

The Marsh Musings:

Newsletter of the Friends of Heinz Refuge at Tinicum

Fall 2008/Volume 0408

Sept 20th 2008 Cradle of Birding Wildlife & Conservation Festival

Come enjoy free food, live music, live animals, special tours, great speakers, and dozens of exciting exhibits at the 5th annual Cradle of Birding Festival. The festival will be held this year on Saturday, September 20th at the John Heinz National Refuge at Tinicum, in collaboration with the Delaware County Riverfest Ramble. Sponsored by the Friends of the Heinz Refuge and U.S. Fish & Wildlife Service, we are looking forward to another WILD day at the refuge.

The festival will feature keynote speaker Paul Baicich, Editor of "Birding" magazine and Author of "A Guide to the Nests, Eggs, and Nestlings of North American Birds," as well as 14 of the American Birding Association's "ABA Bird Finding Guides." Paul's keynote program will include a photography and natural history lecture on bird eggs, nests and nestlings, followed by a book signing in the FOHR Tinicum Treasures Bookstore following his talk on Saturday afternoon. He will also host a bird egg, nest and nestling ID workshop earlier in the day.

VOLUNTEERS ARE STILL NEEDED TO MAKE THIS ALL HAPPEN!

Exhibit setup, tour guides, roving naturalists, costume wearers, hosting receptionists, service projects supervision/helpers, promotion, refreshments bookstore and funding are just a few of the areas where you can get involved. You can make a difference by staffing the festival. To do your part and sign up as staff contact Refuge Manager, Gary Stolz at (215) 365-3118, stop by the office or email gary_stolz@fws.gov right away and with your help we will look forward to another fun and exciting festival. — Gary Stolz, Refuge Manager



Lorrie Schumacher & her Eurasian Eagle Owl at last year's Festival. This year features other exhibitors including the Bailey Foundation Exotic Bird Rescue, and more. Photo: Bill Buchanan, USFWS

September is the month to renew your membership in the Friends of Heinz Refuge at Tinicum. See the inside the last page for the membership forms. Membership is as little as \$10-\$15 a year and helps to support the Refuge and the costs of activities such as mailing this newsletter.

FOHR Board Meetings : The public is always welcome to attend Board Meetings, which are at 6:30 pm at the Cusano Building Visitor's Center the 4th Tuesday of the Month

Donations:

Donations are always welcome to help us help the Refuge



New or Renewing Memberships Thank you!

New

Ronald Brown
William Estes
John Giatropoulos
William Hamilton

Renewing

Carol Coleman
Theresa Easler
Ken & Sue Frank
Heidi Streich & Sharon McKee
Donna Miles
Paul & Judy Oshipp
Gerhard Schad
Laura Tracy



Marsh Musings



A quarterly publication of the Friends of the Heinz Refuge at Tinicum

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The Friends of the Heinz Wildlife Refuge at Tinicum is a non-profit cooperating association founded in 1997 to assist the U. S. Fish & Wildlife Service in carrying out its educational, interpretive, and public use missions.

Some Changes to the Marsh Musings

We have returned to our traditional 12 pages instead of the 16 we had for the past few issues. This saves paper along with our new emphasis on internet delivery of the Musings. We have redone the Microsoft Publisher template so that the pictures are now in color when viewed electronically. The printed copies remain in black and white. We have added a subheading to the title page to make it more clear that this is a newsletter.

The next deadline for articles is November 1st 2008 for the Dec, Jan, Feb issue. We always need stories from volunteers. Query the editor at markcary@comcast.net if you are interested in writing something. We like to have a diversity of voices represented.

The official registration and financial information of the Friends of the Heinz Refuge at Tinicum may be obtained from the Pennsylvania Department of State by calling toll-free within Pennsylvania, 1-800-732-0999.

Registration does not imply endorsement.

FALL SCHEDULE 2008

September

1	Buildings closed for the holiday, grounds open sunrise to sunset		
6	Birds, Trees, and Flowers	Tom Reeves	9AM
	Glorious Flowers	Dick Cloud	130PM
7	Looking for Migrating Birds	Doris McGovern	9AM
13	Early Fall Bird Walk	Debbie Beer	8AM
	Trail Tamers	Hank Hox	9AM
14	Fall Birding	Edie Parnum	9AM
	Family Program-	Staff	2PM
20	Cradle of Birding	7AM to 3 PM	
21	Morning Bird Walk	Doris McGovern	9AM
27	Early Birding	Barbara Heibsch	8AM
28			

October

4	Glorious Fall Birding	Mary Ellen Krober	9AM
	Fabulous Flowers	Dick Cloud	130PM
5			
11	Lovely Fall Bird Walk	Debbie Beer	9AM
	Trail Tamers	Hank Hox	9AM
12	Fall Birding	Edie Parnum	9AM
	Family Nature Program-		
13	Buildings closed for the holiday, grounds open sunrise to sunset		
18	Crisp Fall Birding	Barbara Heibsch	9AM
	Make & Take Story Time	Staff	1PM
19	Birding by Ear	Gregg Gorton	9AM
25			
26			

November

1	Fall Birds of Tinicum	Robert Confer	9AM
	Amazing Flowers	Dick Cloud	130PM
2	Birding by Ear	Gregg Gorton	9AM
8	Birds, Trees, and Flowers	Tom Reeves	9AM
	Trail Tamers	Hank Hox	9AM
9	Cool Fall Birds	Barbara Heibsch	9AM
	Family Program –	Staff	2PM
11	Buildings closed for the holiday, grounds open sunrise to sunset		
15	Birds, Trees, and Flowers	Tom Reeves	9AM
	Make & Take Story Time	Staff	1PM
16	An Avian Autumn	Debbie Beer	9AM
22	Chilly Birds	Brian Byrnes	9AM
23	Late Fall Birding	Doris McGovern	9AM
27	Buildings closed for the holiday, grounds open sunrise to sunset		
29			
30			

For more information on these programs and the Cradle of Birding schedule, call 215 365-3118 or see the web at Heinz.fws.gov
Any additions to the schedule will be on the Refuge web site

Cradle of Birding (selected events)

- US Congressman Joe Sestak, 9 am
- Advanced birding 7 am
- Beginning birding 8:30 am
- Bird-A-Thon 9 am
- Kids Birding 1 pm
- Birding by Ear 10 am
- Nature Photography workshop 8 am
- Fishing workshops 9 am to 3 pm
- Plant walk 10:30 am and 1 pm
- Live zoo show 11 am
- Plus Marin's fine art taxi-dermy, Fly Tying workshops, Animal Junction with Jungle Joe, Exotic Bird rescue, Forgotten Friend Reptile Sanctuary, Living History programs, Woodcarving, and more, more more...
- Kids face painting 10 am to noon
- Kids story time 2 pm
- Large adults dressed in animal costumes wandering about, including Smokey the Bear, Woodsy Owl, Blue Goose, and Teddy Roosevelt Bear

A Tribute to Bill Thomas... A Fallen Friend

Please join us in silent prayer to remember our friend and Administrative Support Assistant, William R. Thomas, who passed from this world on May 18th. Bill served as the refuge's receptionist and computer specialist since 2002, when he transferred in from the Department of Defense.

Bill was born in England and raised in Tioga County PA, where he developed a love for the outdoors, especially fishing and deer hunting.

After serving 17 years in the Navy, where he was stationed all around the world, Bill returned stateside to San Diego and then Philadelphia. With his passion for computers, Bill worked hard behind the scenes to keep all our office systems running smooth in between greeting visitors, answering phones and keeping up on all our administrative supplies.

He so much enjoyed watching wild turkey, deer and fox around the visitor center every morning and always had a story to tell. Bill's never ending passion for fishing helped bring exciting new angling programs and exhibits to hundreds of refuge visitors and he will be sincerely missed by all of us at the refuge.



Bill loved helping children learn fishing



Family fun at the Refuge

Make and Take Story time (Ages 3-5 yrs) at 1pm on the 3rd Saturday of each month. Join refuge volunteer Cynthia Moore for stories and take home crafts.

Nature Explorers (Ages 6 -10 yrs.) 2pm on the 2nd Sunday of each month. Join refuge staff to investigate Tinicum's natural wonders.

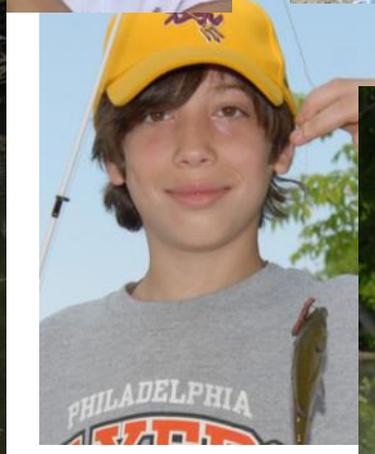
Anytime, Borrow a fun-filled backpack to take out on the trails. Learn about trees, insects, or mammals and become a Junior Naturalist! Ask at the front desk.

Fishing Rod & Binocular Loan Programs for All Ages. Want to fish but don't have a rod? Want to bird watch but don't have binoculars? Borrow one of ours!

Thank you Bill, for the Gift of Fishing



We will miss you



*All photos by Frank Doyle at the Passport to Fishing Program, 2008.
And thank you to all the staff and volunteers who made this a wonderful event.*

Avian Autumn: Thoughts from a Bird Walk Leader

by Debbie Beer, volunteer Bird Walk Leader at Tinicum NWR

Chilly mornings, piercing blue skies, the scent of dry brown leaves – these are some of my favorite things about Autumn. Fortunately, I get to experience these things regularly while birding at Tinicum!

Autumn at the refuge brings magical mornings filled with good energy, good friends and many good birds. The days may start chilly – even require hat and gloves – but the warm sun soon thaws cold fingers and sharpens views of flitting birds. Indeed, I need the sharpest views possible, because many bird species have shed their spring-breeding plumage and look more drab-colored than ever, as they fly through Tinicum during south-bound migration. Identification challenges are magnified when so many look like “LBJ’s” (little brown jobs)! Newly-fledged juvenile warblers may look like their brown-monochromatic mothers, making them all difficult to name.

Difficult or not, the challenge remains irresistible, and I spend many hours at Tinicum, birding in September, October and November. Besides the common warblers – Palm, Yellow-Rumped and Common Yellowthroats – the fall migration also brings Magnolia, Black-Throated Green, Black-Throated Blue, Black & White, Blackpoll and other Warblers. They may not be so readily identified as in the springtime, but no less exciting to see and study.

Shorebird migration has peaked by early Autumn, and if conditions are right, Tinicum entices a wide variety of dowitchers, yellowlegs, plovers and sandpipers to feed on mudflats. This year the main impoundment has not been drained, but good shorebird habitat can still be found on the south end of the refuge, for those who don’t mind walking a good distance beyond the Observation platform on the dike road.

Sparrows have recently captured my interest and delight. For years I ignored at this category of look-alikes, but like anything, after spending a little time studying, I realized that sparrow species can actually be identified with a bit of effort! Oversized Fox Sparrows are always a treat with their russet-red coloring. White-Throated Sparrows arrive in Autumn and stay all winter – distinctive with their yellow lores and high-pitched whistling song. The list of sparrows swells in October and November with White-Crowned, Chipping, Field and Savannah, along with Swamp and Song Sparrows. Mixed flocks of sparrows often feed in the grassy meadows near “Frog Pond,” on



Participants enjoy a Bird Walk at Tinicum, June 2008. (L-R): Becky, Marty, Emma, Scott, Theresa, Don, Dennis.

Photo: Debbie Beer, Walk Leader

both sides of the Haul Road.

Autumn is a great time to look for Raptors at the refuge, or along the highways while driving. Red-Tailed Hawks perch conspicuously on the light poles along Rte 476, and Ospreys soar occasionally over Rte 95 near the airport. Bald Eagles, Peregrine Falcons, Merlins and Harriers are all seen hunting at Tinicum, along with resident Cooper’s and Sharp-Shinned Hawks.

As Autumn days shorten and mornings get frostier, ducks become more numerous at the refuge. The large impoundment hosts a wide variety of dabblers and divers, including American Wigeon, Green-Winged Teal, Northern Pintail, Northern Shoveler, Bufflehead, Ruddy Duck, Hooded and Common Mergansers, American Coot and more. Many flocks feed at close range of the boardwalk, offering great views to morning bird walk participants. I hope to see you at Tinicum this Fall!

A Marsh Musing

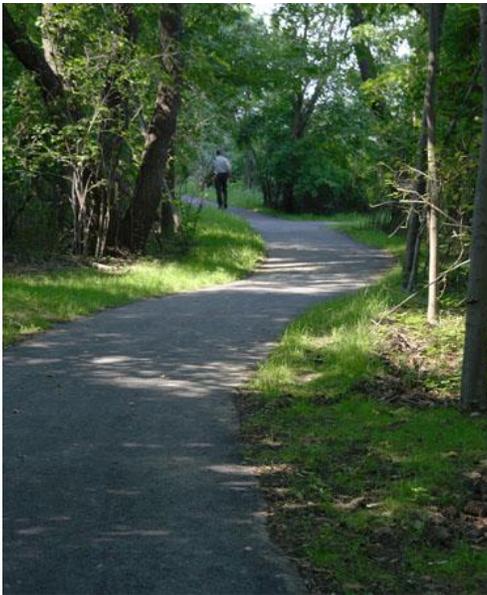
*Sweet bird! thy bow'r is ever green,
Thy sky is ever clear;
thou hast no sorrow in thy song,
No winter in thy year. - John Logan*

Refuge Wrap-Up

Gary M. Stolz, Ph.D. – Refuge Manager

As the whispering breeze begins to spell the end of summer, seasonal changes are once again cycling through the Tinicum Marsh. Shorebirds are always early Autumn visitors and are already stopping along mudflats within the marsh to feed on invertebrates during low tide. Fall waterfowl and neotropical songbirds will be close behind, feeding and resting in other parts of the refuge along their southern migrations. Watch for fall wildflowers such as asters and goldenrod, while cicadas and katydids serenade the woods with sounds of nature through late summer and early fall.

Paving has now been completed for the refuge's brand new .65 mile loop wheelchair accessible nature trail and a new viewing deck with spotting scope will soon be added. A ribbon cutting trail dedication with the Friends of the Heinz Refuge will be held during the Cradle of Birding Festival on Saturday, September 20th. A series of new interpretive exhibit signs have also been created and will



A lovely trail for a walk, and paved for wheelchairs and baby buggies. Photo: Bill Buchanan, USFWS

soon be installed along the refuge trail system. The refuge maintenance road repairs have now also been completed and a new gate has been installed for the shop. After sustaining major reoccurring storm damage to the refuge fishing pier along the Highway 420 tidal lagoon that required expensive annual repairs we now have rebuilt and relocated the pier to a new home. The new refuge fishing pier is now located in Hoy's Pond, right off the Cross Dike Road and double functions as a wildlife viewing deck.

This beautiful new location, offers great bass fishing opportunities as well as scenic vistas of a quiet woodland pond alive with herons, egrets, kingfishers, waterfowl and songbirds within the shade of willow trees. Remember, we also have both fishing tackle and binocular loan programs available in the visitor center... and both are free of charge!

A new special traveling art show featuring the work of wildlife artist Steve Oliver is now on exhibit in the visitor center through the fall, with more exhibits already scheduled to follow. If you are or know other artists interested in displaying wildlife paintings or photography, please contact Bill Buchanan at the refuge office. Thanks also to Bill and Christine for setting up a new Federal Jr. Duck Stamp art display and remember this contest is open to all students between grades K-12 with annual entries due by March 15th each year.

Our biggest event of the year, the 5th annual "Cradle of Birding Wildlife and Conservation Festival," will be held on Saturday, September 20th with early bird tours beginning as early as 7am and exhibits running from nine to three. This year's keynote speaker will be Paul Baicich, Editor of "Birding" magazine and Author of "A Guide to the Nests, Eggs, and Nestlings of North American Birds," as well as 14 of the American Birding Association's "ABA Bird Finding Guides."

Remember to bring your friends and families on out to enjoy the Refuge's many free programs offered every weekend and discover new ways to connect back with nature on your National Wildlife Refuge System... where wildlife comes naturally.

Christine Bettis, our Refuge AmeriCorp VISTA intern, also caught a fish at the Passport to Fishing event.

Photo: Frank Doyle



FOHR Photo Group hosts annual “Learning about the Environment Thru the Lens” (TTL)

By Bill Buchanan, USFWS

The FOHR Photo Group hosted its annual “Learning about the Environment Thru the Lens” program, or “TTL”, on May 3 and 10. The program is offered to high school aged students each spring. It consists of a half day of classroom work covering both photography and some environmental education (EE) followed by a half day of field work. As in the past, photo Group member, Mark Bohn, gave the photography portion and refuge staff member and USFWS/Photo Group liaison, Bill Buchanan, gave the EE portion. The EE portion shows how the refuge and Tinicum Marsh fits into the larger picture of the Darby Creek Watershed and the Delaware Estuary.

After the classroom portion students are teamed up with Photo Group mentors for their actual field work which is based on a theme. This year it was on “Spring and Re-birth at the Refuge”.

The following Saturday students are given prints of the images they shot in the field and proceed to create individual poster board displays as well as a “collective” display so they can work as a team. Upon completion they receive certificates, a choice of T-shirts from the “Tinicum Treasures” gift shop, their unused prints and a CD of all their images. Their displays are exhibited in the visitor center for several months.

While only 2 students were in this year’s program the Photo Group went ahead with it as this was the first time TTL went digital. The mentors actually let the students use their own, personal equipment, giving them much more to work with than had been used in previous years with basic manual film cameras and relatively limited zoom lenses. The Group is working to have several cameras, lenses, and other equipment donated by one of the camera manufacturers and/or retail photo stores, or have funds allocated to purchase equipment that would be dedicated to the TTL program. Previously, Sunoco had donated funds for the purchase of 6 identical 35mm SLR’s, with Camera Clinic of Clifton Heights, PA. (now Webbcam in Philadelphia) providing the cameras and lenses at cost.

This year’s students were Patrick Reilly of Glenolden and Brenden Beadle of Wallingford. They were mentored in the field by Frank Doyle and Mark Bohn respectively. When they returned the following Saturday to do their displays, they were mentored by Group member, Ron Holmes, and USFWS/Photo Group liaison, Bill Buchanan.

You can see the work that Patrick and Brenden created in the visitor center.

Connecting People to Nature and the Refuge with Some New Approaches

By Bill Buchanan, USFWS

Many people come out to the refuge and partake in the wonderful guided walks and programs about birds and flowers. They also come out to fish, hike, bike, and do a lot of photography. But very often some people may be unsure about how they can best get good photos without having humongous lenses and other equipment. And then there are those who are looking for something a little more uncommon about the natural world. To those who are in either of these categories we have two new family programs that just might offer what you are looking for.

Family Photo Safari is for anyone who wants to simply improve their picture taking or may be trying to find some of the better spots to shoot from at the refuge. We’ll give you some basic tips on how to make the most with what you have in the way of equipment, how to approach wildlife, looking at the same subject from different viewpoints, using flash outside (especially if it is vey bright to help cut down on harsh shadows and contrast!), and much more. We’ll try to answer your questions and help you get the most from your photographic efforts.

For some really different wildlife have you ever come face to face with the real world version of the Blob? Or have you ever seen the diversity of life that exists just a little bit beyond the limits of the naked eye? Well, we want to take you on a very special adventure to visit the world of the very small in Micro Adventures. You’ll get to see in real time some of the amazing creatures that exists in practically every nook and cranny of the refuge waters, soils, leaf litters, under rocks and logs and we’ll even show you how to collect them for yourself and grow your very own micro habitat. It’s often like visiting an alien world that exists all around us and is quite literally the foundation of the food chain and supports everything from insect larvae to bald eagles and even us!

The natural world is one of the most diverse and spectacular shows you will ever find. So why not find it right here, at your national wildlife refuge. It’s where learning comes naturally and you can connect with nature in so many ways. You can find out when Family Photo Safari and Micro Adventures takes place simply by checking out the quarterly walks and programs schedule right here in the Marsh Musings or by visiting the refuge website at hein.z.fws.gov

Heinz Refuge to Celebrate Refuge Week with 2nd Annual Jr. Duck Stamp Day

By Bill Buchanan, USFWS

National Wildlife Refuge Week will be celebrated at refuges throughout the country from October 12-18. Here at John Heinz, we will host our 2nd annual "Junior Duck Stamp Day" on Saturday, October 18. From 1-3PM actual winners from this year's Pennsylvania competition will be on hand, as well as some of their art instructors. Some of the students will even be demonstrating how they create their works. Both they and the instructors will be on hand to answer questions and perhaps even provide that extra needed word of confidence to some of our future, local competitors.

The Heinz Refuge is the destination point for all Pennsylvania entries and this is where the judging for the state is held. Refuge Manager, Dr. Gary Stolz, is the Pennsylvania Jr. Duck Stamp Competition Coordinator.

In the competition, 3 first, second, and third place winners, as well as honorable mentions, are selected from 4 age groups covering K-12 grade. From the first place winners, the "Best of Show" winner is chosen. This year the top winner was Ashley Matters from Lebanon, PA., who was also in the top 5 place winners in the national Jr. Duck Stamp Competition. Ashley attends Lebanon County Career and Technology Institute. Her art instructor, Wayne Hagy, is no stranger to seeing his students place in the top of the state competition each year, as well as to go on into the national competition. Last year another of Wayne's students, Madelyn Yohn, was selected as "Best in Show" for Pennsylvania, and went on to place 2nd in the national competition.

In addition to the students and instructors there will be some special exhibits and hand out materials related to the Junior Duck Stamp Program and the adult Duck Stamp Program. Of course, you can also purchase duck stamps at the Tincum Treasures Gift Shop. Proceeds from the sale of Duck Stamps go towards the purchase and preservation of wetland habitats that are absolutely vital to waterfowl as well as so many other species of plants and wildlife.

The 2008 Pennsylvania Junior Duck Stamp 1st Place winners can be seen in a new display at the refuge visitor center. For more information on the Duck Stamp Program visit www.fws.gov/duckstamp and for the Junior Duck Stamp Program visit www.fws.gov/juniorduck. You can also call 703-358-2000 or write to: U.S. Fish and Wildlife Service; Federal Duck Stamp Office; 4401 N. Fairfax Dr.; Mail Stop: DSO-4070; Arlington, VA 22203



Ashley Matters-Home: Lebanon, PA.-Age: 18-Best of Show 2008
Species: Canvasback-Title: Ducks at Sea-Medium: Acrylic
School: Lebanon County Career Tech

The Art of Steve Oliver through September 25 and then Andy Smith's Photography Returns through December

By Bill Buchanan, USFWS

One of the most highly acclaimed art exhibits to be at the refuge will be wrapping up its run on September 25. The artwork of Steve Oliver features multi media representations of North American wildlife from birds to large mammals and spectacular scenics.

Steve is a self taught artist who has won numerous awards and has exhibited widely. Many of his pieces are available as prints and you can see his amazing body of work by visiting his website at: steveoliverart.com

Following after Steve's exhibit will be the photography of Andy Smith for October through mid December. This will be Andy's second exhibit at the refuge. He has been exhibiting widely for several years and is a very committed environmentalist networking with others throughout the country. You can see Andy's work at his website at: andysmith-photography.com

Finally, the FOHR Photo Group is in the midst of revamping its Traveling Exhibit and should have that up and available by early 2009. Once the exhibit is ready it will be shown here at the refuge first.

Bird Behavior: Mobbing Predators

Last February on a bird walk we looked across the impoundment and saw a murder (the old word for a flock of crows) of a dozen crows cawing loudly and mobbing two great horned owls who took refuge in the inner branches of a large tree. What a racket, even from across the impoundment!

Small birds often mob larger predator birds, as well as other predators like snakes or cats. They tend to mob stationary or slow moving predators, but when under immediate risk such as a predator in flight, they generally hide and stay quiet. Mobbing behavior includes loud squawking, but can also include flying around, dive bombing, and even defecating on the intruder (Black headed gulls do this—they live in Europe fortunately, not here). Mobbing is more common during breeding season, and uncommon among migrants just passing through.

Some birds also give information about the predator in the mobbing call. For example, chickadees use the the number of 'dee's in their 'chick-a-dee-dee' call. About 4 for a small owl like a Northern saw-whet, but only 2 for a large predator like a rough-leg hawk.

Mobbing is dangerous for the smaller bird. There are reports of the predator taking out one of the mobbers, although this seems to be fairly rare. Mobbing takes time and energy away from foraging and may reveal nesting locations, so how did it evolve? What's the advantage to the mobber? Behavioral ecologists have developed a number of theories, including:

1) Move on Predator. A variety of studies have shown that mobbing will cause predators to move to another location. A recent study of the Australia 'powerful owl,' a large bird-eating owl, showed that 28% of their food was smaller forest birds, which they often capture near sunrise or sunset. Some species mob these owls and others do not. The frequency of predation was almost 9 times higher on the bird species that do not mob the predator.

2) Predator Distraction. They protect themselves and their babies by keeping the predator from concentrating on their search for prey. It is evidently hard to concentrate when a bird is defecating on your head. Eggs in nests near the center of a bird colony are less often taken than eggs at the periphery, where the mobbing is less intense

3) Alarm Call. The mobbing alerts others, especially mates and relatives, to the presence of the predator.

4) "Stotting". To convince the predator that the prey are quite vigilant or un-catchable and those not worth pursu-



A murder of crows mob two great horned owls at the impoundment edge in February. Photo: M. Cary from across the impoundment, a bit far for an inexpensive camera.

ing. Gazelles "stott" by jumping up on front of predators to show them how fast they are, and thus presumably aren't worth chasing.

5) Attract a bigger predator, who preys on the predator being mobbed.

6) Social leaning. To teach their young who the predators are. Some birds can even learn to "mob" a plastic bottle, although they do it half-heartedly.

In an experiment done 35 years ago, a plastic Horned Owl set out on a college campus bought an average of 6.2 mobbing crows with 18 decibels of noise. Adding a plastic crow set on its side (looking like the owl had killed it) more than doubled the number of mobbers to 14.7 and the decibel level to 41. Crows really seem to dislike owls.

Understanding birds and bird behavior is a lot of fun, and one way is to come to one of the Refuge's weekend walks (usually at 9 am for 2 to 3 hours, depending on the leader and weather). All the walks are listed in the Refuge schedule.

This information on mobbing is from Cornell's *Handbook of Bird Biology* and assorted journal articles. — Mark Cary



A Crow's nightmare



The public can go to front desk of the Cusano Environmental Education and Visitor Center at the John Heinz National Wildlife Refuge at Tinicum and borrow rods, reels and a tackle box full of hooks and other terminal tackle. This equipment is borrowed in much the same way books are borrowed from a library. The Visitor Center hours are from 8:30am to 4:00pm. Other tackle loan sites can be found on the PA Fish and Boat Commission's web site at: <http://www.fish.state.pa.us/loaner.htm>

This program is a partnership between the Pennsylvania Fish and Boat Commission, the American Sportfishing Association, and the John Heinz National Wildlife Refuge at Tinicum. The program is designed to make it easy for anyone to access fishing tackle. It's hoped that those making the loans will enjoy fishing so much they are hooked for life. This equipment may also be loaned to groups conducting angler education programs in the community.

Report Violations



U.S. Fish and Wildlife Service

John Heinz N.W.R. at Tinicum
(215) 365-3118

Pennsylvania Game Commission
SE Region Law Enforcement
(610) 926-3136

Pennsylvania Fish and Boat Commission
SE Region Law Enforcement
(717) 626-0228

EMERGENCY 911

Join or Renew your Friends of the Heinz Refuge Membership

This is a (please check) new renewal gift membership.

I am joining FOHR Tinicum at the following membership level:

- | | |
|--|------------------------|
| <input type="checkbox"/> \$10 Duckling (Student/Senior) | Name _____ |
| <input type="checkbox"/> \$15 Heron (Individual) | Address _____ |
| <input type="checkbox"/> \$25 Heron (Family) | City, State, Zip _____ |
| <input type="checkbox"/> \$50 Red-bellied Turtle (Group) | Phone _____ |
| <input type="checkbox"/> \$100+ Red Fox (Sustaining) | |
| <input type="checkbox"/> \$ _____ Donation+Membership | |

- I want a paper Marsh Musings Mailed
 Save the paper, send an email saying when the Marsh Musings is on the web
- Email _____

Make checks payable to FOHR Tinicum and mail to FOHR, PO Box 333, Folcroft PA, 19032-0333, or bring to the refuge next time you visit.

Membership supports conservation of the largest fresh water tidal marsh in Pennsylvania and entitles you to attend member only events and a 10% discount at gift shops operated by Friends of National Wildlife Refuges in the Mid Atlantic. If you give us your email address, we will email you (no more than monthly) with reminders of upcoming events and when the newsletter is posted to our website. We do not share your information with any other organizations.

