

MINUTES OF THE ENDANGERED PLANT ADVISORY COUNCIL

Date: October 23, 2014

Time: 1:00 – 5:00 P.M.

Location: Doyle Conner Building, Auditorium
1911 SW 34th Street, Gainesville Florida 32608

Council Members Present:

Mr. Richard L. Moyroud, Chair – Florida Native Plant Society

Mrs. Tina Tuttle – Florida Federation of Garden Clubs

Mr. Charles D. Daniel, III – Florida Forestry Association

Dr. Jack Stout – Florida Committee for Rare and Endangered Plants and Animals

Dr. Suzanne Koptur – Florida International University Botanist

Dr. Loran C. Anderson, Vice-Chair – Florida State University Botanist

Mr. Bryan K. Benson, Secretary – FDACS/Division of Plant Industry

Members Absent:

Mr. David M. Drylie, Jr. – Florida Nursery, Growers and Landscape Association

Others Present:

Dr. Patti Anderson – FDACS/Division of Plant Industry

Ms. Cheryl Peterson – Bok Tower Gardens

Dr. Eric S. Menges – Archbold Biological Station

Dr. Joyce Maschinski – Fairchild Tropical Botanical Garden

Mr. Michael R. Jenkins – FDACS/Florida Forest Service

Mr. Steve W. Woodmansee – Key West Botanical Garden

Dr. Colette C. Jacano – University of Florida, Florida Museum of Natural History

Richard Moyroud opened the meeting by welcoming the council members and other interested parties. A quorum of council members was met. Introductions were made of all present.

Richard Moyroud requested council members to review the proposed agenda. Additional plant review added to list for *Plantago rugelii*. **Loran Anderson made a motion to accept the agenda. The motion was seconded by Suzanne Koptur. Motion passed.**

Richard Moyroud asked council members if there were any questions or suggested changes to the minutes from the 2013 EPAC meeting. **Loran Anderson made a motion to accept the minutes from the last meeting. The motion was seconded by Suzanne Koptur. Motion passed.**

Dr. Colette C. Jacano, University of Florida-Florida Museum of Natural History presented on *Marsilea ancyclopoda* with specific focus on water-clover ferns introduction into Florida and endemism. This plant was further discussed in regards to being proposed for listing and tabled for discussion on October 24th.

A total of five Endangered and Threatened Native Flora Conservation Grant Applications were received this year for consideration. All five were received timely, and four out of five met the minimum eligibility requirements for consideration. All were assigned an application number. A copy of each application was forwarded to council members for review prior to this meeting. After the applications were sent out for review by the council members it was determined that the application from the University of Florida did not meet the eligibility requirements. The remaining four

applications were evaluated and ranked by council members.

The opportunity for grant applicants and past grant recipients to present on their continued, ongoing and future conservation activities was offered to those present.

Bok Tower Gardens

Cheryl Peterson presented details outlining conservation efforts, and the past year's programs, as well as ongoing and future program updates. A copy of the 2013-2014 Final Report was provided to EPAC members.

Archbold Biological Station

Eric Menges presented details outlining conservation efforts, and the past year's programs, as well as ongoing and future efforts. A copy of the 2013-2014 Final Report was provided to EPAC members.

Fairchild Tropical Botanical Garden

Joyce Maschinski presented details outlining conservation efforts, and the past year's programs, as well as ongoing activities and future plans. A copy of the final report from 2013-2014 was provided to EPAC members.

Key West Botanical Garden Society

Steve Woodmansee presented details on conservation efforts and the past year's programs, as well as ongoing and future program updates.

After the presentations, council members submitted grant application evaluation forms for all applications considered. Calculations were totaled and explained. See Appendix A for scores and calculations.

A summary of the anticipated grant allocation is provided in the table below:

	<u>Grant Amount Requested</u>	<u>Total Funds Recommended for Fiscal Year 2015-2016</u>
Archbold Biological Station	\$100,000.00	\$77,387.07
Fairchild Tropical Botanical Garden	\$100,000.00	\$75,719.25
Bok Tower Gardens	\$100,000.00	\$73,384.29
<u>Key West Botanical Garden</u>	<u>\$37,500.00</u>	<u>\$13,509.38</u>
Totals	\$337,500.00	\$240,000.00

Loran Anderson made a motion to use the percentage based ranking as used in past years. Suzanne Koptur seconded. Motion passed.

Further discussion on how we are scoring. The committee posed the question asking should we consider changing the evaluation process. All things considered, the current process seems to give the most consideration to the critical areas to insure conservation efforts are the best they can be with grant funding. It would be beneficial to council members if a second meeting was funded with travel to allow for grant recipient field trips.

Loran Anderson made a motion to adjourn. Suzanne Koptur seconded. Motion passed.

THE MEETING ADJOURNED FOR THE DAY

MINUTES OF THE ENDANGERED PLANT ADVISORY COUNCIL

Date: October 24, 2014
Time: 8:00 – 10:00 A.M.
Location: Doyle Conner Building, Auditorium
1911 SW 34th Street, Gainesville Florida 32608

Council Members Present:

Mr. Richard L. Moyroud, Chair – Florida Native Plant Society
Mrs. Tina Tuttle – Florida Federation of Garden Clubs
Dr. Suzanne Koptur – Florida International University Botanist
Dr. Loran C. Anderson, Vice-Chair – Florida State University Botanist
Mr. Bryan K. Benson, Secretary – FDACS/Division of Plant Industry

Members Absent:

Mr. Charles D. Daniel, III – Florida Forestry Association
Dr. Jack Stout – Florida Committee for Rare and Endangered Plants and Animals
Mr. David M. Drylie, Jr. – Florida Nursery, Growers and Landscape Association

Others Present:

Mr. Michael R. Jenkins – FDACS/Florida Forest Service
Mr. Steve Hildebrandt – FDACS/Division of Plant Industry

Richard Moyroud opened the meeting by welcoming back the council members and other interested parties.

Four Year Interval Review of Regulated Plant Index

Each plant listed on the regulated plant index is required to be reviewed by the council every four years. This year the list included 177 plants that were last reviewed in 2010. All plants listed below were reviewed.

ID	Scientific Name	Common Name	Notes
17	<i>Adiantum melanoleucum</i>	fragrant maidenhair fern	
1524	<i>Agalinis georgiana</i>	Georgia false foxglove	Approved 4/8/05; not yet in 5B-40
22	<i>Agrimonia incisa</i>	harvest-lice	
44	<i>Asclepias viridiflora</i>	green-flower milkweed	Should have been listed; omitted by error
46	<i>Asclepias viridula</i>	green milkweed	
60	<i>Baccharis dioica</i>	broombush falsewillow	Delisted (98; reinstated 99; but indicate extirpated?
65	<i>Baptisia simplicifolia</i>	Scareweed	
76	<i>Bourreria radula</i>	rough strongbark	
77	<i>Bourreria succulenta</i>	Bodywood	
84	<i>Byrsonima lucida</i>	locust berry	
88	<i>Caesalpinia major</i>	yellow nicker	
89	<i>Caesalpinia pauciflora</i>	fewflower holdback	
91	<i>Calamintha dentata</i>	toothed savory	
96	<i>Calopogon multiflorus</i>	many-flowered grass-pink	
100	<i>Calyptanthes pallens</i>	pale lidflower	

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107	<i>Campyloneurum latum</i>	wide strap fern	Apparently extirpated
114	<i>Carex microdonta</i>	little-tooth sedge	
121	<i>Celosia nitida</i>	West Indian cockscomb	
125	<i>Centrosema arenicola</i>	sand butterfly pea	
130	<i>Cereus pentagonus</i>	barbed-wire cactus	= <i>Acanthocereus tetragonus</i>
132	<i>Chamaesyce conferta</i>	Everglades & Keys' sandmat	
136	<i>Chamaesyce pergamaena</i>	rocklands spurge	
138	<i>Chaptalia albicans</i>	white sunbonnets	
143	<i>Chrysophyllum oliviforme</i>	satin leaf	
147	<i>Chrysopsis godfreyi</i>	Godfrey's golden-aster	
149	<i>Cissampelos pareira</i>	pareira brava	Delisted Oct 1998; reinstated Mar. 2000; extirpated?
151	<i>Cladonia perforata</i>	Florida perforate cladonia	This is a lichen; federally listed.
152	<i>Cleistes divaricata</i>	spreading pogonia	
153	<i>Clitoria fragrans</i>	pigeon wings	
155	<i>Coccothrinax argentata</i>	silver palm	Formerly on Commercially Exploited List
156	<i>Coelorachis tuberculosa</i>	piedmont jointgrass	
157	<i>Colubrina arborescens</i>	Greenheart	
159	<i>Colubrina elliptica</i>	Soldierwood	
161	<i>Conradina brevifolia</i>	short-leaved rosemary	
162	<i>Conradina etonia</i>	etonia rosemary	2005
164	<i>Conradina grandiflora</i>	large-flowered rosemary	92 acres:2,2,1,3,1,-1 = 8
167	<i>Cordia globosa</i>	Curacao bush	
170	<i>Coreopsis integrifolia</i>	dye-flower	
176	<i>Crossopetalum ilicifolium</i>	Christmas berry	
178	<i>Crotalaria avonensis</i>	Avon Park harebells	
179	<i>Croton humilis</i>	Pepperbush	
183	<i>Ctenium floridanum</i>	Florida toothache grass	
186	<i>Cuphea aspera</i>	tropical waxweed	
187	<i>Cynanchum blodgettii</i>	Blodgett's swallowwort	
188	<i>Cynoglossum virginianum</i>	wild comfrey	
190	<i>Cyperus floridanus</i>	Florida flatsedge	
191	<i>Cyperus fuliginus</i>	limestone flatsedge	
197	<i>Dalbergia brownii</i>	Brown's Indian rosewood	
198	<i>Dalea carthagenensis</i>	Florida prairie clover	
199	<i>Deeringothamnus pulchellus</i>	white squirrel-banana	
203	<i>Desmodium ochroleucum</i>	trailing tick-trefoil	
204	<i>Dicerandra christmanii</i>	Christmann's mint	
210	<i>Digitaria dolichophylla</i>	Caribbean crabgrass	
209	<i>Digitaria pauciflora</i>	Florida pineland crabgrass	
213	<i>Dirca palustris</i>	Leatherwood	
215	<i>Dodonaea elaeagnoides</i>	Keys' hopbush	
218	<i>Drypetes diversifolia</i>	Milkbark	
219	<i>Drypetes lateriflora</i>	Guiana plum	
222	<i>Echinacea purpurea</i>	purple coneflower	

223	<i>Eleocharis rostellata</i>	beaked spikerush	
229	<i>Encyclia tampensis</i>	butterfly orchid	Commercially Exploited.
244	<i>Eriogonum floridanum</i>	scrub buckwheat	Syn: <i>E. longifolium</i> var. <i>gnaphifolium</i> is federally listed
245	<i>Erithralis fruticosa</i>	Blacktorch	
254	<i>Euonymus atropurpurea</i>	burning bush	
255	<i>Eupatorium frustratum</i>	Cape Sable thoroughwort	
256	<i>Euphorbia commutata</i>	wood spurge	
257	<i>Euphorbia telephioides</i>	telephus spurge	
259	<i>Evolvulus convolvuloides</i>	dwarf bindweed	
260	<i>Evolvulus grisebachii</i>	Grisebach's bindweed	
261	<i>Exostema caribaeum</i>	Caribbean princewood	
266	<i>Fothergilla gardenii</i>	dwarf witch-alder	
269	<i>Galactia smallii</i>	Small's milkpea	
273	<i>Gentiana pennelliana</i>	wiregrass gentian	
281	<i>Gyminda latifolia</i>	West Indian falsebox	
294	<i>Heliotropium fruticosum</i>	Key West heliotrope	Delisted 5 Oct 1998 as extirpated; reinstated Mar 99
298	<i>Hibiscus poeppigii</i>	Poeppig's rosemallow	
302	<i>Hymenocallis godfreyi</i>	Godfrey's spiderlily	
327	<i>Isopyrum biternatum</i>	false rue-anemone	
332	<i>Jacquemontia curtissii</i>	pineland jacquemontia	Spelling change: <i>curtisii</i> . Need only one "S"
334	<i>Jacquemontia pentanthos</i>	skyblue clustervine	
337	<i>Juncus gymnocarpus</i>	Coville's rush	
338	<i>Justicia cooleyi</i>	Cooley's justicia	
343	<i>Koanophyllon villosum</i>	Keys' thoroughwort	
344	<i>Kosteletzkya depressa</i>	white fen	
347	<i>Lachnocaulon digynum</i>	Panhandle bogbuttons	
348	<i>Lantana canescens</i>	hammock shrub verbena	
352	<i>Lechea lakelae</i>	Lakela's pinweed	
353	<i>Leiphaimos parasitica</i>	parasitic ghostplant	Mabberley (1989): <i>Leiphaimos</i> is a synonym of <i>Voyria</i> .
358	<i>Liatris ohlingerae</i>	scrub blazing-star	
363	<i>Lilium michauxii</i>	Carolina lily	
364	<i>Lilium superbum</i>	Turk's-cap lily	
365	<i>Lindera melissifolia</i>	Pondberry	Extirpated?
374	<i>Lobelia boykinii</i>	Boykin's lobelia	(confirmed Oct. 2001; not yet in FAC
377	<i>Lupinus aridorum</i>	McFarlin's lupine	syn: <i>Lupinus westianus</i> var. <i>aridorum</i>
383	<i>Lycopodium cernuum</i>	nodding clubmoss	Commercially Exploited List. Syn: <i>Palhinhaea cernua</i>
390	<i>Lythrum flagellare</i>	lowland loosestrife	
393	<i>Macbridea alba</i>	white birds-in-a-nest	
399	<i>Magnolia tripetala</i>	umbrella magnolia	
420	<i>Melanthera parvifolia</i>	small-leaved melanthera	
422	<i>Minuartia godfreyi</i>	Godfrey's sandwort	
430	<i>Nemastylis floridana</i>	celestial lily	

440	<i>Nymphaea jamesoniana</i>	night-blooming waterlily	
443	<i>Ocimum campechianum</i>	Ocimum	
450	<i>Ophioglossum palmatum</i>	hand fern	
451	<i>Opuntia stricta</i>	shell mound prickly pear	Common
454	<i>Osmunda cinnamomea</i>	cinnamon fern	Commercially Exploited list
455	<i>Osmunda regalis</i>	royal fern	Commercially Exploited list
460	<i>Panicum abscissum</i>	cut-throat grass	
461	<i>Panicum nudicaule</i>	naked-stemmed panic grass	
465	<i>Passiflora multiflora</i>	white-flowered passionvine	
466	<i>Passiflora pallens</i>	pineland passionvine	
467	<i>Passiflora sexflora</i>	goat's foot leaf	
468	<i>Pavonia paludicola</i>	Swampbush	
480	<i>Peperomia rotundifolia</i>	round peperomia	
481	<i>Pharus glaber</i>	creeping leafstalk grass	
484	<i>Phoradendron rubrum</i>	mahogany mistletoe	
485	<i>Phyla stoechadifolia</i>	southern matchsticks	
490	<i>Physostegia godfreyi</i>	Apalachicola dragonhead	
491	<i>Picramnia pentrandra</i>	Florida bitterbush	
500	<i>Pisonia rotundata</i>	devil's smooth claws	
501	<i>Pithecellobium keyense</i>	Keys' blackbead	
515	<i>Podophyllum peltatum</i>	Mayapple	
518	<i>Polygala lewtonii</i>	Lewton's polygala	
523	<i>Polygonella myriophylla</i>	sand lace	By ranking score Threatened; but, Federally listed.
525	<i>Polymnia laevigata</i>	Tennessee leafcup	
533	<i>Potamogeton floridanus</i>	Florida pondweed	
535	<i>Prunus geniculata</i>	scrub plum	
536	<i>Prunus myrtifolia</i>	West Indian cherry	
537	<i>Pseudophoenix sargentii</i>	Sargent's cherry palm	
538	<i>Psidium longipes</i>	mangrove berry	
540	<i>Psychotria ligustrifolia</i>	Bahama wildcoffee	
542	<i>Pteris bahamensis</i>	Bahama ladder brake fern	
551	<i>Pteroglossaspis ecristata</i>	non-crested eulophia	
552	<i>Pycnanthemum floridanum</i>	Florida mountain-mint	
555	<i>Quercus arkansana</i>	Arkansas oak	
560	<i>Reynosia septentrionalis</i>	Darling plum	
561	<i>Rhapidophyllum hystrix</i>	needle palm	Commercially Exploited list.
564	<i>Rhexia salicifolia</i>	Panhandle meadow beauty	
568	<i>Rhododendron canescens</i>	pink azalea	Commercially Exploited list
570	<i>Rhus michauxii</i>	Michaux's sumac	Extirpated from Florida?
571	<i>Rhynchosia parvifolia</i>	small-leaf snoutbean	
572	<i>Rhynchosia swartzii</i>	Swartz' snoutbean	
574	<i>Rhynchospora crinipes</i>	hairy peduncled beakrush	
576	<i>Rhynchospora stenophylla</i>	narrow-leaved beakrush	
577	<i>Ribes echinellum</i>	Miccosukee gooseberry	

1526	<i>Rudbeckia auriculata</i>	eared coneflower	2006
584	<i>Sachsia bahamensis</i>	Bahama sachsia	
598	<i>Savia bahamensis</i>	Bahama maidenbush	
601	<i>Schaefferia frutescens</i>	Florida boxwood	
609	<i>Scutellaria floridana</i>	Florida skullcap	Federal Threatened
608	<i>Scutellaria havanensis</i>	Havana skullcap	
618	<i>Setaria chapmanii</i>	coral panic grass	
619	<i>Sideroxylon alachuense</i>	Clark's buckthorn	Changed from Bumelia anomala
620	<i>Sideroxylon lycioides</i>	gopherwood buckthorn	Changed from Bumelia lycioides
621	<i>Sideroxylon thornei</i>	Thorne's buckthorn	Changed from Bumelia thornei
623	<i>Silene virginica</i>	fire pink	
624	<i>Smilax havanensis</i>	Everglades greenbrier	
625	<i>Solanum donianum</i>	mullein nightshade	
626	<i>Spermacoce terminalis</i>	false buttonweed	
654	<i>Stylosanthes calcicola</i>	Everglades pencil flower	
656	<i>Swietenia mahagoni</i>	Mahogany	Reduced from Endangered after more data.
679	<i>Thrinax radiata</i>	Florida thatch palm	
690	<i>Tournefortia hirsutissima</i>	chiggery grapes	
691	<i>Tragia saxicola</i>	rocklands noseburn	
692	<i>Trema lamarckianum</i>	Lamarck's trema	
699	<i>Trichostigma octandrum</i>	hoop vine	Believed to be extirpated, then relocated.
701	<i>Triphora craigheadii</i>	Craighead's orchid	
703	<i>Triphora latifolia</i>	wide-leaved triphora	
705	<i>Tripsacum floridanum</i>	Florida tripsacum	
710	<i>Uvularia floridana</i>	Florida merrybells	
713	<i>Vallesia antillana</i>	tear shrub	
715	<i>Vanilla dilloniana</i>	Dillon's vanilla	
722	<i>Verbesina chapmanii</i>	Chapman's crownbeard	
731	<i>Warea amplexifolia</i>	clasping warea	
739	<i>Xyris chapmanii</i>	Chapman's yellow-eyed grass	
740	<i>Xyris isoetifolia</i>	quillwort yellow-eyed grass	
746	<i>Yucca gloriosa</i>	moundlily yucca	

The following plants were discussed and edited as listed below:

- #60 *Baccharis dioica* – edit notes from ‘indicate extirpated’ to ‘Not Recently Seen’
- #84 *Byrsonima lucida* – discussion with no changes
- #107 *Campyloneurum latum* – edit notes from ‘apparently extirpated’ to ‘Not Recently Seen’
- #149 *Cissampelos pareira* – edit notes from ‘extirpated’ to ‘Not Recently Seen’
- #164 *Conradina grandiflora* – correct notes from ‘acores’ to ‘scores’
- #298 *Hibiscus poeppigii* – discussion with no changes
- #365 *Lindera melissifolia* – edit notes from ‘extirpated’ to ‘Not Recently Seen’
- #451 *Opuntia stricta* – edit notes to include ‘cactus moth concerns’
- #570 *Rhus michauxii* – edit notes from ‘extirpated’ to ‘Not Recently Seen’
- #577 *Ribes echinellum* – edit notes to include ‘mouse predation concerns’
- #699 *Trichostigma octandrum* – discussion with no changes

- #746 Yucca gloriosa – 2012 population discovered and saved from DOT project

Loran Anderson made a motion to accept ratings as currently listed for the 4-year review plant list. Suzanne Koptur seconded. Motion passed.

It would be useful to the council to have a fern expert involved in endangered fern ranking.

Has the FEDERALLY ENDANGERED plants been evaluated for any changes or updates? As updates have occurred they have been confirmed with the state list. We will review with DPI Botanist to insure there are no needed changes to the current list.

Loran Anderson made a motion to review and change applicable uses of the term ‘extirpated’ to ‘not recently seen’ in the EPAC Plant Ranking Table. Suzanne Koptur seconded. Motion passed.

The council has requested that a report be extracted from the plant ranking table that would include total ranking scores for those with the lowest scores (0 to 4.5). A report will be prepared and sent to council members by Bryan Benson.

The following plants were proposed for listing last year (2013) and reviewed by the committee for confirmation this year:

Peperomia alata (winged peperomia)

A = 0.5
B = 0.5
C = 0.5
D = 1.0
E = 2.0
F = 0.0

4.5 – Endangered

Calliphysalis carpenteri (carpenter’s ground cherry)

A = 0.5
B = 0.5
C = 0.5
D = 2.0
E = 3.0
F = 0.0

6.5 – Endangered

Loran Anderson made a motion to accept the proposed ratings as confirmed and include the plants in the regulated plant index. Suzanne Koptur seconded. Motion passed.

The following plants were discussed and submitted to EPAC as Proposed for Listing or Delisting

Echinodorus floridanus (Florida burhead) **PROPOSED FOR DELISTING AS NON-NATIVE**

A = 0.5
B = 1.0
C = 0.5

D = 0.0
E = 1.0
F = -1.0

2.0 – Endangered

Loran Anderson made a motion to accept proposal to delist Echinodorus floridanus as non-native. Suzanne Koptur seconded. Motion passed.

Warea cuneifolia (Carolina pineland cress)

A = 0.5
B = 1.0
C = 0.5
D = 2.0
E = 2.0
F = 0.0

6.0 – Endangered

Loran Anderson made a motion to accept proposal to list Warea cuneifolia as endangered. Suzanne Koptur seconded. Motion passed.

Plantago rugelii (Rugel's plantain)

A = 0.5
B = 0.5
C = 1.0
D = 1.0
E = 2.0
F = 0.0

5.0 – Endangered

Loran Anderson made a motion to accept proposal to list Plantago rugelii as endangered. Suzanne Koptur seconded. Motion passed.

Marsilea ancylopoda (water clover)

A = 0.5
B = 3.0
C = 0.5
D = 1.0
E = 2.0
F = 2.0

9.0 – Threatened

Loran Anderson made a motion to accept proposal to list Marsilea ancylopoda as threatened. Suzanne Koptur seconded. Motion passed.

Election of Officers

Suzanne Koptur made a motion to maintain the current officers (Mr. Richard Moyroud, Chair, and Dr. Loran Anderson, Vice Chair). Motion was seconded Tina Tuttle. Motion passed.

Comments from Council and Interested Parties

- A copy of the Key West 2013-2014 Annual Report was provided to the council to supplement the prior day's presentation by Steve Woodmansee.
- Discussion regarding some recent regulatory actions taken on pitcher plants in the panhandle. This may be a good outreach opportunity for endangered and threatened plants.
- Discussion of outreach opportunities for EPAC and native plant conservation. Some ideas include bookmarks with photos and information, coffee cups, or website enhancement.

Schedule Next Meeting

The next annual EPAC meeting in Gainesville will be scheduled for October 22 & 23, 2015.

A motion was made to adjourn by Tina Tuttle. Motion passed.

THE MEETING ADJOURNED

Richard Moyroud, Chair
Bryan K. Benson, Secretary