

# NYBG

## Urban Naturalist Final Project

To become an NYBG Urban Naturalist, you will need to identify a “*study site*”– a park, open space, or other habitat, or ecosystem – to which you will make regular visits for observation. Your study will include the geology and human history of your site, a survey of the plants and animals found there, and a plan for how the site can be improved to provide ecological and social benefits.

The project consists of two components:

1. A journal in which you have been keeping track of what you observe each time you visit your site (see details below)
2. A written natural history portrait of your site blending your first-hand observations with outside research (see details below)

**If you would like to graduate in June, you will need to submit your project to Program Coordinator, Nancy Slowik by the first Friday in May. All projects should be dropped off at the Registration Office (Watson 306) or emailed to [natcoordinator@nybg.org](mailto:natcoordinator@nybg.org)**

## Journal

Visit your study site often so you can keep track of seasonal changes. You will turn in your journal or photocopies/photographs of its pages, but please don't worry about keeping it neat! As long as it is legible to you, that's the important thing. Each time you visit:

1. Make note of the date, time, weather, temperature, and exact location of your site(s)
2. Describe the geology, topography, and presence/absence of water, and other physical factors.
3. Using as many senses as possible (within reason!), make detailed observations of the plants, insects, birds, and mammals
4. Supplement your observations with sketches. They don't have to be beautiful, as long as they include the organism's relevant characteristics
5. Make notes about any clues you see that might indicate how species are connected to each other – Are the birds eating particular insects? Are the leaves chewed? What relationship might the plants or animals have to the available water or soil?
6. If you are so inclined, you can add personal thoughts, poems, feelings, revelations you have as you visit your site.

Your journal will be graded using the following rubric, with 30 points possible.

	Week 1	Week 2-3	Week 4-6	Week 7-9	Week 10-12+
Written notes	No notes	Life form descriptions have recognizable features	Life form descriptions and context notes are recognizable	Life form descriptions and context notes are recognizable and detailed	Life form descriptions and context notes are recognizable & detailed; interspecies connections are made
Sketches	No sketches	Sketches made occasionally	Sketches regularly made with recognizable features	Sketches regularly made with detailed recognizable features & show some context	Sketches regularly made with detailed recognizable features & context, and show connections
Plants	<5 observed	5-10 observed	10-15 observed	15-20 observed	>20 observed
Birds	<5 observed	5-10 observed	10-15 observed	15-20 observed	>20 observed
Insects	0 observed	1-4 observed	4-7 observed	7-10 observed	10-15 observed

Other vertebrates	0 observed	1 observed	2-3 observed	4-5 observed	6-8 observed
Identification level*		Order	Family	Genus	Species

\*Many invertebrates and non vascular plants (and some vascular plants) are difficult to identify beyond order and/or family, and this will be taken into consideration

### **Natural History**

Using first-hand information from your journal, in addition to outside research, create a comprehensive natural history portrait of your site. The final portrait should be a minimum of 10 written pages (double spaced, 12 point font, not including graphics, photos, sketches, maps etc) and include a detailed description of the following:

#### Physical setting

- Geological and landscape character, including soil, water, climate
- The role of human activity in altering and influencing site ecology in the past
- Current human use
- A map or schematic site layout that shows habitats or plant communities represented by dominant life forms identified to species

#### Flora

- Conspicuous, noteworthy, and/or dominant plants identified
- Plant communities and cover types
- Photographs or sketches to supplement major findings about flora

#### Fauna

- Conspicuous, noteworthy, and or/dominant animals identified
- Habitat (food, cover, and nesting opportunities for resident, migratory, or transient wildlife)
- Photographs or sketches to supplement major findings about fauna

#### Ecology

- Findings and/or hypotheses regarding how species relate to each other
- The extent to which your site and its plants and animals changed throughout the time of your observations
- A simple, illustrated map that shows the habitats and plant communities of your site, identified to species (i.e. oak/hickory woodland; red maple swamp)

#### Ecological Restoration

- A short proposal for how ecological functions at your site might be improved
- An action plan for what you could do to make steps toward those improvements now, as well as if you had unlimited resources

#### An appendix that lists:

- Additional sources you used for the portrait, including guidebooks
- A list of species observed using common names (and botanical names for plants), divided by category (plants, insects, birds, other vertebrates)

Your grade will be based on the richness of you observations and research including:

- Extra historical details on your place or its larger context (the neighborhood, the borough, the city, etc) including stories, maps, photographs
- Greater frequency of visits and greater detail of observations
- More species identifications. You should aim to use at least three field guides. If you cannot identify to species, identify to genus; if not genus, family; if not family, order. If you cannot identify something, describe it in the best detail you can.

Your natural history will be graded using the following rubric with 70 points possible.

	2	4	6	8	10
Field guides used	0	1	2	3	>3
Physical setting	Little description	Description is sparse, based on first-hand observation only	Description is adequate, based on first-hand observation & 1 outside source	Description is detailed, based on first-hand observations & 2 outside sources	Description is extremely detailed, based on first-hand observations & 3 or more outside sources
Flora	<4 plants described	Attempt made to identify 4-6 plants	7-10 plants accurately identified, with a description of the dominant species	11-15 plants accurately identified, with a detailed description of the dominant species & the presence of natives vs. invasives	>15 plants accurately identified, with a detailed description of the dominant species, which plants seem to grow together (plant communities) & the presence of natives vs. invasives
Fauna	<4 animals described	Attempt made to identify 4-6 animals	7-10 animals accurately identified, with a description of the dominant species	11-15 animals accurately identified, with a detailed description of the dominant species and their behavior	>15 animals accurately identified, with a detailed description of the dominant species, their behavior, and the presence of natives vs. invasives
Graphics	No graphics included	1 photo or sketch included	2-3 sketches or photos & a simple map included	4-5 sketches or photos & a map showing habitats or plant communities identified to cover type included	>5 sketches or photos & a map showing habitats or plant communities identified to species included
Ecology	No connections made	Attempt to make connections, based on first-hand observation only	Some connections made; some seasonal changes discussed, based on first-hand observation only	Detailed connections made & seasonal changes discussed, based on first-hand observation & 1 outside source	Extremely thoughtful connections made & seasonal changes discussed, based on first-hand observation & >1 outside source
Ecological Restoration	No recommendation	Facile recommendation	Recommendation & action plan in the ideal hypothetical with unlimited resources	Detailed recommendation & ideal action plan with unlimited resources	Detailed recommendation & action plans (in reality & ideal with unlimited resources)
Appendix	None	Species list with <10 life forms identified	Species list with >25 taxa identified & bibliography with 1-2 outside sources	Species list with >40 taxa identified & bibliography with 3-4 outside sources	Species list with >60 taxa identified & bibliography with >5 outside sources