns and rails would be recorded if these methods were used (Swift 1989, Gibbs and Melvin 1993).

The forested communities on SISP contain the highest species diversity. These habitats are characterized by a mixture of large diameter trees with a canopy height of 75 to 100 feet. These communities are crossed by numerous trails and paths which provide more edge than unbroken forest. Canopy nesters such as Cerulean Warbler and Baltimore Oriole, mid-canopy nesters such as American Redstart and Rose-breasted Grosbeak and ground nesters such as Wild Turkey and Ovenbird were recorded in these forests. It should be noted than an additional informal census by TES of Cerulean Warblers found 13 singing males in different locations on the island, and this species appears to be common in appropriate habitat. This species was added to the NYS List of Species of Special Concern on December 4, 1999.

ACKNOWLEDGEMENTS

This study was funded by the NYS Office of Parks, Recreation and Historic Preservation by contract through C&S Engineers, Inc., North Syracuse, New York. We would especially like to thank Steve McCorkell of the OPRHP and Bob Palladine and Tony Longo of C&S Engineers for their support during this study.

LITERATURE CITED

AOU. 1998. Check-List of North American Birds. 7th Edition. American Ornithologists Union. Washington, D.C.

Gibbs, J. P. and S. M. Melvin. 1993. Call-response surveys for monitoring breeding waterbirds. J. Wildl. Manage. 57(1): 27-34.

Ralph, C. J., J. R. Sauer, and S. Droege (Eds). 1995. Monitoring Bird Populations by Point Counts. Gen. Tech. Rep. PSW-GTR-149. Albany, CA. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture. Berkeley, CA.

Reschke, C. 1990. Ecological Communities of New York State. New York Natural Heritage Program. NYS Department of Environmental Conservation. Latham, NY.

Swift, B. L. 1989. Avian breeding habitats in Hudson River tidal marshes. Final Report. NYSDEC. Delmar, NY.

Birds Observed Per 5-Minute Point Count within a 50-meter radius Schodack Island State Park

	SOF	SS	DSF	FTM	FTS	FPF
Wild Turkey *Meleagris gallopavo*	0.25					
American Woodcock *Scolopax minor*						0.08
Mourning Dove *Zenaida macroura*				0.33		
Red-bellied Woodpecker *Melanerpes carolinus*			0.22			0.15
Downy Woodpecker *Picoides pubescens*						0.08
Northern Flicker *Colaptes auratus*					0.33	0.15
Eastern Wood-Pewee *Contopus virens*			0.22		0.33	0.08
Willow Flycatcher *Empidonax traillii*				0.83	0.33	
Least Flycatcher *Empidonax minimus*		0.20	0.11		0.33	
Great Crested Flycatcher *Myiarchus crinitus*			0.22			
Yellow-throated Vireo *Vireo flavifrons*			0.11			
Warbling Vireo *Vireo gilvus*			0.33			
Red-eyed Vireo *Vireo olivaceus*		0.20	0.11			0.15
Blue Jay *Cyanocitta cristata*					0.33	0.08
American Crow *Corvus brachyrhynchos*				0.17		
Barn Swallow *Hirundo rustica*				0.17		
Black-capped Chickadee *Poecile atricapillus*					0.67	0.46
White-breasted Nuthatch *Sitta carolinensis*					0.33	0.08

Birds Observed Per 5-Minute Point Count within a 50-meter radius Schodack Island State Park

	SOF	SS	DSF	FTM	FTS	FPF
House Wren						
Troglodytes aedon	0.25		0.11			
Marsh Wren						
Cistothorus palustris				1.33		
Blue-gray Gnatcatcher						
Polioptila caerulea					0.33	
Veery						
Catharus fuscescens			0.22		1.00	
Wood Thrush						
Hylocichla mustelina	0.25		0.11		0.33	0.23
American Robin						
Turdus migratorius		0.60	0.22	0.17		0.54
Gray Catbird						
Dumetella carolinensis	0.75	1.00	0.67		0.67	0.54
European Starling						
Sturnus vulgaris		0.20				0.08
Cedar Waxwing						
Bombycilla cedrorum		0.40				0.08
Blue-winged Warbler						
Vermivora pinus						0.15
Yellow Warbler						
Dendroica petechia	1.50	1.00	0.89	0.83	0.67	0.62
Chestnut-sided Warbler						
Dendroica pensylvanica		0.20	0.11		0.33	0.08
Blackpoll Warbler						
Dendroica striata						0.08
Cerulean Warbler						
Dendroica cerulea			0.44			0.08
American Redstart						
Setophaga ruticilla			1.11		1.67	0.46
Ovenbird						
Seiurus aurocapillus			0.22			0.08
Common Yellowthroat						
Geothlypis trichas	0.75	0.40	0.11	0.50	0.33	0.54
Scarlet Tanager						
Piranga olivacea			0.22			0.08

Birds Observed Per 5-Minute Point Count within a 50-meter radius Schodack Island State Park

	SOF	SS	DSF	FTM	FTS	FPF
Eastern Towhee *Pipilo erythrophthalmus*			0.11			
Song Sparrow *Melospiza melodia*	0.25	0.40	0.67	0.33	1.33	1.38
Swamp Sparrow *Melospiza georgiana*				0.67	0.33	
Northern Cardinal *Cardinalis cardinalis*	0.25	0.40	0.22		0.33	0.08
Rose-breasted Grosbeak *Pheucticus ludovicianus*		0.20	0.22		0.67	
Indigo Bunting *Passerina cyanea*						0.08
Red-winged Blackbird *Agelaius phoeniceus*		0.80		1.33	0.33	
Common Grackle *Quiscalus quiscula*						0.08
Brown-headed Cowbird *Molothrus ater*		0.20	0.11			0.08
Baltimore Oriole *Icterus galbula*			0.44		0.67	0.31
House Finch *Carpodacus mexicanus*						0.23
American Goldfinch *Carduelis tristis*	0.25	0.20	0.11			0.46
Total Number of Species:	9	15	26	11	21	31
Average Number of Birds per 5-Minute Count:	4.50	6.40	7.67	6.67	11.67	7.62
Number of 5-Minute Samples:	4	5	9	6	3	13
Diversity Index $H' = -\sum[(Ni/N)\ LOGe\ (Ni/N)]$	1.92	2.51	2.95	2.16	2.87	2.98

Vegetation Communities
SOF – Successional Old Field
SS – Successional Shrubland
DSF – Dredge Spoil Forest
FTM – Freshwater Tidal Marsh
FTS – Freshwater Tidal Swamp
FPF – Floodplain Forest