



LEWS NEWS



Photo: Kristin Stanford

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Protecting Lake Erie's Natural Heritage

A Flagship for the Islands

By Kristin Stanford "The Island Snakelady"

Wildlife conservation often focuses on large, highly charismatic, well-liked animals such as Giant Pandas, African Elephants, and Sea Turtles; or alternatively, as I like to say, the "cute and fuzzies". Although many conservation campaigns focus on these animals (e.g. Save the Whales!), often the actual act of "saving" them also protects their habitat and all of the other species that thrive within.

These animals are known as *flagship species*; a concept that many conservation organizations strongly support. The World Wildlife Fund, for example, has been actively involved in the conservation of the Giant Panda and has used one as its logo since its inception in 1961. In their drive to "Save the Panda", they have diligently worked with the Chinese government to set up over 50 panda reserves, thereby protecting more than 10,400 km² of mountain forests and countless numbers of other species living there.¹ Truly a victory for conservation, as well as a great example that the island community, can surely follow!

No, that was not a typo.

Now, I know we don't have Pandas, and we may not really even have any large, highly charismatic, well-liked mammals (besides Pat Daily) that can act as our ambassador of island conservation. However, we do have an animal that fits most of the descriptions associated with a typical flagship species. The Lake Erie Watersnake!

No, that was not a typo either!

Now before you call me crazy, let's run through some additional facts concerning flagship species.

Fact 1: Flagship species are typically on endangered lists, such as the Giant Panda, The African Elephant and the Lake Erie Watersnake which is listed as endangered in Canada and the state of Ohio, and threatened under the US Endangered Species Act.

Fact 2: Flagship species usually have a strong public outreach component to their conservation such as the "Save the Whales" campaign of the Humpback Whale, and the strikingly similar LEWS catchphrases "Save our Snakes" and "Water Snakes Welcome Here".

Fact 3: Because of their vulnerability, flagship species often provide a means for obtaining grant monies in order to protect the areas they inhabit. For example, the WWF and the Chinese government worked together to set aside thousands of acres of reserve for the Giant Pandas, and similarly the Lake Erie Islands Chapter of the Black Swamp Conservancy and the Division of Wildlife have been working to set up conservation agreements with island landowners to protect LEWS habitat.

So maybe I'm not so crazy after all.

However, I have admittedly avoided something that was originally mentioned as an important characteristic of flagship species; the fact that people really like them. And that's because I feel it should be the least important. Surely something doesn't need to be "cute and fuzzy" in order for us to appreciate and conserve it. Does it? It's true that the Lake Erie Watersnake may not be the most charismatic of creatures we might choose as our ambassador of conservation. I suppose the fact that most people don't like snakes at all doesn't help the argument much either. But the bottom line is: *this animal is a unique part of the island ecosystem found no where else on earth*, and with that comes an intense drive to try and protect it. If we know that (see Flagship, page 2)

A Giant Slither Toward Recovery: ODNR Manages Habitat for LEWS

The Ohio Department of Natural Resources (ODNR) has developed a management plan for all ODNR Lake Erie island properties to protect the Lake Erie Watersnake and its habitat, and ultimately contribute significantly toward achieving the goals outlined in the Recovery Plan, so that the snake can one day be removed from the Federal endangered species list. The U.S. Fish and Wildlife Service officially accepted the plan in August 2005.

ODNR will lead in the conservation of the LEWS and its habitat through the implementation of the plan, entitled, "Lake Erie Watersnake Habitat Management Planning, Lake Erie Island Properties Owned/Managed by the Ohio Department of Natural Resources." The plan outlines specific measures that will be undertaken to protect the snake on all island properties. For example, where practical, ODNR will establish "no mow buffer zones" within 70 feet of the water's edge to serve as a refuge for interactions between snakes and people. In addition, ODNR will implement specific mowing guidelines for different areas of habitat, and will implement a number of other protective measures during normal land

maintenance activities, such as tree clearing, herbicide application, and dock repair and construction.

The table below compares total ODNR protected shoreline LEWS habitat, and LEWS inland hibernation habitat (land within 226 feet) of the shoreline with the amounts of protected habitat required for delisting in the LEWS Recovery Plan. As is evident, ODNR's properties will comprise the vast majority of protected LEWS habitat needed for delisting.

With the addition of ODNR's shoreline and hibernation habitat properties, the LEWS has taken another great slither towards recovery and delisting! In fact, with the addition of ODNR's properties, the Valore property (see article page 4), and the Lake Erie Islands Chapter of the Black Swamp Conservancy's (LEIC-BSC) easements (see article page 5), the only recovery goal for protected habitat that has not yet been achieved is for inland hibernation habitat on South Bass Island. Only about 2 acres of inland habitat within 226 feet of the shoreline is still needed on South Bass Island. If you are interested in having your property count towards protected habitat, please contact LEIC-BSC (contact info on page 5).

Megan Seymour
US Fish and Wildlife Service

Island	ODNR Shoreline (mi)	Recovery Plan Shoreline Goal (mi)*	ODNR Inland (ac)	Recovery Plan Inland Goal (ac)*
Kelleys	1.09	0.75	36.9	20.5
South Bass	0.5	0.7	12.9	19.3
Middle Bass	1.7	0.51	48.7	14.1
North Bass	6.19	0.54	168.8	9.1
Green	1.06	n/a	16.34	n/a
Total	10.54	4.6	283.64	126

*Goals in the recovery plan include a specified amount of total protected habitat, specific amounts of which must occur on each of the four largest U.S. islands, and the rest of which may occur on any of the U.S. islands.

(Flagship, cont. from page 1)

embracing the conservation of this one animal can thereby conserve a little more of the natural island areas for our future generations to enjoy, we would do it. Wouldn't we? Isn't this exactly the kind of flagship we want to pave the way for the conservation of *all* the species we care for, regardless of whether it is "cute" or not?

I see it as a choice. When you're hiring for an important job, should you automatically choose the applicant that is

just a pretty face? Or do you go with the one who can get the job done?

Saving what open space is left on our islands is *our* job, and although an uncommon flagship, the Lake Erie Watersnake is the one animal we have that can help us do that. It may not be cute, and it's definitely not fuzzy, but it has all the right credentials to get the job done. And in my opinion, that's what really counts!

¹ World Wildlife Fund website: www.panda.org

New Lake Erie Watersnake Research Projects

Researchers have recently begun two new research projects on the Lake Erie Watersnake. The first project focuses on the effect of human construction activities on watersnake habitat use and hibernation sites. Planned modifications of the marina area of Middle Bass Island State Park (under review by the U.S. Fish and Wildlife Service) provide an opportunity to assess potential impacts of such activities on Lake Erie Watersnakes. Radio transmitters are being surgically implanted into 10 adult watersnakes. Kristin Stanford and her assistants will monitor the movements of these snakes before and during construction activities. In addition, an artificial hibernation site is being created outside of the construction area and monitored for use by snakes. Questions addressed by this research include the following:

1. Can watersnakes find new hibernation sites if they are prevented from returning to a hibernation site they used previously?
2. Will watersnakes voluntarily use artificial hibernation sites?
3. Can watersnakes be encouraged to use an artificial hibernation site by placing them within a temporary snake-proof fence around the site?

The results of this project should aid in minimizing the impact of future projects on Lake Erie Watersnake populations.

The second project focuses on the impacts round gobies are having on Lake Erie Watersnakes and vice versa. Round gobies, an invasive fish from eastern Europe, have achieved astounding population sizes in western Lake Erie (9.9 billion by one recent estimate) and have become the predominant food of Lake Erie Watersnakes. What is not known is just how many round gobies watersnakes are consuming and whether predation by watersnakes might help limit round goby populations. Peter Jones, a graduate student at Northern Illinois University, will be spending much of the summer at the F. T. Stone Laboratory conducting experiments to answer these questions. Using snakes captured in the wild and held temporarily in captivity, Peter will determine how quickly watersnakes can digest round gobies and how many gobies a watersnake will eat. Pilot experiments conducted by undergraduates at the F. T. Stone Laboratory in 2005 suggest that digestive rates are high – round gobies were more than 50% digested in just 8 hours. In addition, watersnakes can eat a lot of gobies – two snakes, each weighing about 325 g, both consumed 8

round gobies totaling nearly 75 g in just 3.5 hours. That's like a 150 lb human eating 35 lbs of food in an afternoon! Peter will be repeating these experiments with snakes of different sizes and at different temperatures. He will then combine his results with information on watersnake population numbers to estimate the impact that watersnake may be having on round goby populations.

Because the density of watersnakes varies dramatically from location to location within the island region, researchers are also interested in whether the density of watersnakes is greater in locations where round goby density is high. Furthermore, because many watersnakes have been individually marked and captured year after year, it is possible to ask whether watersnake growth rate is greater where round goby density is high.

The answers to these questions have implications not only for management of Lake Erie Watersnakes, but for conservation biology (e.g., the problems posed by invasive species) more generally.

Richard B. King
Northern Illinois University



Photo: Kristin Stanford

Valore Property, East Point, South Bass Island, Ohio

It would have been a beautiful park—the acreage on the east point of South Bass Island is on the path of thousands of migratory birds and provides natural habitat to the endangered Lake Erie Watersnake. The Lake Erie Islands Chapter of the Black Swamp Conservancy through the auspices of Put-in-Bay Township in Ottawa County had the money in place to purchase this property. In a last minute change of heart, however, the owners rejected the \$1,200,000.00 from the conservation organization and in 2002 sold their east point, South Bass Island property to Valore Builders of Westlake, Ohio so they could retain a building lot within the property.

The eleven acres, now called Hope Sound, was originally designed for nine exclusive homes. Hope Sound includes over 1,500 feet of Lake Erie shoreline. Because of Hope Sound's proximity to the waters of Lake Erie and within habitat of the Lake Erie Watersnake, numerous agencies had jurisdiction over the property. The Ohio Environmental Protection Agency, the Ohio Department of Natural Resources, the United States Fish and Wildlife Service (USFWS), and the United States Army Corps of Engineers (USACE) all had regulatory authority over the proposed construction at Hope Sound.

However in November of 2003 without the required permits, Valore Builders began bulldozing the area and conducting "in-lake" work, including moving substrates and large rocks out of the water and clearing the habitat of an endangered species. The Regulatory Branch of USACE informed Valore Builders that it was in violation of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Waters Act; and the USFWS advised the project manager to cease all activities on site "...to avoid prosecution under the Endangered Species Act..."

To further compound the problems of the builder, Kristin Stanford, Lake Erie Watersnake researcher, found a dead watersnake at the construction site, and Megan Seymour, Wildlife Biologist with the USFWS, concluded, "...the snake was hibernating underground at the time of the excavation and the snake was severely cut, probably by excavation equipment, resulting in the death."

The USACE recommended to Valore Builders that they contact a professional to devise a plan for mitigating the damage that had been done to the lake and to the natural habitat. Valore Builders followed this recommendation

and contacted Dr. Charles E. Herdendorf of EcoSphere Associates to develop a restoration plan for the area to avoid potential litigation.

Working with the USACE and USFWS and Valore Builders, EcoSphere designed the "Habitat Restoration Plan For Hope Sound Housing Development, South Bass Island, Ottawa County, Ohio." The restoration plan is contained in a 125-page document reviewed by the USACE and USFWS and approved by Valore Builders in 2005.

Before Valore Builders can proceed with the proposed Hope Sound housing development, the proposed habitat restoration plan requires action in ten major areas. 1. Mapping and inventorying the existing Lake Erie Watersnake habitat; 2. Creating a 40-foot wide wildlife habitat reserve along the shoreline; 3. Setting aside a 20-foot wide wildlife habitat corridor reserve along the southern margin of the property; 4. Establishing appropriate cover and shrub vegetation in the wildlife preserves; 5. Constructing a 669-foot long, 40-foot wide revetment to control erosion and to stabilize shore habitat; 6. Constructing an 8-foot wide hibernacula structure along the shore protection structure; 7. Rehabilitating the near-shore lake bottom and setting the area aside as a submerged land wildlife reserve; 8. Formulating construction procedures for the housing development that are consistent with guidelines for the Lake Erie Watersnake habitat areas; 9. Creating enforceable deed restrictions to ensure high quality Lake Erie Watersnake habitat; and 10. Establishing a monitoring mechanism for assessing the effectiveness of the habitat restoration plan.

All of the reserve areas will count towards the "protected habitat" goal contained in the Lake Erie Watersnake Recovery Plan, and will eventually contribute towards removing the snake from the Federal list of endangered species.

An 11-page Environmental Covenant—a deed restriction—for Hope Sound was filed with the Ottawa County Recorder (Vol. 1118, page 185) on February 8, 2006, by Valore Builders. This environmental covenant was agreed upon by USFWS, the USACE, and Valore. Any development of the area must comply with the restoration program, even if the property changes hands.

Now the area is for sale—A February advertisement in the *Wall Street Journal* listed it at \$3,250,000.00.

Kelly Faris

What's New This Spring with LEIC-BSC!

The Lake Erie Islands Chapter-Black Swamp Conservancy has been hard at work planning this summer's adventures for **Nature Camp at the Bay 2006**. We will be working with the Lake Erie Islands Historical Society and the Lake Erie Islands State Parks with partial funding from the Put-in-Bay Recreation Committee. Some funding is still needed to keep the day camps affordable for everyone. Bats, Bees and Bubbles will keep the Nature Camp kids (ages 6-8) busy from July 17-20. Environmental Adventure Camp will include an overnight campout, kayaking, and a possible trip to North Bass the week of July 24-27 for ages 9 and up. New this year is a preschool program for 4-5 year olds complete with nature stories, crafts, and games June 12-14. Visits by the Snake Lady Kristin Stanford to each of the Camps will introduce island children to the Lake Erie Watersnake. Camp programs center on gaining an appreciation for our special island environment. Registration forms are available at the Lake Erie Islands Historical Society, on our website, by e-mail or call to get one by mail. Middle Bass Nature Camp, sponsored by the Middle Bass Board of Education, is June 26-29



Environmental Adventure Camp at Kelleys. Photo: Sandi Tkach

Ladd Carr Wildlife Woods was formally dedicated on Earth Day, April 22, 2006, with a ceremony and wildflower walk. This is our first South Bass Island preserve, with two acres of woods, wildflowers, and migratory bird habitat. The project was funded with a Clean Ohio Conservation Fund grant. Mary Carr Ladd, Georgia Ladd, Richard Gump and the membership of LEIC-BSC provided the matching money for the grant.

John Ladd and his sister Mary Carr Ladd spoke at the dedication with Nora Ladd unveiling the new sign. Thanks to everyone who wrote letters of support or helped with this effort!

We have set up two new funds to further the work of our conservancy. **The Land Protection Fund** will be used to preserve natural areas on the Lake Erie Islands. Money donated to this fund will allow us to cover the costs associated with preserving land. There will be another round of Clean Ohio Conservation Fund grants for our District 5 in December. We are trying to raise money for the necessary 25% match to make an application to purchase and preserve additional properties with this December deadline in mind. The properties we are considering for protection include habitat for the Eastern Fox Snake and melanistic Eastern Garter Snake, both species of concern here in Ohio. **The Nature Camp Fund** will provide money for our popular Nature Camp programs for young people. We are a non profit 501c3 organization so any contribution is tax deductible. Please contact us if you would like to make a donation to one of these funds.

The LEIC-BSC still has funds available to pay the expenses associated with donated **Conservation**

Agreements to protect habitat for the Lake Erie Watersnake. A conservation agreement is a legal agreement between a landowner and a conservancy that permanently protects its conservation values with restrictions. An easement can be placed on either a portion of a property or the entire piece. A landowner keeps the title to the property and there is no public access. Remember that saving Lake Erie Watersnake habitat also protects valuable migratory bird habitat and areas with rare shoreline plant species as well. If you have property within 69 meters of the shore and are interested in habitat conservation, give us a call for more information!

Lisa Brohl, Chair

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GOT SNAKES???? Announcing Nerodio 2006

Yes, folks. Once again, the annual Lake Erie Watersnake census, A.K.A. ~ Nerodio is rapidly approaching. The snakeoholics will be spending two weeks scouring the islands for Lake Erie Watersnakes from approximately May 29 – June 10, although we may be doing occasional site visits both before and after the census period. As in the past, we will begin our census at the Bass islands and then move over to Kelleys Island. Following Kelleys Island, we will return to the Bass island area to census the smaller islands like Rattlesnake, Sugar and Ballast. We will be visiting our traditional sites that we go to every year, however, we are always open to suggestions for new areas! As part of the criterion outlined in the federal recovery plan, one of our objectives is to continue to monitor the snake population size and learn where the snakes are and are not living along the shoreline. Additionally, we hope to continue to show that the population size is currently at the recovery size criterion (above 5,500 adult snakes on all 9 islands combined). Myself and my undergraduate assistants will also be visiting select sites throughout the summer. If you would like us to come and catch snakes on your property, please contact the Stone Lab office at 419-285-2341 and leave your name, address, phone number, and let us know when we can come out for a visit. Better yet, e-mail theislandsnakelady@yahoo.com and tell me all about the snakes on your property. The sooner you get your request in for us to come and visit, the better! Last year I had so many requests that we were unable to visit all the sites, so get those requests in early. I want to thank those residents who have been supportive of our work and encourage others to do so as well!

Thanks again!

Kristin Stanford ~ The Island Snakelady



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