Frequently Asked Questions: The USFWS lists Florida Leafwing and Bartram's Scrub-Hairstreak Butterflies as Endangered; Designates Critical Habitat

1. Why did the U.S. Fish and Wildlife Service decide to list Florida leafwing and Bartram's scrub-hairstreak butterflies as endangered?

The Service believes the Florida leafwing and Bartram's scrub-hairstreak butterflies are presently in danger of extinction throughout their entire ranges based on the severity and immediacy of threats currently impacting the species. Although remaining Florida leafwing and Bartram's scrub-hairstreak populations occur almost entirely within conservation lands, a wide array of natural and human-influenced threats remain. Habitat loss, fragmentation and degradation, specifically from natural fire suppression (combined with limited prescribed burns or mechanical clearing), are the most imminent threats to these butterflies and their host plant.

2. Why is the Service designating critical habitat for the Florida leafwing and Bartram's scrub-hairstreak butterflies?

When a species is proposed for listing as endangered or threatened under the Endangered Species Act (ESA), the Service must consider whether there are areas of habitat essential to the species' conservation. Those areas may be proposed for designation as critical habitat.

3. What does a critical habitat designation do?

Critical habitat is a term in the Endangered Species Act (ESA) that identifies geographic areas containing features essential for the conservation of a listed species and which may require special management considerations or protection. Specifying the location of habitat essential for the conservation of the species helps federal agencies identify where to utilize their authorities to benefit listed species. The designation also helps focus the conservation efforts of other conservation partners, such as state and local governments, non-governmental organizations, and individuals.

The Service will work cooperatively with partners to conserve critical habitat for the Florida leafwing and Bartram's scrub-hairstreak. In addition, federal agencies need to ensure activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the thoroughwort or result in the destruction or adverse modification of its critical habitat. Designating critical habitat also provides non-regulatory benefits by informing the public of areas that are important to the species' recovery and identifying where conservation actions would be most effective.

Section 7(a)(2) of the ESA requires federal agencies, including the Service, to ensure that any action they fund, authorize, or carry out are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification its designated critical habitat.

In addition, Section 7(a)(4) of the ESA requires federal agencies to consult with the Service on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of proposed critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. A critical habitat designation does not allow the government or public to access private lands, nor does it require implementation of restoration, recovery, or enhancement measures by non-federal landowners.

4. How much critical habitat has been designated for the Florida leafwing and Bartram's scrub-hairstreak and where is it located?

About 10,561 acres in Miami-Dade and Monroe Counties, Florida, are designated as critical habitat for the Florida leafwing. The designated critical habitat areas are in Everglades National Park and other areas in Miami-Dade County, and Big Pine Key. About 11,539 acres in Miami-Dade and Monroe Counties, Florida, are designated as critical habitat for the Bartram's scrub-hairstreak. The designated critical habitat areas are in Everglades National Park and other areas in Miami-Dade County, Big Pine Key, No Name Key and Little Pine Key. Most of the designated lands are already protected as federal, state and local government conservation areas.

When designating critical habitat boundaries, the Service avoided developed areas such as lands covered by buildings, pavement and other structures because such lands lack physical or biological features that could support the Florida leafwing and Bartram's scrub-hairstreak.

5. Why were these particular critical habitat units chosen, what were the criteria?

Florida leafwing -- The Florida leafwing requires the following physical and biological features:

• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that are at least 120 ha (296 ac) in size.
• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that contain pineland croton and other herbaceous vegetation typical of these plant communities.
• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods with pineland croton for larval development and ample roosting sites for adults and limited or restricted pesticide application.
• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that contain pineland croton and other herbaceous vegetation typical of these plant communities, with limited nonnative predation.
• Disturbance regimes, natural or prescribed to mimic natural disturbances, such as fire or storms.

The current distribution of the Florida leafwing is much reduced (90 percent) from its historical distribution. Small butterfly populations with limited, fragmented distributions, such as the Florida leafwing, are highly vulnerable to localized extirpations. Historical populations of the Florida leafwing, once linked, now are subject to the loss of genetic diversity from genetic drift, the random loss of genes, and inbreeding. In addition, natural fluctuations in rainfall, hostplant vigor, or butterfly predators may weaken a population to such an extent that recovery to a viable level would be impossible. Isolation of habitat can prevent recolonization from other sites and result in extinction. Because of the dangers associated with small populations or limited distributions, the recovery of many rare butterfly species includes the creation of new sites or reintroductions within the historical range to ameliorate these effects.

Recovery of the Florida leafwing will require continued protection of the remaining extant population and habitat, as well as establishing populations in additional areas that more closely approximate its historical distribution in order to ensure there are adequate numbers of butterflies in stable populations and that these populations occur over a wide geographic area. This will help to ensure that catastrophic events, such as storms, cannot simultaneously affect all known populations.

The occupied critical habitat units were delineated around documented extant populations. These units include the mapped extent of the population that contain one or more of the elements of the physical and biological features: (1) Space to allow for the successional nature of the occupied pine rockland habitat, the habitat being one of the elements of the PBFs; and (2) Space to plan for the persistence of the current Florida leafwing population in the face of imminent effects on habitats as a result of sea level rise These areas generally are habitats where some of the PCEs have been lost through natural or human causes and would help to off-set the anticipated loss and degradation of habitat occurring or expected from the effects of climate change (such as sea level rise) or due to development.

The current occupied habitat is not adequate for the conservation and recovery of the Florida leafwing, thus, unoccupied areas essential to the conservation of the species were selected because they: (1) Represent areas of sufficient size to support ecosystem processes for populations of the Florida leafwing. Large contiguous parcels of habitat are more likely to be resilient to ecological processes of disturbance and succession, and support viable populations of the Florida leafwing. The unoccupied areas selected were at least 120 ha (296 ac) or greater in size. This size criteria is based on Navy Wells Pine Preserve, which was the smallest known parcel in recent history (past 25 years) known to have maintain a viable leafwing population; (2) Provide areas to maintain connectivity of habitat to allow for population expansion; and (3) Provide areas, that once restored will allow the Florida leafwing to disperse and recolonize and in some instances, may be able to support expansion and a larger number of the subspecies either through reintroduction or expansion from areas already occupied by the butterfly. These areas would help to offset the anticipated loss and degradation of habitat occurring or expected from the effects of climate change (such as sea level rise) or due to a lack of adequate fire management development.

The amount and distribution of designated critical habitat are essential for the conservation of the Florida leafwing because they: (1) Provide sufficient size to support ecosystem processes for populations of the Florida leafwing; (2) Maintain connectivity of habitat to allow for population expansion; and (3) Once restored will allow the Florida leafwing to expand throughout its historical range.

Bartram's scrub-hairstreak -- The Bartram's scrub-hairstreak requires the following physical and biological features:

• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that are at least 7 ha (18 ac) in size and are located no more than 5 km (3 miles) apart to allow for habitat connectivity.
• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that contain pineland croton and other herbaceous vegetation typical of these plant communities.
• Absence of pesticide in the pine rocklands, associated rockland hammock, and hydric pine flatwood habitats or in low enough quantities that is not detrimental to the butterfly.
• Pine rockland habitats and associated rockland hammock and hydric pine flatwoods that contain pineland croton and other herbaceous vegetation typical of these plant communities.
• Disturbance regimes, natural or prescribed to mimic natural disturbances, such as fire or storms.

The current distribution of the Bartram's scrub-hairstreak is much reduced (90 percent) from its historical distribution.

Isolation of habitat can prevent recolonization of the Bartram's scrub-hairstreak from other sites and result in extinction. Because of the dangers associated with small populations or limited distributions, the recovery of many rare butterfly species includes the creation of new sites or reintroductions to ameliorate these effects. In addition, establishing corridors or employing small patches (stepping stones) of similar habitats have been shown to facilitate dispersal, reduce extinction rates and increase gene flow of imperiled butterflies suggest that small natural areas within the urban landscape may serve an important role in promoting butterfly dispersal and gene flow in fragmented landscapes. Butterflies are capable of dispersing throughout the landscape, sometimes as far as 5 km (3 miles), utilizing high-quality habitat patches. Stepping stones may be particularly useful to the Bartram's scrub-hairstreak, which like most lycaenids, exhibits low vagility, rarely venturing from the pine rockland habitat or away from large areas of contiguous patches of hostplant.

Recovery of the Bartram's scrub-hairstreak will require continued protection of the remaining extant population and habitat, as well as establishing populations in additional areas that more closely approximate its historical distribution in order to ensure there are adequate numbers of butterflies in stable populations and that these populations occur

over a wide geographic area. This will help to ensure that catastrophic events, such as storms, cannot simultaneously affect all known populations.

The occupied critical habitat units were delineated around documented extant populations. These units include the mapped extent of the population that contain one or more of the elements of the physical and biological features: (1) Space to allow for population growth and expansion; The units include only pine rocklands fragments that are at least 7 ha (18 ac) in size (which represents the minimum known extant population size) and are currently occupied; and (2) Space to plan for the persistence of the current Bartram's scrub-hairstreak population in the face of imminent effects on habitats as a result of sea level rise. These areas generally are habitats where some of the PCEs have been lost through natural or human causes and would help to off-set the anticipated loss and degradation of habitat occurring or expected from the effects of climate change (such as sea level rise) or due to a lack of adequate fire management or development.

The current occupied habitat is not adequate for the conservation and recovery of the Bartram's scrub-hairstreak, thus, unoccupied areas essential to the conservation of the species were selected because they: (1) Represent large contiguous parcels of habitat that are more likely to be resilient to ecological processes of disturbance and succession, and support viable populations of the Bartram's scrub-hairstreak; (2) Provide areas are needed to maintain connectivity of habitat and aid butterfly dispersal within and between occupied units (i.e. stepping stones for dispersal); and (3) Provide areas that are needed to allow the dynamic ecological nature of the pine rockland habitat to continue.

The amount and distribution of designated critical habitat are essential for the conservation of the Bartram's scrub-hairstreak because they: (1) Provide sufficient size to support ecosystem processes for populations of the Bartram's scrub-hairstreak; (2) Maintain connectivity of habitat to allow for population expansion; and (3) Once restored will allow the Bartram's scrub-hairstreak to expand throughout its historical range.

6. What does the critical habitat designation mean to residents and property owners of these areas?

Designation of critical habitat also does not affect land ownership or establish a refuge or preserve. The designation of critical habitat on private land has no impact on private landowner activities that do not require federal funding or federal permits. The regulatory implications of designating of critical habitat only apply to federal activities. The Service will continue to consult on projects federal agencies conduct, fund, and/or permit that may impact these butterflies, regardless of whether these projects occur in designated critical habitat or not.

7. What is the biggest threat to the Florida leafwing and Bartram's scrub-hairstreak habitat?

The decline of the Florida leafwing and Bartram's scrub-hairstreak is primarily the result of habitat destruction and fragmentation, including climatic change, and lack of adequate

fire management, poaching, parasitism, predation, disease, small population size, restricted range, and influence of chemical pesticides used for mosquito control.

8. Did the Service consider the possible economic impacts the proposed designation of critical habitat might have on coastal communities and landowners?

Yes. The Service conducted an economic analysis of the proposed critical habitat that the public was encouraged to participate in. Our economic analysis didn't identify any disproportionate costs that are likely to result from the designation. This analysis considered the potential impact of the designation on various sectors of the economy over the next 20 years. The Service quantified economic impacts of conservation efforts associated with: (1) commercial, residential and recreational development; (2) federal land management; and (3) restoration and conservation.

A draft economic analysis (DEA) was prepared to identify and analyze the potential economic impacts associated with the proposed critical habitat designation for the Florida leafwing and Bartram's scrub-hairstreak. The DEA provides estimated costs of the foreseeable potential economic impacts of the proposed critical habitat designation for both butterflies to determine if there is a potential for the proposed critical habitat rule to result in costs exceeding $100 million in a single year (Executive Order 12866) and identify the geographic areas or specific activities that could experience the greatest impacts, measured in terms of changes in social welfare, to inform the Secretary's decision under section 4(b)(2). The economic impacts of requiring conservation efforts for the Florida leafwing and Bartram's scrub-hairstreak associated with the following categories of activity were evaluated: (1) commercial, residential and recreational development; (2) Federal land management; and (3) restoration and conservation. The DEA concluded that the types of conservation efforts requested by the Service during section 7 consultation for either butterfly were not expected to change due to critical habitat designation in occupied or unoccupied habitat.

Based on the available information, we anticipate no more than eight to nine consultations per year in occupied and unoccupied critical habitat units. Unit costs of such administrative efforts range from approximately $400 to $9,000 per consultation (2013 dollars, total cost for all parties participating in a single consultation). Applying these unit cost estimates, this analysis conservatively estimates that the administrative cost of considering adverse modification in section 7 consultation will result in incremental costs of up to $72,000 (2013 dollars) in a given year. Therefore, the incremental administrative burden resulting from the designation is unlikely to reach $100 million in a given year based on the small number of anticipated consultations and pre-consultation costs.

9. If someone doesn't like the decision the Service makes after the final rules are published, can they protest it or seek to have it repealed?

Under the Administrative Procedures Act, each federal agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule. If someone does not agree with the Service's final decision, they may submit a petition to the Service to request the decision be changed or negated. Petitions are formal requests to list a species as endangered or threatened under the ESA. The ESA requires that the Service make and publish specific findings on the petition. The regulations that apply to petitions submitted under the ESA are found in Title 50 of the Code of Federal Regulations (C.F.R.); petitions to list, delist, or reclassify species are addressed in 50 C.F.R. § 424.14(b), and petitions to revise critical habitat are addressed in § 424.14(c). The full text of the CFR is available online at http://www.gpoaccess.gov/cfr/index.html). For a summary of the text, see http://www.fws.gov/endangered/esa-library/pdf/petition_guidance_for_internet_final_for_posting_12-7-10.pdf

A petition must be a written document that clearly identifies itself as a petition submitted under the ESA, and it must be dated. It must contain the name, signature, address, telephone number, if any, and the association, institution, or business affiliation, if any, of the petitioner.

10. How many butterflies are currently listed as endangered or threatened in South Florida and have designated critical habitat?

Previously, the Schaus swallowtail and Miami blue were the only federally listed butterflies in South Florida. Critical habitat has not been designated for either species. The sawgrass skipper (Euphyes pilatka klotsi), which only occurs in the lower Florida Keys is currently on the candidate list of species to be considered for listing. Additionally, two other butterflies, the Zestos (Epargyreus zestos oberon) and rockland grass skippers (Hesperia meskei pinocayo), have disappeared from South Florida within the past decade and are thought to be extinct.

In an attempt to galvanize butterfly conservation efforts in South Florida, the Imperiled Butterfly Working Group (IBWG) was formed. The IBWG consists of several agencies and organizations that meet quarterly to address butterfly-related issues in South Florida.

11. Are these actions the result of a litigation settlement?

The Service reviewed the status of the Florida leafwing and Bartram's scrub-hairstreak as part of an overall effort to improve the implementation of the Endangered Species Act (ESA). The Service submitted to the U.S. District Court for the District of Columbia, a multi-year listing work plan that enables the Service to systematically review and address the needs of more than 250 species listed on the 2010 Candidate Notice of Review, to determine if they should be added to the federal lists of endangered and threatened wildlife and plants. The multi-year listing work plan was initially developed by the Service to consolidate litigation.

The work plan was finalized through agreements with two frequent plaintiff groups, WildEarth Guardians (Guardians) and the Center for Biological Diversity (CBD). The

Service reached agreement on the work plan with the Guardians and filed in the U.S. District Court for the District of Columbia on May 10, 2011. On July 12, 2011, the Service reached an agreement with the plaintiff group CBD that reinforced the work plan. These agreements were approved by the Court on September 9, 2011. The listing of the Florida leafwing and Bartram's scrub-hairstreak was done in the spirit of that work plan, but more importantly as an opportunity to put the needs of species first and extend that safety net to those species truly in need of protection.