

# PUBLIC SUBMISSION

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**Docket:** FWS-R4-ES-2013-0108

Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

**Document:** FWS-R4-ES-2013-0108-0002

Submitted Electronically via eRulemaking Portal

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## Submitter Information

**Name:** Steve Paul

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## General Comment

We must protect viable populations of all life, including these.

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

**Document:** FWS-R4-ES-2013-0108-0003

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## Submitter Information

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## General Comment

We must protect viable populations of all life, including these.  
[http://www.ekoldugmesi.com/SAAT,LA\\_259-2.html](http://www.ekoldugmesi.com/SAAT,LA_259-2.html)

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

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## General Comment

The index system for identifying the proposed Units of Critical Habitat for Florida Brickell-bush and Carter's Small-flowered Flax were based on the best information possible for these two species. The Units in this Proposed Rule are very inclusive and reflect the two species current and historic, now unoccupied but potential range.

Ownership of the key habitats within the Units for the two species was very well reported on but was in need of reference on the maps themselves. Were the conservation lands from FNAI's Florida Managed Area GIS database, or from Dade County, or another source? A reference to year of GIS layer showing property boundaries would be helpful also. A lot of work has been put into the acquisition and management of the Pine Rocklands in many programs and these were well referenced in the text of the Proposed Rule, but not the maps or how the actual maps were produced, specifically the boundaries of the conservation lands. The past efforts towards preservation of Pine Rockland from many organizations can be reflected in a map to show this effort.

The criteria used to determine these Units was comprehensive and the best GIS data was used from the organizations that conserve the species, however another source of data could have been used, the Florida Element Occurrence data for the Pine Rockland natural community from the Florida Natural Areas Inventory. Also, all FLEO data from FNAI could have been used for the entire county that would show where Pine Rockland rare species are documented, thus revealing Pine Rockland habitat quality and delineation. FLEO point and polygon shapefiles for rare plants, animals, invertebrates, and natural communities are critical for large-scale examination identification of a particular habitat, such as Pine Rockland. This may have been used but was not referenced. The Institute for Regional

Conservation, Fairchild Tropical Botanical Garden, and other organizations also have put forth spatial data that were probably used but not referenced on the maps. This may or may not have been the purpose of the maps in the Proposed Rule, and may not be an issue, as it is well advertised how to get more information, if needed and all of it was well referenced in the text of the Proposed Rule.

This Proposed Rule is a successful attempt, in my opinion to help preserve these two rare species, using the best scientific data possible and making proper assumptions on conservation measures that will benefit Florida Brickell-bush and Carter's Small-flowered Flax.

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

**Document:** FWS-R4-ES-2013-0108-0008

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## General Comment

I have a brief comment in addition to ones already posted.

This is in reference to the critical habitat designation for *Brickellia* and *Linum*.

Specifically, the map on page 61313 of the proposed register, which shows Unit 1: Trinity Pineland and Surroundings.

If I understand the map correctly, it shows that Trinity and AD Barnes preserves are critical habitat for both species, and Tropical Park is critical habitat only for *Linum*. I believe that there is no reason why *Brickellia* couldn't also be supported at Tropical Park.

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

**Document:** FWS-R4-ES-2013-0108-0009

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## Submitter Information

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## General Comment

11/27/2013

Comments submitted here are being provided by Jimi Sadle in response to a request for peer review from the USFWS South Florida Ecological Services Field Office, Vero Beach. All materials received for this review from the USFWS were reviewed in the preparation of these comments. In my opinion, the USFWS used the best available science in preparing the proposed designation of critical habitat for both *Brickellia mosieri* and *Linum carteri* var. *carteri*. I also believe that the assumptions used in preparing the proposed rule are sound.

Please consider the following specific comment in preparation of the final rule.

Page 61317 Critical Habitat Units for *Brickellia mosieri* and *Linum carteri* var. *carteri* Unit 5: Quail Roost Pineland and surrounding areas

The holotype of *B. mosieri* (as *Kuhnia mosieri* Small 6544, NY) lists the locality as "Pinelands about Ross-Costello Hammock Dade County". My understanding is that fire suppressed pine rockland habitat may still be present between Ross and Castellow Hammock in the Miami-Dade Co. managed Castellow Hammock Park. Given that it appears to be the type locality for *B. mosieri*, this area should be considered for inclusion in proposed critical habitat. An image of this specimen is available online <http://sciweb.nybg.org/science2/hcol/vasc/index.asp.html> by searching for *Kuhnia mosieri*.

Thank you for the opportunity to review this listing package.

Sincerely,

Jimi Sadle  
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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

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## General Comment

I have read all of the documents carefully, and with great interest. The FWS has done a very thorough job, reviewing all available data, the relevant literature, and contacting scientists with experience in the study of habitats and plants where these two candidate species are located (currently, and historically). The methods employed for determining critical habitat are modern, robust, and entirely adequate.

I fully support their conclusions, and the request to designate the specified areas as critical habitat, even though places where the plants have not recently been found are included. These are areas where they might occur, where the seeds of these rare species might disperse by wind or water, and the sites may also be used for re-introductions if deemed necessary.

When wild plants are brought into cultivation, some of them grow extremely large and vigorous, and that is certainly the case for *Brickellia mosieri* in the schoolyard plantings of project PRIDE (Pine Rocklands in Dade Environments, at West Miami Middle Community School, spearheaded by teacher Lisset Perez-Munoz, and part of the Connect to Protect Network). While plants I have observed at Larry and Penny Thompson Park are 10-15 cm in height, those thriving in the WMMCS PRIDE plantings can grow up to 60-80 cm tall, with many stems and numerous flowers producing an enormous number of seeds. Pine rockland plants are adapted to rocky, sometimes nearly soil-free growing conditions; when planted in soil under reclaimed lawns, and mulched, the plants flourish, and if conditions are right for their pollination, reproduce very successfully. Once these perennials (*Brickellia mosieri*) are established, they can provide a continual input of propagules that may successfully colonize other pine rockland areas, fulfilling the hopes of the Connect to Protect Network (CTPN).



I have not had many opportunities to observe *Linum carteri* , and I do not think it has been planted in any of the CTPN sites yet; but if it could be established in more of these intermediate areas, there would be greater chance of persistence of this annual (or short-lived perennial) species, by producing enough seeds so that there would be some to take advantage of disturbances and make their way to other sites (perhaps assisted by conservation biologists, as their chances of being dispersed overland by rainwater flooding over long distances is unlikely).

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

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## General Comment

Designation of Critical Habitat

In designating critical habitat for two pine rockland plants, USFWS has taken an important step in protecting this ecosystem and its rare and endemic species. For the most part, the process used by USFWS to designate critical habitat is very well done. The agency's decision process is transparent to follow, even without examining the "consequence matrix" in detail. The critical habitat network that USFWS has arrived at encompasses all the important pine forest fragments remaining within the ranges of the two species, as well as a few degraded fragments that may be capable of contributing to a host network given some restoration effort. After closely looking at the shape files provided by USFWS, I found few fragments to be superfluous, especially given the adaptations of *L. carteri* to disturbance, e.g., mowing. USFWS has placed an emphasis on connectivity of patches, and where possible, has designated unoccupied patches in groups focused on occupied patches that may serve as source populations. While their choices in this regard appear very reasonable, in the future USFWS may consider supporting these choices with quantitative analyses, for instance, estimates of the contribution of each patch to network connectivity (e.g., Grace and Keitt 2001).

USFWS is to be commended for incorporating threats from sea level rise into their assessment. Many agencies are only now beginning to take the issue seriously, but USFWS has been a leader on the topic, and here in lowlying Miami they include it effectively in their considerations.

Urban, D. and T. Keitt. 2001. Landscape connectivity: a graph-theoretic perspective. *Ecology* 82(5): 1205-1218.

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Designation of Critical Habitat for *Brickellia mosieri* and *Linum carteri* var. *carteri*

**Comment On:** FWS-R4-ES-2013-0108-0001

Endangered and Threatened Wildlife and Plants: Designation of Critical Habitat for *Brickellia mosieri* (Florida Brickell-bush) and *Linum carteri* var. *carteri* (Carter's Small-flowered Flax)

**Document:** FWS-R4-ES-2013-0108-DRAFT-0011

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## Submitter Information

**Name:** George Gann

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## General Comment

The document looks good. Some technical plant comments and one comment about the evaluation criteria for critical habitat designation.

Page 61297. Column 2. *Lysiloma bahamense* should be *Lysiloma latisiliquum* per ITIS et al. *Thrinax morrisii* is not native to the Miami Rock Ridge - this is an error. *Rapanea punctata* should be *Myrsine floridana* per ITIS or *M. floridana* per the Atlas of Florida Vascular Plants. Because of taxonomic confusion, I would recommend deleting *Dodonaea viscosa*. *Quercus elliotii* is an old synonym for *Q. pumila*. Column 3. *Chamaecrista deeringiana* is more typical of pine rocklands than *C. fasciculata* and is accepted by ITIS. *Zamia pumila* should be *Z. integrifolia* per ITIS; *Zamia pumila* is a West Indian species.

Page 61299. Same comments as above.

Page 61301. With regards to (5)(a) as supplemented. In my opinion any pine rockland with a canopy openness >50% should score the highest, not pine rocklands with 25-50% openness, which is way too dense for *Linum carteri* var. *carteri*. I agree that anything with less than 25% openness should remain the lowest. If you wish to retain a 4 point systems, then I might suggest 50-75% open is a 4, 75-100% open is a 3, 25-50% open is a 2 and <25% open is a 1.

Page 61311. Same comments as page 61297.

George Gann  
Chief Conservation Strategist  
The Institute for Regional Conservation