

Conservation Matters:
Contributions from the Conservation Committee

The Butterfly Conservation Initiative Developing a New Conservation Vision through Compound Eyes

Stephanie J. Sanchez, Program Coordinator, Butterfly Conservation Initiative

and

Jaret C. Daniels, Ph.D., IFAS Assistant Professor and BFCI Steering Committee Co-Chair

University of Florida

The popularity of butterflies continues to grow tremendously on a nationwide level. Unfortunately, the number of imperiled species has also mirrored this upward trend. Many state and federal agencies struggle simply to meet the demanding funding requirements necessary to support the recovery of the current federally listed U.S. butterflies. Lack of public awareness, agency inexperience with invertebrates, and a focus on larger taxa have compounded the problems of population decline and generally resulted in minimal recovery actions.

At present, 22 butterflies (including skippers) are federally listed under the U.S. Endangered Species Act (http://ecos.fws.gov/tess_public/SpeciesReport.do?groups=I&listingType=L&mapstatus=1), 15 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (http://www.cosewic.gc.ca/eng/sct0/rpt/rpt_csar_e.pdf) and many more by individual U.S. states. Of the federally listed butterflies, only 15 have final and approved recovery plans; no recovery plans are complete for the Canadian species. Fewer still have received comprehensive research attention to address key information gaps (habitat characteristics, life history, behavior, population dynamics, etc.) necessary for effective recovery and management.

The **Butterfly Conservation Initiative (BFCI)** was established in

2001 as a result of conversations between the Association of Zoos and Aquariums (AZA) and U.S. Fish and Wildlife Service's Office of Partnerships and Outreach. At that time, it was recognized that many AZA zoos and aquariums, particularly smaller facilities, were actively seeking opportunities to contribute to North American conservation efforts. By demonstrating a commitment to local wildlife, these institutions could position themselves as community conservation leaders. Butterfly conservation and recovery offers a unique opportunity for zoos and aquariums of all sizes to participate in field conservation in a meaningful way. Hands-on efforts, including habitat restoration and creation, native plant propagation, captive rearing, education and outreach, and population monitoring, offer participants a chance to connect directly with species and habitats in need while helping to inform their visitor base.

BFCI is a national coalition of 43 accredited zoos and aquariums and seven partner organizations: the Association of Zoos and Aquariums, U.S. Fish and Wildlife Service, National Wildlife Federation, Environmental Defense, McGuire Center for Lepidoptera and Biodiversity, Xerces Society and the North American Pollinator Protection Campaign. Together, BFCI is dedicated to the

conservation of threatened, endangered, and vulnerable North American butterflies and the habitats that sustain them, with a focus on recovery, research, and education. BFCI strives to empower its members and partners to work individually and collaboratively to affect butterfly conservation and offer opportunities for engagement suitable to diverse interests and strengths.

Operating out of the offices of its original host institution, the Association of Zoos and Aquariums, under the visionary leadership of Ruth Allard and Shelly Grow, BFCI began to benefit butterfly recovery efforts through the utilization of the many resources available from its partner organizations and the participating accredited zoos and aquariums. Staff entomologists, husbandry experts, horticulturalists, education specialists, and volunteers are working together to share their expertise, skills and resources.

BFCI member projects are diverse and reflect the interests, skills, and resources of each institution. Members are involved in both small- and large-scale habitat restoration ranging in scope from on-site educational butterfly and pollinator gardens and the National Wildlife Federation (NWF)-certified Backyard Habitat Program, to propagating host plants for restoration

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Butterfly Conservation Initiative in Action

Fig. 1. Woodland Park Zoo and Nature Conservancy staff release Oregon silverspot from eclosion cages with the help of students from Lewis and Clark College. Cascade Head, Oregon. Photo: Celine Pardo. **Fig. 2.** Stephanie Sanchez (BCFI Coordinator and UF researcher) works on the captive propagation of the endangered Miami blue butterfly at the McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History. **Fig. 3.** Oregon Silverspot (*Speyeria zerene hippolyta*). Photo: Woodland Park Zoo. **Fig. 4.** Male Miami Blue (*Cyclargus thomasi bethunebakeri*). Photo: Jaret Daniels. **Fig. 5.** Dr. Akers Pence conducts training for the Florida Butterfly Monitoring Network (FBMN) at Camp Bayou Outdoor Learning Center, Ruskin, FL. FBMN is a collaborative citizen science program between BCFI, University of Florida and eight Florida AZA institutions that pairs zoo staff members, university researchers and public volunteers to survey butterfly populations. Photo: D. Cummings. **Fig. 6.** Karner Blue workshop participants in the field.

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sites and collaboratively working on multi-acre landscape restoration projects. Member institutions are involved in the captive rearing, reintroduction, and related habitat assessments of multiple butterfly species, most of which are listed as either threatened or endangered. Many have ongoing butterfly education projects that include exhibits, on-site programs, and butterfly festivals. Some are working with state wildlife agencies to engage landowners in species or habitat conservation. Still others are participating in citizen-science butterfly monitoring networks that generate valuable distribution data for researchers and land managers while connecting children and adults with local wildlife.

Specific *in-situ* and *ex-situ* research among BFCI members is extensive. Ongoing conservation and recovery programs focus on many organisms and sites: Karner blue, *Plebejus*

[*Lycaeides*] *melissa samuelis* (Toledo Zoo, Detroit Zoo, Roger Williams Park Zoo, Toronto Zoo), Mitchell's satyr *Neonympha mitchellii mitchellii*, (Toledo Zoo), Oregon silverspot, *Speyeria zerene hippolyta* (Woodland Park Zoo, Oregon Zoo), Taylor's checkerspot, *Euphydryas editha taylori* (Oregon Zoo, Xerces Society), Miami blue, *Cyclargus thomasi bethunebakeri* (McGuire Center for Lepidoptera and Biodiversity/University of Florida), Baltimore checkerspot, *Euphydryas phaeton* (Maryland Zoo in Baltimore), purplish copper, *Lycaena helloides* (Toledo Zoo), swamp metalmark, *Calephelis muticum* (Peggy Notebaert Nature Museum/Chicago Academy of Sciences, Toledo Zoo), Schaus' swallowtail, *Papilio aristodemus ponceanus* (McGuire Center for Lepidoptera and Biodiversity/University of Florida), mardon skipper, *Polites mardon* (Oregon Zoo, Xerces Society), large-scale habitat restoration (Akron Zoo, Cincinnati Zoo, Cleveland Metroparks Zoo, Columbus Zoo, the Wilds, Toledo Zoo), and many more.

In May of this year, BFCI moved from the Association of Zoos and Aquariums, to its new host institution, the University of Florida's McGuire Center for Lepidoptera and Biodiversity at the Florida Museum of Natural History in Gainesville. The McGuire Center includes some 50,000-square-feet of collection, office and exhibit space and houses one of the largest and most comprehensive collections of Lepidoptera in the world. BFCI hopes to continue its growth at the McGuire Center by involving natural history museums, botanical gardens and other conservation organizations in its membership and its many collaborative endeavors.

For additional information on the Butterfly Conservation Initiative, please visit our soon to be revised website at www.butterflyrecovery.org or contact Stephanie Sanchez (BFCI Program Coordinator) at ssanchez@flmnh.ufl.edu.

Nominations for the Karl Jordan Medal

Jacqueline Y. Miller

McGuire Center for Lepidoptera and Biodiversity, Florida Museum of Natural History, University of Florida, P. O. Box 112710, Gainesville, FL 32611-2710

This is a call for nominations for the Karl Jordan Medal Award. Established in 1973, the award was named for Dr. Karl Jordan, the Curator of the Lepidoptera Collections at Tring Museum, and who was one of the original Honorary Life Members of the Lepidopterists' Society. Among the 20th Century lepidopterists, Dr. Jordan was one of the pre-eminent entomologists in the field and began his career as a coleopterist but later one of the world's leading authority on Siphonoptera.

The Karl Jordan Medal is given biannually by the Lepidopterist Society

in recognition of outstanding original research on the Lepidoptera, not a compilation of already known facts. The publications should have an emphasis on the fields of morphology, taxonomy, biogeography, and what was originally known as "natural history." The award may be based on a single piece of research or on a series of interrelated works. These publications must have been published at least three years prior to the nomination but not be more than 25 years old. In addition, the Jordan Medal is not intended to be a career award as the Society already has such an award, the Honorary Life

Membership, but it does not preclude the award being presented to an Honorary Life Member.

Please send nominations along with a list of the publications for consideration to Dr. Jacqueline Y. Miller at the above address or to jmiller@flmnh.ufl.edu on or before 1 January 2008.

