



The Marsh Musings:

Newsletter of the Friends of Heinz Refuge at Tinicum

Winter 2009/Volume 0109

The September Cradle of Birding was a great success, with more than 1,000 visitors. The Refuge opened the new wheelchair accessible trail (made possible in part by FOHR donations), provided dozens of exhibits and educational opportunities, and hundreds of free hot dogs provided by FOHR funds.

The Refuge and Friends Group are facing challenges. A recent GAO report “Wildlife Refuges: Changes in Funding, Staffing and Other Factors Create Concerns about Future Sustainability” (<http://www.gao.gov/new.items/d08797.pdf>.) explains the difficulties the Refuge system faces. There are new challenges and opportunities in our area— such as the upcoming airport plans to add another runway.

We need help in our Friends Group. We need additional volunteers, especially someone willing to serve as **Treasurer** and maintain some accounts. We need volunteers to staff the front desk and run the gift shop, as well as others interested helping to provide public programs. We’d like to get our web site up and running again. Please contact the Refuge front desk staff if interested (215 365-3118) and they will forward your name to us. Or, just show up at a FHOR Board Meeting on the 4th Tuesday of the month at 6:30 pm.

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

PLEASE RENEW: If you have not renewed your FOHR membership, please do so using the form on the next to last page.



Above: Congressman Joe Sestak and daughter Alex cut the ribbon opening the wheelchair accessible trail. Photo: Frank Doyle FOHR Photo Group.

Below: At the NJ Academy of Aquatic Sciences exhibit, Brie Ilenda shows a starfish to Emma Medina & her children Cecile & Lucas, and Taylor Picca and Ken Marsh. Photo: Ron Holmes FOHR Photo Group.



Donations:

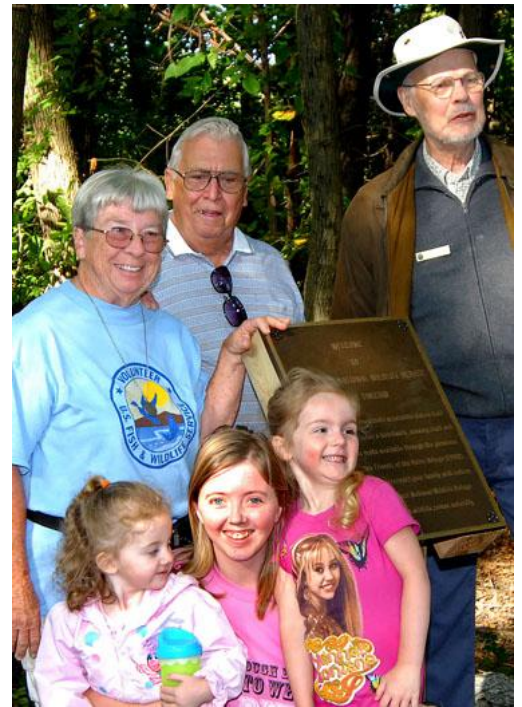
Donations are always welcome to help us help the Refuge



At the plaque for the new wheelchair accessible trail is Jean Diehl, the first FOHR President and long time Refuge advocate. Jean's efforts over the years were central in getting the refuge established. Next to her is her husband, Russ, and below is Jean's daughter Crystal and her two children. To the right is Bill Church, long time volunteer and former Board Member.

It is grass roots volunteers like Jean and Bill who are the real forces behind this Refuge as well as refuges and conservation all over the country.

Photo: Frank Doyle, FOHR Photo Group



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.

A note from Hank Hox, FOHR President

Just want to wish everyone a wonderful New Year. May it be better than last year. The highlight of 2008 was the completion of the Wheelchair Accessible Nature Trail, a 6/10th mile trail through the Refuge. This trail was made possible by the support of the Friends of the Heinz Refuge. Through donations by people like you and others. We hope to see more visitors using this great trail.

As always, we need for Volunteers to help keep the Refuge that you love the place you love. The Trail Tamers meet on the Second Saturday of every month rain or shine. There's always something to keep us busy. Come on down were always glad to see you.

A big thank you for all who supported us in the past and look forward to many more years to come.

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.

**2008-2009 Winter Wonderland Walks
at John Heinz National Wildlife Refuge at Tinicum**

For more
information,
call
**John Heinz NWR
at Tinicum -
215 365-3118**

**Lindbergh Blvd.,
Philadelphia, PA
19153**

December 2008

6	Early Winter Birding at Tinicum	Debbie Beer	9am
	Winter Plants	Dick Cloud	130pm
7	Birding by Ear	Gregg Gorton	9am
13	Cold Birding	Lynn Roman	9am
	Trail Tamers-New Volunteers Welcome	Hank Hox	
14	Early Winter Birds	Edie Parnum	9am
	Family Program-Snow/Hibernation	Staff	2pm
	Winter Birds	Denis Brennan	9am
20	Make & Take Story Time	Staff	1pm
21	Christmas Time Birds	Barbara Hiebsch	9am
25	<i>Christmas Day, Buildings Closed</i>	<i>Grounds Open Sunrise to Sunset</i>	

January 2009

1	<i>Happy New Year! Buildings Closed</i>	<i>Grounds Open Sunrise to Sunset</i>	
3	Winter Birding	Mary Ellen Krober	9am
	Outdoor Recreation Program**	Paul Schubert	2pm
4	Mid-winter Birds	Denis Brennan	9am
10	Cold Weather Birds at Tinicum	Debbie Beer	9am
	Trail Tamers-New Volunteers Welcome	Hank Hox	9am
	Cold Plants	Dick Cloud	130pm
11	Winter Birds of Tinicum	Edie Parnum	9am
	Family Program - Seasons	Staff	2pm
17	Snowy Birds of Tinicum	Brian Byrnes	9am
	Story Time/Make&Take-Seasons	Staff	1pm
18	Cold Birds	Barbara Hiebsch	9am
19	<i>M L K Day, Buildings Closed</i>	<i>Grounds Open Sunrise to Sunset</i>	
24	Who's Still Here?	Lynn Roman	9am
25	Birding by Ear	Gregg Gorton	9am
31	Cold Ducks on Ice	Doris McGovern	9am

February 2009

1	Late Winter Birds	Denis Brennan	9am
7	Winter Waterfowl at Tinicum	Debbie Beer	9am
8	Winter Wonderland Birds	Barbara Hiebsch	9am
	Family Program-MicroAdventures	Bill Buchanan	2pm
14	Birds, Trees, and Flowers	Tom Reeves	9am
	Trail Tamers New Volunteers Welcome	Hank Hox	9am
15	Snow Cold Birds	Robert Confer	9am
16	<i>Presidents Day Buildings Closed</i>	<i>Grounds Open Sunrise to Sunset</i>	
21	Easy Birding	Lynn Roman	9am
	Make & Take Storytime - Deer	Staff	1pm
22	Birding by Ear	Gregg Gorton	9am
28	Beginning Birding	Lynn Roman	9am

** Saturday, January 3, 2 PM. Meet in the Multipurpose Room Meet Paul Schubert and enjoy his program on the recreational movement of urban residents. Paul incorporates his own personal growth spurred on by his increasing interest and immersion into the great outdoors.



**The Cradle of Birding
Festival 2008
At John Heinz NWR
at Tinicum**



If you missed the Cradle of Birding Festival in September, you missed the visit from the Pirates, the friendly tame snake, and the wise old burrowing owl. The Festival returns next year in September. All photos: Frank Doyle FOHR Photo Group.



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!

Refuge Wrap-Up

Gary M. Stolz – Refuge Manager

After our first refuge frost on the morning of October 20th changing leaves are still clinging to the trees at the tail end of fall colors and our native wildlife is preparing for the upcoming winter season.

The tail end of warbler migration has now moved south, while sparrows and waterfowl are showing up with good numbers in the refuge impoundment and fresh water tidal marsh. Pine siskins, bobolinks and other special avian treats have been recently spotted by birders as they gather seeds from native vegetation now restored to the John Heinz National Wildlife Refuge at Tinicum. Raptors including bald eagles, red-shouldered hawks and even merlins have recently been spotted hunting here as well, while the woodchucks, now all fattened up from summer feasting are seeking their warm burrows... perhaps awaiting ground hog day next February.

A big thank you goes out to all of our friends, volunteers, exhibitors, speakers and staff for your wonderful help at the 5th annual Cradle of Birding Wildlife and Conservation Festival, which was held on Saturday, September 20th with more than 1,000 visitors attending.

We were again blessed with beautiful weather and a wonderful day of visitors enjoying learning about wildlife conservation from many important refuge partners. Let's all stay tuned for next year when we plan to do it again the third week of September of 2009.

For a post festival special event during National Wildlife Refuge Week on October 18th and 19th we also hosted, thanks to Bill and Christine, a Federal Junior Duck Stamp Program with artists and their teachers, along with a traveling art show featuring a visiting waterfowl decoy cavers club.

Please help spread the word that the 2009 Junior Duck Stamp contest brochure and entry form is now on line at www.fws.gov, then click on duck stamps and again on Junior Duck Stamp Program. The contest is open to all students between grades K-12 with annual entries due by March 15th each year.

In closing out our FY08 budget, we were able to achieve a number of major additional projects including complete repaving of the maintenance shop compound, purchasing

of a large emergency backup generator to power the visitor center/office complex, and several large preplanning projects that will become part of our upcoming Comprehensive Conservation Plan (CCP). CCP preplanning contracts now in place include development of our Refuge Habitat Management Plan (HPM), detailed deer population surveys, habitat study and management plan, as well as realty boundary surveys, right-of way and easements documentation for upcoming planning process.

At the marsh restoration site, we have also now purchased two new bridges, which will soon allow reconnection to the natural tidal flow of Darby Creek. Through detailed planning in the hydrological design of this exciting restoration area, we anticipate natural seeding of native plants from nearby wild rice and other emergent vegetation that has also been recently restored to the refuge's adjacent fresh water tidal marsh.

Out in the woods, check out our new interpretive exhibit signs that have now been installed along the refuge's .65 mile wheelchair accessible nature trail and the new viewing deck with spotting scope is now complete, along with the FOHR dedication plaque at the Haul Road Junction. Thank you all again who contributed toward the Friends quilt project (sewn together by Refuge Volunteer Pat DiPietro) that raised thousands of dollars towards this wonderful trail.

Our latest traveling art show in the refuge multipurpose room now features a beautiful wildlife photography exhibit by Andy Smith. If you are or know other artists interested in displaying wildlife paintings or photography, please contact Bill Buchanan at the refuge office.

We are also still in need of active refuge volunteers to help staff the visitor center desk and gift shop, help out on the fiends board with all kinds of projects and many other duties. Please contact us if you are available to lend a hand to the refuge.

Fishing tackle and binocular loan programs are available in the visitor center... and both are free of charge! Remember to bring your friends and families on out to enjoy the Refuge's many other free volunteer led guided programs offered every weekend and discover new ways to connect back with nature on your National Wildlife Refuge System... where wildlife comes naturally.

Junior Duck Stamp Day & Delaware Valley Decoy Collectors and Carvers Club

By Bill Buchanan, USFWS

The refuge celebrated National Wildlife Refuge Week and for the second year in a row, on Saturday, October 18, highlighted the wonderful artistic talent of students who competed in the 2008 Pennsylvania Junior Duck Stamp Program.

This year's "Best of Show" for the Commonwealth went to Ashley Matters of Lebanon, PA. Ashley's beautiful rendering of a pair of Canvasbacks also placed in the top 5 nationally. Her work was guided under the supervision of Wayne Hagy at the Lebanon County Career and Technical Center who also was the teacher for last year's "Best of Show" and the 2nd place winner in the national competition, Madelyn Yohn. Ashley was among the students who turned out for this year's event.



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

Other students, along with various family members who participated in Jr. Duck Stamp Day were Jacob and Jordan Speicher, of Cresco, PA., Tara Kosowski of King of Prussia, PA., Michelle Johnson of Avondale, PA., and Rahul Doraiswamy of Kennett Square, PA. In addition to the students, teacher, Anita Davidson was also in attendance. Anita teaches at Mother of Divine Providence School in King of Prussia and taught Tara Kosowski.

The Delaware Valley Decoy Collectors and Carvers Club graced the Cusano Environmental Education Center during Refuge Week with many of their prize decoys. The club also had actual carvers working on pieces on both Saturday and Sunday, October 18 and 19. According to club president, Lou Nolan, of Penn Valley, PA., the group



Jr. Duck Stamp Day students for 2008 from across PA. (L-R) Jordan Speicher, Rahul Doraiswamy, Ashley Matters, Tara Kosowski, Michelle Johnson, and Jacob Speicher. Photo: Bill Buchanan, USFWS

started from a base of area collectors who, for years, traveled to decoy shows and collecting organizations well beyond the local region. Many became members of those clubs. Nolan said, "It became time for our group to capture the carving expertise and great decoys that existed right here in the Delaware Valley. Our goals are to further the unique American art form of decoys, both by collecting vintage gunning birds and by recognizing the talents of our contemporary carver members."

The club certainly made a very impressive showing at the refuge as nearly 200 visitors viewed their wares and marveled at the craftsmanship exhibited as several members worked on pieces and answered questions.



Three of the Delaware Valley Decoy Collectors and Carver's club members— (L-R) Kevin Wharton, Lou Nolan, and Jode Hillman. Photo: Bill Buchanan, USFWS

2008 FOHR Photo Group Winners

By Bill Buchanan, USFWS

The FOHR Photo Group awarded ribbons, checks, and gift certificates to the winners of the 2008 Photo Contest during the Cradle of Birding Festival on Sept. 20. While the number of entries were actually lower this year the quality of many of the images submitted were very high. This year's winners are as follows:

Adult Category

1st Place: Larry Mayer of Aston, PA. with "Bald Eagle #1"
2nd Place: Katherine Meng of Glenolden with "Dragonfly"
3rd Place: Tina Kirkpatrick of New Cumberland, PA. with "Wood Duck"

Honorable Mention: Jim Quinn of Wallingford with "A Peaceful Repose" (Wood-Pewee) and Honorable Mention: John Orlich of Glen Mills, PA. with "Do These Cheeks Make Me Look Fat" (Chipmunk)

Teen Category

1st Place: Joe Ferrarelli of Aston, PA. with "On the Edge" (Zebra Butterfly)
2nd Place: Jessica Ferrarelli of Aston, PA. with "This is My Good Side" (Great Egret). There were no 3rd place or honorable mention winners due to lack of teen entries.

Children's Category

1st Place: Dalton Thomason of Brookhaven, PA. with "Lunch" (Great Spangled Fritillary on Corn Flower)
2nd Place: Bevyn Mannke of Glen Mills, PA. with "Pacific Coast Starfish"
3rd Place: Jack Mannke of Glen Mills, PA. with "Bottoms Up" (Sequoia Nat'l Park)



*Children's winner, Dalton Thomason of Brookhaven.
Photo: Ron Holmes FOHR Photo Group*

While we do not have any specific dates yet just a quick reminder that coming up this spring we will have our annual program for high school age folks, "Learning about the Environment Thru the Lens", or "TTL". This is con-



Brother and sister teen winners, Joe & Jessica Ferrarelli of Aston. Photo: Ron Holmes FOHR Photo Group

ducted over two consecutive Saturdays and includes classroom and field sessions and a wrap up with students creating their own poster displays. Photo Group mentors work with the students in the field and even avail some of their own equipment for student use.

Specific details will come out with the Spring 2009 Marsh Musings as well as on the refuge website and through the local area media outlets. So, if you have a budding photographer who gravitates to nature this may be just the program for them

Finally, we would like to invite new members to join the Photo Group. The only real prerequisite is that you must maintain an active membership with the Friends of the Heinz Wildlife Refuge, be a photographer (all levels welcomed), and be willing to give some volunteer time to the Group such as documenting events, programs, and special projects or get involved as a TTL mentor, help with exhibits and the contest and other Group projects that may come about. In return you get to join us for special Group only field days, off-site trips, and the friendship and bonds you can make with some of the most talented and dedicated folks behind a lens you may meet.

We invite you to sit in on one of our quarterly meetings which are held on the third Sunday of January, April, July, and October at 10AM in the refuge visitor center. In the event of date changes or cancellations it is always best to check with the refuge prior to scheduled meeting dates. Just call 215-365-3118 and ask for Bill Buchanan. So, unless weather or some other surprise comes our way our next meeting will be on Jan. 18, 2009.

The Ecological Restoration Plan: Invasive Species

The journal *Ecological Restoration* published an overview of the restoration plan for the refuge in its September 2008 issue. The author, Dan Salas, a lead consultant for the plan, noted that this plan was developed with funding awarded to the Friends of Heinz Refuge (us!, with the help of all our members and donors), which then hired the Delaware Riverkeeper Network to develop the plan.

The plan identified four key concerns: 1) too many deer due to the loss of natural predators resulting in an altered and degraded plant community, 2) invasive plants, with 17 different species of key interest, 3) the loss of freshwater tidal marsh, and 4) numerous pollution sources including high densities of impermeable surfaces, storm water runoff, and thermal pollution.

The excessive deer browsing affects invasive species, because re-establishing native plants and biodiversity can't work if the deer simply eat all the new plants. Thus, deer browsing was highest on the list of concerns.

Priority was assigned to invasive species least established, but with the most potential for future impacts. The overall goal recommended was to prevent new invasions and focus initial control on those areas least invaded. The table lists the invasive species in priority order (using their common names rather than the Latin name).

You are probably familiar with 'mile-a-minute,' the vine that covers native plants, but there are many more. Japanese knotweed is second on our list, but the Refuge has been able to control it by mechanical means. Purple Loosestrife (5th on list) has proven more difficult to control. Likewise controlling for one invasive sometimes gives a benefit to another invasive. For example, lowering the water level in the empoundment kills some kinds of invasives, but allows others to grow. The Refuge is working with a plan called "adaptive management," recognizing that ecology is a dynamic system.

We will have more details about the restoration plan and the tradeoffs involved in adaptive management in a later issue. If you'd like a pdf of the journal article, email me at markcary@comcast.net and I will send a copy to you.

—Mark Cary.

Rank/Species	Impact	Extent	Management Difficulty
Strategy: Eradicate localized occurrences			
1. Mile-a-minute	High	Med	Low
2. Japanese knotweed	High	Low	High
3. Porcelainberry	Medium	Low	Medium
Reduce existing populations/Eradicate localized occurrences			
4. Phragmites reed	High	Medium	High
5. Purple loosestrife	High	Medium	High
6. Japanese honeysuckle	High	Medium	High
7. Norway maple	Medium	Medium	High
8. Oriental bittersweet	Medium	Medium	Medium
9. Japanese Stiltgrass	High	High	Medium
Remove as warranted with control of higher priorities species			
10. Tree-of-heaven	Medium	Medium	Medium
11. Japanese hops	Medium	Medium	Medium
12. Bush honeysuckle	Medium	Medium	Medium
13. Garlic mustard	High	High	High
14. Multiflora rose	Medium	Low	Medium
15. Reed canarygrass	Medium	Low	Medium
16. European privet	Low	Low	Low
17. Common mugwort	Low	Low	Low



A group of happy late-summer birders out enjoying the birds and accessible trail. Photo: Denis Brennan FOHR Walk Leader

Wondrous Winter Waterfowl

Thoughts from a Bird Walk Leader

by Debbie Beer, volunteer Bird Walk Leader at Tinicum

I may never understand why ducks don't instantly freeze up in frigid, ice-rimmed waters. My feet are cold just looking at the pond, I can't imagine swimming in it! Such is the life of waterfowl in the wintertime. But chilly toes are forgotten when large flocks of myriad ducks arrive at Tinicum, giving long, rewarding views.

It is fitting that the refuge's main impoundment hosts a wide variety of waterfowl species. Our country's national wildlife refuge system, managed by the U.S. Fish & Wildlife Service, was established at the turn of the 20th century initially to protect migrating ducks and waders from uncontrolled hunting that was decimating populations.

Since President Teddy Roosevelt designated Florida's Pelican Island as the first NWR in 1903, the system has grown to include more than 100 million acres under over 550 refuges, sheltering thousands of species of plants, birds, mammals, reptiles, amphibians and other wildlife, many of them endangered. John Heinz National Wildlife Refuge at Tinicum, established in 1972, comprises about 1,200 acres of diverse habitat in Philadelphia and Delaware counties, hosting over 300 documented species of migrating and nesting birds. Our refuge provides important resources for wintering waterfowl, many of whom travelled hundreds of miles before stopping to feed here.

On frosty days, dabblers and divers can be abundant in the large main impoundment, affording good looks to enthusiastic visitors. Spotting scopes are useful for viewing and studying ducks, but most can be seen well enough with binoculars from the main boardwalk.

Dabblers such as American Wigeon, Gadwall, Green-winged Teal, Northern Pintail, Northern Shoveler, Wood Ducks and Mallard feed at the surface of shallow areas by "dabbling" their bills into the water. They may also upend their bodies to reach vegetation at the bottom of the pond, looking rather comical with their butts in the air! Dabblers rarely dive.

Divers are found in deeper waters, frequently diving underwater in search of small crabs, fish, invertebrates and plants. Typically smaller in size and more characteristically diverse than dabblers, divers like Bufflehead, Ruddy Ducks, Ring-necked Ducks and mergansers may be underwater much of the time, making identification a delightful

challenge. Redheads and Canvasbacks are less common winter visitors to our area and always a treat when they show up. While Lesser Scaup are more common inland, Greater Scaup are also a possibility, and I enjoy the challenge of confirming the species I.D. by studying the field marks of these handsome ducks. The Lesser Scaup crown peaks at the back of the head (not as distinct as a Ring-Neck) and the black bill tip is small and narrow, if you are close enough to see this. By contrast, Greater Scaup crown is higher in the front of the head, giving it a rounded appearance, and the black bill tip is a bit wider and bigger. While they look very similar, with practice you can see the subtle differences. Keep an eye out for Pied-billed Grebe, American Coot, Blue-winged Teal, and possible loons or goldeneyes.

For additional views of ducks, I recommend a side trip to Franklin D. Roosevelt Park, located next to the stadiums in



Too cold for you to go out looking at ducks in subzero weather? Duck carving is an alternative. Here DVDCC member Bob Biddle carves a duck during their show at Tinicum. Photo: Bill Buchanan, USFWS.

South Philly, just a few miles away from Tinicum. The smaller ponds consolidate the birds, giving great looks of a possible 12 to 14 species at close range.



Bundle up and join one of the weekend bird walks at Tinicum this winter. I look forward to enjoying many wonderful waterfowl species with you!

The White-Throated Sparrow Morphs

Winter is coming to the Tinicum Marsh and the white-throated sparrows will be arriving from the frozen north for the balmy weather here in Philadelphia. They are easy to identify because they look like typical sparrows but have a large distinctive white patch on their throats. They sing the distinctive “Old Sam Peabody, Peabody” or “Oh Sweet Canada, Canada” song. In Philadelphia, we believe they sing “Oh Sweet Tastycake, Tastycake.”

White-throated sparrows have one of the most unique reproductive strategies any bird in the world. White-throats come in two kinds, called “morphs,” with either a white stripe down the center of their head from front to back, or a tan stripe. This “plumage polymorphism” corresponds to an inversion on their 2nd chromosome (call it “I” compared to “i” for the non-inverted). Each bird has two sets of chromosomes (one from mommy and one from daddy). The white birds are heterozygous (i.e., I,i), while the tan birds are homozygous (I,I). They are unusual in that white almost always mates with tan (called “disortative mating”). Thus, about half the offspring are I,I (tan) and half are I,i (white).

So, yawn, so what? Well, according to recent research by Elaina Tuttle, the two forms pursue different reproductive strategies—the whites are more aggressive and the tans more protective.

The white males help a single female raise young while also attempting to mate with other females on other male’s territories (Biologists call these “EPCs”, for extra-pair couplings). These EPCs were always unsolicited and the females always responded with aggression. Elaina Tuttle describes one as, “the male flew quickly toward the female and knocked her into the shrubs, where a struggle ensued.” The white males also invest heavily in advertisement through song and intrusion into neighboring territories. A few even maintain a second female on their territory.

The tan males, on the other hand, invest more in parental care (that is, actually taking care of the babies) and in mate guarding. The mate guarding is successful, as the tan males are rarely cuckolded. Tuttle found that tan male with white females raised about 4% of their young from an EPF (Extra-pair fertilization), while the rate was about 32% for the white male with tan female. In other words, when the white morph went out looking for EPCs, the other white morphs moved in on his territory.

The female strategies are less clear. The white fe-



A White-throated sparrow, white morph. The white morph is the more aggressive. The tan morph has a tan stripe down the top of the head. Photo by Steve Lestengart, Rhode Island, Wikipedia commons.

males have a higher solicitation rate than the tan with their mate, and there is some evidence that the white female are aggressive in laying eggs in other females’ nests, a practice called “conspecific brood parasitism.” The white females also provide less parental care, possibly putting the tan males in what one biologist called a “cruel bind.” That is, if the male deserts to pursue EPCs, then the costs may exceed the benefits if the white female does not increase parental care sufficiently.

Although the white-throated sparrow’s reproductive behavior may appear to be just an interesting oddity, to ecologists it is utterly fascinating. Because the pattern is stable over time, it suggests that each strategy has about the same long-term reproductive success. Exactly why this is the case is not at all clear.

Both the behaviors and color morphs are clearer on the summer breeding grounds rather than on the wintering grounds. However, next time you see a white-throated sparrow, remember that, as tame and quiet as they look, they that they lead complicated and somewhat messy reproductive lives. For more information, see Elaina M. Tuttle’s article “Alternative reproductive strategies in the white-throated sparrow” in *Behavioral Ecology*, 2003, 14 (3), 425-432.

And, thanks to Tinicum bird walk leader Edie Parnum, who first pointed out the two morphs to me.

— Mark Cary.



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:

- \$10 Duckling (Student/Senior)
- \$15 Heron (Individual)
- \$25 Heron (Family)
- \$50 Red-bellied Turtle (Group)
- \$100+ Red Fox (Sustaining)
- \$ _____ Donation

Name _____

Address _____

City, State, Zip _____

Phone _____

- 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.



Friends of the Heinz Wildlife Refuge at Tinicum

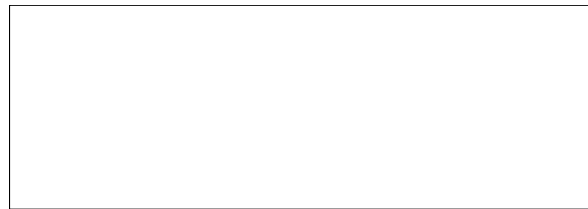
PO Box 333

Folcroft, PA 19032-0333

Return Service Requested

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U.S. Postage
Paid**

Permit 335



If you have not renewed your membership, now is a good time to do so on the form inside

Your Friends group needs your help. We are especially looking for:

- A **treasurer** to keep track of our expenses
- Volunteers to **staff the front desk and gift shop**
- More **trail tamers** to help out in the battle against invasives and to maintain our trails
- Anyone interested in helping to **develop programs** for members and the public

If interested, please **call the Refuge office** (215-365-3118) and leave a name and number or email, and that information will be passed on to us, and we will be in touch.