Florida Fish and Wildlife Conservation Commission Floristic Inventory of Big Torch Hammocks Parcels Epstein and MCLA, Florida Keys Wildlife and Environmental Area, Florida
Final Report

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Submitted by
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Cover Photo: *Metopium toxiferum* a common hammock species on Big Torch Key, Steven W. Woodmansee.

Introduction:

The Florida Fish and Wildlife Conservation Commission ("Commission") has acquired the Epstein and MCLA parcels on Big Torch Key in Monroe County, Florida. This site is to be incorporated as part of Big Torch Hammocks, Florida Keys Wildlife and Environmental Area. The Commission possessed very little floristic data on these parcels, such as floristic inventories, lists of rare plant species, lists of exotic species, or status of rare plant species on each site. The Institute for Regional Conservation ("IRC") was contracted to provide this data to the commission on this property.

Study Design:

Survey the Big Torch Parcels Epstein and MCLA, owned by the Commission, producing a vascular plant species list and collect occurrence data for agency listed rare species. A biologist will walk transects across each property in order to fully cover all available habitat types on each property.

a) Make list of all plant species on property.

b) Estimate population sizes on a $\log_{10}$ scale of all mature plant species.

c) Collect GPS coordinates for occurrences of rare and exotic plant species when they occupy small, discrete areas on each site.

Results:

Within Big Torch parcels Epstein and MCLA, a total of 76 native and naturalized plant species were recorded in our surveys. Of these 72 (95%) are considered native to the Florida Keys and 4 (5%) are considered exotic.

No plant species listed by the U.S. Fish and Wildlife Service were recorded. Seventeen plant species listed by the State of Florida as threatened, endangered, or commercially exploited were recorded. Ten plant species listed by the Florida Natural Areas Inventory (FNAI) as Critically Imperiled (S1), Imperiled (S2) or rare (S3) in Florida were recorded. No species were recorded as Critically Imperiled (SF1) in South Florida by The Institute for Regional Conservation (Gann et al 2002). Twenty-two percent of the native flora here is listed by at least one of the above agencies/institutions. Table 3 possesses location data for these rare plant taxa.

One vascular plant (*Nephrolepis cordifolia*) was listed as invasive by the Florida Exotic Pest Plant Council (FLEPPC) and recorded at the site as cultivated only. In addition, *Phoenix dactylifera*, was observed naturalizing in rockland hammock at the site. Table 4 possesses location data for these invasive exotic taxa.

The compiled plant list is provided in two formats. Table 1 provides a list of vascular plants recorded at the site arranged by group, family, and then genus/species. Common names and native status are also provided in this table. Table 2 provides a

list of vascular plants recorded at the site arranged by genus/species with common names. In Table 2, native status, state status, FNAI status, IRC status, FL EPPC status, and habitat location are provided. Habitats follow the Florida Natural Areas Inventory and Florida Department of Natural Resources guidelines (1990). Also in Table 2, population size estimates on a $\log_{10}$ scale of each of these species are noted. Table 3 provides a list of rare plants recorded at the site with GPS coordinates in decimal minutes for discrete locations, and a description of where the plants were observed. Table 4 provides a list of invasive exotic plants recorded at the site with GPS coordinates in decimal minutes for discrete locations, and a description of where the plants were observed. Whether plants were fruiting or flowering is noted in tables 3 and 4.

Citations:

Florida Natural Areas Inventory and Florida Department of Natural Resources. 1990. Guide to the natural communities of Florida. Florida Natural Areas Inventory and Florida Department of Natural Resources. Tallahassee, FL.

Gann, G.D, K.A. Bradley, and S.W. Woodmansee. 2002. Rare Plants of South Florida: Their History, Conservation, and Restoration. The Institute for Regional Conservation, Miami, Florida.

Table 1

The Vascular Plants of
Big Torch Hammocks Parcels Epstein and MCLA, Florida Keys Wildlife and Environmental Area

The Institute for Regional Conservation
Miami, Florida

Compiled from field observations made by Steven W. Woodmansee, May 31-June 2, 2005

Dicots

Anacardiaceae	
Metopium toxiferum	Poisonwood, Florida poisontree
Apocynaceae	
Pentalinon luteum	Wild-allamanda, Hammock viperstail
Asclepiadaceae	
Cynanchum angustifolium	Vine milkweed, Gulf Coast swallowwort
Asteraceae	
Aster bracei	Brace's aster
Borrichia arborescens	Green sea-oxeye-daisy, Tree seaside oxeye
Borrichia frutescens	Silver sea-oxeye-daisy, Bushy seaside oxeye
Flaveria linearis	Narrowleaf yellowtops
Avicenniaceae	
Avicennia germinans	Black mangrove
Bataceae	
Batis maritima	Saltwort, Turtleweed
Burseraceae	
Bursera simaruba	Gumbo-limbo
Celastraceae	
Crossopetalum rhacoma	Rhacoma, Maidenberry
Maytenus phyllanthoides	Florida mayten
Chenopodiaceae	
Salicornia bigelovii	Annual glasswort
Salicornia perennis	Perennial glasswort

Combretaceae		
	Conocarpus erectus	Buttonwood
	Laguncularia racemosa	White mangrove
Euphorbiaceae		
	Chamaesyce mesembrianthemifolia	Seaside spurge, Coastal beach sandmat
	Drypetes diversifolia	Milkbark, Whitewood
	Hippomane mancinella	Manchineel
Fabaceae		
	Piscidia piscipula	Jamaica-dogwood, Florida fishpoison tree
	Pithecellobium keyense	Florida Keys blackbead
	Sophora tomentosa var. truncata	Yellow necklacepod
Malpighiaceae		
	Byrsonima lucida	Locustberry
Myrtaceae		
	Eugenia axillaris	White stopper
	Eugenia foetida	Spanish stopper, Boxleaf stopper
	Psidium longipes	Longstalked-stopper
Nyctaginaceae		
	Guapira discolor	Blolly, Beeftree
Olacaceae		
	Ximenia americana	Hog-plum, Tallowwood
Plumbaginaceae		
	Limonium carolinianum	Saltmarsh-rosemary, Carolina sealavender
Polygonaceae		
	Coccoloba diversifolia	Pigeonplum, Tietongue
	Coccoloba uvifera	Seagrape
Rhamnaceae		
	Reynosia septentrionalis	Darlingplum
Rhizophoraceae		
	Rhizophora mangle	Red mangrove
Rubiaceae		
	Chiococca alba	Common snowberry, Milkberry
	Chiococca parvifolia	Pineland snowberry
	Erithalis fruticosa	Blacktorch
	Ernodea littoralis	Beach-creeper, Coughbush
	Morinda royoc	Yellowroot, Redgal, Mouse's pineapple
	Randia aculeata	White indigoberry
E	*Spermacoce verticillata*	Shrubby false buttonweed
Rutaceae		
	Amyris elemifera	Common torchwood, Sea torchwood
Sapindaceae		
	Exothea paniculata	Inkwood, Butterbough
Sapotaceae		

	Manilkara jaimiqui subsp. emarginata	Wild dilly
	Sideroxylon celastrinum	Saffronplum
	Solanaceae	
	Lycium carolinianum	Christmasberry, Carolina desertthorn
	Solanum verbascifolium	Mullein nightshade
	Surianaceae	
	Suriana maritima	Baycedar
	Theophrastaceae	
	Jacquinia keyensis	Joewood

Monocots

	Arecaceae	
	Coccothrinax argentata	Florida silver palm
E	*Phoenix dactylifera*	Commercial date palm, Date
	Serenoa repens	Saw palmetto
	Thrinax morrisii	Silver thatch palm, Brittle thatch palm
	Bromeliaceae	
	Tillandsia flexuosa	Banded wild-pine, Twisted airplant
	Tillandsia paucifolia	Twisted wild-pine, Potbelly airplant
	Tillandsia utriculata	Giant wild-pine, Giant airplant
	Cyperaceae	
	Cladium jamaicense	Saw-grass, Jamaica swamp sawgrass
E	*Fimbristylis cymosa*	Hurricane sedge, Hurricanegrass
	Fimbristylis spadicea	Marsh fimbry
	Poaceae	
	Andropogon glomeratus var. pumilus	Common bushy bluestem
	Aristida purpurascens	Arrowfeather threeawn
	Distichlis spicata	Saltgrass
	Eustachys petraea	Common fingergrass, Pinewoods fingergrass
	Monanthochloe littoralis	Shoregrass, Keygrass
	Panicum amarum	Beachgrass, Bitter panicgrass
	Panicum virgatum	Switchgrass
	Paspalidium chapmanii	Coral panicum
	Paspalum caespitosum	Blue paspalum, Blue crowngrass
	Paspalum distichum	Knot grass
	Schizachyrium gracile	Wire bluestem
	Schizachyrium sanguineum	Crimson bluestem
	Setaria parviflora	Knotroot foxtail, Yellow bristlegrass
	Spartina spartinae	Gulf cordgrass
	Sporobolus domingensis	Coral dropseed
	Sporobolus virginicus	Seashore dropseed

Pteridophytes

	Nephrolepidaceae	
CE	*Nephrolepis cordifolia*	Tuberous sword fern

Polypodiaceae

Phlebodium aureum	Golden polypody

CE = Cultivated only at the site

E = Not Native to the site

Table #2

The Vascular Plants of Big Torch Hammocks Parcels Epstein and MCLA, Florida Keys Wildlife and Environmental Area: by Genus

13-Jun-2005

Field data compiled by Steven W. Woodmansee on May 31 - June 2nd, 2005

The Institute for Regional Conservation, Miami, Florida.

										Habitats				
Scientific Name	**Common Names**	**NativeStatus**	**Estimated Population**	**State Status**	**Federal Status**	**FNAI State Status**	**FNAI Global Status**	**IRCStatus**	**Florida EPPC**	**Disturbed Dry**	**Freshwater Wetland**	**Rockland Hammock**	**Tidal Marsh and Buttonwood Association**	**Tidal Swamp**
Amyris elemifera	Common torchwood, Sea torchwood	N	101-1,000									x		
Andropogon glomeratus var. pumilus	Common bushy bluestem	N	11-100									x		
Aristida purpurascens	Arrowfeather threeawn	N	11-100							x				
Aster bracei	Brace's aster	N	101-1,000							x			x	
Avicennia germinans	Black mangrove	N	1,001-10,000							x			x	x
Batis maritima	Saltwort, Turtleweed	N	1,001-10,000										x	x
Borrichia arborescens	Green sea-oxeye-daisy, Tree seaside oxeye	N	10,001-100,000							x			x	
Borrichia frutescens	Silver sea-oxeye-daisy, Bushy seaside oxeye	N	10,001-100,000							x			x	
Bursera simaruba	Gumbo-limbo	N	1									x		
Byrsonima lucida	Locustberry	N	101-1,000	T		S3	G4					x		
Chamaesyce mesembrianthemifolia	Seaside spurge, Coastal beach sandmat	N	11-100							x				
Chiococca alba	Common snowberry, Milkberry	N	2-10									x		
Chiococca parvifolia	Pineland snowberry	N	101-1,000									x		

Scientific Name	Common Names	NativeStatus	Estimated Population	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Florida EPPC	Disturbed Dry	Freshwater Wetland	Rockland Hammock	Tidal Marsh and Buttonwood Association	Tidal Swamp
Cladium jamaicense	Saw-grass, Jamaica swamp sawgrass	N	1,001-10,000								x	x		
Coccoloba diversifolia	Pigeonplum, Tietongue	N	2-10									x		
Coccoloba uvifera	Seagrape	N	101-1,000							x	x	x	x	
Coccothrinax argentata	Florida silver palm	N	2-10	T		S3	G3?					x		
Conocarpus erectus	Buttonwood	N	10,001-100,000							x	x	x	x	
Crossopetalum rhacoma	Rhacoma, Maidenberry	N	2-10	T		S3	G5					x		
Cynanchum angustifolium	Vine milkweed, Gulf Coast swallowwort	N	11-100							x			x	
Distichlis spicata	Saltgrass	N	100,001-1,000,000							x			x	
Drypetes diversifolia	Milkbark, Whitewood	N	1	E		S2	G4					x		
Erithalis fruticosa	Blacktorch	N	101-1,000	T						x		x	x	
Ernodea littoralis	Beach-creeper, Coughbush	N	11-100									x		
Eugenia axillaris	White stopper	N	101-1,000									x		
Eugenia foetida	Spanish stopper, Boxleaf stopper	N	101-1,000									x	x	
Eustachys petraea	Common fingergrass, Pinewoods fingergrass	N	11-100							x				
Exothea paniculata	Inkwood, Butterbough	N	1									x		
Fimbristylis cymosa	Hurricane sedge, Hurricanegrass	A	101-1,000							x			x	
Fimbristylis spadicea	Marsh fimbry	N	101-1,000							x			x	
Flaveria linearis	Narrowleaf yellowtops	N	11-100							x				
Guapira discolor	Blolly, Beeftree	N	11-100									x		

Scientific Name	Common Names	NativeStatus	Estimated Population	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Florida EPPC	Disturbed Dry	Freshwater Wetland	Rockland Hammock	Tidal Marsh and Buttonwood Association	Tidal Swamp
Hippomane mancinella	Manchineel	N	1	E		S2	G5					x		
Jacquinia keyensis	Joewood	N	101-1,000	T		S3	G4			x		x	x	
Laguncularia racemosa	White mangrove	N	101-1,000										x	
Limonium carolinianum	Saltmarsh-rosemary, Carolina sealavender	N	101-1,000										x	
Lycium carolinianum	Christmasberry, Carolina desertthorn	N	11-100										x	
Manilkara jaimiqui subsp. emarginata	Wild dilly	N	101-1,000	T		S3	G4Q				x	x		
Maytenus phyllanthoides	Florida mayten	N	101-1,000	T									x	
Metopium toxiferum	Poisonwood, Florida poisontree	N	1,001-10,000							x	x	x		
Monanthochloe littoralis	Shoregrass, Keygrass	N	8										x	
Morinda royoc	Yellowroot, Redgal, Mouse's pineapple	N	101-1,000								x	x		
Nephrolepis cordifolia	Tuberous sword fern	CA	0						I	x				
Panicum amarum	Beachgrass, Bitter panicgrass	N	1							x				
Panicum virgatum	Switchgrass	N	11-100								x	x		
Paspalidium chapmanii	Coral panicum	N	2-10	E								x		
Paspalum caespitosum	Blue paspalum, Blue crowngrass	N	101-1,000									x		
Paspalum distichum	Knot grass	N	2-10							x				
Pentalinon luteum	Wild-allamanda, Hammock viperstail	N	101-1,000							x		x		
Phlebodium aureum	Golden polypody	N	2-10									x		

Scientific Name	Common Names	NativeStatus	Estimated Population	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Florida EPPC	Disturbed Dry	Freshwater Wetland	Rockland Hammock	Tidal Marsh and Buttonwood Association	Tidal Swamp
Phoenix dactylifera	Commercial date palm, Date	A	2-10									x		
Piscidia piscipula	Jamaica-dogwood, Florida fishpoison tree	N	2-10									x		
Pithecellobium keyense	Florida Keys blackbead	N	101-1,000	T						x		x	x	
Psidium longipes	Longstalked-stopper	N	101-1,000	T		S2	G4					x		
Randia aculeata	White indigoberry	N	101-1,000								x	x		
Reynosia septentrionalis	Darlingplum	N	101-1,000	T								x		
Rhizophora mangle	Red mangrove	N	101-1,000										x	x
Salicornia bigelovii	Annual glasswort	N	1,001-10,000										x	
Salicornia perennis	Perennial glasswort	N	10,001-100,000										x	x
Schizachyrium gracile	Wire bluestem	N	11-100							x				
Schizachyrium sanguineum	Crimson bluestem	N	11-100										x	
Serenoa repens	Saw palmetto	N	11-100								x	x		
Setaria parviflora	Knotroot foxtail, Yellow bristlegrass	N	2-10										x	
Sideroxylon celastrinum	Saffronplum	N	101-1,000								x	x		
Solanum verbascifolium	Mullein nightshade	N	11-100	T									x	
Sophora tomentosa var. truncata	Yellow necklacepod	N	2-10							x		x		
Spartina spartinae	Gulf cordgrass	N	2-10							x				
Spermacoce verticillata	Shrubby false buttonweed	A	2-10							x				
Sporobolus domingensis	Coral dropseed	N	2-10							x				
Sporobolus virginicus	Seashore dropseed	N	1,001-10,000							x			x	

Scientific Name	Common Names	NativeStatus	Estimated Population	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Florida EPPC	Disturbed Dry	Freshwater Wetland	Rockland Hammock	Tidal Marsh and Buttonwood Association	Tidal Swamp
Suriana maritima	Baycedar	N	11-100							x			x	
Thrinax morrisii	Silver thatch palm, Brittle thatch palm	N	101-1,000	E		S3	G4G5					x		
Tillandsia flexuosa	Banded wild-pine, Twisted airplant	N	11-100	T		S3	G5					x	x	
Tillandsia paucifolia	Twisted wild-pine, Potbelly airplant	N	11-100										x	
Tillandsia utriculata	Giant wild-pine, Giant airplant	N	11-100	E								x		
Ximenia americana	Hog-plum, Tallowwood	N	11-100								x	x		

Origin	**FNAI Status**	G3 = Very rare or local throughout its native range
N = Native	S1 = Critically Imperiled in Florida	G4 = Apparently secure in its global range
E = Exotic (non native)	S2 = Imperiled in Florida	G5= Demonstrably secure in its global range
CE = Cultivated Exotic	S3 = Very rare or local throughout its range in Florida	G#Q = Questionable rank due to its being a subtaxon

Federal Status	**IRC status**
T = Threatened	SF1 = Critically Imperiled in South Florida
E = Endangered	
State Status	**Florida EPPC Status**
T = Threatened	I = species that are invading and disrupting native plant communities
E = Endangered	II = species that have shown a potential to disrupt native plant communities

Table #3												
The Rare Plants of Big Torch Hammocks parcels Epstein and MCLA, Florida Keys Wildlife and Environmental Area												
June 13, 2005												
Field data compiled by Steven W. Woodmansee on June 1-2, 2005												
The Institute for Regional Conservation, Miami, Florida.												
Scientific Name	**Common Names**	**State Status**	**Federal Status**	**FNAI State Status**	**FNAI Global Status**	**IRCStatus**	**Estimated Population**	**Actual Population**	**Fruiting/Flowering**	**Latitude**	**Longitude**	**Notes**
Byrsonima lucida	Locustberry	T		S3	G4		101-1,000		Yes			Throughout rockland hammock
Coccothrinax argentata	Florida silver palm	T		S3	G3?		1	1	No	24.69252	81.4192	Rockland hammock
Coccothrinax argentata	Florida silver palm	T		S3	G3?		1	1	No	24.69206	81.4192	Rockland hammock
Crossopetalum rhacoma	Rhacoma, Maidenberry	T		S3	G5		2-10	2	Yes	24.69319	81.4175	Rockland hammock
Crossopetaulm rhacoma	Rhacoma, Maidenberry	T		S3	G5		2-10	2	Yes	24.69119	81.41974	Edge of trail and rockland hammock, just east of Road
Drypetes diversifolia	Milkbark, Whitewood	E		S2	G4		1	1	No	24.69291	81.41799	Rockland hammock
Erithalis fruticosa	Blacktorch	T					101-1,000		No			Throughout rockland hammock
Hippomane mancinella	Manchineel	E		S2	G5		1	1	Yes	24.69242	81.41905	Edge of Rockland Hammock and Freshwater Wetland
Jacquinia keyensis	Joewood	T		S3	G4		101-1,000		No			Throughout buttonwood hammock and tidal marsh
Manilkara jaimiqui subsp. emarginata	Wild dilly	T		S3	G4Q		101-1,000		Yes			Throughout rockland hammock

Scientific Name	Common Names	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Estimated Population	Actual Population	Fruiting/Flowering	Latitude	Longitude	Notes
Maytenus phyllanthoides	Florida mayten	T					1	1	No	24.6923	81.41813	Edge of coastal prairie and hammock "Buttonwood fringe"
Maytenus phyllanthoides	Florida mayten	T					1	1	No	24.69442	81.41756	Buttonwood hammock/Coastal prairie
Maytenus phyllanthoides	Florida mayten	T					2-10	3	No	24.69609	81.41741	Buttonwood hammock/Coastal prairie
Maytenus phyllanthoides	Florida mayten	T					2-10	5	No	24.69646	81.4174	Buttonwood hammock/Coastal prairie
Maytenus phyllanthoides	Florida mayten	T					11-100		No	24.69677	81.41756	Abundant in north portion of preserve
Paspalidium chapmanii	Coral panicum	E					2-10	3	Yes	24.69194	81.41894	Rockland hammock
Pithecellobium keyense	Florida Keys blackbead	T					101-1,000		No			Throughout rockland hammock
Psidium longipes	Longstalked-stopper	T		S2	G4		101-1,000		No			Throughout rockland hammock
Reynosia septentrionalis	Darlingplum	T					101-1,000		No			Throughout rockland hammock
Solanum verbascifolium	Mullein nightshade	T					11-100		Yes	24.6926	81.41769	Edge of coastal prairie and hammock "Buttonwood fringe"
Solanum verbascifolium	Mullein nightshade	T					2-10	4	Yes	24.69344	81.4189	Rockland hammock
Thrinax morrisii	Silver thatch palm, Brittle thatch palm	E		S3	G4G5		101-1,000		Yes			Throughout rockland hammock
Tillandsia flexuosa	Banded wild-pine, Twisted airplant	T		S3	G5		2-10	10	Yes	24.6945	81.41756	Buttonwood hammock/Coastal prairie

Scientific Name	Common Names	State Status	Federal Status	FNAI State Status	FNAI Global Status	IRCStatus	Estimated Population	Actual Population	Fruiting/Flowering	Latitude	Longitude	Notes
Tillandsia flexuosa	Banded wild-pine, Twisted airplant	T		S3	G5		2-10	2	Yes	24.69252	81.4192	Rockland hammock
Tillandsia utriculata	Giant wild-pine, Giant airplant	E					11-100	10-20	Yes	24.69235	81.4187	Rockland hammock
Federal Status												
T = Threatened												
E = Endangered												
State Status												
T = Threatened												
E = Endangered												
FNAI Status												
S1 = Critically Imperiled in Florida												
S2 = Imperiled in Florida												
S3 = Very rare or local throughout its range in Florida												
FNAI Status												
S1 = Critically Imperiled in Florida												
S2 = Imperiled in Florida												
S3 = Very rare or local throughout its range in Florida												
G3 = Very rare or local throughout its native range												
G4 = Apparently secure in its global range												
G5= Demonstrably secure in its global range												
G#Q = Questionable rank due to its being a subtaxon												
IRC status												
SF1 = Critically Imperiled in South Florida												

Table #4

The Invasive Exotic Plants of Big Torch Hammocks parcels Epstein and MCLA, Florida Keys Wildlife and Environmental Area

June 13, 2005

Field data compiled by Steven W. Woodmansee on June 1-2, 2005

The Institute for Regional Conservation, Miami, Florida.

Scientific Name	Common Names	FL EPPC	Estimated Population	Actual Population	Latitude	Longitude	Habitat/Notes
Phoenix dactylifera	Commercial date palm, Date		1	1	24.69325	81.4175	Rockland hammock
Phoenix dactylifera	Commercial date palm, Date		1	1	24.69291	81.41799	Rockland hammock
Nephrolepis cordifolia	Tuberous sword fern	I	0	0			One large clump was dumped at corner entrance to the property where big torch road bends west.

Florida EPPC Status

I = species that are invading and disrupting native plant communities

II = species that have shown a potential to disrupt native plant communities