

## DEPARTMENT OF THE INTERIOR

## Fish and Wildlife Service

## 50 CFR Part 17

**Endangered and Threatened Wildlife and Plants; 90-Day Finding for a Petition To List the Miami Blue Butterfly as Endangered With Critical Habitat**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of 90-day petition finding and initiation of status review.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding for a petition to list the Miami blue butterfly (*Hemiargus thomasi bethunebakeri*) under the Endangered Species Act of 1973, as amended. The range of this butterfly, which once extended north along the Florida coasts to about St. Petersburg and Daytona, has been shrinking for many years. We find that the petition presented substantial information indicating that listing this species may be warranted. We are initiating a status review to determine if listing the Miami blue butterfly is warranted.

**DATES:** The finding announced in this document was made on December 20, 2001. To be considered in the 12-month finding for this petition, information and comments should be submitted to us by March 4, 2002.

**ADDRESSES:** Data, information, comments, or questions concerning this petition should be submitted to the South Florida Ecological Services Office, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960. The petition finding, supporting data, and comments are available for public inspection, by appointment, during normal business hours at the above address.

**FOR FURTHER INFORMATION CONTACT:** David Martin at the above address (561-562-3909, extension 230).

**SUPPLEMENTARY INFORMATION:****Background**

Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*), requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information to demonstrate that the petitioned action may be warranted. This finding is to be based on all information available to us at the time the finding is made. To the maximum extent practicable, we are to make this finding within 90 days of the

date we received the petition and promptly publish it in the **Federal Register**. If the finding is that substantial information was presented, we are also required to promptly commence a review of the status of the species involved if one has not already been initiated under our internal candidate assessment process. After completing the status review, we will issue an additional finding (the 12-month finding) determining whether listing is in fact warranted.

On June 15, 2000, we received a petition, dated June 13, 2000, from Dr. Jeffrey Glassberg, president of the North American Butterfly Association, Morristown, New Jersey, and Mr. Mark Salvato, an entomologist in St. Petersburg, Florida. The petition requested that we list the Miami blue butterfly as an endangered species on an emergency basis, and that critical habitat be designated concurrent with listing.

The petitioners cited habitat loss as a threat to the Miami blue butterfly. They suggested that fragmentation of habitat is a threat to this butterfly because if a local population becomes extinct, surviving populations of Miami blues are unlikely to be nearby, and butterflies will not be able to disperse into the unoccupied habitat. The petition also suggested that vegetation management on public land (notably lack of prescribed fires and suppression of natural ones) is adversely affecting Miami blue butterflies, as it does not maintain the appropriate native plant species required by the butterfly. Further, the petition cited unethical butterfly collection as a potential threat to the Miami blue. Finally, the petition asserted that mosquito control measures (i.e., spraying of adulticides) may threaten this species.

The Miami blue is the only subspecies of *Hemiargus thomasi* in the United States. The other subspecies are in the Bahamas, Hispaniola, and islands further east in the Antilles. Guides to Florida and Caribbean butterflies differ over whether the Miami blue also occurs in the Bahamas. Minno and Emmel (1993) considered it restricted to Florida, while Smith *et al.* (1994) noted that it had been recorded from the Bimini Islands in the Bahamas as does Calhoun (1997). Calhoun *et al.* (in press) surmise that it may not be a permanent resident in the Bahamas. In any case, the vast majority of this subspecies' distribution was in Florida, with any populations in the Bahamas being peripheral.

Little historic information exists on the abundance of the Miami blue, but its distribution has clearly shrunk. Kimball

(1965) stated that "it is not rare in the area from Gainesville and Tampa south, and is common in Dade and Monroe Counties. It has been taken in the Dry Tortugas." Opler and Krizek (1984) showed its range as being from Tampa Bay and Cape Canaveral southward. Minno and Emmel (1993) stated that "although populations of the Miami blue have declined on the southern mainland, it is still locally common in the Keys" (pp. 134-35). However, this statement was based on a 1980 reference. Calhoun *et al.* (in press) place the historic limits of the species' northern distribution at Hillsborough and Volusia Counties, extending southward along the coasts to the Marquesas Keys to the west of Key West, based on information from Forbes (1941) and Kimball (1965), as well as unpublished data assembled by Calhoun.

The Miami blue is closely related to the nickerbean blue (*Hemiargus ammon*), a Cuban species that has recently become established on Big Pine Key (Calhoun *et al.* in press). The potential for confusing these two species, as well as a third, the Florida blue (*Hemiargus ceraunus antibubastus*), makes it essential to base distribution records on specimens or photographs rather than sightings.

The petitioners' evidence, augmented by other available information, especially a paper by Calhoun *et al.* (in press), demonstrate that this subspecies has become hard to find. No observations of the Miami blue were supported by photographs or specimens from 1993 (Calhoun *et al.* in press) until November 1999, when Jane Ruffin provided a photographically verified report of about 50 individuals at a site in southern Florida. Her report was published in the spring 2000 issue of American Butterflies (Ruffin and Glassberg 2000). Calhoun *et al.* (in press) note an additional confirmed population near the one observed in 1999 as well as a credible sighting by R. Gillmore on Key Largo, which was posted on the North American Butterfly Association's website (<http://www.naba.org/sightings/sightingsMay2001Archive.htm>). The petitioners cited biologists and others who have searched for butterflies in southern Florida in recent years without sighting the Miami blue. This strongly indicates that the Miami blue is now very restricted in its distribution and nowhere abundant.

Larval food plants for the Miami blue butterfly include the seed pods of nickerbeans (*Caesalpinia* spp.), which are common tropical coastal shrubs and vines, as well as blackbeards

(*Pithecellobium* spp.) and perhaps other members of the pea family, such as *Acacia* (Calhoun *et al.* in press). Miami blue larvae also utilize balloon vine (*Cardiospermum halicababum*) seedpods (Opler and Krizek 1984, Minno and Emmel 1994). These vines, belonging to the soapberry family, are not native to Florida, but are relatively common, especially in urban areas. Additionally, Calhoun *et al.* (in press) suggest that larvae of the Miami blue, like those of the nickerbean blue, may feed on species of *Acacia* that are abundant on Big Pine Key.

The petition cites habitat loss and fragmentation as a threat. The Miami blue was a coastal species, known to feed on distinctly coastal trees and shrubs, which occur in tropical coastal hammocks (forests) and scrub. It also occurred in pine rocklands (slash pine with small palms and a grassy understory) on Big Pine Key (Calhoun *et al.* in press) and presumably in Miami-Dade County. Much of that habitat is gone, especially on the mainland, and what is left is fragmented. For example, the entire coastline in Palm Beach, Broward, and Miami-Dade Counties (as far south as Miami Beach) is densely urban, with only small remnants of coastal vegetation conserved in parks. In coastal areas where undeveloped land remains, the Miami blue's larval food plants are likely to be displaced by invasive exotic plants such as Brazilian pepper (*Schinus terebinthifolius*), which is now a dominant plant in coastal Florida. The seriousness of the loss and fragmentation of natural habitats is uncertain, partly because larvae of the Miami blue feed on balloon vines, which are exotic, weedy, and likely to be present in the urban landscape. It is possible that balloon vines could provide patches of suitable larval feeding habitat that would allow Miami blue butterflies to disperse between patches of suitable natural habitats.

The petition suggests that fragmentation of habitat is a threat to this butterfly because if a local population becomes extinct, surviving populations of Miami blues are unlikely to be nearby, and butterflies will not be able to disperse into the unoccupied habitat. Calhoun *et al.* (in press) provide indirect evidence that this may be the case on Big Pine Key, which appears to be unoccupied by the Miami blue, but is occupied by the nickerbean blue butterfly. The food plants of the two species seem similar enough to indicate that the Miami blue became extirpated from Big Pine Key in the 1990s for reasons other than loss of suitable habitat, and has not recolonized the island.

The petition suggests that vegetation management on public land, notably lack of prescribed fires and suppression of natural ones, is adversely affecting butterflies. Calhoun *et al.* (in press) report that, until it disappeared from Big Pine Key in the early 1990s, the Miami blue most commonly occurred in pine rocklands that are now used by the nickerbean blue. This is a fire-dependent habitat and it is conceivable that the success of the Miami blue in pinelands depended on regular burning, although as Calhoun *et al.* (in press) note, host plants (*Caesalpinia* and *Acacia*) appear to be abundant. It did not seem to them that habitat loss or modification was likely to have caused the loss of the Miami blue from Big Pine Key.

The petition cited unethical butterfly collection as a potential threat to this species. While we have listed several butterflies to, in part, protect them from collectors, it is not yet possible to demonstrate that collecting is threatening this species. However, unless this butterfly proves to be more widespread than is currently known, collection may be a threat due to the species rarity and apparently spotty distribution.

Butterflies are potentially subject to intense collection pressures, and recent listings of butterflies as endangered or threatened species have been based on this threat (notably the Saint Francis' satyr (*Neonympha mitchellii francisci*), emergency-listed, 59 FR 18324, April 15, 1994; callippe and Behren's silverspot butterflies (*Speyeria callippe callippe* and *Speyeria zerene behrensi*), 62 FR 64306, December 5, 1997; and Blackburn's sphinx moth (*Manduca blackburni*), 65 FR 4770, February 1, 2000). The Saint Francis' satyr was demonstrated to have been hard hit by collectors in just a 3-year period. On the other hand, our 90-day petition finding for the Santa Monica Mountains hairstreak (*Satyrrium auretorum fumosum*) (64 FR 62641, November 17, 1999) found that collection and other threats were not serious enough to warrant listing. Along with collectors interested in making money, butterflies also attract obsessive collectors (Alexander 1996, Williams 1996).

The Miami blue butterfly's apparent rarity makes it vulnerable to random events such as hurricanes or possibly freezes that can temporarily destroy the foliage of larval food plants.

The petition asserted that mosquito control measures (i.e., spraying of adulticides) may threaten this species. Salvato (1999) studied factors influencing the declining populations of three butterfly species in the lower

Keys. Although the species he studied have life histories that are different from that of the Miami blue, his masters thesis demonstrates that mosquito adulticide spraying can harm butterflies at the National Key Deer Refuge on Big Pine Key. He suggested specific expansions of the existing no-spray zones to protect the breeding grounds of these butterflies. His study is one of several conducted by a group of researchers on the problems of mosquito control pesticides in the ecosystem (Emmel 1991), which focused on conservation of the endangered Schaus swallowtail butterfly (*Papilio aristodemus*) on Key Largo. They found a "probably causal" correlation between the history of mosquito control on Key Largo and the decline of the Schaus swallowtail butterfly there.

The petitioners stated that, due to aspects of the Miami blue's natural history, especially its association with ants, "roadside adulticide applications may be having much larger negative impacts on *H. t. bethunebakeri* populations than on those of other lycaenid species in the Keys. Miami blue larvae mature in the stem and seed pods of their host. These larvae leave the entrance holes open so that ants can enter the seed pods and stems and interact with the larvae. Dr. Jenella Loge (University of Utah) has discovered that these ants and the Miami blue larvae die when spraying begins in late spring on the Keys. Larvae of other lycaenid species on the Keys, ones without mutualistic relationships with ants, plug the holes of their seed pods and stems to keep would-be predators outside, and this may also restrict the entrance of adulticide spray." About half of the world's lycaenid butterfly species associate with ants. Cushman and Murphy (1993) suggest that ant-dependent lycaenid butterflies are inherently more vulnerable to extinction than those that are not ant-dependent because of the consequences of needing both the right food plants and the right ants, simultaneously. Based on information from Calhoun *et al.* (in press) and Salvato (1999), mosquito spraying appears likely to have contributed to the decline of the Miami blue and might be inhibiting recolonization of suitable habitats.

We have reviewed the petition, the literature cited in the petition, and other literature and information available in our files. On the basis of the best scientific and commercial information, we find the petition presents substantial information that listing this species may be warranted. Habitats that were probably formerly occupied by the Miami blue butterfly have been

destroyed or fragmented. The available information suggests that the Miami blue is rare and may exist only in small numbers at a few sites. This probable rarity suggests that the species might not be able to recolonize former portions of its range that may have suitable, but unoccupied, habitat. Also, the available information demonstrates that mosquito spraying in the Florida Keys and probably other parts of the Miami blue's former range has the potential to harm this species.

The petitioners stated that the Miami blue butterfly's last known population may be destroyed by mosquito control adulticide treatments, by human-caused changes to its habitat on the public land it inhabits, or by unethical butterfly collectors, and they requested emergency listing of the species. We may issue an emergency rule when an immediate threat poses a significant risk to the well-being of a species. Although the Miami blue butterfly appears to be in danger of extirpation, we do not believe that the threats are so great that extirpation is imminent. Upon receiving the petition, we reviewed the available information to determine if the existing and foreseeable threats posed an emergency. Consequently, we determined that an emergency listing was not warranted at this time. However, if at any time we determine that emergency listing of the Miami blue butterfly is warranted, we would seek to initiate an emergency listing. The petitioners also requested that critical habitat be designated for this species. We always consider the need for critical habitat designation when listing species. If the 12-month finding determines that listing the Miami blue butterfly is warranted, then the designation of critical habitat will be addressed in the subsequent proposed rule.

#### Public Information Solicited

When we make a finding that substantial information exists to indicate that listing a species may be warranted, we are required to promptly commence a review of the status of the species. To ensure that the status review is complete and based on the best available scientific and commercial information, we are soliciting information on the Miami blue butterfly. We request any additional information, comments, and suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested parties concerning the status of the Miami blue butterfly. We are seeking information regarding historic and current distribution, habitat use and habitat conditions, biology and ecology,

ongoing conservation measures for the species and its habitat, and threats to the species and its habitat.

If you wish to comment, you may submit your comments and materials concerning this finding to the Supervisor, South Florida Ecological Services Office, U.S. Fish and Wildlife Service, 1339 20th Street, Vero Beach, Florida 32960. Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Respondents may request that we withhold their home address, which we will honor to the extent allowable by law. There also may be circumstances in which we would withhold a respondent's identity, as allowable by law. If you wish us to withhold your name or address, you must state this request prominently at the beginning of your comment. However, we will not consider anonymous comments. To the extent consistent with applicable law, we will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address.

#### References Cited

You may request a list of all references cited in this document, as well as others, from the South Florida Ecological Services Office (see **ADDRESSES** section).

#### Author

The primary author of this document is David Martin, South Florida Ecological Services Office (see **ADDRESSES** section).

#### Authority

The authority for this action is the Endangered Species Act (16 U.S.C. 1531 *et seq.*).

Dated: December 20, 2001.

**Marshall P. Jones Jr.,**

*Director, Fish and Wildlife Service.*

[FR Doc. 02-36 Filed 1-2-02; 8:45 am]

**BILLING CODE 4310-55-P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

#### 50 CFR Part 697

[Docket No. 010918229-1229-01; I.D. 022301A]

**RIN 0648-AP15**

#### American Lobster Fishery

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed rule; request for comments.

**SUMMARY:** NMFS proposes regulations to modify the management measures applicable to the American lobster fishery. This action responds to the following recommendations made by the Atlantic States Marine Fisheries Commission (ASMFC): To control fishing effort as determined by historical participation in the American lobster trap fisheries conducted in the offshore Lobster Conservation Management Area (LCMA) 3 (Area 3) and in the nearshore LCMAs of the Exclusive Economic Zone (EEZ) from New York through North Carolina (Areas 4 and 5); to implement a mechanism for conservation equivalency and associated trap limits for owners of vessels in possession of a Federal lobster permit (permit holders) fishing in New Hampshire state waters; and to clarify lobster management area boundaries in Massachusetts waters. NMFS includes in this proposed rule a technical amendment to the regulations clarifying that Federal lobster permit holders must attach federally approved lobster trap tags to all lobster traps fished in any portion of any management area (whether in state or Federal waters). This requirement is not new, but was not previously clearly specified in the regulatory text, and this announcement is intended to make the regulations easier to understand.

**DATES:** Comments must be received no later than 5 p.m., eastern standard time, on February 19, 2002.

**ADDRESSES:** Comments on the proposed rule should be sent to Harry Mears, Director, State, Federal and Constituent Programs Office, NMFS, One Blackburn Drive, Gloucester, MA 01930.

Comments will not be accepted if submitted via e-mail or the Internet. Comments regarding the collection-of-information requirements contained in the proposed rule should be sent to Harry Mears at the above address, and the Office of Information and Regulatory