

Skimmer

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The Francis M. Weston Audubon Society

Tri-State Growth Threatens Water Resources in Panhandle

By Adam Snyder, Executive Director
Alabama Rivers Alliance

As the saying goes, we all live downstream. Yet, no one lives more downstream than the residents—human, fowl, or otherwise—of Florida's Panhandle.

For more than 17 years, the states of Florida, Alabama, and Georgia have engaged in what has been affectionately known as the tri-state "water wars." It has pitted all the downstream interests against Atlanta, whose thirst for growth threatens to deplete water resources for the rest of us.

Atlanta claims it needs millions upon millions of gallons of water to supply existing and future demands in the sprawling metropolis. They have proposed getting this water from the Alabama-Coosa-Tallapoosa (ACT) basin and the Apalachicola-Chattahoochee-Flint (ACF) basin by either removing the water through inter-basin transfers (pipelines) or through great withdrawals from Lake Lanier and other existing reservoirs in both basins.

The original requests for water, granted by the Army Corps in 1989, forced Alabama and Florida to sue the Corps and Georgia. During the past two decades, there have been court battles, court-mandated negotiations, governor summits, public outcry and scrutiny of proposals. And now, the issue is where it began—in federal court with an uncertain future.

What does that leave the rest of us, those of us who live nowhere else but downstream? Most simply, it could mean less water supplies for recreation, drinking water, terrestrial and marine economic opportunities, and supporting habitat. It could mean many of us will be drinking more of Atlanta's treated wastewater downstream. It could mean those areas that are "water poor" try to take water from areas that are "water rich," pitting local governments and property owners against one another.

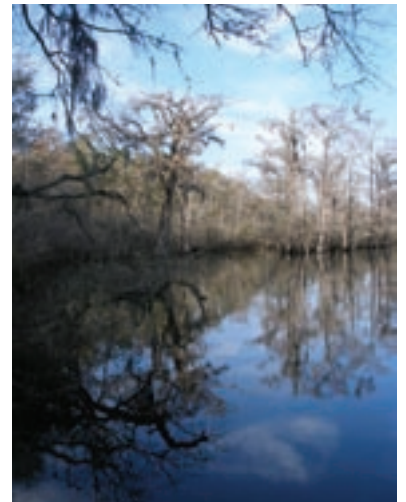
The residents of the Florida Panhandle are wedged in the

middle of the effects of poor water policies and planning. The Apalachicola River would most likely be the most adversely affected by such large water withdrawals by Atlanta. It would affect flows, habitat, and vital commercial fisheries in the bay.

The coastal plain streams that feed much of the Panhandle are more likely to see indirect impacts from the water wars. While Atlanta extends its reach farther and farther away to gather the water it needs, other communities may be forced to reach farther away to obtain their water needs as well. The sparsely populated coastal plain streams of Alabama could be targeted for water needs in other areas of Alabama, therefore potentially diminishing the flow that reaches south, from Perdido Bay to Apalachicola.

These are all projected, uncertain concerns. The fact is, until we get a legal resolution to the water wars, we are only speculating at the impact to downstream residents. However, it is essential that residents in Florida, Alabama, and Georgia push their elected leaders to set policies that will protect natural flow regimes and the downstream and in-stream stakeholders of our shared waterways.

For more information about the ACF and the Tristate Conservation Coalition, please visit chattahoochee.org.



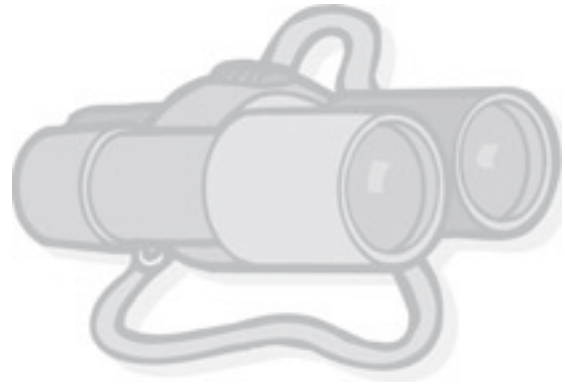
Field Trips

Saturday, February 10, Ft. Walton Beach Spray Fields Birding. Bob Duncan will lead us around and through the spray fields and adjacent ponds and forested areas in search of the many species of birds which winter in this area. Expect moderate walking with possibly some wet conditions. Plan to eat lunch in a restaurant. Meet at 7:30 a.m. in the shopping center parking lot across the highway from the Gulf Breeze Hospital entrance. We plan to return by mid afternoon.

Saturday, March 24, Ed Ball Nature Trail Wildflowers. James Burkhalter will lead us on a walk to find early spring wildflowers along the Ed Ball Nature Trail at University of West Florida. The trip will also include a visit to the UWF Herbarium, which has over 20,000 plant specimens. Expect easy walking. Meet at 7:30 a.m. in the University Mall parking lot in front of the J.C. Penney Store. We will finish by noon.

Friday thru Monday, March 30–April 2, Southern Louisiana Birding. Morris Clark will lead us on a long weekend birding trip to southern Louisiana. We will spend some time at the Lake Martin rookery (spoonbill-egret-anhinga-ibis-heron rookery) in The Nature Conservancy's Cypress Island Preserve, if the birds are nesting there this year. Over 30,000 pairs of waders have nested there in some years, making Lake Martin one of the most ecologically important rookeries of its kind. Also, we plan to spend some time driving through Vermilion Parish and adjacent areas looking at shorebirds and ducks. Rooms are available at LaQuinta Inn located south of I-10 Exit 103A on Hwy. 167 in Lafayette. Twelve rooms at a price of \$65 per night are being held until March 15. Call 800-531-5900 and mention FMW Audubon Society Group to make your reservations. To sign up call Morris Clark at 968-5498 and leave your name, telephone number, e-mail address, and send a \$30 per participant contribution to Francis M. Weston Audubon Society.

Saturday, April 14, Ft. Morgan and Bon Secour NWR Birding. Peggy Baker will lead us to look for neotropical migrants at one of the best places along the upper gulf coast. A visit to the Sargent's bird banding station will be included. Expect some



moderate walking in sand. There will be a small admission fee at Ft. Morgan. Bring a picnic lunch and drinks for the day. Insect repellent is always a good idea. Meet at 7:30 a.m. in the former Winn-Dixie parking lot across from Walmart on the east side of Navy Blvd. south of U.S. Highway 98. We will return by mid-afternoon.

Chapter Meetings

Pensacola Junior College, Main Campus, 7:00 p.m.
Baroco Science Center, Room 2142

Thursday, February 22, Eagles & Penguins & Storks, Oh My! Jim Brady will explore the biological basis for the new classification of birds.

Thursday, March 22, Bird and Butterfly Gardening with Native Plants of the Central Gulf Coast. Emily Peterson, of The Garden Gate in Gulf Breeze, will share tips for successful gardening with a variety of native and non-native plants.

Board of Directors' Meetings

(Open to all members)

February 1, 7 p.m. at Ann Forster's home, 447 Creary Street.

March 1, 7 p.m. at Baskerville-Donovan building 449 West Main Street, Pensacola.

Other Events (Open to members and visitors)

Saturday, February 10, Hyatt Center Volunteer Day, 9 a.m. Call Mo Michel 433-3151 for details.

Friday—Monday, February 16–19, Great Backyard Bird Count. See page 6 for details.

Saturday, February 17 Big Lagoon State Park, 9:00 a.m. Dedication of the F.M. Weston observation tower followed by a bird walk with experts.

Saturday, March 31—Friday, April 13, bird banding at Ft. Morgan.

Volunteers Needed for RHEC Programs

The Francis M. Weston Audubon Society membership helps sponsor educational programs at the Roy Hyatt Environmental Center (RHEC). These programs continue to teach bird biology to hundreds of 2nd and 5th graders in Escambia County elementary schools of. Your naturalist-educators also have been busy taking pre-field trip and post-field trip visits into the classrooms at Semmes, Weis, Carver, and Spencer Bibbs Schools, where they have met with about 260 students. These are among the ten schools targeted by our grant from the National Fish and Wildlife Foundation for intensive in-classroom visits that complement the field trips to RHEC. We have refined the new unit on birds for 5th grade classes, and revised the 2nd grade unit that has been teaching children about birds for several years. Some of the ten targeted schools have already received a feeder tray and a supply of birdseed to bring birds to the classroom windows, and we will continue to provide each of the remaining schools with a window feeder, thanks to the construction skills of Dan Forster.

OUR PROGRAM NEEDS YOUR HELP—Plans to fully implement this program of in-school visits depends, frankly, on the addi-

tion of some volunteers to our teaching corps. We have identified three levels of assistance that will make it possible to continually engage the students in these ten schools. Levels are identified by the following names: (1) *Painted Bunting* level is in contact with a selected school, and delivers birdseed and general information to the school on an ad hoc basis. (2) *Summer Tanagers* are volunteers who will accompany a naturalist-educator on classroom visits, and provide continuing liaison between the classes in a selected school and our naturalist-educators. (3) *Pileated Woodpecker* level volunteers are those who are willing to become trained to not only accompany the naturalist educator into the classroom, but also will conduct a pre- or post-field trip visit and continue to follow up with the classes in their selected school.

We are seeking additional volunteers who will visit a school about once a month. We will provide the training needed to make volunteers comfortable in that role.

Please call Jim Brady at 456-5083, or Lynn Ogden at 937-2117 if you would like to participate at any of these three levels of engagement with our children.

UWF Student's Research Monitors Success of Project GreenShores

By Aiza An Lim, Marketing Communications, UWF

University of West Florida graduate student Chasidy Hobbs had always been passionate about coastal environments, so when she came to Pensacola nearly 10 years ago, it was natural for her to study the waters. Hobbs noticed that construction waste, instead of natural vegetation, was used in several areas to keep the shorelines from eroding, and Hobbs thought there had to be a better way.

"Using native plants can be just as effective," said Hobbs. "Plants help to bind sediments which reduce erosion and help improve water clarity. Plants also help keep the natural ecological balance of



Chasidy Hobbs at Project GreenShores.

the area by providing food and habitat for many sport fish, something construction waste and seawalls do not do."

Hobbs hopes to develop a solid foundation in restoration science as she

completes her master's thesis focusing on a nationally-recognized habitat restoration effort, Project GreenShores.

She says that most restoration projects nationwide receive considerable planning and funds dedicated to the initial design and implementation process, but there is considerably less focus when it comes to researching the success and sustainability of the projects.

Under the guidance of Chris Houser, a UWF environmental science assistant professor, Hobbs is characterizing the morphological evolution of the first phase of Project GreenShores. She will

See Project GreenShores **on page 7**



F I E L D N O T E S

by Bob Duncan

■ Once rare, the **Bald Eagle** is making a comeback in our area with two seen 30 November by Ann and Dan Forster from their home on Davenport Bayou and another spotted by Betsy Tetlow in Pensacola on 16 December. The **Western Kingbird**, rare vagrant from the western states, was widely reported this season. Between 3 December and 18 December, 9 birds were reported between Pensacola and Ft. Walton Beach. Clem Bonifay watched about 200 transient **White Pelicans** soar over downtown Pensacola on 2 December. On 23 November, Anna Stalcup spotted 3 very rare Sandhill Cranes near her home in Pace. A very irregular winter visitor, a Fox Sparrow 5 December, was seen in Gulf Breeze at the home of Linda Bogiages and Paul Blakeburn.

■ Fred Bassett of the Hummer Bird Study Group made three forays into our area, with outstanding results. Fred banded 18 individuals of five hummingbird species. They were: **Rufous** (8 November, at Vicky Parker's in Pensacola and the Friedman's 4th year return in Niceville; 16 December at Sharon Roberts' in Pensacola, a fifth year return; 17 December, Glenda Bowman's, Pensacola); **Black-chinned** (8 November, at Jan Lloyd's, Pensacola, third year return); **Calliope** (8 November, Pat Taylor's, Gulf Breeze, a 2nd year return and 12th area record); **Buff-bellied** (17 December, at Vicky Parker's); and **Ruby-throat** (16 December, at Jan Lloyd's). Another visit by Fred into our area on 6 January resulted in six additional Rufous Hummingbirds banded, two **Buff-bellied** at Brenda Roose's in Gulf Breeze, two **Black-chinned** at Powers and Rosann McLeod's, and a Ruby-throat and Rufous at Annabelle Miller's home.

■ Four **American Black Ducks** unreported in our area since 1965, were photographed by Laura Catterton on 13 December at the catfish farms in northern Escambia Co. This species can be confused with the female Mallard or Mottled Duck but her photos were diagnostic. Jere French found a very rare and hard to detect winter visitor, a **Winter Wren** on 13 December in his Gulf Breeze yard. On 27 December, Howard Horne, Lucy, Scot, William and Bob Duncan made a kayak-canoe trip up the Escambia River and detected four of these wrens. Perhaps it is not all that rare in the proper habitat. The same trip yielded 3 very rare **Hairy Woodpeckers**. A **Masked Booby** photographed by Joe Kern off Eglin AFB 14 November provided a 2nd area November record. James Pfeiffer heard an **Indigo Bunting**, casual in Dec. on the 20th in Gulf Breeze. A very rare (and handsome) adult male **Western Tanager** was photographed on 31 December at the home of Robin and Tom Stiles in Niceville. Another graced Paula Palmer's feeder in Pensacola on 18 January for the second year in a row! On 30 December John and Joan Burr were astonished to see a

foolish (or brave) **Killdeer** walking down the middle of Fairpoint Dr. in Gulf Breeze!

■ A **Tree Sparrow** found by Sam Tagatz, Jan Osborne and Carolyn Henning on 3 January at the Ft. Walton Beach Spray Fields was outstanding and a third state record if accepted by the Florida Ornithological Society Records Committee (FOSRC). Peggy Baker and Pam Beasley spotted a rare **Black Scoter** in the sound off Gulf Islands National Seashore 5 January and I was able to relocate it on the 8th. Paul Johnson photographed a **Brown Creeper**, rare winter visitor, on 8 January at the Avalon Beach Nature Trail. On January 3, I found a **Prairie Warbler** at the Ft. Walton Spray Fields, a bird that should have been wintering in the tropics, and 3 rare **Brewer's Blackbirds**. A visit to the Ft. Walton Beach Spray Fields 10 January rewarded me with a **Brown Creeper**. Laura Catterton's visit to the Perdido Landfill yielded a beautiful first year **Iceland Gull**, only the fourth for our area. Her knockout photos will be reviewed by the FOSRC. The discovery of **Horned Larks** 14 January in a muddy field in Jackson County sent the Duncans on an impromptu bird chase for this "state bird" which we found immediately upon arrival at the site. Winter birding often surprises us, and makes getting out in the cold worthwhile!

■ **THE 2006 PENSACOLA CHRISTMAS BIRD COUNT** (CBC) was 16 December with 38 participants in 11 areas. The weather was ideal, from 50-70 degrees under sunny skies with light winds. Weather may have contributed to this Pensacola record count of 140 species, the previous high being 136 in 2000! The count included 14 species of ducks, 8 species of herons, and rarities such as **Lesser Black-backed Gull**, **Western Kingbird**, **Yellow-throated Vireo**, **White Ibis**, and **Calliope**, **Buff-bellied**, **Rufous**, and **Ruby-throated Hummingbirds**. The total of 17,991 individuals seen represented a remarkable increase over the previous two post-Ivan years. However, this number is still down when you consider that the average number of individuals seen on the CBCs for 1988 through 1998 was almost 27,000! However, 5,000 of that average came from the **Fish Crows** roosting near Cordova Mall that disappeared after 1996.

The Skimmer welcomes reports of noteworthy birds. If you have something to report, please call Bob or Lucy Duncan at (850)932-4792.



Species with asterisks require documentation so that they may be processed to become part of the ornithological record.

For many areas of the world, water conservation is almost a necessity at this time in human history. There are so many of us now, and we each use so much water, that water conservation should be a way of life for all. Yet, little in the way of water conservation happens until a crisis hits. This is especially true where good quality water is plentiful, as in the Southeast.

The recent serious conflicts over water in the Apalachicola River can be traced, in large part, to the founding of Atlanta at the end of a railroad line, not on a major river. Farm products were shipped by railroad from Atlanta, not on a traditional river transportation system. Unlike most large cities, Atlanta does not have a major river passing through it that serves its transportation and water supply needs. It is now a major city that sprawls for many miles into what were previously farmlands. All those people use huge amounts of water and there is no huge local supply to meet that demand. Thus, Atlanta consumes a large portion of the water from the relatively small rivers that flow past it. Hence, water supply is a serious concern for Atlanta and its suburbs.

Fortunately for far Northwest Florida, a thick and

Whether water is in short supply or not, water conservation makes sense.

productive sand and gravel aquifer supplies most (over 80%) of our potable water. From about Crestview eastward, water comes mainly from the Floridan Aquifer, composed of limestones that are very deep in our area, but become more shallow to the east. Both these aquifers produce so much high-quality water that we have almost ignored the fact that the supply is not unlimited. Some of us old-timers recall the “artesian” wells that our parents and grandparents

enjoyed—wells that needed no pumps or pressure tanks to deliver plenty of water for home use. It was not until after the Northwest Florida Water Management District was formed about 30 years ago that controls were placed on the use, and waste, of potable water from such wells. Now that agency pursues several mandated goals relating to both quantity and quality of water for humans as well as natural ecosystems.

Whether water is in short supply or not, water conservation makes sense. I hope you all will take action to minimize your use of water. Not only will conservation delay the onset of additional water use controls, it will allow natural systems to function normally and support the other living things we value and which add so much enjoyment to our lives.

TRIPPING— or no good deed goes unpunished

by Ann Forster

I was clearing out some old books and journals when it dawned on me (a year after the fact) that among the losses that our friends in Louisiana suffered in Katrina was loss of their books. I e-mailed Mac Myers who many of you met at Audubon meetings. He lost everything in Katrina and was the lucky recipient of the Duncans’ hospitality staying in what has now become Refugee Cottage. I told Mac that I had thirty years of *The Auk*—the scientific journal of the American Ornithologists’ Union. I also had forty years of *American Birds*—the Audubon Society’s journal of seasonal bird population and distribution records; plus forty years of *Birding*, a journal for the serious birding amateur emphasizing tips on travel and identification. I asked him if he could check around and see if anyone needed these journals and, in a moment of temporary insanity, said that we would deliver them. In about five minutes, I had an e-mail from the Curator of the LSU Museum of Natural Science say-

I was clearing out some old books and journals when it dawned on me (a year after the fact) that among the losses that our friends in Louisiana

ing that their library had significant water damage and they were thrilled with the offer.

We rushed around collecting boxes and packing them. I am here to tell you that slick paper journals weigh a ton, but no matter, we were doing a good deed. We got the van packed and on the morning of November 14, set out for Baton Rouge. Ten miles east of Loxley on I-10 Dan ran over a board followed immediately by the whop-whop sound of a really flat tire. Dan called AAA for help, and told the agent that he was 80 years old, thinking it would speed up their arrival. While he gave AAA our location data, I moved the boxes of journals, found the jack (not easy), jacked the van up and removed the flat. The hardest part was retrieving the spare that had to be lowered by turning a bolt 33 times counter-clockwise. Of course the spare had to be dragged out on the I-10 side because the manifold blocked the passenger side. [Editor’s note: Can you imagine the AAA agent’s surprise when Dan said, “Cancel that. My wife just changed the tire”?]

After buying a new tire in Robertsdale we resumed our trip, negotiating a line of blinding thunderstorms at the Louisiana line. By the time we got to LSU, all we did was turn the journals over to the curator, shake hands all around, and hit the road.

■ **A Birdwatching Class, “Birding for Newcomers and Novices,”** will be offered this spring by the FMWAS chapter. Classes will consist of three classroom lectures, and three Saturday field trips. Designed for beginners, topics covered will include what you need to know to identify birds, birding tools and resources, birding ethics, geographic and habitat explanations for diversity, northwest Florida birds, and fieldcraft. The introductory cost for this series is \$100 for members, and \$120 for nonmembers, which includes membership in National, Florida and the F. M. Weston Audubon Societies. Class size is limited. For information, contact any board member, or Lucy Duncan at 932-4792.

■ **Audubon Rallies Support for Woodpecker Search.** Audubon of Florida is helping fund the search for the Ivory-billed Woodpecker in Florida’s Panhandle, and has rallied its partners including the Disney Wildlife Conservation Fund, the Apalachee Audubon Society, and the St. Joe Company to contribute an additional \$15,000 to aid the search for this inspirational bird. To learn more about and to support this inspiring search, visit: auburn.edu/ivorybill.

■ **Purple Martins have arrived** in northwest Florida! On January 5, they were seen in Sarasota, and soon were seen in Pensacola. If you have a Purple Martin house, it’s time right now to get it cleaned and ready. Male martins arrive first to stake out and defend nesting sites while waiting for females. House Sparrows and Starlings are the greatest problems with untended martin houses. These two non-native birds usurp the nest cavities, and destroy martin eggs. The website purplemartin.org/ has all the information you need to be a successful Purple Martin host.

■ **Energy Star Qualified CFLs** are compact fluorescent lights that fit into standard light-bulb sockets, using 30% less electricity than standard bulbs. If every U.S. household replaced their five most frequently used light fixtures or the bulbs in them with Energy Star qualified options, each would save about \$60 a year in energy costs, but we’d also prevent greenhouse gas emissions equal to the emissions from 8 million cars! Compared to standard incandescent bulbs: CFLs last 10 times longer, use one third the energy, fit almost any fixture, generate 70% less heat, provide the same amount of light and each CFL prevents more than 450 pounds of greenhouse gas emissions over its life. Join your fellow Americans in saving energy and money. For more information, see energystar.gov/.

■ **The Nominating Committee for FMWAS officers and board of directors for 2007 consists of Peggy Baker, Lucy Michel and Mary Newman. If you have suggestions for Officers or board of directors positions, or if you would like to become more involved with the organization and its projects, please contact Peggy Baker (934-3242) or any Board member. The slate of nominees will be voted upon at the Annual Meeting in late May.**

■ **“Corkscrew has a twist—no mosquitoes”** is the subtitle of a news story in the Toronto Star, highlighting Audubon’s Corkscrew Swamp Sanctuary. A gem among Audubon Sanctuaries, Corkscrew is located near Naples, Florida, and is home for an extensive breeding colony of Wood Storks and other wading birds. Here one can wander the elevated boardwalk finding birds accustomed to humans. Eyeball to eyeball you can find owls and herons, moorhens and more, but no mosquitoes. Unseen beneath the quietly flowing waters, beneath the lily pads and pond lettuce, the “mosquito fish”—*Gambusia*—feed on the mosquito larvae, their voracious appetites provide natural control. *Gambusia* live in northwest Florida, and are a wise addition to one’s backyard

pond. This is a good time to add them to your aquatic habitat before warmer weather and skeeter season starts.

■ **American White Pelicans migrate through northwest Florida,** but do not winter in the Pensacola area. On occasion, a flock of them will put down on the shallow bays in the Pensacola area—Blackwater and Escambia Bay—and more rarely on Pensacola Bay. When they do so, they typically spend the night and move on the next day. They are so heavy, they need sun-generated thermal uplift to fly. A small flock of White Pelicans

winter in the Mobile Bay area within sight of Interstate-10. In fall, White Pelicans are in transit to South Florida, originating from populations that breed east of the Rockies. Spring finds the reverse journey underway.



“Choosing Eyeglasses for Birding”

(*Bird Watcher’s Digest*, Jan.-Feb 2007 issue) by

Wayne Mones tells you a few things to know about how binocular manufacturers design products to accommodate the eyeglass wearer’s needs, as well as how to purchase eyeglasses that will help you get a lot more enjoyment from birding. We highly recommend this article.

Skimming

by Jere French

It's the middle of winter and you're huddled around your fireplace. Outside it's 49°. Well, quit grumbling and go birding. Not just your backyard, go to Michigan, the Upper Peninsula and icy Lake Superior. The Great Gray Owl is waiting.

It's February, 1999 and I'm flying out of Detroit. Small plane. Small airline. In fact this is their only airplane, and I'm their only passenger. Bill Jones Airline. Bill's the flight announcer, ticket taker, and yes, the pilot. I'm the co-pilot, in a manner of speaking, but I don't touch anything. We're coming into Sault Ste. Marie Airport, it's 5:45 p.m. and black as a witch's you-know. As we bank and turn for a landing, I catch a glimpse of a narrow clearing in the snow with drifts of three or four feet on either side. Bill slips the Piper into this groove, cuts back the throttle and leans over to me.

"Got your bag? Okay, grab that door handle and get ready to jump. Not gonna make a full stop. And close the door after you!"

And I'm out, a dull, hard chill embracing me, alone in the black and white night as Bill roars off into a starlit sky. The shadowy terminal shrinks darkly under deep snow. No lights anywhere. With measured steps I mush toward the appearance of an entrance. The door is open.



*"Got your bag?
Okay, grab that
door handle and
get ready to jump.
Not gonna make a
full stop."*

"Hello?" No answer. Down the corridor a wisp of light slips from under a doorway. Behind the door a human voice. Relief. A young woman seated behind a desk frowns up at me. She gets up from her desk and pulls on a heavy coat and wooly cap. There were only two cars in the parking lot. She gets into one, hands me the keys to the other. "Good luck finding wherever you're goin'."

"I'm going birding. The Great Gray Owl awaits!" And I begin sweeping snow off the adjacent lump, fully expecting to find a car beneath.

This is how the Adventure of Whitefish Point began. Do you know how hard it is to see through binoculars at minus 26°? The lenses fog up, the focus ring goes stubborn, and droplets of ice cling to your eyelashes. We are birders, pushing our way through the snow drifts of Lake Superior, in search of arctic birds: Redpolls, Pine Grosbeaks, Snow Buntings, Bohemian Waxwings, Snowy Owls. And when the Gyrfalcon glides over the icy shoreline of the lake, swooping low over our heads, well, we all go nuts.

We celebrate in one truly unique hostelry, outside the quaint town of Sault Ste. Marie, pulling off layers of goosedown coats and sweaters to perspire in front of the blazing fire of a giant stone hearth. We eat thick, hot sandwiches, and swill cold beer. Exhausted, ecstatic. And I'd love to go back again. Well, doggone, we missed the big owl.

Project GreenShores Continued from page 3

look at how the constructed wetland responds to being exposed to a series of storms, and how plant demography, as well as exposure to high and low tides, will affect that response.

The success of Project GreenShores means there will be wave protection for a major highway, and water quality will be improved because of the continued growth of marshes that help

reduce excessive amounts of nutrients from stormwater runoff and suspended sediments.

For more information, contact Hobbs at chobbs@students.uwf.edu.

An unedited version of this article originally appeared in the University of West Florida's *Fountain* newsletter.

