

Restoration at *the Wilds*

Dr. Nicole Cavender
The Wilds, Director of Restoration Ecology



Eastern black swallowtail at *the Wilds*
Photo: Ian Adams

Pollinators in Peril

Pollinators such as butterflies, moths, bees and others are essential to our environment. The ecological service they provide is important for the reproduction of nearly 75 percent of the world's flowering plants. More recently, pollinator conservation has become a prominent topic on many fronts. In 2006, The National Academy of Science released the

report, *Status of Pollinators in North America*, and called attention to the serious decline in both managed and wild pollinator populations. Since then, the Pollinator Protection Act was introduced to congress in 2007 by Senator Boxer and addresses both the problems with honey bees and native pollinators of North America including their health, ecology, and loss of habitat. Pollinator declines around the world are due to many factors, but the loss of quality habitat continues to be one of the main threats to healthy populations.



Maximilian sunflowers
Photo: Ian Adams

Encompassing almost 10,000 acres, the vast land base at *the Wilds* along with its key personnel, partnerships, expertise and outreach potential presents a unique opportunity for *the Wilds* to play a key part in pollinator conservation both on the ground and through scientific endeavor.

Creating Habitat

For the last several years, *the Wilds* has been working on transforming this once coal-mined landscape into a rich habitat capable of supporting a diversity of Ohio native pollinators. The original concept was developed in partnership with BFCI and Ohio Zoos in 2002 and focused primarily on native butterfly populations, but it has more recently evolved to also include other pollinators such as native bees. Essentially, *the Wilds* is replacing large areas of



Butterfly habitat entrance
Photo: Nicole Cavender

non-native grasses with a diversity of native plant species that will provide nectar, host plant larval food for native butterflies, and pollen and nest sites for bees. The concept for the creation of this refuge is simple "if you build it (the habitat) they will come". To date over 35-acres of native meadow have been planted, 10 acres of trees have been established contiguous to 30-acres of native woodlands, and

BUTTERFLY CONSERVATION INITIATIVE

McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History,
UF Cultural Plaza, 308 Hull Road, P.O. Box 112710, Gainesville, FL 32611-2710

an acre of wetland has been enhanced. The habitat will continue to expand with the hope of reaching up to 200 acres in the future.



Butterfly habitat at the Wilds
Photo: Ian Admas

Integrating Science

As the habitat expands and improves, *the Wilds* is conducting concurrent population monitoring. Five years of butterfly monitoring, following guidelines given by The Ohio Lepidopterist Society, have been carried out in the habitat. Results to date have shown a 257% increase in total numbers of butterflies since the initiation of the project along with a 47% increase in species richness. These results are exciting and show tremendous promise on how habitat improvements, even on highly altered landscapes, can increase local butterfly populations in a relatively short period of time.



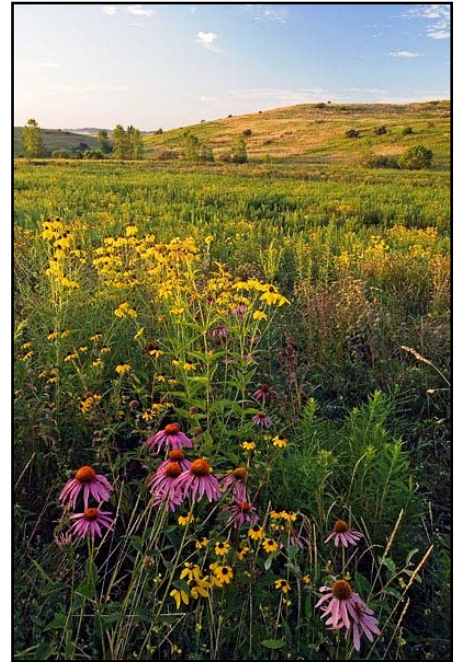
Monarch Butterfly

Photo: Ian Admas

Furthermore, research has also begun in partnership with Dr. Karen Goodell from Ohio State University to investigate the ecological factors influencing the assembly of pollinator communities on highly altered lands following restoration of high quality pollinator habitat. Karen’s efforts aim to develop techniques for improving pollinator habitat to maximize pollinator diversity and abundance communities in the local and surrounding regions.

Native Plant and Butterfly Propagation

The Wilds is now in the beginning phases of creating a unique, on-site Native Plant Propagation Facility that will provide both seed and mature transplants in order to continue these large-scale ecological restoration projects. A pollinator rearing area is also planned to augment existing insect populations, especially butterflies, as well as serve as an additional source of pollinators to further support the critical plant-pollinator relationship. We hope to begin building this year. Stay tuned...



Butterfly habitat at sunrise
Photo: Ian Adams



Dr. Nicole Cavender
Director of Restoration Ecology at *the Wilds*

The Wilds, short for the International Center for the Preservation of Wild Animals, cares for dozens of endangered species from around the world. They partner with BFCI member **Columbus Zoo and Aquarium.**

To learn more about habitat restoration and other conservation efforts at *the Wilds*, please visit www.thewilds.org.

Simple Request Preserves Habitat in Ottawa

In response to a suggestion made by Canadian Member of Parliament Paul Dewar in September 2007, the National Capital Commission (NCC) decided this year to modify its mowing standards to leave a broader stretch of uncut meadow near the Ottawa River.

The area along the Ottawa River Parkway is an important habit for Monarch butterflies, a species of Special Concern under Canada’s Federal Species at Risk Act. “There is no reason why the milkweed by the Ottawa River should be mowed down. Having vegetation along a waterway is an important factor in contributing to healthy waterways and overall biodiversity,” said Dewar.

The issue was first brought to Mr. Dewar’s attention by constituent Rachel Plotkin, a policy analyst for the David Suzuki Foundation, who focuses on endangered species. Ms. Plotkin expressed her satisfaction with the positive result in preserving the meadow habitat, “We are delighted to see this action taken by the NCC. The protection of milkweed is a critical tool in protecting the Monarch Butterfly.”

Dewar concluded, “While we focus on global environmental issues like the climate change, it is important that we take steps at the local level.”

BFCI in the Field

Here at BFCI, we practice what we preach! We are active in the field, working with the Florida Fish and Wildlife Conservation Commission (FWC) on Miami blue research, as well as the Florida Division of Forestry on Frosted elfin surveys.



FWC’s Ricardo Zambrano and Univ. of FL and BFCI’s Jaret Daniels traverse habitat heavily affected by 2004’s Hurricane Wilma
Photo: Stephanie Sanchez

BFCI’s Stephanie Sanchez and Jaret Daniels have worked together on the captive propagation and reintroduction of the federally endangered Schaus swallowtail and in 2003 initiated the captive propagation and reintroduction program for Florida’s state-endangered Miami blue.



Univ. of FL and BFCI’s Jaret Daniels and Stephanie Sanchez
Photo: Mary Truglio

BFCI is proud to join the *Imperiled Butterflies of South Florida Workgroup* (IBWG). The FWC recently formed the IBWG to directly address the significant declines experienced by multiple south Florida butterfly taxa.



Hand-marked Miami
Photo: Mary Truglio



Mating pair of Miami blue
Photo: Mary Truglio



Univ. of FL’s J. Akers Pence and Jaret Daniels with FWC’s Ricardo Zambrano
Photo: Mary Truglio



FWC's Mary Truglio Photo: Jaret Daniels

Composed of local, state, and federal agencies, the North American Butterfly Association and the University of Florida, the IBWG was borne out of an initial stakeholder forum developed to deal with conservation and management issues surrounding the state- endangered Miami blue (*Cyclargus thomasi bethunebakeri*) including habitat management, mosquito control pesticide application, and captive breeding and reintroduction.

The IBWG hopes to build on these accomplishments in order to facilitate the regular exchange of information between agencies, identify research priorities and educational needs, and catalyze the development of additional critical partnerships that are needed to assist with organism recovery. This workgroup hopes to serve as a model for the development of similar workgroups across North America.



BFCI's Stephanie Sanchez records GPS location of lupine Photo: Jaret Daniels

BFCI is just beginning to work with the University of Florida in monitoring populations of the Frosted Elfin in northeast Florida. The research aims to estimate current population numbers, determine habitat characteristics, identify ant symbionts and help improve management practices.

BFCI hopes to create a Frosted elfin network in North America to further understand and protect this species. If interested, contact Stephanie: ssanchez@flmnh.ufl.edu.

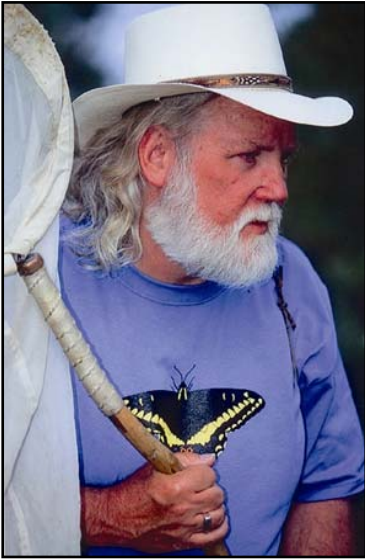


With necessary equipment safe inside a drybag, Univ. of FL and BFCI's Jaret Daniels wades to shore Photo: Mary Truglio



Frosted elfin on sundial lupine flower Photo: Jaret Daniels

Bob Pyle Visits the McGuire Center on His Butterfly Journey



Photograph © Eddie Rivers

Throughout the year 2008, noted lepidopterist and writer Robert M. Pyle will be undertaking a historic journey in hopes of finding, experiencing, and positively identifying as many species of butterflies as possible in the United States and Canada. The literary fruits of this project will be published by the Houghton Mifflin Company as a book entitled *Swallowtail Seasons: The First Butterfly Big Year*. We hope that you will be a part of Bob's journey, and support the efforts of the Xerces Society to preserve and protect rare and endangered butterfly species in the process.

While Bob will be seeking as many species of the 800 recorded in North America north of Mexico, the numbers themselves will be secondary to his in-depth encounters with the butterfly fauna. These numbers will, however, play a role in furthering butterfly conservation work. **All proceeds from this Butterfly-A-Thon will directly benefit Xerces Society projects in rare butterfly conservation.** To update Butterfly-A-Thon participants on Bob's progress, he will be sending regular updates from the road. These notes, cards, photos, postcards, and other souvenirs from Bob's Journey will be collected by the Xerces Society and posted as a blog on their website at www.xerces.org/Butterfly_Conservation/butterflyathon.html. Regular updates will also be sent via e-mail.

Jaret Daniels with Bob Pyle



Jaret Daniels with Bob Pyle
Photo: Kathy Malone

Robert Michael Pyle founded The Xerces Society in 1971. He has published some fifteen books, including such butterfly classics as the *Audubon Society Field Guide to North American Butterflies*, the *Handbook for Butterfly Watchers*, and *The Butterflies of Cascadia*, as well as several award-winning literary works such as *Wintergreen*, *The Thunder Tree, Where Bigfoot Walks*, *Walking the High Ridge*, and *Sky Time in Gray's River*. The new book will be closest in form to *Chasing Monarchs*, in that it will consist of a personal narrative of another remarkable field trip, this one lasting an entire year and spanning an entire continent.



Bob Pyle and Kathy Malone survey in Gainesville, FL. Photo: Jaret Daniels

Bob arrived at the McGuire Center for Lepidoptera and Biodiversity on March 20th, and was the guest speaker for a North American Butterfly Association (NABA) meeting held at the Center. During his stay, McGuire Center staff accompanied Bob on his trips around north Florida, finding 47 species to add to his 2008 tally.

BOB PYLE'S BUTTERFLY-A-THON 2008

YES! I want to support the Xerces Society by sponsoring Bob Pyle's quest to identify a record number of North American butterfly species!

I would like to sponsor the Butterfly-A-Thon by pledging to give:



- \$0.05 per species identified
- \$0.10 per species identified
- \$0.25 per species identified
- \$1.00 per species identified
- \$_____ per species identified

*The Butterfly-A-Thon is based on pledges; the total amounts will be calculated based on the number of species that Bob identifies in 2008. For example, if you pledge \$0.10 per species and Bob sees 458 species, you would pay \$45.80 in January of 2009.

Instead of pledging, I will donate:
(please enclose check or money order) \$ _____
Credit Card # _____
Expires: _____ Signature: _____

Name _____
Address _____
City/State/Zip _____
Telephone _____
E-mail (for regular updates on Bob's progress) _____

The Xerces Society
4828 SE Hawthorne Blvd.
Portland, OR 97215 USA
(503) 232-6639
www.xerces.org



Conference to Feature Butterfly Conservation Session

This year's AZA National Conference will feature a session entitled, "Creating a Nexus for Recovery: AZA-FWS Alliances for Butterfly Conservation." The session will be moderated by Dr. David Shepherdson, Conservation Program Scientist at the Oregon Zoo.

Speakers and topics include:

- Stephanie Sanchez, Program Coordinator, BFCI - "The Butterfly Conservation Initiative: Developing Partnerships for Cooperative Conservation."
- Dr. Jaret Daniels, Assistant Director for Research, McGuire Center for Lepidoptera and Biodiversity - "Paving the road to recovery in south Florida: A cooperative conservation model for imperiled butterflies."
- Dr. David Shepherdson, Conservation Program Scientist, Oregon Zoo - "Saving Pacific Northwest butterflies: The role of zoo alliances, agency partnerships and NGO support."
- Dr. Peter Tolson, Director of Conservation and Research, The Toledo Zoo - "The Mitchell's Satyr Working Group: creation of a federal- state- AZA nexus for recovery of an endangered wetland butterfly."

The session, jointly sponsored by the AZA Field Conservation Committee and BFCI, highlights cooperative butterfly conservation programs for endangered and threatened North American butterflies that resulted from the historic joint FWS/AZA Memorandum of Understanding for endangered species recovery signed in 2001. The goals of the session are to 1: Highlight successful collaborative field conservation efforts that include the AZA institutions, the U.S. Fish and Wildlife Service, state wildlife agencies, and NGOs such as The Nature Conservancy; 2: Encourage formation of regional conservation partnerships within the USA as espoused by the AZA Field Conservation Committee; and 3: Provide examples of proven templates that can be emulated by AZA institutions that wish to institute a cooperative field conservation program with the FWS. In this session, illustrated connections to institutions and organizations other than the FWS are quite diverse and include universities (e.g. University of Florida and Michigan State University, State Agencies (e.g. Michigan Department of Natural Resources, Washington Department of Fish and Wildlife, Florida Fish and Wildlife Conservation Commission) and NGOs (e.g. The Nature Conservancy, SW Michigan Land Conservancy, and Everglades National Park). Butterfly conservation programs provide a unique opportunity for AZA members to participate in field conservation in a relatively inexpensive, yet meaningful way, promoting collaborative efforts that can expand into other projects that truly will aid in welding AZA member facilities into "North America's largest conservation movement".

Come Meet BFCI!

BFCI has reserved a meeting room at the Conference. Please stop by to meet Stephanie and learn more about BFCI's programs. We want to know more about you; your institution; your interest in butterfly research, recovery, and education; and how we can assist you!

Monday, September 15 4:00 pm – 5:00 pm in 203B

Look Forward to Seeing You There!

Member Exhibit Openings

**Albuquerque Biological Park *PNM Butterfly Pavilion*
May 23 - September 30**

Birmingham Zoo *Butterfly Encounter* April 19 – September 3

Bronx Zoo *Butterfly Garden Exhibit* March 22–November 2

Chicago Brookfield Zoo *Butterflies!* Memorial Day – Mid September

**Como Park Zoo and Conservatory *Como's Blooming Butterflies*
June 6 – September 7**

Potawatomi Zoo *Butterflies In Living Color* May 24 – September 1

**Roger Williams Park Zoo *Flutterby: Butterflies in Bloom*
May 24 – September 1**

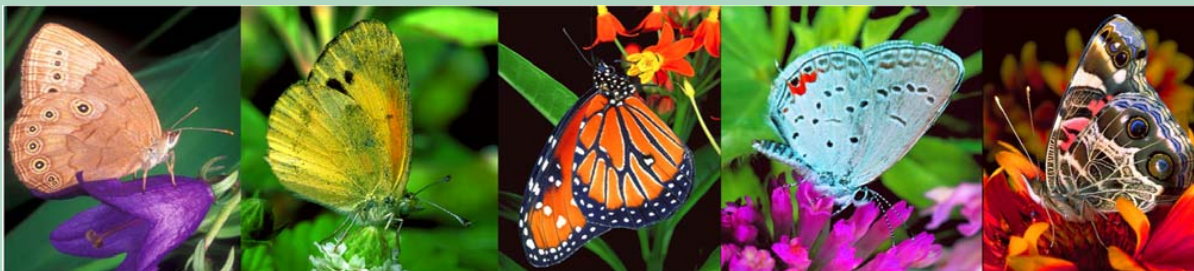
**Seneca Park Zoo *Butterfly Experience* Memorial Weekend - September
Butterfly Beltway Memorial Weekend - September**

Toledo Zoo *Butteflies!* May 24 – September 28

Utah's Hogle Zoo *Conservation Carousel* June 7

WNC Nature Center *The Beauty of Butterflies* June 28 – September 5

Woodland Park Zoo *Butterflies & Blooms* May 23 - September 30





Current Members

** Founding Member

- | | |
|---|---|
| ** Akron Zoological Park | ** Friends of the WNC Nature Center |
| ** Albuquerque Biological Park | ** John Ball Park Zoological Garden |
| ** Binder Park Zoo | ** The Living Desert |
| Birmingham Zoo | ** Louisville Zoological Garden |
| ** Bronx Zoo/Wildlife Conservation Society | Museum of Science |
| The Butterfly House | Naples Zoo |
| ** Cheyenne Mountain Zoo | ** The Oakland Zoo |
| Chicago Academy of Sciences/Notebaert | ** Oklahoma City Zoo & Botanical Garden |
| Nature Museum | ** Potawatomi Zoo |
| Chicago Zoological Society - Brookfield Zoo | ** Racine Zoological Gardens |
| ** Cleveland Metroparks Zoo – Cleveland | ** Roger Williams Park Zoo |
| Zoological Society | San Diego Zoo's Wild Animal Park |
| ** Columbus Zoo and Aquarium | ** Santa Barbara Zoological Gardens |
| Como Park Zoo and Conservatory | ** Seneca Park Zoo |
| ** The Dallas World Aquarium | ** The Toledo Zoo |
| ** Detroit Zoological Society | ** Toronto Zoo |
| ** Disney's Animal Kingdom | Utah's Hogle Zoo |
| The Florida Aquarium | ** Vancouver Aquarium |
| ** Fort Wayne Children's Zoo | ** Woodland Park Zoo |
| ** Fresno Chaffee Zoo | |

Contributors

- Brandywine Zoo
- Brevard Zoo
- Chesapeake Chapter of the American Association of
 Zoo Keepers – Salisbury Zoo
- ** Oregon Zoo
- ** San Antonio Zoological Gardens and Aquarium
- Steinhart Aquarium

Partners

- Association of Zoos and Aquariums (AZA)
- Environmental Defense
- McGuire Center for Lepidoptera and Biodiversity
- National Wildlife Federation
- North American Pollinator Protection Campaign
 (NAPPC)
- U.S. Fish and Wildlife Service
- Xerces Society for Invertebrate Conservation

Thanks to Our Supporters!

As always, we thank our members, contributors, donors and partners for their dedication to BFCI's mission and goals.

Announce your butterfly efforts and activities in *BFCI News* by contacting the BFCI Program Coordinator at: ssanchez@flmnh.ufl.edu

To learn more about the BFCI, please visit our website (www.butterflyrecovery.org)