



Volunteer of the Year

Hawthorne Honored

Gary Hawthorne of Rochert, MN was presented with the Tamarac Refuge Volunteer of the Year Award by last year's recipient, George Weatherston of Fargo, ND. Hawthorne has been volunteering for just over 3 years. In this short time he has accumulated over 300 hours providing refuge visitors quality service with a sense of humor.

Gary is a regular host at the Tamarac Visitor Center. He has also assisted with grouse surveys, Christmas bird counts, fall festivals, refuge tours, high school biology class visits and more. As a retired den-

tist he is an expert in the field of pulling teeth, which comes in quite handy at the deer check station each fall. In times of need, he has always come through, whether it's to welcome a pack of Head Start children or to run the visitor center during bird festival weekend.

Thank you for your enthusiasm for the refuge and your smile every Wednesday morning. The refuge staff and TIA are proud to have Gary donate his time and share his enthusiasm for the refuge.

And, congratulations!



Gary Hawthorne (left), Rochert, MN was honored as Tamarac Volunteer of the Year at a June 1st, 2006, volunteer banquet at the Speak Easy restaurant. Last year's award recipient, **George Weatherston** (right) of Fargo, ND presented the award on behalf of the staff and volunteers of Tamarac National Wildlife Refuge.

We Make a Difference

Wanted: Volunteers!_____

Do you enjoy sharing your enthusiasm for wildlife? Would you like to meet visitors from all over the world? Or does participating in field research appeal to you? Why not become an integral part of our refuge team by volunteering at Tamarac?

Becky Hastad enjoys being outside and interacting with people. As a tour guide she interprets the natural and cultural history of the refuge. As a visitor center host, **Lois Branter** welcomes visitors to Tamarac, provides information about the refuge, and operates the store. Come fall, folks like **Cheryl Didier** enjoy waking up at the wee hours of the morn and banding ducks with the biologists.

Other positions include gardener/groundskeeper, clerical aide, wildlife survey assistant, invasive species GPS mapping, photographer, maintenance helper and more. As you can see, there are many different opportunities for folks to share their talents at the refuge.

Volunteer applications are available online at www.tamaracfriends.org. To learn more please contact Janice Bengtson at 218-847-2641.

Hi, Friends!

I am pleased to be able to write a few words for the newsletter. I think TIA members are a super bunch and I look forward to meeting all our newest members soon. Everywhere you look on the refuge, you will see the effects of our dedicated, caring volunteers. We have definitely made a difference!

You may not have met one of our newest volunteers and board member, Denis Mudderman, but his influence is evident in many ways. He has designed a website for Tamarac of which we are very proud. Besides being beautiful and creative, the website is a valuable reference for information about the refuge. Denis has also installed a computer in the visitor center with an interactive bird quiz. You'll love the challenge of testing your knowl-

edge of birds by playing this entertaining game the next time you visit.

We really value the experience and love of nature that each volunteer brings to our organization. The fresh, new ideas keep us moving forward with our activities and improvements, so we hope that many of you will consider donating your time and talents. August 24th we will be getting together for a volunteer picnic that is always great food and enjoyable company. Soon it will be time for our annual Open House on September 30, and many members are already working making plans for this event that grows in popularity every year. Mark your calendars for that day and come to the refuge to spend a memorable day of fun.

Thanks to our many volunteers and I hope to see you soon at Tamarac National Wildlife Refuge.

Thank You!

Much appreciated donations were received from the following:

- *Jean Traver Memorial Donations
- *Nancy Moulden in Memory of Sally Moulden
- *Bruce Besse and Friends
- *Memoriums to Carl Randolph
- *Country Fields - Flowers for Visitor Center Entry

Donations to the Tamarac Interpretive Association (501 (c) 3) are tax deductible and help support the educational programs, volunteer program and habitat enhancements at Tamarac National Wildlife Refuge.

Tamarac Interpretive Association, Inc.
35704 County Hwy. 26, Rochert, MN 56578
(218) 847-2641, www.tamaracfriends.org

Mission: To facilitate activities and programs that interpret, protect and restore the natural and cultural resources of the Tamarac National Wildlife Refuge.

Nancy Moulden, President	Detroit Lakes, MN	Term Expires 2006
Rosie Greenland, VP	Detroit Lakes, MN	Term Expires 2008
Theresa Haney, Secretary	Rochert, MN	Term Expires 2006
Wayne Olson, Treasurer	Detroit Lakes, MN	Term Expires 2007
Ruth Olson	Detroit Lakes, MN	Term Expires 2006
Denis Mudderman	Rochert, MN	Term Expires 2008
George Weatherston	Fargo, ND	Term Expires 2007
Penny Nielsen	Detroit Lakes, MN	Term Expires 2008
Donna Stewart	Rochert, MN	Term Expires 2007

Refuge Advisors to the Board

Barbara Boyle, Tamarac Refuge Manager	218-847-2641
Barbara_Boyle@fws.gov	
Kelly Blackledge, Tamarac Visitor Services	218-847-2641
Kelly_Blackledge@fws.gov	
Denis Mudderman, Webmaster tamaracweb@yahoo.com or www.tamaracfriends.org	
Becky Hastad, Newsletter Editor rhastad@tvutel.com	

Member Highlight

Welcome Greg Hoch

By Penny Nielsen

We welcome Greg Hoch from Hawley, MN, to our TIA family. He becomes our first and (at this time) only *Life Member*. Greg is an Assistant Professor in the Biology Department at Concordia College in Moorhead, MN. He received his Bachelor of Science degree from Wabash College in Indiana and Master's and Doctorate degrees from Kansas State University.

Greg got involved at the Tamarac through the Detroit Lakes DNR office working with Mark Chase and Scott Kahan. During the summer he would have students do biodiversity surveys on WPA's in Clay County looking at plants, invertebrates, birds, and small mammals. Later the students surveyed invasive plant species. Having a deep interest in grassland ecology, especially fire, grazing, and birds, he found Tamarac with its forested area a perfect fit.

Mike Murphy from Hamden's Slough NWR and Wayne Brininger from Tamarac NWR met Greg through discussions about future research involving the golden-winged warbler.

In addition to the projects mentioned Greg runs the MAPS (Monitoring Avian Productivity and Survivorship) bird banding station at Buffalo River State Park along with fire and grazing programs on other refuges. He is presently taking part in a 23-refuge project looking at shorebird and waterfowl use of different water impoundments.



Website Updates

Plugged In

By Denis Mudderman

The website boasts some new and expanded features. We've added a section to the website (and menu) of information and news for just TIA members and volunteers. Currently on this member page you can see the pretty faces of the TIA board in a group photo taken at the annual meeting.

Also, in the Photography section, there are high quality photos taken at Tamarac with the TIA logo that can be downloaded and used on your computer desktop. Good desktop photos are ones where you can still easily see

your icons. These uncompressed photos require lots of server space, so we will only offer a couple at a time and change them each month.

Finally, we are significantly expanding the wildlife and plants sections and your help and participation with these pages would be appreciated. Birding and insect pages have been added, and loons, wildflowers, and invasive species pages will soon follow.



Reminders

Tamarac Newsletter Deadlines: January 15, April 15, July 15, October 15. We'd love to include your Tamarac stories.

The Tamarac Interpretive Association collects grocery receipts from Central Market that show the "We Care" sticker. TIA receives one cent for every dollar you spend. They really add up! So mail or drop off those receipts at the refuge and help us accomplish even more.



Membership dues are paid annually October 1st. Check your label to see if you are current. If you are unsure if your 2006 dues are paid, you may call Kelly Blackledge at Tamarac 218-847-2641. Remember that with your paid dues, you receive a 10% discount in the Tamarac gift shop, seasonal newsletters, and special tours.

Trumpeters Successful at Tamarac

One of the highlights of visiting Tamarac is the beautiful sight of trumpeter swans. Sadly, this wasn't always the case. By the late 1800's trumpeters had completely disappeared from Minnesota. Swans were hunted for their beautiful white feathers, their skins and meat. Habitat was also disappearing as settlers moved across North America. By the 1930s only 69 remained in the lower 48 states, living in the remote Red Rock Lakes area in southwestern Montana.

It was during the 1960s that restoration efforts began. The Hennepin County Park Reserve District obtained 40 swans from Red Rock Lakes to establish a breeding flock. For the first time in 80 years, swans were nesting in Minnesota.

In 1982, the Department of Natural Resources Nongame Wildlife Program joined the effort to restore trumpeters to Minnesota. During the next three years, they acquired eggs from Red Rock Lakes and LaCreek National Wildlife Refuges, the Minnesota Zoo and Chicago's Brookfield Zoo. From 1986-1988, the DNR was also able to collect over 50 eggs from Alaska and reared those young at Minnesota's Carlos Avery Wildlife Management Area. In the spring of 1987, 21 two-year-old swans were released at Tamarac. In 1994, 38 more were released in

Becker (including the refuge), Itasca and St. Louis Counties.

With a total release of 350 swans, Minnesota now has more than 2000 individuals. Trumpeters continue to do well as we have again set a record productivity on the refuge. In 2005, a total of 80 cygnets were produced from 14 pairs. A total of 17 breeding pairs/nests were documented by refuge biologists Lowell Deede and Wayne Brininger, but a few nests failed to produce cygnets. Deede and Brininger are predicting the number of cygnets produced in 2006 to be lower, but Tamarac continues to be one of the premier trumpeter swan production sites in the lower 48 states.

So, as you observe these graceful images of beauty on the refuge, think about the effort, dedication and support that went into restoring a part of Minnesota's natural history.

Trumpeter Trivia:

+Trumpeter swans are the largest waterfowl species in North America. They can weigh 20-30 pounds, can measure up to 5 feet long and have a wingspan of up to 8 feet.

+Adults are pure white with black bills and feet.

+Males (cobs) and females (pens) mate for life and begin nesting when they are 4 years old. Their mound-shaped nests consist of marsh vegetation and can measure 6-12 feet across and 18 inches high.

+Adult nesting swans can be very aggressive and will defend territories up to 100 acres against predators and other swans.

+Pens will lay a clutch of 5-7 eggs in late April.

+The young will hatch after 35 days of incubation. These 'cygnets' are light gray in color and will eat aquatic insects and crustaceans for the first few weeks of life. By three months, they will feed on aquatic vegetation. When they reach 4 months of age, they will be ready to fly – just in time before freezing temperatures set in.

+Trumpeters will winter in the central United States in open water areas along the Mississippi River in Arkansas and Missouri and west to Oklahoma. (In Minnesota, a good place to view swans is on the Mississippi near the Monticello Power Plant.)

+In the spring, the one-year-old cygnets will return with their parents to nesting sites only to move out on their own.

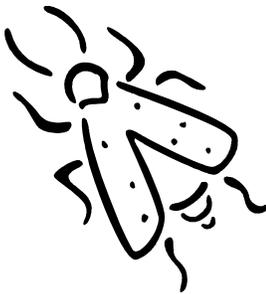


Shoo-Fly

By Denis Mudderman

Summer at Tamarac features landscapes, vistas, and an abundance of flora and fauna to see and enjoy, but, unfortunately, one also has to contend with swarms of deer flies. Having to wait for the first frost to venture back out into nature causes a lot of missed summer opportunities.

Over the last month, during deer fly season, I've seen three young grey foxes north of Pine Lake, several hundred small bull-heads trying to swim up-



stream like salmon at the Chipewewa Lake dam, I've encountered a breathtakingly beautiful expanse of yellow-orange ox eye wildflowers, and I've found where I could enjoy some fresh, wild raspberries. So, it's a priority trying to figure out how to deal with the throngs of deer flies ready to ambush any mammal that crosses their path.

Not being an entomologist, I had to learn something about deer flies. They are in the fly family *Tabanidae*, along with horse flies, and plague much of the U.S. There is state government website information on

deerflies in such far-flung locations as Colorado, Florida, Tennessee, and Michigan. Deer flies develop along a one year life cycle with adults living two to three weeks. Both male and female deer flies feed on nectar and plant juices to get the energy for flight. In order to nourish their eggs, it is the female deer fly that feeds on blood using mouth parts that are like knives or razors. Eggs are laid in grasses and aquatic vegetation.

Deer flies locate their hosts by movement and by carbon dioxide. They are particularly attracted to darker moving objects. Rather than hunt for hosts, they sit and wait and then ambush. There is usually more deer fly activity on sunny days with no wind.

In reviewing a number of websites, the verdict on the effectiveness of Deet insect repellent is mixed. Some sites claim that Deet is ineffective; others state that Deet won't stop deer flies from buzzing around you, but it will help keep them from landing and biting. My experience supports this latter view that Deet does help.

An interesting product is Tred-Not™ Deerfly Patches which are sticky on both sides

and placed on the back of a hat. They take advantage of the fact that deerflies like to go for the highest point, plus the carbon dioxide that would trail behind a moving head. In a comparison test between duct tape and the Deerfly patches, at the end of an hour's hike, the duct tape had zero stuck deer flies (it wasn't sticky enough), where the Deerfly patch had over 50 stuck deer flies. The Deerfly Patch should handle smaller numbers of deerfly exclusively. For the frequent July Tamarac deer fly horde, it is probably best to wear light clothing and a hat, use a Deerfly Patch in combination with Deet repellent, and take advantage of windy days.

If you have other effective approaches to dealing with deer flies, please let us know. We will post your suggestions on the TIA website along with the references used for this article.



NEWSLETTER OF THE
TAMARAC INTERPRETIVE
ASSOCIATION

Website: //midwest.fws.gov/tamarac
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35704 County Highway 26
Tamarac National Wildlife Refuge

Phone: 218-847-2641

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Attend the Fall Open House

Let the spectacular fall colors throughout the refuge lure you to Tamarac for the Fall Open House. This year we will feature conservation efforts for birds of special concern.

Guided bus tours of the refuge will take you to out-of-the-way places on the refuge as we travel through habitats suitable for the Golden-wing Warbler, Trumpeter Swan, Bald Eagles and more. You'll learn how biologists are collecting

Tamarac Fall Open House *Bringing Back the Birds*

Saturday, September 30
10:00 am – 4:00 pm

sample some wild edibles. The kids can try their luck at using different types of bird beaks and making a nest.

Browse the work of local artists and the Tamarac Bookstore which is stocked with gifts for everyone on your Christmas list.

You'll see the past and present of conservation in action at Tamarac National Wildlife Refuge.



information to monitor the health of these populations.

Then, step back in time and learn how people have influenced the bird populations of today. You'll be intrigued by the stories of the Passenger Pigeon, Egrets, and even the Canada Goose. Take a peek inside an old settler's cabin and

