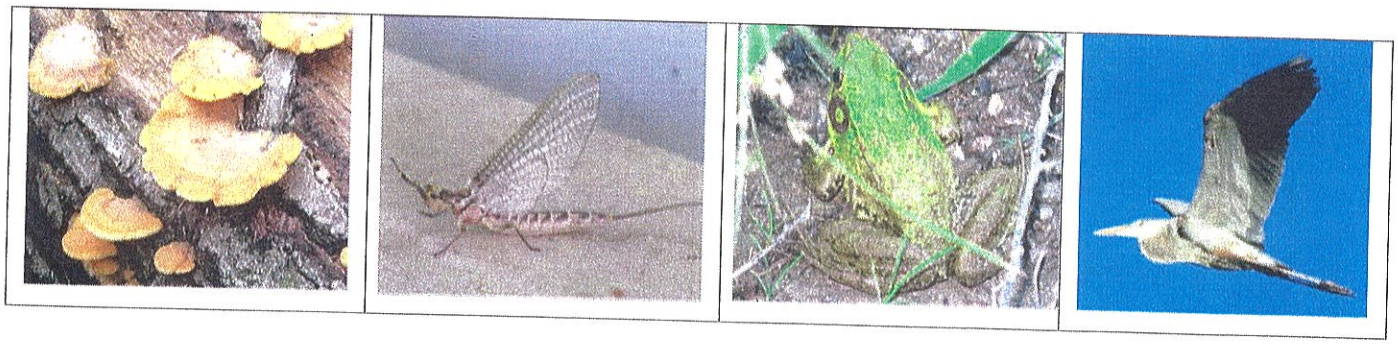

John Burroughs Natural History Society

BioBlitz

Sunday, June 5th, 2011

9:00 a.m. to 5:00 p.m.
New Paltz Recycling Center
(Clearwater Rd off Route 32, New Paltz, NY)

IF YOU'VE EVER WANTED TO LEARN HOW TO:

- Identify birds by sight and/or their songs or calls,
- Find and properly handle/release salamanders, turtles and snakes,
- Capture and identify butterflies, dragonflies and damselflies,
- Survey streams and ponds for aquatic insects, or
- Identify trees, shrubs, vines and non-woody plants,

THEN JOIN US AT THE NEW PALTZ RECYCLING CENTER BIOBLITZ!

This is a great opportunity to meet local field biologists and naturalists and to learn about the diversity of plants and animals of the area. Explore interesting habitats and help field leaders find, identify and compile a record of the biodiversity at the Town's 189 acre property on Clearwater Road. Come for the day, an hour or more or join us at the end of the day when the species tally will be announced and interesting discoveries revealed.

Follow signs for the **BioBlitz** when you turn into Town of New Paltz Recycling Center on Clearwater Road off NYS Route 32. Be prepared for off-trail walking, possibly wet conditions and insects. Bring water and lunch or a snack if you plan to be with us for more than a few hours.

Please do not bring pets or children under the age of twelve.

For more information go to John Burroughs Natural History Society website:
www.jbnhs.org

CONTENTS

ACKNOWLEDGEMENTS

The John Burroughs Natural History Society extends its gratitude to the Town of New Paltz for its help and enthusiastic support of our first effort at conducting a BioBlitz. We thank all of those who joined us, -- field leaders, administrators, supporters, naturalists and the engaged public alike.

We are especially appreciative of the steady hands-on assistance of Town Recycling Coordinator, Laura Pettit. We trust that the inventory of species recorded at the Recycling Center Property is informative and may prove useful during future land use planning and management activities.

Appreciatively,

Lin Fagan, President
John Burroughs Natural History Society

VOLUNTEERS

Coordinator /Report Author
Joe Bridges

Field Leaders
Roland Bahret
Lynn Bowdery
Steve Chorvis
Jaime Deppen
John Thompson
Nava Tabak

Public Support
Charlotte Adamis
Matt Corsaro
Lin Fagan
Laura Petit
Town of New Paltz Planning Board

INTRODUCTION

On June 5, 2011, the John Burroughs Natural History Society (JBNHS) conducted a bioblitz at the New Paltz Recycling Center at Clearwater Road in the Town of New Paltz, New York. The town property encompasses 189 acres and is comprised of an approximate 57 acres of developed and 132 acres of largely undeveloped land. Developed areas of the property include recreational fields of Clearwater Park, a BMX track, solid waste transfer station, Highway Department facility, Recycling Center, an inactive, capped landfill, a cell tower, and roadways storage areas and other infrastructure associated with the property.

Undeveloped portions of the property support a diverse assemblage of natural and semi-natural communities, including mixed hardwood forest, stands of eastern hemlock, white pine and eastern red cedar, shale barrens, shrub thickets and meadow/grasslands, as well as ponds, intermittent and perennial streams and a diversity of wetlands (***refer to the attached Vegetation Map***).

Coined by National Park Service naturalist Susan Rudy in 1996, the term bioblitz refers to an intensive effort by experience field biologists to identify as many species of plants and animals as possible in a continuous twenty-four hour period. The purpose of a bioblitz is twofold: (1) to establish the extent of biodiversity within a defined area, and (2) to engage the public in citizen science during an outdoor scientific exploration. The results of a bioblitz can provide important data to land-use planners regarding the diversity and richness of a site's natural resources, such as the presence of rare or unusual species of conservation concern, so that informed land-use choices can be made by involved decision makers. A BioBlitz also serves to educate the public about the natural world around them and to foster citizen stewardship toward important natural areas.

Unlike a "full-blown" continuous twenty-four hour bioblitz, this first effort by JBNHS was limited to a single diurnal 8-hour period. Consequently, species of predominantly nocturnal and crepuscular (dawn and dusk) habit were not surveyed. Also, because the field expertise of survey participants was limited to certain groups of plants and/or animals, some species groups were not fully surveyed, notably the aquatic and terrestrial invertebrates, lichens, algae, fungi and bryophytes (mosses and liverworts).

PROCEDURES

Prior to the date of the bioblitz, preliminary field surveys were conducted on the property by JBNHS trustees on December 9, 2010 and on April 12, 25 and May 5, 18 and 25 of 2011 in order to identify major habitats, ecological communities, develop checklists of plant and animal species and to prepare an aerial photographic map of site vegetation.

On June 5, 2011, an orientation for field leaders and other experienced field biologists was held prior to the start of the bioblitz. A summary of the findings from the preliminary field surveys was presented in order to help guide survey efforts. The following materials were distributed and briefly reviewed with the field biologists prior to the arrival of the public:

- Schedule of Activities
- Vegetation Map
- Checklist of Vascular Plants
- Public Participation: Basic Questions and Answers
- Field Sheets

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s were established to survey different areas of the property. Field leaders were asked to plan their ark them on the Vegetation Map as they surveyed the property and to record identified species on Field Sheets as they were encountered along the selected route. Unknown plant species were collected if abundant for later identification. Identification of animals was based on direct observations or on sounds/calls, remains or signs/tracks. No animals were collected.

Approximately three hours of survey/identification activities were conducted in the morning with the attending public free to join a group of their choice. A working lunch took place at the Recycling Center Office during which time collected plants were identified and species data entered on spread sheets established for various taxa (selected plant or animal groups). Approximately three hours of survey/species identification activities were conducted in the afternoon by two field survey groups. The occurrence of a rain storm precluded presentation of a species summary and tally.

RESULTS

Twenty-seven people attended the bioblitz, seven of whom are JBNHS members, including some trustees and officers. During the morning survey, field teams focused their species identification efforts on areas of shrubland within the utility line ROW near the Recycling Center, perimeter areas of the capped landfill and areas up to and surrounding the southeastern pond. In the afternoon, species identification efforts were directed to perimeter areas of the westerly ponds off Clearwater Road.

The following Table summarizes the tally of species recorded following review/integration of the field data sheets and data entry/analysis of the species recorded.

TAXA: PLANTS	**# SPECIES**	**TAXA: ANIMALS**	**# SPECIES**
Vascular plants:		**Vertebrates:**	
Trees	47	Amphibians	11
Shrubs	22	Reptiles	5
Vines	8	Fish	3
Forbs (Broad-leaved flowering herbs)	177	Birds	61
Grasses and grass-like species	31	Mammals	16
Ferns	14	**Subtotal**	**93**
Fern Allies (Horsetails)	3	**Invertebrates:**	
Subtotal	**302**	Butterflies	16
Non-Vascular Plants:		Moths	5
Mosses and Liverworts	10	Damselflies	4
		Dragonflies	4
FUNGI	10	Other species	57
		Subtotal	**86**
LICHENS	3	**Species Grand Total:**	**507**

Lists of the species recorded for each of the major taxa above are included in the Appendix of this report.

The following findings of the bioblitz are noteworthy:

Despite limited survey coverage of certain taxa, notably non-vascular plants, fungi and invertebrates, the number of species recorded during the eight-hour bioblitz is impressive and reflects a substantial degree of biodiversity on the property. To wit, the vascular plant species tally of 302 species recorded on the 189-acre

property captured approximately 18% of the currently recorded flora of Ulster County, as reported by the New York Flora Atlas.

Reflexed Sedge (*Carex retroflexa*)
A substantial population of this State-listed endangered species occurs in one area on the property and is currently under study by Cornell University. It is similar in general appearance and may be confused with the common Pennsylvania sedge (*Carex pensylvanica*), which occurs in numerous locations on the property. Thus, it is likely that reflexed sedge occurs in other unknown locations on the property.

Maleberry (*Lyonia ligustrina)*
A single shrub of this species was found at the southeast pond. This species should be considered "regionally rare" as it is seldom encountered in this region of Ulster County. It's probably worth mentioning the presence of a substantial population of the reflexed sedge (Carex retroflexa; State-listed endangered

Common hornwort (*Ceratophyllum demersum*)
This species occurs abundantly in the large pond south of Clearwater Road. The closely related prickly hornwort (*Ceratophyllum echinatum*), a State-listed threatened species, which is frequently associated with common hornwort, could be present in the pond.

Amphibians
Eleven species of amphibians (frogs, toads and salamanders) were identified on the property, which represent 35% of the thirty-one species of amphibians known to occur in New York.

Spotted salamander (*Ambystoma maculatum*)
Egg masses of this species were found in a small wetland pool west of the large pond near Clearwater Road. This pool provides suitable potential breeding habitat for the Jefferson salamander hybrid complex (*Ambystoma jeffersonianum* x *laterale*), which is State-listed Special Concern.

Eastern box turtle (*Terrapene carolina carolina*)
The discovery of a total of 5 different female box turtles in an area of suitable nesting and foraging habitat on the property a few weeks before and during the bioblitz indicates that a viable population of this species is present. Once common, this species is now listed "Special Concern" by the New York Department of Environmental Conservation (NYSDEC). A Special Concern species is a native species which has not yet recognized as endangered or threatened, but for which documented evidence exists relating to its continued welfare in New York State.

Chinese Mystery Snail (*Cipangopaludina chinensis malleata*)
Substantial numbers of this golfball-sized nonnative snail were found at the large pond on the west side of Clearwater Road. It is reported to have been sold in Chinese food markets in San Francisco in the late 1800s; collected in Boston, MA in 1914 and reportedly released into the Niagara River between 1931 and 1942. It was found in Central Park in the 1960s and in ponds on Long Island in the fall of 2009. It is reported to feed non-selectively on organic and inorganic bottom sediments. Its ability to alter or influence native species and ecosystems has not been documented.

Bobolink (*Dolichonyx oryzivorus*)
This meadow/grassland species of conservation concern was observed in the grassland cover of the landfill. After being informed of the presence of bobolink by JBNHS, the Town has agreed to delay mowing the landfill cover until late summer after bobolink chicks have fledged.

John Burroughs Natural History Society BioBlitz
Sunday, June 5th, 2011
New Paltz Transfer Station
(Clearwater Rd and Route 32)

Schedule of Activities

8:00 a.m.	Meet at the Recycling Center at the end of Clearwater Rd; set up tables, easels and other equipment and supplies
8:30 a.m.	Present objectives, introduction of leaders, orientation of layout of the site, assign survey locations, distribute field supplies
9:15 a.m. To Noon	Conduct surveys in assigned areas
Noon To 1:30 p.m.	Lunch (Bring Your Own) and Findings Discussion
1:30 p.m. To 3:30 p.m.	Conduct surveys in assigned areas, begin species' identification/ tabulation at Recycling Center
3:30 p.m. To 4:30 p.m.	Complete species identification/tabulations
4:30 p.m. To 5:00 p.m.	Present summary of species tabulations, highlights of noteworthy discoveries

John Burroughs Natural History Society BioBlitz
New Paltz Recycling Center
June 5, 2011

Basic Questions and Answers

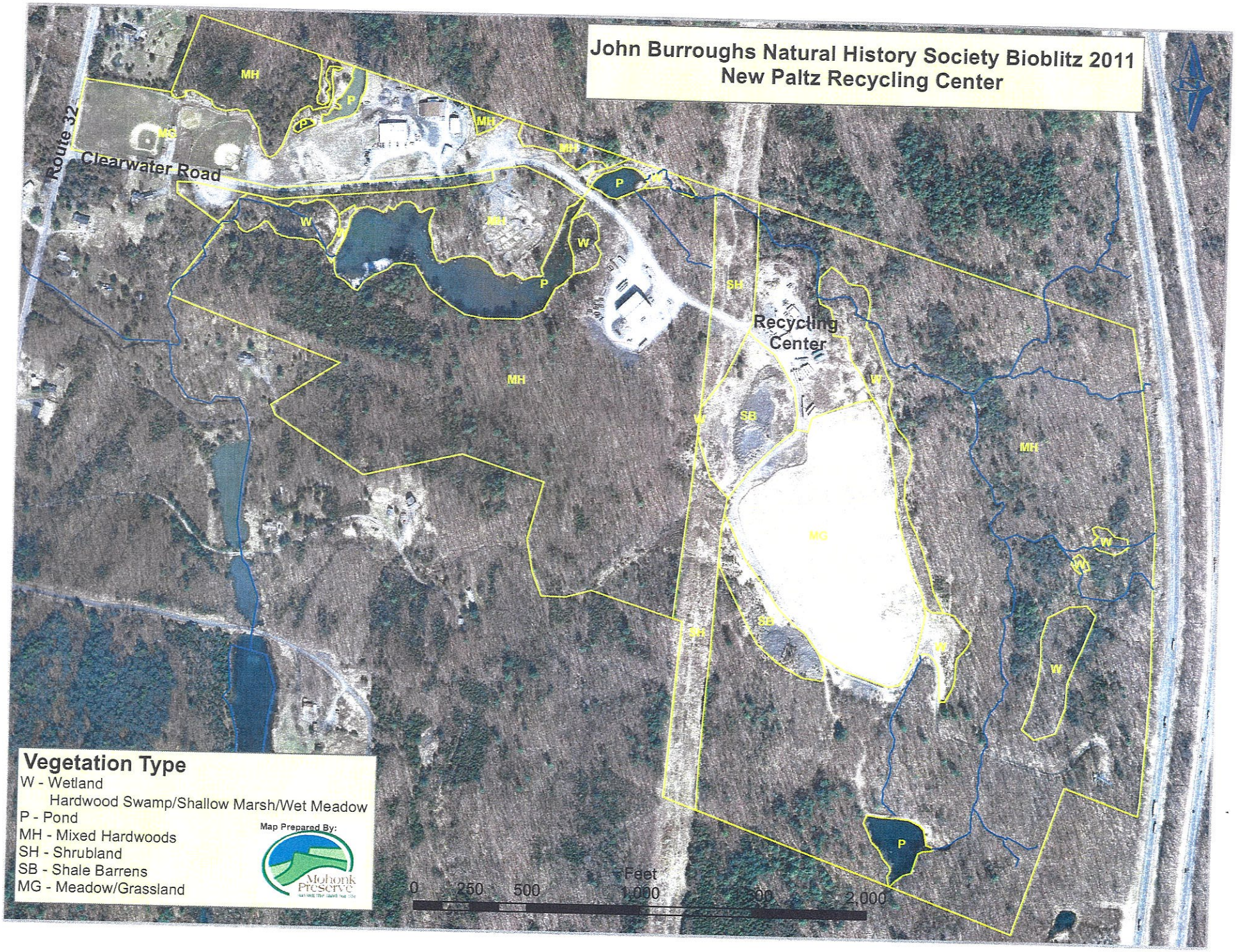
What is a BioBlitz and what purpose does it serve?
A Bioblitz is an intensive survey and recording of all species identified in a relatively short time period. The purpose of a BioBlitz is to rapidly assess the biodiversity of a site in order to obtain information about its species' diversity or richness, species rarity or vulnerability and to provide a baseline of a site's flora and fauna for consideration during site planning activities.

How can I get the most out of this event?
Stick close to the field leader and ask questions about plants and animals that are new to you. Point out plants or animals that other people in your group may have missed. Interact with others and discover their interests and field experience. Take advantage of their knowledge to expand your own. Stop at "Identification Central" to find out how the species tally is going, to learn what unusual plants or animals may have been found and examine the printed resources used to identify plant and animals.

Is there a certain way I should walk around the site?
The guidance is simple: walk slowly and weave your way around plants to avoid crushing them.

Do I need to walk the entire site or cover a certain distance?
No. You will likely discover more plants and hear or see more animals by walking slowly and quietly and making frequent stops, than if you walk at a brisk pace across the site. You may be surprised at the number of species you can discover over a distance of only a few hundred feet.

What should I do if I find an interesting or unusual plant?
First, don't pick it. Point it out to the field leader and he/she will identify it or make the decision to collect it or not for later identification.


John Burroughs Natural History Society Bioblitz 2011
New Paltz Recycling Center
Route 32
Clearwater Road
Recycling Center
MH
P
MG
W
SH
SB
Vegetation Type
W - Wetland
Hardwood Swamp/Shallow Marsh/Wet Meadow
P - Pond
MH - Mixed Hardwoods
SH - Shrubland
SB - Shale Barrens
MG - Meadow/Grassland
Map Prepared By:
Mohonk Preserve
0 250 500 1,000 2,000
Feet