



THE URBAN AUDUBON

Marsh: A Vital Habitat
Jamaica Bay Heroes
Northern Harrier



**NYC AUDUBON
MISSION & VISION**

Mission: NYC Audubon is a grassroots community that works for the protection of wild birds and habitat in the five boroughs, improving the quality of life for all New Yorkers.

Vision: NYC Audubon envisions a day when birds and people in the five boroughs enjoy a healthy, livable habitat.

THE URBAN AUDUBON

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NYC Audubon's fiscal year ends March 31. Thus, by the time this issue of *The Urban Audubon* lands in your mailbox, another year will have passed. And it has been a great year for us. We have solidified our financial footing, expanded our membership, improved our communications with our members, added staff, enhanced ongoing programs, and started new ventures designed to protect wild birds and their habitat in the City. These can all be seen on our website and in *The Urban Audubon*, The eGret, and our Annual Report (all available at www.nycaudubon.org/about-us). I encourage you to stay current on what, and how, our organization is doing these days.

But many challenges, some known, some as yet unforeseen, await us. The battles over Gateway and Jamaica Bay are still being fought, birds are still fatally colliding with buildings, and habitat is being lost to urban development. The list goes on and on.

Your help is critical in the struggle to provide birds a hospitable place in our sometimes inhospitable city. NYC Audubon has a small staff, and our office can only do so much (and each of them does a tremendous job). **The real strength of our organization lies with you, our members and volunteers.** You not only provide the financial support that makes conservation possible in New York City, but also give your priceless time, and make much more work possible than we could hope for without you.

I encourage each and every one of you to take a look at our volunteer opportunities; some are discussed later in this issue, and others can be found on our website. Or perhaps develop your own activity, talk to us about it, and potentially we can work together to start a new conservation venture in the City. **I cannot over-emphasize how important this volunteer effort is to our organization.** In the history of conservation in this country, we have all read and heard how the efforts of one individual have been the moving force behind some environmental victory, from the outlawing of shooting egrets and herons for their plumes to the banning of pesticides. I cannot guarantee you that you will achieve such headline-worthy results by helping in our beach cleanups, joining our monitoring of herons and egrets in NY harbor, counting dead birds that collide with windows, or surveying bird populations in City parks, but I can guarantee you this: You will have made the City a better place for wildlife, and you will be able to pat yourself on the back for a job well done. The birds, other wild creatures, and the habitats they use need you. Volunteer, and help us strengthen NYC Audubon's family tree. We very much look forward to hearing from you.

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IMPORTANT BIRD AREAS AND PROJECT SAFE FLIGHT

Thanks to Audubon's Toyota Together-Green, we added two new facets to Project Safe Flight this spring: outreach to Business Improvement Districts (BIDs) and partnering with landscape architects. Research Assistant Kaitlyn Parkins led training workshops that she developed specifically for the sidewalk sweepers. She also devised a smart phone reporting system for dead birds found by the BID workers. (The system works: One day after the second workshop, we received a photo.) Kate Orff, landscape architect with SCAPE, partnered with us in 2007 to create the first edition of our *Bird-Safe Building Guidelines*. She and her staff are now working with us to produce a special brochure on bird-safe landscape architecture, and will help us with outreach to the landscape community.

We continue to refine the flight tunnel at the Bronx Zoo, which tests bird-friendly glass options, working with scientists Christine Sheppard (American Bird Conservancy), Alan Clark (Fordham University), and Nellie Tsipoura (New Jersey Audubon). Taking into consideration both bird biology and scientific protocol, we are working toward a standardized way to rate glass for "bird-friendliness" that can be used at multiple testing centers.

Despite all the reflective glass and beacons of light, birds are attracted to the City's

green spaces—not just the Important Bird Areas, but also green roofs and small parks. NYC Audubon is working with the Jacob K. Javits Convention Center and Fordham University to evaluate the Javits seven-acre green roof as wildlife habitat—the second-largest green roof in the country. We've also begun a new project working in tandem with Audubon New York's "For the Birds!" program, with funding from the Greenpoint Community Environmental Fund. Established through the leadership of Greenpoint resident and NYC Audubon Board Member Marcy Boyle, the project will include planting native gardens and monitoring bird and insect biodiversity at McGolrick Park, Brooklyn.

JAMAICA BAY

We are anxiously awaiting the final release of the Gateway General Management Plan. Only then can the stakeholder meetings commence for restoration of the West Pond at the Jamaica Bay Wildlife Refuge. In the meantime we are gearing up for fieldwork. We are once again partnering in a regional conservation project featuring American oystercatchers. Thanks to NYC Audubon Board Executive Vice President David Speiser, some parents at the Resurrection Episcopal Day School have 'adopted' a bird for the summer season. We will be catching and banding American oystercatchers with

field-readable leg bands and watching them throughout the breeding season as they lay eggs and raise their young.

Horseshoe crabs, shorebirds, and beach cleanups remain a priority for our science and conservation team. This year we are partnering with Dan Hendrick at Jamaica Bay Lives to engage the Indo-Caribbean community in our conservation work. Already spiritually connected to the waters of Jamaica Bay, this community will have the opportunity to become involved with horseshoe crabs and shorebirds as NYC Audubon starts the sixth year of this important program.

WESTERN LONG ISLAND SOUND AND THE NARROWS/STATEN ISLAND

We are excited to be bringing our "Be a Good Egg" program to Orchard Beach in Pelham Bay. One of the busiest beaches in New York City, Orchard Beach provides a great opportunity for us to educate beachgoers about sharing the beach with shorebirds.

With guidance from our longtime Research Associate Liz Craig, our Communications Manager Tod Winston will be leading our annual Harbor Herons nest survey this year. The nesting islands took a beating from the storm surges of Hurricane Sandy in 2012. Birds returned in 2013 to find nesting structures in a state of collapse and dense vegetation replaced by open clearings and skeletal trees. I can't predict what we will find this year; how resilient are the birds and the supporting habitat?

This year we begin and end the summer with two festivals: The first annual "It's Your Tern" Festival will take place on Sunday, June 22, on Governors Island (see page 17). The 9th annual Shorebird Festival will take place, weather permitting, on Saturday, August 23, at the Jamaica Bay Wildlife Refuge (see page 18). We hope to see you at one or both as we celebrate the bird life of New York City.

You can find the latest conservation project updates on our blog, *Syrinx*, at www.nycaudubon.org/syrinx.



© NYC Audubon

A Banded American Oystercatcher

JAMAICA BAY HEROES: THE MUNDYS OF BROAD CHANNEL

Carol Peace Robins

“Growing up we all swam in our backyards and caught killies to sell for bait,” recalls Dan Mundy Jr., sitting in his Broad Channel living room with his father Dan Sr., who lives next door, looking out over Jamaica Bay. The son is an FDNY battalion chief; the dad, a retired FDNY captain. Their family has lived on this tiny island for generations.

“Back in the mid-90s, there were sudden changes in the water,” notes Dan Sr. It turned brown and soon after, as he and neighbors paddled the ever-widening creeks, it was clear that the marshes were disintegrating. Fish were dying, too. The Mundys and other concerned locals banded together in what would become Jamaica Bay Ecowatchers, a citizen environmental advocacy group.

Taking charge, the Mundys educated themselves on the science of marshlands, photographed and mapped marsh loss, and analyzed water quality data. It became clear to them that excess nitrogen, the unintended result of the City’s sludge-cleaning techniques, was polluting the bay, likely robbing it of oxygen and causing deterioration of saltmarsh habitat. This was an emergency. Father and son quickly learned fund-raising techniques and PowerPoint, making presentation after presentation to government and environmental organizations, which often questioned their evidence.

Eventually, the hours spent educating themselves paid off

as they educated those in charge. Today, effective water treatment is in place, causing nitrogen levels to drop significantly. And the Mundys have been involved in the creation of new marshes, in cooperation with the U.S. Army Corps of Engineers, the American Littoral Society, and hundreds of volunteers, including kids, who are hand-planting grasses in newly transplanted sand.

Recently, the ongoing task of clearing the bay of wreckage from Hurricane Sandy has been a main focus. Next, if funding comes through, work will start on Sunset Cove at the southern tip of Broad Channel, a proposed sanctuary of marsh restoration, oyster reefs, forests, and trails “that will not only protect the wetlands, but the City itself,” says Dan Jr. “And,” says Dan Sr., “it’s a great place to watch the sunset.”

© Carol Peace Robins



VOLUNTEER!



Work in NYC Audubon’s friendly office or in the field and make a difference for the City’s wildlife. If interested in any of the projects listed below, please contact us at 212-691-7483 x304 or volunteer@nycaudubon.org.

Office projects Help with mailings, filing, and general office work. Computer skills and birding knowledge are helpful but not required.

The Urban Audubon Join our Newsletter Committee and contribute your writing skills to four seasonal issues. Meetings are bi-monthly in the early evening. Please contact Marcia Fowle at bsfowle@aol.com to learn more.

COMMUNITY MARSH PLANTING DAY IN JAMAICA BAY
Sunday, June 1, 1-5pm
With American Littoral Society, Jamaica Bay Ecowatchers

Join us for a community-led planting and restoration day on Ruler’s Bar and Blackwall marsh islands in Jamaica Bay. For the second year, we are teaming up with the Jamaica Bay Ecowatchers to organize a day of planting plugs of *Spartina alterniflora* (saltmarsh grass), repairing fencing, and clearing debris as part of our Marsh Restoration Initiative, the first-ever community led marsh restoration project in a National Park. Please contact the American Littoral Society at 718-474-0896 to register. NYC Audubon is providing transportation from Manhattan; to reserve a seat please RSVP to volunteer@nycaudubon.org. Limited to 40.

PROJECT SAFE FLIGHT
Begins Monday, September 1
During spring and fall, migrant birds confront many hazards as they migrate through New York City. Volunteers are needed to monitor buildings for bird collisions, rescue injured birds, and record any casualties. Orientations will be held on Tuesday, August 19, and Thursday, August 21, 6-7pm.

TRIBUTE IN LIGHT MONITORING
Thursday, September 11, beginning at 8pm
With the Municipal Art Society
Each year a tireless group of volunteers monitors the Tribute in Light to ensure that migrating birds do not become entrapped in the light beams. A training session will be held Wednesday, September 3, from 6-7pm.

INTERNATIONAL COASTAL CLEAN-UP
Saturday, September 20, 10am-2pm
With American Littoral Society and National Park Service
Join us at North Channel Bridge this fall to take part in a multi-state effort to improve coastline habitat. The North Channel Bridge area, used by species like the American oystercatcher, is also a stone’s throw away from the Harbor Heron Islands, the newly restored Elders Point Marsh, and the Jamaica Bay Wildlife Refuge. Help us clear the beach and raise awareness of the importance of coastal areas to birdlife. Equipment, refreshments, and transportation from Manhattan are provided. Limited to 40.



©Richard Elzy

FRESHWATER MARSH

Like salt marshes, freshwater marshes are among the richest ecosystems on earth due to their high nutrient content. They are typically found in areas of low drainage and mineral-rich soils, principally near the mouths of rivers and streams. Freshwater marshes are home to more diverse plant life than salt marshes, including low-growing grasses and sedges, cattails, bulrushes, and water lilies. Some bird species breed exclusively in freshwater or brackish marsh, including least and American bitterns, blue-winged teal, and common moorhen (all of which bred at one time in Jamaica Bay's now greatly diminished freshwater habitat). In addition to its value as wildlife habitat, freshwater marsh also mitigates flooding and filters excess nutrients and pollution from surface water runoff. Despite the societal and ecosystem benefits freshwater marshes provide, this vital habitat is often encroached upon by development and degraded due to excessive nutrients and sediment from human agricultural and industrial activity. Coastal freshwater marshes are also imperiled due to sea level rise, as saltwater flooding becomes more frequent.

©Matt Green

Marshes are wetlands dominated by herbaceous plants. Freshwater marshes may be found at the edges of rivers and streams (see sidebar). We find salt marshes, which are intertidal systems that are regularly flooded with salt or brackish water and are dominated by salt-tolerant grasses and low shrubs, adjacent to estuaries and coasts. As few plant species can tolerate water immersion and salt, marsh vegetation is not very diverse. Cordgrass, *Spartina alterniflora*, is the most tolerant and dominates the low marsh, where it is immersed twice daily. Other plants live further back where they are flooded less frequently.

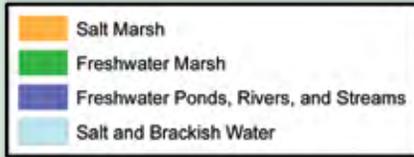
Salt marshes are among the world's most productive ecosystems, rivaling tropical rain forests. Critical habitat for various life stages of coastal fisheries, they are utilized by over half of the East Coast's commercial fish species at some time in their lives. In addition to providing habitat for juvenile fishes, crabs, and shrimp, salt marshes also serve as vital stopover habitat during migration and as wintering grounds for migratory shorebirds and ducks. Wading birds such as egrets and herons feed in salt marshes during the summer. Salt marshes sequester carbon and serve as natural barriers to coastal flooding and shoreline erosion, bearing the brunt of waves and providing protection from coastal storms. They also slow and store floodwater, reducing impacts on coastal communities—while removing sediment, excess nutrients, and other contaminants from storm-water runoff, protecting nearby waters from harmful effects.

...continued on page 8



THE MARSHES OF NEW YORK CITY

Map created by Darren Klein, courtesy of USFWS. Captions by Clem Phillips.



4. The Soundview Park restoration project restored 15 acres of salt marsh and upland habitat in the south Bronx, beginning in 2011.

3. Swindler Cove, opened by the New York Restoration Project in 2003, is the first saltmarsh restoration project along Manhattan's shoreline.

2. Arlington Cove Marsh is the City's largest intact salt marsh not managed as parkland. Although the City agreed in principal to transfer most of the property to the parks department in 2008, the transfer has yet to be completed.

1. The preserved freshwater marsh of Staten Island's Bluebelt has spared the City billions of dollars over the costs of traditional combined sewer construction and water treatment.

6. NYC Audubon is currently advocating for restoration of Jamaica Bay Wildlife Refuge's East and West Ponds as freshwater habitat.

5. Spring Creek Park is the site of a large pilot marsh restoration and storm surge protection project (see page 10).

7. The salt marsh islands of Jamaica Bay have gradually shrunk and become submerged, and this loss has accelerated: 506 acres were lost from 1924 to 1974; 750 more from 1974 to 1999. The U.S. Army Corps of Engineers has recently used dredged sand to restore these islands to 1974 dimensions. Planting with salt marsh grass is ongoing.

The extent of marsh loss in New York City over the past three centuries is considerable. Our ports and airports were built on marshes, and the originally marshy edges of the boroughs have been replaced with ecologically poor, hardened shorelines. The

most sizeable salt marshes today are in Jamaica Bay and Staten Island, with large marshes remaining in Brooklyn. The City's freshwater marshes have fared even worse: Less than 1% of this habitat is estimated to have escaped development. The Staten

Island Bluebelt is a large freshwater marsh preserved as part of the City's stormwater management system. Other important City marsh areas and restoration projects are highlighted above.



MARSH: (CONTINUED)

Formerly viewed as useless wastelands, salt marshes have been filled in for urban and agricultural development or garbage dumps. Less than 50% of the world's original wetlands remain, and current loss is estimated at 1-2% per year, making wetlands one of the fastest disappearing ecosystems worldwide. Key threats are land reclamation, coastal development, and most significantly, sea level rise (SLR). A SLR of one meter (predicted by 2100) will eliminate much of the world's coastal wetlands. Some marshes can keep pace with SLR, but others, especially those cut off from sediment sources by levees or seawalls, cannot.

The ultimate impacts of SLR depend on the relative rates of accretion and subsidence: Can the marsh elevate fast enough to keep up? If it cannot elevate fast enough, it may still be able to migrate inland—provided that there is a place to go. In urban areas, this may not be possible; there are probably roads, parking lots, and houses just inland of the marsh. “Coastal squeeze” describes the inability of marshes to move inland because of coastal development.

As we have become aware of the environmental and economic values of salt marshes, efforts have begun to slow the loss and to restore degraded marshes. Restoration may involve reconnecting areas to an estuary by excavating channels that had been filled in; the resulting tidal flow stimulates the marsh to restore itself. Other restoration projects involve removing unwanted invasive vegetation and planting desired species. Monitoring of such projects should be done for years after restoration, as it may be decades before a restored marsh acquires the biodiversity and ecosystem function of a natural marsh.



Clapper Rail



American Bittern

© Mart Green



MITIGATION BANKING 101:

Understanding the concept of mitigation banking is important for all who care about birds and wildlife and about conserving wetlands—and particularly timely given the pilot project being planned for Staten Island's Sawmill Creek Marsh (see sidebar on page 9). Our aim in this article is to break down the basic concept of mitigation banking, and discuss the principal issues involved.

Section 404 of the Clean Water Act requires that any party permitted by the U.S. Environmental Protection Agency (EPA) to disturb or destroy a wetland must mitigate that loss by restoring, creating, enhancing, or preserving an equivalent habitat. The goal of this practice, known as compensatory mitigation, is “no net loss” of wetlands. Generally, compensatory mitigation is performed on-site by the party that is responsible for the wetland loss.

Mitigation banking arose as an alternative: A third-party performs restoration off-site in anticipation of future development that will impact wetlands, thus creating “credits” for the mitigation bank. Developers can purchase these mitigation credits rather than perform the mitigation themselves. The success of this system depends on the effectiveness of government oversight and efficacy of the mitigation method employed.

Government Oversight: In order to obtain permission to damage or destroy a wetland, a development proposal must pass through a rigorous permitting process by the EPA. Developers must prove that there are no viable alternate locations for a project and take every possible step to reduce the adverse impacts. Regulatory agencies then consider whether or not projected damage is justifiable in light of the value a project will generate. During this stage, pressure from environmental advocates and the public is important to ensure that environmentally responsible decisions are made. Environmental constituents, including NYC Audubon, weighed in against the proposed expansion of Staten Island's Howland Hook container terminal and were successful in getting it denied because the value that the terminal would produce was deemed insufficient in light of potential damage to Arlington Cove Marsh.

Mitigation Types: Four types of mitigation are possible: (1) creation of an entirely new wetland; (2) restoration of a previously existing wetland; (3) enhancement of an existing wetland; and (4) preservation of an existing wetland in perpetuity. Preservation and creation are the most highly criticized by environmentalists, but the most commonly applied methods on which mitigation banks are based. Preservation does not actually offset the loss of a wetland, so it is not actually a mitigation. Creation projects often fail to restore area and function, mostly because of the complexity of creating a functioning aquatic ecosystem in a landscape where a wetland did not previously exist. *Restoration* banks, however, have the greatest chance for achieving successful results. Because these banks are placed in areas where wetlands formerly existed, the surrounding landscape features provide conditions that can maintain a wetland. Where mitigation banking is to be applied, restoration is the preferred method.

Wetland mitigation banking, while not a perfect practice, can be a vast improvement over on-site private compensatory mitigation, especially when the method of mitigation is restoration. Furthermore, mitigation banks may be overseen by professionals who are experts in the field of ecosystem restoration, and they have the potential to yield ecological benefits by creating large, contiguous habitats.



© David Spenser

Glossy Ibis

MARSHES

Suzanne Charlé

Mitigation And Restoration Strategies for Habitat and Ecological Sustainability is a pilot mitigation banking initiative aimed at determining if this approach can be successfully applied in New York City. Jennifer Sun, senior vice president, development, and Andrew Genn, senior vice president, ports and transportation, of the New York City Economic Development Corporation (NYCEDC), explain that historically it has been difficult for New York City to meet federal and state regulations, in force since 2008, which require that there be no net loss of wetlands.

“The mitigation bank is in a very conceptual stage,” Jennifer Sun says. For over a year, the NYCEDC, other City agencies, federal agencies, and a technical advisory committee of advocacy groups have been working on MARSHES. Included in the advisory committee is NYC Audubon, as well as the Environmental Defense Fund and National Resources Defense Council, which have been engaged in some of the more successful mitigation banks in Florida and Washington State.

This pilot project aims to restore, enhance, and protect Staten Island’s Saw Mill Creek Marsh, a 68-acre City-owned site on the western shore, filled with invasive plants and used for many years as an illegal dump. The site was selected because it is a priority site for restoration for the Harbor Estuary Program, nominated by NYC Audubon for its value to nesting herons and egrets.

“The City is learning about mitigation banking together with its partners,” says Sun. To set up a bank, the NYCEDC and U.S. Army Corps of Engineers will oversee the restoration, and make certain that the work meets standards. As sections are completed, credits will be sold to off-site developers in phases, to offset the unavoidable impact on wetlands from development that takes place within the five-borough service area. The entire process should occur over a five-year period. If the Staten Island pilot project is successful, mitigation banks could be set up in other parts of the City.

THE SPRING CREEK PROJECT: RESTORATION AND PROTECTION

© Don Riepe



Aerial View of Spring Creek with Jamaica Bay in Background

Spring Creek, a federally-owned park stretching from the Queens border at the Belt Parkway to the North Channel Bridge at Cross Bay Boulevard, is the largest portion of Gateway National Recreation Area on the main body of Long Island. Dominated by invasive *Pbragmites*, the landscape is at first glance uninviting—but birders know that the park can provide critical habitat for wintering northern harriers and short-eared owls. Next year, the park will undergo a remarkable restoration, however, bringing high and low salt marsh, coastal grasslands, and maritime forest back in the largest demonstration of nature-based flood damage protection in the Northeast. Funded by the Federal Emergency Management Agency (FEMA) through a grant to the New York State Department of Environmental Conservation (DEC), the

project potentially involves 60 acres of marsh restoration and 90 acres of grassland and shrubland to help protect the New Howard Beach community from floods, along with providing other environmental benefits.

“This is an opportunity for large-scale transformation that will not only create a more rich and diverse natural environment—which is inherently more resilient—but will also help address the need for protection of

our neighboring communities,” said Jennifer Nersesian, superintendent of Gateway National Recreation Area. About half of the park will be restored to tidal marshes, while the rest will become maritime grassland and forest. Spring Creek is one of eight sites that were identified in the 1990s through the Jamaica Bay Ecosystem Restoration Project (JBERP), a project of the U.S. Army Corps of Engineers and the NYC Department of Environmental Protection. (JBERP was itself influenced by publications of NYC Audubon and the Trust for Public Land’s *Buffer the Bay Revisited*, which identified open space around the bay for public acquisition and restoration).

The DEC has hired the U.S. Army Corps of Engineers to design the Spring Creek project, drawing on the planning work the Corps has already completed, and on their

© Lloyd Spillank



Saltmarsh Sparrow

© Matt Green



Glenn Phillips

expertise restoring marsh islands in the bay. “This project is a great example of how natural/nature-based features can complement traditional structural alternatives to provide a comprehensive response for managing storm risk in Jamaica Bay,” said Lisa Baron, project manager for the Corps. This project, and an additional project proposed by the New York City Department of Parks and Recreation for the City-owned Spring Creek Park Preserve across the Belt Parkway, are among the first nature-based projects moving forward as the Corps prepares the Rockaway Reformulation Study, a comprehensive review of coastal protections along the Rockaway Peninsula and Jamaica Bay that will be fully funded through the Disaster Relief Appropriations Act of 2013. To the extent that these restoration projects can be demonstrated to have significant coastal storm impact reductions, they may be implemented using post-Sandy recovery funds.

“This is a winning solution all around, providing improved habitat for birds and other wildlife, improved water quality, reduced erosion, better public access, more beautiful aesthetics, and at the same time also adding storm protection for the New Howard Beach community,” said Venetia Lannon, regional director for the DEC. “This will also be a proving ground to test our concept that by restoring natural systems we can significantly reduce coastal flooding during storms.”

The National Park Service, Department of Environmental Conservation, and the U.S. Army Corps of Engineers plan to submit their final designs to FEMA in August, with construction starting in 2015.



NORTHERN HARRIER (*Circus cyaneus*)

Don Riepe

©Abby McBride



The northern harrier, also known as marsh hawk or hen harrier, is found throughout the northern parts of North America and Eurasia. These raptors are sexually dimorphic; the females are an overall warm brown while the males, or “gray ghosts,” are light gray on top and pure white beneath, with black wingtips. Some males are polygamous, raising several families at once.

Unfortunately, northern harriers are quickly disappearing as a breeding species in the New York City area as development of commercial malls, housing projects, and institutions has encroached on grasslands, the birds’ desired habitat. The last breeding sites in the City that I know of were at Floyd Bennett Field over 20 years ago and at JFK Airport a few years ago. While NYC Audubon’s partnership with the National Park Service to maintain a 140-acre grassland at Floyd Bennett Field has provided some open foraging areas for harriers, kestrels, and other grassland species, increased human activity has greatly reduced the harrier’s chance at nesting success. At JFK Airport, runway expansion plus active bird harassment efforts have eliminated it as a breeding species. Increasing raccoon populations in Jamaica Bay and throughout the City also negatively impact harriers and other ground-nesting species as the mammals prey upon eggs and young. The New York State Breeding Bird Atlas (2000-2005) lists the harrier population as being relatively stable but with a declining trend of about 1.7% yearly.

Although listed as “threatened” in New York State, the American subspecies of the northern harrier can usually be seen in all seasons, leisurely gliding over the landfills and marshes of Jamaica Bay as well as other open areas in all boroughs of New York City. In fact, I’ve never been to a City landfill without seeing one. Easily identified by its V-shaped flight silhouette and prominent white rump patch, this beautiful raptor tirelessly hunts for prey aided by its owl-like facial disc, which enables it to hear the rustling of small mammals (especially voles and mice). To survive, harriers may range up to 100 miles in a day looking for prey. I’ve watched them for over 30 years and have never seen one actually catch anything!

EVENTS AND ADVENTURES

● NYC Audubon Events ● Partnership Events

● THE BIRDS OF WOODLAWN CEMETERY, THE BRONX

Saturday, May 31, 7-8:30am

Guides: Joseph McManus, Tod Winston, Woodlawn Conservancy Docent

With the Woodlawn Conservancy

Meet at the Jerome Avenue entrance of Woodlawn Cemetery. Join us for a morning bird walk and tour of beautiful Woodlawn Cemetery: Tod Winston and Joseph McManus will look for spring migrants and year-round residents on the expansive, wooded cemetery grounds, while a Woodlawn Conservancy docent shares fascinating stories about Woodlawn's history and the interesting mixture of individuals interred there. Limited to 15. To register, call the Woodlawn Conservancy at 718-920-1469. Adult admission \$15; Seniors, students, and NYC Audubon members \$10 (payment at time of walk). Free admission for children under 6

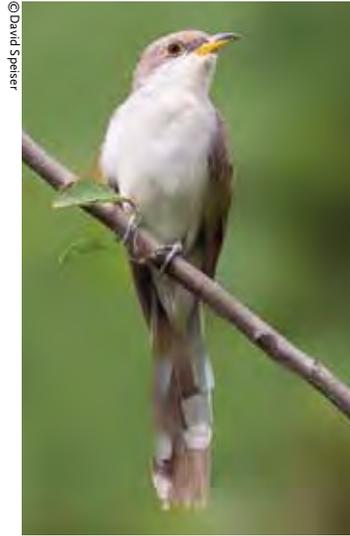
● RED KNOTS AND HORSESHOE CRABS AT JAMAICA BAY

Saturday, May 31, 10am-1pm

Guide: Don Riepe

With Gateway National Recreation Area

Meet at the Jamaica Bay NWR Visitor Center to see the annual mating ritual of prehistoric horseshoe crabs and foraging red knots, sanderlings, and ruddy turnstones. Hike along the beach and marshland edges to



Yellow-Billed Cuckoo

see fiddler crabs, egrets, and other wildlife. Bring lunch. To register, contact Don Riepe at 718-474-0896 or donriep@gmail.com. Limited to 25. Free

● SUNSET ECOCRUISES TO THE HARBOR HERON ISLANDS

Sundays, June 1-August 17

South Street Seaport, Pier 16

Times dependent on choice of tour

Guide: Gabriel Willow

With New York Water Taxi

Meet at South Street Seaport's Pier 16. This summer we'll continue our explorations of the City's principal island rookeries: Depending on which weekend you choose, your cruise may visit the fascinating Brother islands, the large egret and cormorant colonies on Hoffman

and Swinburne islands, or the great expanses of Jamaica Bay. Whichever your destination, you'll experience the wonders of New York's famous Harbor at sunset and see some of the three thousand herons, egrets, and ibis nesting on these urban islands. To learn about specific cruise dates and to register, contact New York Water Taxi at 212-742-1969 or www.nywatertaxi.com. Limited to 90. Pricing varies by destination.

● SUMMER BLOOMS AND BIRDS IN QUEENS BOTANICAL GARDEN

Tuesday, June 3, 8:30-10am

Guide: Jeff Kollbrunner

Meet at 43-50 Main Street at Main Street Gate (between Dahlia and Elder Ave). Enjoy the wide diversity of resident avian species, beautiful formal and informal gardens, meadows and more. Admission to the Queens Botanical Garden is included. Limited to 15. \$39 (27)

● CAMERA CLUB

Wednesday, June 4, 6:30-8:30pm

Instructors: David Speiser, Lloyd Spitalnik

Meet at the National Audubon office, 225 Varick St., to catch the last Camera Club meeting before "summer recess." Whether you're a beginner or a more advanced photographer, our Camera Club is the place to discuss diverse photography-related topics, hone your skills, and learn about the great photography opportunities available in the New York City area. Professional bird and nature photographers David Speiser and Lloyd Spitalnik will share their expertise and help you improve your work. Registration required. No limit. \$8 per meeting. For more information and to learn about additional photography workshops and classes, visit www.nycaudubon.org/photography-club

● VAN CORTLANDT BIRD WALKS, THE BRONX

Saturdays, June 7-September 27, 8-9:30am

Guide: NYC Audubon Naturalist With the Van Cortlandt Park Conservancy

Meet at Van Cortlandt Nature Center. Influential birders such as Roger Tory Peterson and Allan D. Cruickshank learned their craft on Van Cortlandt Park's ecologically diverse grounds, and these walks celebrate the tradition set by them. Participants will look for resident and migrant species and discuss a wide range of avian topics. For more information, please call 212-691-7483 x304. No registration necessary. No limit. Free

● LATE MIGRANTS AND NESTING BIRDS OF FOREST PARK, QUEENS

Saturday, June 7, 8:30-11am

Guide: Jeff Kollbrunner

Meet at the corner of Park Lane South and Metropolitan Avenue. Visit "the waterhole"—a veritable migrant magnet when wet that is known for rarities, and where flycatchers, sparrows, vireos, thrushes, and a variety of warblers may be seen. Look also for birds of prey like great horned owls, eastern screech-owls, and red-tailed hawks. Time and conditions allowing, we'll also explore some nearby glacial depressions. Limit 15. \$39 (27)

● WILLOW LAKE IN FLUSHING MEADOWS CORONA PARK

Sunday, June 14, 8:30-10am

Guide: Jeff Kollbrunner

Meet at the Willow Lake park entrance at Grand Central Parkway and 72nd Road (parkside of the footbridge). Explore one of the City's last freshwater wetlands. Observe the great avian diversity of this park from strategic points along Willow Lake Trail, including looks from a wildlife blind. In addition to songbirds, swallows and swifts, and herons and other waterbirds, keep a look out for hovering osprey on the hunt—and even an immature bald eagle known to haunt the nearby Meadow Lake! Limit 15. \$39 (27)



LIVE IN THE CITY, LOVE THE OUTDOORS

Friday, May 30-Sunday, June 8

OutdoorFest is a ten-day festival celebrating outdoor activities in the natural spaces of all five New York City boroughs. The festival will include outdoor adventures such as kayaking, climbing,

biking, and slacklining; education surrounding boating, birding, and photography; and volunteer opportunities including forest restoration, beach cleanups, and trail maintenance.

For more information about OutdoorFest, please visit www.outdoorfest.org



● **BIRDING BY CANOE IN CONSTITUTION MARSH, PUTNAM COUNTY, NY**

Saturday, June 14, 9am-4:30pm
Guides: Gabriel Willow, Constitution Marsh Naturalist
With Constitution Marsh Audubon Center and Sanctuary

Join Gabriel Willow and a Constitution Marsh naturalist to explore Constitution Marsh Audubon Sanctuary—a spectacular 271-acre tidal marsh just outside of Cold Spring, NY. Observe marsh birds up close as you canoe through this pristine freshwater habitat—possible sightings include Virginia rails, spotted sandpipers, and Louisiana waterthrushes, as well as resident breeding bald eagles. Then look for warblers and other spring migrants on the sanctuary's trails. Finally, enjoy a picnic lunch while learning more about the marsh's ecology. Bring lunch. Transport by passenger van included. Limited to 12. \$122 (85)

● **THE PARAKEETS OF GREEN-WOOD CEMETERY, BROOKLYN**
Saturday, June 21, 10am-1pm

Guide: Gabriel Willow
With Green-Wood Cemetery

Meet at the cemetery entrance at 5th Avenue and 25th Street, Greenwood Heights, Brooklyn. Green-Wood Cemetery is rich in both history and wildlife. It is also the highest point in Brooklyn, affording marvelous views. We will explore its environs in search of spring migrants and its most unique avian residents: the huge flocks of brilliant green monk parakeets that nest there. Native to South America, these charming immigrants are surprisingly hardy and flourish even in our harsh winters. Limited to 15. \$39 (27)

● **IT'S YOUR TERN FESTIVAL**
Sunday, June 22, Noon-4pm (Rain date Saturday, June 28)

With Governors Island Alliance, National Park Service, New York Harbor School, Earth Matter

See page 17 for details

● **CITY OF WATER DAY ECOCRUISE**

Saturday, July 12, 10-11:30am
Guide: Gabriel Willow
With Metropolitan Waterfront Alliance

Meet at Pier 83, at West 42nd Street and 12th Avenue. As part of City of Water Day, a celebration of the waterways and harbors of New York City, NYC Audubon will once again offer a special ecocruise past Hoffman and Swinburne islands, exploring the natural history of the area. Visit www.nycaudubon.org to learn more about City of Water Day and ecocruise details. Registration required. Limited to 150. Free

● **TWILIGHT BAT WALKS IN CENTRAL PARK**

Tuesdays, July 15-August 12, 7:45-9:15pm
Guide: Paul Keim

Meet at 103rd Street and Central Park West. Explore the mysteries of Central Park at twilight as we seek these fascinating and misunderstood flying mammals—and learn about their great importance to our environment. We'll see local bat

species in flight as they hunt and dive for insects, and hear them with an echolocator. Other nocturnal creatures may be seen as well. Bring bug spray and a flashlight. Limited to 16. \$32 (22) for adults, \$20 (14) for children under 12, per walk. All children must be accompanied by an adult. Recommended for ages 5 and up

● **SONGBIRDS AND SHOREBIRDS AT ALLEY POND PARK, QUEENS**

Saturday, July 19, 8am-1pm
Guide: Jeff Kollbrunner

Look for breeding birds in the hilly woodlands and salt marshes of Queen's second largest City park—and its most ecologically diverse. We'll look for nesting birds including eastern wood-pewees, wood thrushes, red-eyed vireos, American redstarts, barn and tree swallows, spotted sandpipers, and even great horned owls! Mid-summer is also a perfect time to see shorebirds and wading birds feeding on the exposed mudflats. Transportation by van included. Limited to 11. \$75 (52)

● **SHOREBIRD IDENTIFICATION WORKSHOP**

Thursday, July 31, 6:30-8:30pm (class); Saturday, August 2, 11am-2pm (trip)
Instructor: Joe Giunta, Happy Warblers LLC

Shorebirds are one of the most challenging groups of birds to identify, yet beautiful and fascinating once they can be distinguished. Learn to identify plovers and sandpipers (including "peeps") by learning behavior, field marks, and calls. Then take a field trip to Jamaica Bay to practice your new skills. Limited to 12. \$65 (45)

● **9TH ANNUAL SHOREBIRD FESTIVAL AT JAMAICA BAY**

Saturday, August 23, 7am-5pm
With Gateway National Recreation Area and American Littoral Society
 See page 18 for details

● **CAMERA CLUB**

Wednesday, September 3, 6:30-8:30pm
Instructors: David Speiser, Lloyd Spitalnik

Meet at the National Audubon office, 225 Varick St., for the first meeting of our 2014-15 season. Whether you're

...continued on page 15

©François Portmann



Semipalmated Sandpipers

NATIONAL/INTERNATIONAL TRIPS

MONTAUK SUMMER WEEKEND, LI

Friday, June 6–Sunday, June 8
Guides: Don Riepe, Mickey Cohen, Mike Bottini

With American Littoral Society

Spend an extended weekend at the eastern tip of Long Island to see nesting pine and prairie warblers, visit a cranberry bog with flowering orchids, and enjoy Montauk's beautiful woodlands, beaches, and bluffs. Includes accommodations at the luxurious Manor House, five meals, guided hikes, evening programs, a star watch, and free pickup at the Montauk LIRR station. For more information or to register, contact Don Riepe at 718-474-0896 or donriepe@gmail.com. Limited to 60. \$385 (\$120 single supplement)

BASHAKILL, SHAWANGUNK NWR, AND DOODLETOWN, NY **Saturday, June 14, 9am–Sunday, June 15, 6pm**

Guide: Joe Giunta, Happy Warblers LLC

Look for breeding eastern meadowlarks, American bitterns, cerulean warblers, and more at these three great birding areas. An overnight stay will facilitate being in the right spot at the right time. Bring lunch for the first day. Transport by passenger van included. Limited to 10. \$275 (\$50 single supplement)

CAPE ANN WHALE WATCH, MA **Thursday, August 14–Sunday, August 17**

Guides: Don Riepe, Mickey Cohen

With American Littoral Society

Come to beautiful Cape Ann, Massachusetts, for a fun-filled weekend as we seek out pelagic species such as shearwaters, storm petrels, and eiders—not to mention humpback whales, basking sharks, and dolphins. Includes three nights' stay in historic Gloucester, a whale watch boat trip, an Essex River Cruise, canoeing on the Ipswich river, birding at Parker River Wildlife

Refuge, and a lobster dinner. To register, contact Don Riepe at 718-474-0896 or donriepe@gmail.com. Limited to 40. \$395 (\$150 single supplement)

ASSATEAGUE/CHINCOTEAGUE WEEKEND

Thursday, September 18, 9am–Sunday, September 21, 6pm

Guide: Don Riepe

With American Littoral Society

A great wildlife weekend along the Virginia Coast. See wild ponies, sika deer, bald eagles and many other species of wildlife. Includes three nights at the Refuge Inn, a bus tour of backwater flats, plus an "all-you-can-eat" seafood buffet. Transportation included. To register, contact Don Riepe at 718-474-0896 or donriepe@gmail.com. limited to 30. \$495 (\$180 single supplement)

CAPE MAY FALL MIGRATION WEEKEND, NJ

Saturday, September 27, 9am–Sunday, September 28, 7pm

Guide: Joe Giunta, Happy Warblers LLC

Cape May, New Jersey, is one of the best birding venues in the United States, especially during fall migration. Visit the Cape May hawk watch on two days, once late in the day and then early to get a good variety of hawks. Also visit birding hotspots such as Higbee Beach, Cape May Point, Jake's Landing, Cape May Meadows, and Nummy Island. Transport by passenger van included. Limited to 10. \$325 (\$50 single supplement)

NYC AUDUBON WEEKEND AT HAWK MOUNTAIN, PA

Saturday, October 11, 8am–Sunday, October 12, 6pm

Guides: Hawk Mountain Raptor Educator, Gabriel Willow

Mid-October is the perfect time to visit Hawk Mountain, one of the premier hawk-watching spots in the East. Spend two days exploring this famous sanctuary

and experience breath-taking views as you seek out a variety of raptors including golden eagles, hawks, and falcons. Group programs, trail admission, accommodations, some meals, and transportation by coach or van included. Participants may also arrange their own transportation. Transportation option limited to 15. Price TBA

BIRDING THE ANDEAN SLOPES: NORTHWEST ECUADOR

Saturday, December 6–Sunday, December 14

Guides: John Rowden, Edwin Perez

Join us for a trip to one of South America's most celebrated and scenic birding areas, led by one of Ecuador's finest bird guides. Starting from Quito, we'll cover east and west slope Andean birds. Target species include the coveted Andean cock-of-the-rock, long-wattled umbrellabird, Andean condor, and sword-billed hummingbird, as well as manakins, tanagers, and more. Includes two pre-trip workshops, lodging, local transportation, most meals, and all park fees. A full tour description and itinerary is available online at www.nycaudubon.org/overnight-trips. Please contact Adriana Palmer at apalmer@nycaudubon.org or 212-691-7483 x304 to learn more and register. Limited to 12. \$2,695 (\$150 single supplement)

COSTA RICA: TALAMANCA HIGHLANDS AND PACIFIC LOWLANDS

Saturday, January 10–Sunday, January 18, 2015

Pre-Trip Workshops:

Dates TBA, 6:30–8:30pm

Guides: Richard Garrigues, NYC Audubon Guide

Target species here include two of Latin America's most spectacular birds: the fiery-throated hummingbird and resplendent quetzal. Other tour highlights include the famous Las Cruces Field Station and Wilson Botanical Garden, known for rarities such as the white-crested coquette, garden emerald, and "charming" hummingbird; and a boat tour of Golfito Bay and nearby mangroves. Includes two pre-trip workshops, lodging, local transportation, most meals, and all park fees. A full tour description and itinerary is available online at www.nycaudubon.org/overnight-trips. Please contact Adriana Palmer at apalmer@nycaudubon.org or 212-691-7483 x304 to learn more and register. Limited to 12. Price TBA

©VII Sarfati



Andean Cock-of-the-Rock

EVENTS AND ADVENTURES (CONTINUED)

a beginner or a more advanced photographer, our Camera Club is the place to discuss diverse photography-related topics, hone your skills, and learn about the great photography opportunities available in the New York City area. Professional bird and nature photographers David Speiser and Lloyd Spitalnik will share their expertise and help you improve your work. Registration required. No limit. \$8 per meeting; yearly membership available. For more information and to learn about additional photography workshops and classes, visit www.nycaudubon.org/photography-club

● FALL WARBLERS

**Thursday, September 4,
6:30-8:30pm (class);
Sunday, September 7, 8-11am (trip)**
Instructor: Joe Giunta, Happy Warblers LLC

Identifying “confusing fall warblers” can be tricky, even for the experts. Come study some of the most puzzling species that stop through our area during fall migration with expert Joe Giunta, and then enjoy a second session in the “classroom” of Central Park. Limited to 12. \$65 (45)

● **MORNING FALL MIGRATION WALKS IN CENTRAL PARK**
**Wednesdays, September 10, 17, 24;
October 1, 8, 15; 7:30-10:30am**
Guide: Joe Giunta, Happy Warblers LLC

Meet at Central Park West and 72nd Street. Birders of all levels can enjoy this fun and educational series of six walks, observing the diverse and ever-changing waves of migrants that stop over Central Park during fall migration. Limited to 15. \$140 (99)

● **NATURE HIKE IN UDALLS COVE AND RAVINE NATURAL RESOURCE AREA, QUEENS**
Saturday, September 13, 8am-1pm
Guide: Jeff Kollbrunner

Meet at Virginia Point at the northern end of Little Neck Parkway. Udalls Cove is tucked right alongside Little Neck Bay in Queens. This small but precious park provides resources

for saltmarsh, freshwater wetland, and forest species of birds and other animals. Look for great and snowy egrets, belted kingfishers, common terns, osprey, and even clapper rails. Limit 15. \$50 (35)

● EXPLORE THE BRONX RIVER BY ROWBOAT

Saturday, September 13, 11am-3pm
**Guide: Rocking the Boat Staff
With Rocking the Boat**

Launch from Hunts Point Riverside Park and explore the Bronx River aboard a hand-built wooden boat, led by experienced rowers. The Bronx River is the City's only true river and hosts an abundance of wildlife, including herons and egrets, osprey, and belted kingfishers. Visit restoration sites and learn about the Bronx River ecosystem, as well as its social and cultural history. Rowing optional. Limited to 20. \$45 (31) for adults, \$35 (24) for ages 18 and under

● EVENING FALL MIGRATION WALKS IN CENTRAL PARK

Monday Series: September 15-October 13; 5-6:30pm
Tuesday Series: September 16-October 14; 5-6:30pm
Wednesday Series: September 17-October 15; 5-6:30pm
Guide: Gabriel Willow

Meet at Central Park West and 72nd Street. Witness the spectacle of autumn migration as songbirds follow the Atlantic Flyway to their tropical wintering grounds. Look for tanagers, warblers, and other neo-tropical migrants in the wilds of Central Park. Choose from our Monday, Tuesday, or Wednesday evening series. Limited to 15. \$122 (85)

● **HOOK MOUNTAIN HAWK WATCH, NY**
Sunday, September 21, 9am-4pm
Guide: Joe Giunta, Happy Warblers LLC

Part of the Palisades Interstate Park system, Hook Mountain has commanding views of all nearby mountain ridges and the Hudson River. From this inland hawk watch

© Françoise Portmann



Bald Eagle

spot we expect to see many species of migrating raptors, including broad-winged and red-shouldered hawks, bald eagles, accipiters, and falcons. Note: this trip requires a 35-minute hike up and down the mountainside. Bring lunch. Transport by passenger van included. Limited to 12. \$95 (66)

● **FALL FOLIAGE BIRD WALK IN QUEENS BOTANICAL GARDEN**
Thursday, September 25, 8:30-10am
**Guide: Jeff Kollbrunner
With Queens Botanical Garden**

Meet at 43-50 Main Street (between Dahlia and Elder Avenues). Enjoy the beauty of turning leaves and returning feathered friends amidst the carefully cultivated autumnal exhibits of the Garden. Admission to the Queens Botanical Garden is included. Limited to 15. \$39 (27)

● **TO REGISTER FOR ALL NYC AUDUBON EVENTS and for more information, visit www.nycaudubon.org or call 212-691-7483 x304 unless otherwise specified.**

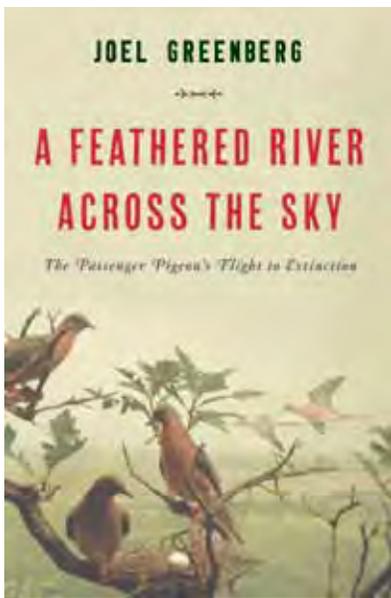
IMPORTANT INFORMATION

- Classes meet at 71 West 23rd Street, Suite 1523.
- Contributing Members (Student/Senior level and up) receive a 30% discount on most local trips and classes. See membership form on page 19.
- For all coach and van trips, the meeting location is in front of 71 West 23rd Street in Manhattan unless otherwise specified.
- We depart promptly at the stated start time.
- For all overnight trips, membership in NYC Audubon at the Student/Senior level and up is required. See membership form on page 19.

EVERYTHING YOU WANTED TO KNOW ABOUT THE PASSENGER PIGEON BUT WERE TOO SAD TO ASK

Cathy Heller

*A Feathered River
Across the Sky:
The Passenger Pigeon's
Flight to Extinction*
By Joel Greenberg
Bloomsbury USA, 2014



Here's what John James Audubon wrote in 1810 about a flock of passenger pigeons that eclipsed the sun for three days:

As soon as the Pigeons discover a sufficiency of food to entice them to alight, they fly around in circles, reviewing the country below. During their revolutions, on such occasions, the dense mass which they form exhibits a beautiful appearance, as it changes its direction, now displaying a glistening sheet of azure, when the backs of the birds come simultaneously into view, and anon, suddenly presenting a mass of rich deep purple. They then pass lower, over the woods, and for a moment are lost among the foliage, but again emerge, and are seen gliding aloft. They now alight, but the next moment, as if suddenly alarmed, they take to wing, producing by the flapping of their wings a noise like the roar of distant thunder, and sweep through the forests...

Reliable estimates of the bird's population at this time range from three to five billion. It was the most populous bird in North America, if not the planet. By 1914, they were gone. *A Feathered River Across the Sky: The Passenger Pigeon's Flight to Extinction* is Joel Greenberg's beautifully written, meticulously researched, and affecting account of the bird's history and rapid demise.

What happened? How can a species of

billions be wiped out in such a short time?

Inventions and technological progress in the late 19th century aided the destruction. Passenger pigeons were easy to kill—with guns, with nets, or by hand as the birds nested together in large colonies. Vast flocks flew low and could be batted out of the air with oars. As guns became more sophisticated, the devastation increased. The birds roosted in dense gatherings of up to 850 square miles. Raucous pigeon “socials” or “picnics” were organized and the telegraph made it possible for crowds to gather near the flocks with short notice. Tents were erected, dances were held, and people camped out nearby to slaughter the birds by the thousands.

The pigeons, both adults and young squabs, were delicious and had market value. New refrigerated railroad cars made it easier to ship hundreds of thousands of barrels stuffed with millions of dead pigeons to large cities. Competitive trap shooting contests became popular; the development of clay “pigeons” that are still used today came only after the live ones became scarce. And of course, the growing population and cutting of forests diminished the species' food supply and nesting sites.

Greenberg's book is a warning that we cannot take the abundance of nature for granted. Early conservationists cautioned of the inevitable demise of the passenger pigeon, but pigeon “picnics,” competitive shooting, and the money to be made by selling the carcasses trumped caution. The book is heartbreaking and should be read by everyone, especially those in government. I hope it sells a billion copies.

REMEMBER NYC AUDUBON

A bequest is a thoughtful and straightforward way to protect birds and bird habitat in the five boroughs. It can be expressed “I bequeath [a sum of money or a percentage of my estate] to New York City Audubon Society, Inc. a not-for-profit organization with offices at 71 West 23rd Street, Suite 1523, New York, NY 10010, for its general purposes.” Consult your attorney and give Development Manager Angela Januzzi a call at 212-691-7483 x306.

BIRDS ACROSS THE CENTURIES

Mary Jane Kaplan

*Extraordinary Birds:
Essays and Plates of Rare Book
Selections from
the American Museum of
Natural History Library*
By Paul Sweet
Sterling Signature, 2013



From the Rare Books Collection of the American Museum of Natural History, Paul Sweet, curator of the museum's ornithological collections, has chosen 40 illustrations of birds from publications dating from 1555 to 1935 and written brief texts to go with each, focusing variously on the author of the book, the explorer who collected the specimens, the artist that created the illustration, the bird itself—or all of these. The book's designers added lavish layouts and the museum's photographers ensured that the illustrations were beautifully reproduced. The result is a book that is not only a pleasure to look at but highly informative as well, giving an overview of 400 years of natural history exploration and collecting, of the development of ornithology as a science, and of technological advances in printing.

Because authors of natural history books often gave little credit, or none at all, to their illustrators, the names of many talented artists have remained obscure. John Gould is well known for his role in Darwin's development of the theory of evolution: It was Gould who first realized that each of the famous Galapagos finches was a separate species, endemic to the island where it was found. However, the

plates of Darwin's finches for *The Zoology of the Voyage of H.M.S. Beagle* were made not by Gould but by his wife Elizabeth, who received no credit; Gould himself supplied only rough sketches. Another mostly forgotten name from the flourishing business of natural history publishing in the nineteenth century is John Gerrard Keulemans; he was responsible for six of the illustrations chosen by Sweet, a disproportionate presence that mirrors his stature among illustrators of his day.

Publications by better-known authors and/or illustrators that are represented in *Extraordinary Birds* include Mark Catesby's *The Natural History of Carolina, Florida, and the Bahama Islands*; Alexander Wilson's *American Ornithology*; Arthur Russell Wallace's *The Malay Archipelago*; and, of course, John James Audubon's *Birds of America*. But we also meet the less well-known Conrad Gesner, whose 1555 attempt to describe all the birds in the world included only 217 species.

Packaged together with separate reproductions of the 40 illustrations, suitable for framing, the book is a delight for anyone with an interest in the history of humans' fascination with birds.

“IT'S YOUR TERN” FESTIVAL AT GOVERNORS ISLAND SUNDAY, JUNE 22, NOON-4PM

©David Speller



(RAIN DATE SATURDAY, JUNE 28)
WITH GOVERNORS ISLAND ALLIANCE,
NATIONAL PARK SERVICE,
NEW YORK HARBOR SCHOOL, EARTH MATTER

Come celebrate Governors Island's treasures: Common terns and oysters! Common terns have recently colonized several decommissioned piers on Governors Island's waterfront; last year we counted 181 nests and banded 100 chicks. Free festival activities will include expert bird walks and talks, displays, and hands-on activities for the whole family including creating oyster-shell jewelry. NYC Audubon naturalist Gabriel Willow will lead boat tours to provide a view of the tern colony from Buttermilk Channel. Learn more at www.nycaudubon.org/tern-festival. Free

9TH ANNUAL SHOREBIRD FESTIVAL AT JAMAICA BAY WILDLIFE REFUGE—SATURDAY, AUGUST 23, 7AM-5PM

©Don Riepe

Join us at the Jamaica Bay Wildlife Refuge during peak shorebird migration. Jamaica Bay is world-renowned as a premier migration stopover for over 35 species of shorebirds. Learn about the history, ecology, and management of the refuge as well as shorebird behavior and identification and how to photograph shorebirds in the wild.

Free bus transportation from Manhattan to Jamaica Bay is available for NYC Audubon members at the Student/Senior level and up. Meet at 71 West 23rd Street at 6:15am. Contact the office at 212-691-7483 x306 to reserve a seat.

For more information, contact NYC Audubon at 212-691-7483 x306, the American Littoral Society at 718-474-0896, or Don Riepe at donriepe@gmail.com

The Shorebird Festival is a partnership program with Gateway National Recreation Area and the American Littoral Society.

- | | |
|------------------------|--|
| 7am | Meet at the Jamaica Bay Wildlife Refuge Visitor Center for registration, coffee, donuts |
| 7:15-10:15am | Hike to the East Pond to view shorebirds during the high tide (Kevin Karlson, Lloyd Spitalnik, Tom Burke, et al.) |
| 10:15-11am | Welcome and presentation on Jamaica Bay: Past, Present, and Future (National Park Service, Don Riepe) |
| 11-11:30am | NYC Audubon update on shorebird research (NYC Audubon) |
| 11:30am-12:15pm | Shorebird photography (Lloyd Spitalnik) |
| 12:15-1:15pm | Lunch (bring lunch or visit nearby delicatessens) |
| 1:15-3:15pm | Hike around the West Pond and gardens to look for shorebirds, waders, and early migrating warblers (National Park Service rangers and festival guides) |
| 3:15-4:30pm | Shorebird identification (Kevin Karlson) |
| 4:30-5pm | Questions, social |



News & Notes

GATEWAY PLAN STILL TO COME

As we went to press, we were awaiting the release of Gateway National Recreation Area's new General Management Plan by the National Park Service. Please check www.nycadubon.org for updates.

NEW LEADERSHIP AT CITY PARKS

Mitchell Silver was appointed this past April as the new Commissioner of New York City Department of Parks and Recreation. A Brooklyn native, Mr. Silver's career has included leadership roles in numerous urban planning positions in New York City, Washington D.C., and most recently, Raleigh, North Carolina, where he served as planning and development officer and planning director. During his time in New York City, Silver played a central role in the planning of Harlem Piers Park. We welcome Mr. Silver back to New York City.

JAMAICA BAY "COMES INTO FASHION"

Toyota TogetherGreen Fellow Tara Mei Smith is reaching out to the new generation of New York City fashion designers, engaging them through social media to join us in monitoring horseshoe crabs and to join the American Littoral Society in their marsh grass plantings this spring and summer.

BOARD, ADVISORS, & STAFF

The terms of several NYC Audubon board members have ended: We are grateful to Peter Shen for his years of service; Robert J. Kimtis and Dorothy M. Peteet will continue as members of the NYC Audubon advisory council. We thank Robert and Dorothy for their continued contributions to NYC Audubon.

We are pleased to welcome two new staff members: Kaitlyn Parkins, who began working with us as an intern from Fordham University, has joined us as a full-time research assistant; Joseph O'Sullivan, a longtime volunteer and coordinator of our Harbor Herons Foraging Study, has joined us as a part-time development assistant. We'd like to thank Yori De La Rosa, also a longtime volunteer, for his service as a part-time development assistant and wish him well.

PARTNERSHIP ACKNOWLEDGMENTS

Conservation is not possible without working partnerships. NYC Audubon collaborates with government agencies and other nonprofit and community organizations to reach broader audiences and achieve common conservation goals. Recent partnerships have included the following organizations:

Alley Pond Park Environmental Center	Grounded Truth Productions	New York City Department of Environmental Protection	Queens County Bird Club
American Bird Conservancy	Harbor Estuary Program	New York City Department of Parks and Recreation	Queens Botanical Garden
American Birding Association	Hawk Mountain Sanctuary	Central Park Arsenal Forestry, Horticulture and Natural Resources	Queensborough Community College
American Littoral Society	Hudson River Park Trust	Green Teen Program (formerly "Queens Green Teens")	Randall's Island Park Alliance
American Museum of Natural History	Huntington-Oyster Bay Audubon Society	Natural Resources Group	Raptor Trust
Animal General Audubon New York	Jacob K. Javits Convention Center	Staten Island Forestry Urban Park Rangers	Rockaway Waterfront Alliance
Bayside Historical Society	Jamaica Bay Ecowatchers	New York City Fire Department	Rocking the Boat
Brooklyn Bird Club	Jamaica Bay Institute	New York Harbor School	Rutgers University
Brooklyn Children's Museum	Kingsborough Community College	New York Restoration Project	SCAPE/Landscape Architecture PLLC
Bryant Park Corporation	Linnaean Society of New York	New York State Department of Environmental Conservation	South Shore Audubon Society
Canadian Wildlife Service	Manomet Center for Conservation Science	New York State Ornithological Association	Staten Island Museum
Central Park Conservancy	Massachusetts Audubon Society	New York State Wallerstein Collaborative For Urban Environmental Education	SUNY College of Environmental Science and Forestry
Children's Museum of the Arts	Metropolitan Transit Authority	NYC iSchool	Toyota
City College of New York	Metropolitan Waterfront Alliance	NYC Wildflower Week	The Trust for Governors Island
City University of New York Graduate Center	Municipal Arts Society	Ocean Conservancy	University of Connecticut
Hunter College	Natural Areas Conservancy	Port Authority of New York and New Jersey	University of Delaware
Macaulay Honors College	National Audubon Society	Prendergast and Laurel Architects	University of Maine
Queens College	National Park Service	Prospect Park Alliance	US Fish and Wildlife Service
Columbia University	Gateway National Recreation Area	Protectors of Pine Oak Woods	US Geological Service
Constitution Marsh Audubon Center and Sanctuary	Governors Island National Monument		US Green Building Council of New York
Cornell Cooperative Extension	National Park Conservation Association, Northeast Regional Office		USDA APHIS/Wildlife Services
Cornell University	National September 11 Memorial and Museum		Van Cortlandt Park Conservancy
Earth Matter NY	New Jersey Audubon		Wagner College
Ennead Architects	New Jersey Meadowlands Commission		Wave Hill
Fordham University	The New York Botanical Garden		Wild Bird Fund
FXFLOWLE	New York City Department of Correction		The WildLab
Governors Island Alliance			Wildlife Conservation Society
Great South Bay Audubon Society			Wildlife in Need of Rescue and Rehabilitation
Green-Wood Cemetery			Woodlawn Conservancy
Greenbelt Conservancy			

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Reception 6-7pm
Dinner and Program 7-9pm

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