

Who Killed All the Miami Blues?



Holly Salvato

The night of the iguana. Populations of non-native introduced iguanas have exploded on the Florida Keys. Nickerbeans, the caterpillar foodplant for Miami Blues on Bahia Honda, are part of their diet. Aug. 26, 2010. Bahia Honda State Park, FL.

The re-discovery and would-be protection and restoration of Miami Blues in Florida has been well-chronicled in these pages (see below). I wish I had better news to report regarding the status of this rare butterfly, but I do not.

While sitting in a parking lot in El Cerrito, California checking my office emails, I received word from a representative of the Florida Fish and Wildlife Commission to the effect that: The “flagship” wild Miami Blue colony at Bahia Honda State Park in the Lower Florida Keys had apparently collapsed (in fact, neither adults nor caterpillars have been seen at Bahia Honda State Park since January 2010) and the captive

Miami Blues have disappeared — the U.S. Fish & Wildlife Service in the G. W. Bush administrations failed to declare them an endangered species; the State of Florida, despite good intentions, failed to implement a management plan; and personnel at University of Florida failed to learn what factors have caused their decline or to maintain the laboratory colony created as a safety valve if disaster befell the Bahia Honda colony.

by Dennis Olle



James L. Monroe

These mated Miami Blues, to the best of our knowledge the last Miami Blues seen at Bahia Honda State Park, provided hope for a future that has now died. Jan. 23, 2010. Bahia Honda State Park, FL.



breeding colony maintained at the McGuire Center For Lepidoptera and Biodiversity at the University of Florida at Gainesville had been allowed to die.

A review — Hope and Hope renewed

Miami Blues have historically inhabited much of the West Indian region, including South Florida. The populations in South Florida are phenotypically distinct from those in the Bahamas, Hispaniola, and Puerto Rico and were described as a separate subspecies.

Once plentiful throughout South Florida, the numbers of Miami Blues declined precipitously throughout the 1980s. The reasons for the decline are not known. A round up of the usual suspects includes extensive habitat loss, sensitivity to the massive use of pesticides dumped onto South Florida (and Floridians). Changes in the ant flora of South Florida, with which the caterpillars of this butterfly interact, cannot be ruled out.

Above: A Miami Blue egg on nickerbean's new growth. Feb. 6, 2003. Bahia Honda SP.

Below: The last Miami Blue on Bahia Honda warms up in the sun. Jan. 23, 2010.



Above: Personnel at Bahia Honda State Park installed a picnic table and mowed all the vegetation under the trestle, thus destroying an important nectaring area for Miami Blues. Typical usage of the new table is as illustrated. July 17, 2009.

Below: Habitat for Miami Blues at Bahia Honda State Park. July 17, 2009.

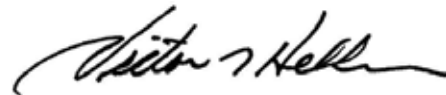


MANAGEMENT PLAN

MIAMI BLUE

Cyclargus (= Hemiargus) thomasi bethunebakeri

Approved:



KDH Kenneth D. Haddad
Executive Director
October 31, 2003

Florida Fish and Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, Florida 32399-1600

Although the State of Florida developed and approved a Management Plan for Miami Blues, the plan was, unfortunately, never completely implemented.



JEB BUSH
GOVERNOR OF THE STATE OF FLORIDA

Florida Butterfly and Butterfly Gardening Month

WHEREAS, butterflies play important roles as pollinators of flowers and as indicators of the health of the environment; and

WHEREAS, people are enthralled by the beauty, grace and tranquility of butterflies and are fascinated by their amazing transformations from caterpillar to chrysalis to adult butterfly; and

WHEREAS, the great state of Florida is home to more than one hundred fifty kinds of butterflies, many of them found nowhere else in the world; and

WHEREAS, by planting certain native plants and flowers, gardeners can enjoy the wonderful diversity of butterflies in their own backyard, and actually increase the populations of many butterflies;

NOW, THEREFORE, I, Jeb Bush, Governor of the state of Florida, do hereby extend greetings and best wishes to all observing April 2003, as *Florida Butterfly and Butterfly Gardening Month*.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the state of Florida to be affixed at Tallahassee, the Capital, this 26th day of February in the year of our Lord two thousand three.




GOVERNOR

In the spirit of cooperation with NABA, then Governor Jeb Bush declared April 2003 to be Florida Butterfly and Butterfly Gardening Month.

Early Chronology: The "Salad Days"

- Fall 1999 - Rediscovery at Bahia Honda State Park (by J. Ruffin). (See *American Butterflies* 8:1).
- June 2000 - NABA petitions the federal government for emergency listing of the Miami Blue as "endangered species."
- October 2002 - NABA petitions the State of Florida for emergency listing.
- November 2002 - Miami Blues become the first emergency-listed endangered species by the State of Florida; management plan is adopted. (See *American Butterflies* 11:1).
- Spring 2004 - A Miami Blue Working Group is created by the Florida Fish & Wildlife Conservation Commission.
- Spring/Summer 2004 - Releases of captive-bred Miami Blues in Everglades and Biscayne National Parks begin. (See *American Butterflies* 13:3).
- May 2005 - Miami Blues become a "candidate species" for federal listing.
- Fall 2006 - Discovery of a second wild population in Key West National Wildlife Refuge (by P. Cannon, et al.). (See *American Butterflies* 14:2).

In 1992, Hurricane Andrew destroyed the last known colony, on Bear Cut Key. No Miami Blues were seen in the United States for the next seven years, and the butterfly was feared to be extinct. Then, in the fall of 1999, NABA member, Jane Ruffin, found a population of Miami Blues at Bahia Honda State Park on the Florida Keys.

The news of this discovery was breathtaking to members of NABA and butterflyers from around the country. The discovery led to a flurry of activity: On June 13, 2000, NABA petitioned the United States Fish and Wildlife Service to emergency list Miami Blues as endangered. But, political considerations prevailed over both truthfulness and compliance with the law, and the USFWS refused to list Miami Blues.

After making no headway with the U.S. Fish and Wildlife Service, in October 2002 NABA petitioned the State of Florida to list Miami Blues as endangered. The state of Florida responded with its first ever emergency listing of an organism as endangered.

This welcome action led to the development of management plans and to a breeding colony at a major state university. NABA welcomed the establishment of a breeding colony as a safeguard against a catastrophic event at the Bahia Honda colony. However, the breeding colony was used for butterfly reintroduction attempts at a variety of locations in extreme southern Florida and the Keys.

Then, during a Thanksgiving boat trip to Key West National Wildlife Refuge in 2006, another NABA member, Paula Cannon, discovered a second Miami Blue colony on Boca Grande Key and other islands within the Key West National Wildlife Refuge (Key West NWR) (an assemblage of islands located about 20 miles west of Key West). Unfortunately, this appears to have been the high point for Miami Blues; it has been downhill from there.

Bureaucratic Bungling

Since those "salad days" (and even during them) storm clouds began gathering on the Miami Blues' horizon. Almost immediately after the implementation of the captive breeding colony

NABA renewed its application to the United States Fish and Wildlife Service for endangered species status for Miami Blues.



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Visit our website at www.naba.org

August 9, 2010

Kenneth L. Salazar, Secretary
U.S. Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Re: Renewed Petition for Emergency Endangered Listing for the Miami Blue (*Hemiargus thomasi bethunebakeri*)

Dear Secretary Salazar:

The North American Butterfly Association (NABA) hereby renews its petition for the emergency listing of the Miami Blue, *Hemiargus thomasi bethunebakeri* (Comstock and Huntington) as endangered pursuant to the Endangered Species Act, 16 U.S.C §§ 1531 et seq. Please refer to our letter to you of June 10, 2000 (copy attached) the continuing statutory basis for this renewed petition is set forth in that letter.

As you are aware, the Miami Blue is currently known from only one location on the Florida Keys (on federal lands within Key West National Wildlife Refuge ("KWNWR"). The entire remaining population of Miami Blues is in significant and immediate danger:

- 2010 hurricane season is underway and NOAA expects (as of this writing) an active Atlantic hurricane season with:

- o 14 to 20 Named Storms (top winds of 39 mph or higher), including:
- o 8 to 12 Hurricanes (top winds of 74 mph or higher), of which:
- o 4 to 6 could be Major Hurricanes (Category 3, 4 or 5; winds of at least 111 mph).

- The presence of one or more Inguanid species has been recently reported from the islands in KWNWR. As you know, iguanas were one of the adverse factors which led to the apparent collapse of the Miami Blue colony on Bahia Honda Key.

- The proximity of the islands within KWNWR, to both Key West and the Dry Tortugas, invite human mischief, and largely go unpunished.

For all those reasons, and the fact that the "original" Miami Blue colony which formed the basis of our request more than a decade ago has apparently been extirpated despite management efforts by the State of Florida, we reiterate our demand for the emergency listing of this species. Your role as stewards of this disappearing resource requires nothing less.

As of October 15, 2010, no action has been taken.



Above: A male Miami Blue at Bahia Honda State Park. Dec. 7, 2009.



Above: One of the last existing Miami Blues at Bahia Honda SP. Dec. 7, 2009.

Below: Tourists hop the fences at Bahia Honda, destroying Miami Blue habitat.

at the University of Florida, and the creation of the Miami Blue Working Group, Monroe County Mosquito Control District commenced a legal action in state court against the State of Florida (including all of the Trustees of the University of Florida) seeking to stop any releases of captive-bred Miami Blues into the Florida Keys (Monroe County). This was only the beginning of bureaucratic hijinks, but it unfortunately set the tone for cautious foot-dragging.

The future of Miami Blues in the United States has played out not only at Bahia Honda but also within the various government agencies charged with the protection of our natural resources within Florida. This tangled web of agencies includes:

- Florida Fish and Wildlife Conservation Commission
- The State Division of Parks (Department of Environmental Protection)
- The University of Florida (Gainesville)
- U.S. Fish & Wildlife Service (USFWS) (U.S. Department of Interior)
- National Park Service (U.S. Department of Interior)
- Monroe County Mosquito Control District

During 2006-2010 NABA's Miami Blue Chapter pressed these various agencies for a more robust plan and implementation, in the hopes of securing the fate of the Miami Blue, but to no avail:

At least two management plans for the Miami Blue were adopted by the Florida Fish and Wildlife Commission. Amazingly, the most

recent plan was adopted in June, 2010, after the species had disappeared from State lands.

Thousands of captive-reared Miami Blue adults and caterpillars were released in Biscayne and Everglades National Parks; however no effective monitoring system was ever established to evaluate success or to determine the fate of the released individuals.

A Miami Blue Working Group was formed, but no real restoration targets were set.

The Monroe County Mosquito Control District commissioned and funded a pesticide/draft study in The Ocean Reef Club (on Upper Key Largo) where endangered Miami Blues were sacrificed, rather than a surrogate species, such as the close relative *Ceraunus* Blues which are common.

Because of political considerations, releases of captive-bred Miami Blues (both caterpillars and adults) were limited to a few remote areas (such as northern Elliott Key within Biscayne National Park) and this severely limited the ability of researchers to effectively monitor the status of those butterflies.

Requests for an experimental population to be introduced on Key Biscayne at Bill Baggs State Park were met with bureaucratic red tape; and took one and one-half years to complete — just in time for the captive colony to expire.

The Current Situation

Meanwhile the Bahia Honda population collapsed. This was apparently due to several reasons, the most important of which appears to have been the lack of a coordinated, site-specific management plan for this Miami Blue population. In fact, the existing ten-year plan for Bahia Honda State Park barely mentions, and makes no meaningful provision for the protection and encouragement of, the Miami Blue population.


Without an effective plan, several factors conspired to overwhelm Bahia Honda State Park's wild population: (i) Pressure on the gray nickerbean population (the Miami Blue hostplant at the site) resulting from human activities (trails, sewage facilities, picnic areas) in the Miami Blues' micro-environment which

were planned and implemented (or tolerated), along with (ii) not-unexpected natural events, including extraordinary dry seasons, tropical storms and cold, dry Winter of 2010, (iii) the lack of a coherent, routine monitoring program, and finally beginning in 2008 (iv) tolerance of an ever expanding iguana population which has, and continues to, reek havoc on the nickerbean populations by eating the freshest growth on the plants, such as terminal buds (the prime location for Miami Blue egg-laying).

Last Blue Flame

Prospects for the restoration of Miami Blues in Florida are now much diminished. A recent government-led expedition in mid July 2010 found no Miami Blues at Bahia Honda, but did find a relatively robust population at Boca Grande. Now the butterfly is under federal custody where as a candidate species it lingers in a long queue for federal endangered listing. Several actions have been taken over the past few months:

- The U.S. Fish and Wildlife Service has engaged biologist Nick Haddad from North Carolina State University to conduct a thorough survey of Key West NWR and the contiguous Great White Heron NWR for Miami Blues.
- NABA and its Miami Blue Chapter has requested that the USFWS re-evaluate its decade-old request to emergency list the Miami Blue as an endangered species.
- The State of Florida (specifically Bahia Honda State Park) has gotten serious about protecting and improving the Bahia Honda site for Miami Blues, with the hope that they will fly there again.

After much bureaucratic stumbling, we will see if the government can get it right this time, or whether the last Miami Blue "flame" will flicker out. 

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Stoplight Catone

photos from Palenque and the lowlands of Chiapas, Mexico tour



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