

# Final Listing – Threatened Species Status for the Miami tiger beetle

## 1. What action is the Service taking?

The U.S. Fish and Wildlife Service is publishing a final rule to list the Miami tiger beetle as endangered under the Endangered Species Act (ESA).

## 2. Why is the Service listing the Miami tiger beetle and what criteria did the Service use?

The Service determined that the Miami tiger beetle is currently at risk of extinction throughout all of its range.

Under the ESA, the Service can determine that a species is endangered or threatened based on any of five factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

Habitat loss, degradation, and fragmentation have destroyed an estimated 98 percent of the historical Miami-area pine rockland habitat, with only two known Miami tiger beetle populations remaining. The threat of habitat loss is continuing from development, inadequate habitat management, encroaching vegetation, and environmental effects resulting from climatic change (Factors A, E). Because of its restricted range, small population size, few populations, and relative isolation (Factor E), collection is a significant threat to the species and could potentially occur at some locations at any time (Factors B, D). Additionally, the species is currently threatened by a wide array of natural and manmade factors (Factor E). Existing regulatory mechanisms do not provide adequate protection for the species (Factor D).

### **3. Is a critical habitat designation for the Miami tiger beetle part of this proposal?**

Not at this time. Critical habitat will be proposed later in a separate action. Although critical habitat is prudent, it is not determinable at this time because more information to perform the required analysis of the impacts of the designation is needed. We anticipate proposing critical habitat for the Miami tiger beetle by September 2017.

### **4. Was this listing triggered by plans to develop areas in the Richmond Pine Rockland area of Miami?**

No. The listing was triggered after a population of these beetles were rediscovered in the Miami area. They were thought to be extinct. The Miami tiger beetle is currently threatened by a wide array of factors and the threat from proposed development in the Richmond Pine Rocklands is one of the threats considered under Factor A, “the present or threatened destruction, modification, or curtailment of its habitat or range.”

### **5. How might this species’ listing affect landowners’ ability to develop or sell their land?**

Section 7(a)(2) of the ESA requires a federal agency to consult with the Service before it funds, permits, or carries out an action that is likely to jeopardize the continued existence of a listed species. For non-federal entities, it is recommended that the listed species be included as a covered species when developing Habitat Conservation Plans under the ESA’s Section 10.

Sections 7 and 10 of the ESA apply, requiring consideration of the species in any actions that may affect it, including development or management of lands. The sale or transfer of lands that involves the federal government (e.g., Coast Guard) would likely require consultation under the National Environmental Policy Act depending on the ultimate intended use of the land. It is prudent for the parties involved to discuss the presence of listed species prior to finalization of any sale or transfer of lands.

## 6. Is the Service already working with landowners and potential developers to try to protect rare pine rocklands in this area?

We coordinated with federal, state, county, and private stakeholders to notify them of our plans, seek their support, and refine strategies essential to survival and recovery of the beetles. The Service has a good working relationship with most stakeholders and has received their assistance in pulling together information for this listing action. Coordination to date includes obtaining information about habitat quality and management efforts and constraints. Reactions of key partners have so far been positive.

The Service is working closely with prospective developers and key stakeholders in Miami-Dade County to ensure that the Miami tiger beetle is considered in development or management plans.

Although this beetle is not currently listed by the State of Florida, the Miami-Dade Mosquito Control District (MCD), the agricultural community, and the Florida Department of Agriculture and Consumer Services (FDACS) may be concerned about possible restrictions upon pesticide application. Although the effects of pesticides and contaminants on the Miami tiger beetle have not been directly studied, the beetle may be exposed to a variety of compounds through multiple routes of exposure. We plan to build upon our evolving partnerships with the MCD, FDACS, and others and encourage partners, to, wherever possible, avoid or minimize pesticide application in occupied and suitable habitat to increase the likelihood of survival and recovery. Most recently the MCD implemented spray buffers for listed butterflies, which should also reduce potential threats to the Miami tiger beetle.

Developers proposing projects in the Richmond Pine Rocklands (Miami Wilds at Zoo Miami and Coral Reef Commons by Ram Realty Services) are concerned about possible restrictions on development. Plans for the proposed Miami Wilds and Coral Reef Commons developments have yet to be finalized and lands have not been fully surveyed for the beetle, so potential impacts to the species and its habitat cannot be fully assessed. However, based upon available information to date, it appears that the proposed developments would have impacts on suitable and/or potentially suitable beetle habitat.

In a December 2, 2014, letter, the Service notified Miami-Dade County about concerns regarding the proposed development's effects to listed, candidate, and imperiled species, including the Miami tiger beetle. Service biologists and managers also have met with

Miami-Dade officials and provided recommended survey guidelines for the Miami tiger beetle. Current plans for the proposed Miami Wilds theme park will require the sale or transfer of U.S. Coast Guard land, which is known to be occupied by the Miami tiger beetle, and would be reviewed by the Service under the National Environmental Policy Act. Zoo Miami is coordinating with our office on projects that have the potential to adversely affect Miami tiger beetles. To date, these have included a road expansion and transmission line. Surveys on the adjacent Coast Guard property are underway. This effort is a precursor for a land management strategy for the Coast Guard and/or the potential transfer of lands from the Coast Guard to the County for the development of Miami Wilds.

With regard to Coral Reef Commons, the Service has worked with representatives of Ram Realty Services on the development of a draft Habitat Conservation Plan (HCP), which includes the Miami tiger beetle as a covered species. The draft HCP along with the incidental take permit application was submitted to the Service's Southeast Regional Office for review in August 2016. The package will be reviewed by regional biologists and will undergo a legal review. Following these reviews, the draft HCP will be made available for public review during a 60-day comment period. The HCP will be finalized and a decision on the incidental take permit application will be made by the Southeast Region once public comments are reviewed and considered. Completion of the process is not expected before spring 2017.

## **7. How might this listing affect proposed development in the Richmond Pine Rocklands?**

The Richmond Pine Rocklands is a mixture of publically and privately owned lands that retains the largest area of contiguous pine rockland habitat (approximately 503 hectares (1,243 acres)) outside of Everglades National Park. Six listed species or their critical habitat, if applicable, are currently found within the Richmond Pine Rocklands, including the Florida bonneted bat (*Eumops floridanus*), Bartram's scrub-hairstreak butterfly (*Strymon acis bartrami*), Florida leafwing butterfly (*Anaea troglodyte floridalis*), Florida brickell-bush (*Brickellia mosieri*), Carter's small-flowered flax (*Linum carteri* var. *carteri*), deltoid spurge (*Chamaesyce deltoidea* ssp. *deltoidea*), and tiny polygala (*Polygala smallii*).

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## **8. How will protected status for these beetles impact the ability of the Mosquito Control District to do its job of protecting the health and well-being of South Florida citizens?**

Although the effects of pesticides and contaminants on the Miami tiger beetle have not been directly studied, the species may be exposed to a variety of compounds through multiple routes of exposure. We plan to build upon our evolving partnerships with the Miami-Dade Mosquito Control District, Florida Department of Agriculture and Consumer Services, and others and encourage partners to, wherever possible, avoid or minimize pesticide application in occupied and suitable habitat to increase the likelihood of survival and recovery. Most recently, Miami-Dade Mosquito Control District implemented spray buffers for listed butterflies, which should also reduce potential threats to the Miami tiger beetle. Their truck-based spray buffers around critical habitat for the Bartram's scrub-hairstreak butterfly have greatly reduced exposure to the Miami tiger beetle, and mosquito control is currently not considered a major threat for the known populations at this time. However, the current spray buffers are not regulations and are subject to change based on human health concerns, which is likely with the spread of the Zika virus and potential efforts to combat its spread.

## 9. Is the Miami tiger beetle a separate species from the Highlands tiger beetle?

Yes. The most current peer-reviewed scientific information confirms that the Miami tiger beetle (*Cicindelidia floridana*) is a full species, and this taxonomic change is used by the scientific community.