

**ANNUAL ADMINISTRATIVE REPORT (FY 2002) AND
WORK PLAN (FY 2003) FOR INVENTORIES AND VITAL SIGNS
MONITORING**

FY 2002-FY 2003

South Florida / Caribbean Network

Includes: Biscayne National Park, Big Cypress National Preserve, Buck Island Reef National Monument, Dry Tortugas National Park, Everglades National Park, Virgin Islands National Park.

South Florida / Caribbean Network Approval Signatures

Matt Patterson, Network Coordinator, South Florida / Caribbean Network

Date

John Donahue, Superintendent, Big Cypress National Preserve
Chair, Network Board of Directors

Date

Larry West, Regional Inventory and Monitoring Coordinator,
Southeast Region

Date

I. Overview and Objectives

The South Florida / Caribbean Network (SFCN) includes six national parks with significant natural resources in the Southern tip of the state of Florida and the U.S. Virgin Islands of St. Croix and St. John. In FY02, several biological inventories were initiated, including inventories for vascular plants, mammals, fish, reptiles, and amphibians.

In FY 2002, the SFCN received \$390,974 in funding from the Service-wide Inventory and Monitoring (I&M) program to continue conducting inventories of vertebrates and vascular plants. The network hired a full-time network science information data manager to ensure the data quality and accuracy are of the highest level. This position will assist contractors and cooperators in adhering to NPS data guidelines, continue with network data mining efforts, and coordinate Geographic Information System datasets are complimentary across the network. The FY02 budget was spent primarily on projects with 68% (\$266,160 to contractors and cooperators), 21% (\$82,708) on personnel, 5% (\$20,379) on operations, and 5% (\$21,494) on travel.

In FY03, the SFCN biological inventories of amphibians, reptiles, small and medium sized mammals, and vascular plants will continue. A network-wide inventory of bats will be initiated. Network staff will continue to work with the Science Advisory Committee, collect and organize data, and work towards vital signs scoping sessions. The I&M budget for network vertebrate and vascular plant inventories is \$250,063.

The South Florida / Caribbean Inventory and Monitoring Network received \$150,000 for Vital Signs Monitoring startup for FY03. These funds will be used to pay for network coordinator salary, travel, a Vital Signs Scoping Meeting, and data mining for the Phase One report. The salary money freed up by shifting the coordinator position salary will be used to hire a museum technician and start some additional inventory, monitoring, and mapping work throughout the network.

Objectives for Biological Inventories

1. Compile and evaluate existing data for each park into NPS databases.
2. Complete the documentation of 90% of vertebrate and vascular plant species in the parks through targeted field investigations.
3. Curate voucher specimens collected during inventories.
4. Hire Network Data Manager to ensure quality data content.

Objectives for Vital Signs Monitoring

5. Draft and finalize a network charter to ensure smooth operation by setting roles and responsibilities, as well as administrative organization in writing.
6. Establish Board of Directors and Science Advisory Committee.
7. Continue to work with partners in the region to ensure long term planning occurs for resource allocation and strategic planning across the network.
8. Begin development of the Phase One Vital Signs Monitoring Report.

II. Accomplishments (FY2002) and Scheduled Activities (FY2003)

A. Biological Inventories

Objective 1 – Compile and evaluate existing data for each park into NPS databases (all parks).

Task 1.1 – Compile and evaluate existing data on vertebrates and vascular plants and enter them in a consistent format into NPSpecies, NPbib, Database Template and the Dataset Catalog.

- FY 2002 Accomplishments: (1) Entered into an Interagency Agreement with Dr. William Loftus, USGS Biological Resource Discipline, Florida / Caribbean Science Center to review the NPSpecies records of freshwater fish of Everglades National Park, populating the database with known voucher information and ensuring accurate information throughout the records. (2) Entered into a contractual agreement with the Institute for Regional Conservation (IRC) to review the vascular plant records of all four South Florida parks (BICY, BISC, DRTO, EVER). Linkages will be made to observational records in the IRC Plant Conservation website and the Fairchild Tropical Garden Virtual Herbarium Website. (3) Entered into a cooperative agreement with Dr. Gary Ray at the University of the Virgin Islands through the South Florida / Caribbean Cooperative Ecosystems Studies Unit to review the vascular plant records of Virgin Islands National Park and Buck Island Reef National Monument. (4) Hired a network science information data manager on July 15, 2002 (See 4.1). (5) Data manager attended the Inventory and Monitoring Data Management Workshop in Ft. Collins, CO in August to learn about service-wide databases and data management and analysis tools. (6) Data manager worked with Mr. Simon Kingston, NPSpecies administrator to ensure amended NPSpecies records would migrate back into the master database without conflict. (7) The network data manager obtained over 6,000 records of fish voucher specimens residing at the University of Florida Museum of Natural History for the network, as well as over 7,000 records for the Southeast Coast network and 58 records for the Cumberland-Piedmont Network. Additional requests for voucher data are currently being investigated at the museum.
- Scheduled FY 2003 Activities and Products: (1) Locate additional inventory related reference material including observations, vouchers, and literature. (2) Coordinate data entry with parks, contractors, and WASO. (3) Develop and implement a Data Management Plan to ensure quality data content in all I&M databases.

Task 1.2 – Compile existing GIS themes and modify them to be consistent with the GIS Theme Manager.

- FY 2002 Accomplishments: (1) The network was able to work with the Dr. Mark Monaco of NOAA Biogeography Program to add multiple geographic information systems (GIS) data layers representing benthic habitat characterizations, bathymetry, and national monument boundaries for the U.S. Virgin Islands parks. (2) The network received cutting edge aerial remote sensed imagery from above the coral reefs of BISC with 1 m² spatial resolution for use in hyperspectral algorithm development and habitat delineation. (3) The data manager obtained georectified satellite imagery covering the majority of the southern half of the State of Florida.
- Scheduled FY 2003 Activities and Products: (1) The network data manager will work with the State of Florida Marine Resources Institute to develop a relationship and understanding for data sharing and exchange. (2) The data manager will work with the Geographic Information System (GIS) manager at Everglades to ensure data migration into ARC SDE will be clean and efficient when the network moves to the South Florida National Park Service Everglades Restoration office. (3) A cooperative Agreement with the State of Florida Marine Research Institute will be initiated in order to share costs in obtaining aerial imagery of Florida Bay for use in documenting seagrass recovery and provide archival imagery for long-term trend analysis. (4) The SFCN will enter into an interagency agreement with Dr. John Brock with the U.S. Geological Survey and Wayne Wright

with NASA to collect EAARL data from the U.S. Virgin Islands, which will include LIDAR, passive hyperspectral data, and digital imagery all georeferenced.

Task 1.3 – Convert existing hard copy maps to digital GIS format.

- FY 2002 Accomplishments: (1) Modified a Cooperative Agreement with Mrs. Maria VillaNueva with the Department of Marine Affairs at the University of Miami to scan and georeference a series of aerial transparencies flown over Biscayne Bay and the Safety Valve for use in seagrass quantification and time series analysis. Delivery of the GIS image is scheduled for Fall 2002. (2) Hired a network science information data manager on July 15, 2002. (See 4.1) (3) Data manager digitized management zones for the BISC General Management Plan to determine area of “no take” zones protecting coral reef resources to compare with the U.S. Coral Reef Task Force protection recommendations for coral reef resources within federal jurisdiction. (4) Data manager developed a series of maps of the network parks with coral reef resources to be displayed at the U.S. Coral Reef task Force meeting October 2-3, 2002 in San Juan, Puerto Rico. These maps were displayed as part of the Department of the Interior’s exhibit.
- Scheduled FY2003 Activities and Products: (1) The Data manager will continue to search for all available GIS and cartographic data to determine accuracy, significance, and prioritize need for digitization. (2) The data manager will assist contractors and cooperators with guidance for FGDC compliant metadata requirements.

Task 1.4 – Adapt Database Template to South Florida / Caribbean Network I & M projects.

- FY 2002 Accomplishments: (1) Hired a network science information data manager on July 15, 2002. (2) The Database Template is being modified to accept cryptic reef fish data from the inventory work at BUIS by Dr. William Smith-Vaniz.
- Scheduled FY2003 Activities and Products: (1) The Database Template will be modified to integrate bat data for the bat inventories scheduled to start Winter 2002/3. (2) New data will be entered as it becomes available.

Objective 2 – Complete the documentation of 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

Task 2.1 – Small and Medium Sized Mammal Inventories of Biscayne National Park

Parks involved: BISC

- FY 2002 Accomplishments: (1) Dr. Mike Gaines (University of Miami) obtained his permit and met with park staff, USGS-BRD Cooperators and staff from the Institute for Regional Conservation for a prework meeting, and to learn from the BISC Vascular Plant Inventory staff about areas for potential mammal habitat on the mainland and on the Keys. (2) Small and medium sized mammal trapping occurred from August to October of 2002 on the mainland and the Keys.
- Scheduled FY 2003 Activities and Products: (1) Field work will continue through Winter 2002/2003. (2) Final report, Shape files with FGDC Compliant metadata, and MS Access database shall be expected Fall 2003.

Task 2.2 – Inventory of Bats at all network parks.

Parks involved: BICY, BISC, BUIS, DRTO, EVER, & VIIS

- FY 2002 Accomplishments: (1) A cooperative agreement has been signed with Laura Finn and Fly by Night Incorporated to accomplish a bat inventory for all network parks beginning Fall 2002 until Spring 2005.
- Scheduled FY 2003 Activities and Products: (1) Permit requests have been submitted and received by all network parks. Mrs. Finn has been working with park resource management staff to answer questions regarding sampling design and logistics. (2) Mrs. Finn is working with Dr.

Task 2.3 – Freshwater Fish Inventories of Virgin Islands National Park

Parks involved: VIIS

- FY 2002 Accomplishments: (1) Dr. Bill Loftus (USGS-BRD) and his team obtained permits and conducted the first inventory mission to St. John, U.S. Virgin Islands, to sample the freshwater and brackish habitats of the island. Mountain mullet were collected, photographed and released in two guts on the island.
- Scheduled FY 2003 Activities and Products: (1) Dr. Loftus and his crew will be revisiting the park in Spring 2003 to finish the sampling. The final report, database and GIS data should be available Fall 2003.

Task 2.4 – Freshwater Fish Inventories of Big Cypress National Preserve and Biscayne National Park.

Parks involved: BISC, BICY

- FY 2002 Accomplishments: (1) Dr. Jerry Lorenz (Audubon) and his crew met with Resource Managers from Big Cypress National Preserve, Dr. Bill Loftus, USGS – BRD, and network staff to develop a strategy for fieldwork. (2) BICY provided aircraft hours for Dr. Lorenz to fly over the preserve to determine various sampling habitats that would need to be addressed during the inventory of BICY. (3) Dr. Lorenz was able to fund a proposal entitled “Inventory of Freshwater Fish Species within the Big Cypress National Preserve, with emphasis on methods testing to design a long-term aquatic biota sampling program” through the Critical Ecosystems Studies Initiative – Ecological Processes Program funded at \$348,550 through 12/2006. (4) This project provides **689%** match to the original project funding of \$44,150 clearly demonstrating the importance of knowing fishes exists in these habitats prior to Everglades restoration.
- Scheduled FY 2003 Activities and Products: (1) Dr. Lorenz and crew will continue field work at BICY and BISC.

Task 2.5 – Inventory of cryptic reef fish

Parks involved: BUIS, BISC

- Scheduled FY 2003 Activities and Products: (1) The network will develop a Scope of Work for cryptic reef fish inventories for the deeper habitats of Buck Island Reef National Monument and Biscayne National Park, looking for method comparison for inventory, as well as trade-offs between different sampling techniques. This RFP should be advertised during Winter 2003.

Task 2.6 – Inventory of reptiles and amphibians

Parks involved: BISC, BICY, BUIS.

- FY 2002 Accomplishments: (1) Field work commenced in Big Cypress National Preserve for the reptile and amphibian inventory. This year, 55 sites were surveyed, with a total of 257 sampling occasions, observing 1,493 individuals of 29 species during visual surveys and 14 species of anurans during vocalization surveys. The total for the preserve from this project is 31 species of reptiles, six lizards, 18 snakes, six turtles, and one crocodylian. The total from the preserve from this project is 17 amphibians, 14 anurans and three salamanders. Monthly sampling of the 34 permanent plots will continue until March 2003. (2) Fieldwork commenced in Biscayne National Park for the reptile and amphibian inventory. This year, 22 sites were surveyed, with a total of 44 sampling occasions, observing 26 individuals of 10 species during visual surveys and seven species of anurans during vocalization surveys. The total for the park from this project is four species of reptiles, two lizards and 2 snakes. The total from the park from this project is eight amphibians, all of which are anurans. Fieldwork is scheduled to continue with monthly sampling of the 16 permanent plots until May 2003. (3) The Final Report for the reptile and amphibian inventory for Buck Island is to be completed Fall 2002.
- Scheduled FY 2003 Activities and Products: (1) BUIS Report will be delivered and reviewed. (2) Field work will continue at BISC. (3) Field work will continue at BICY.

Task 2.7 – Inventory of vascular plants at Biscayne National Park and Big Cypress National Preserve.

Parks involved: BISC, BICY

- Scheduled FY 2002 Activities and Products: (1) The Institute for Regional Conservation continued field work at BISC sampling 10 1 km² sampling cells on both mainland and the islands. The park has been 80% (80 of 100 cells) inventoried to date. A total of 423 plant taxa were recorded as of May 2001. Of these 133 (31.5%) had not been previously reported for BISC (by Stalter et al 1999 who reported a total of 370), including 80 that are native to South Florida, 52 that are exotic, and one of doubtful nativity. Nine of the new species are listed by the State of Florida as Endangered and six as Threatened (although four of these listed species are only cultivated in the park). Nine of the new exotic taxa are listed by the Florida Exotic Pest Plant Council as Invasive or Potentially Invasive. Inventory work around the Turkey point Nuclear Power Plant became logistically more difficult post 9/11 due to the increased security concerns by power plant staff. The network, IRC and Florida Power and Light developed a process to allow the inventory work to continue in the area with proper clearances. (2) Field work commenced at BICY, sampling 60 1 km² sampling cells, and five roadside transects. (3) Voucher specimens were delivered from BISC for inclusion of the NPS virtual herbarium at Fairchild Tropical Gardens (see 3.1) (4) The Institute for Regional Conservation was awarded a grant worth \$17,000 from the U.S. Fish and Wildlife Service for demographic monitoring of *Opuntia corallicola* (Semaphore Prickly Pear Cactus) on Swan Key, and increased surveying of the remainder of Biscayne National Park for additional populations of this rare plant. (5) Biscayne National Park was successful at obtaining Regional Natural Resources funding for PMIS project “Conservation Biology and Population Genetics of the Critically Endangered Semaphore Cactus (PMIS# 85388)” for funding at \$60,360 over a two year period. The study will serve as a general model for applying conservation genetic data to plant conservation.
- Scheduled FY 2003 Activities and Products: (1) Vascular plant inventory will continue at Biscayne National Park with 10 1 km² cells sampled and review of the NPSpecies database for the South Florida parks vascular plant records to include voucher information and literature species documentation (See Task 1.1). (2) Vascular plant inventory will continue at Big Cypress National Preserve with 150 1 km² cells sampled and 15 pairs of roadside transects. (3) Additional voucher specimens will be collected within BICY to ensure the inventory work will occurring will have

nearly all species recorded with current voucher specimen, The original contract stated that only non-vouchered specimens would be collected, however, this was found to be in error, and that vouchers should support all documented species whenever possible. (4) An inventory of Mahogany mistletoe will be conducted on Sands Key in Biscayne National Park. Mahogany mistletoe (*Phoradendron rubrum*) was identified during December 2002 in two Mahogany trees (*Swietenia mahogoni*) on Sands Key during a survey for semaphore cactus (*Opuntia corallicola*). This species is listed by the state of Florida as endangered. Prior to this find, it's only occurrence in Florida was from two mahogany trees at the Key Largo Hammocks State Botanical Site, and those trees are in a state of decline. This effort will identify the distribution and abundance of this parasitic shrub and examine possibilities of a seed source for other mahogany trees within the upper Keys.

Objective 3 – Curate voucher specimens collected during inventories.

Task 3.1 - Work with Fairchild Tropical Gardens (FTG) to develop a relationship to ensure professional curation of vascular plant voucher specimens

- FY2002 Accomplishments: (1) A Purchase Order was written to accomplish a series of tasks to ensure professional curation of the vascular plant vouchers of the South Florida / Caribbean Network. Tasks included proper mounting and labeling of vouchers, scanning and databasing of vouchers, creation of a virtual herbarium, to allow voucher viewing at a secure website so park staff and cooperators can see specimens with a web browser with the ability to zoom to 10x on-line, reducing the need to handle the actual specimen. (2) 1,350 specimens were received by Fairchild Tropical Garden during FY2002 for scanning, databasing, and curation from VIIS, BUIS, and BISC.
- Scheduled FY2003 Activities and Products: (1) Vouchers will continue to be sent to FTG as the inventories continue. (2) Arrangements are being made for scanning and databasing all voucher plants at the Everglades Regional Collection Center for archival and research purposes.

Task 3.2 – Work with the University of Florida Museum of Natural History on voucher agreements for inventory voucher specimens.

- FY2002 Accomplishments: (1) Met with Mr. George Burgess and Dr. William Smith-Vaniz to discuss curation of the 4,400 lots of cryptic reef fish collected during the cryptic reef fish inventory at Buck Island Reef National Monument. (2) Negotiated long-term curatorial costs for maintenance of the collection.
- Scheduled FY2003 Activities and Products: (1) Continue negotiating long-term curatorial costs for maintenance of the collection.

Task 3.3 – Hire a network museum technician to ensure I&M voucher specimens will be properly entered into the Automated National Catalog System (ANCS+), and additional duties as required.

- Scheduled FY2003 Activities and Products: (1) EVER will be advertising for a term GS-7 museum technician to work at the Everglades Regional Collection Center (ERCC), and visiting network parks to evaluate curation needs network wide.

Objective 4 – Hire Network Data Manager to ensure quality data content.

Task 4.1 – Worked with Network parks, cooperators and contractors to share I&M tools, policy and guidance.

- FY2002 Accomplishments: (1) Ms. Britton Wilson, South Florida / Caribbean Network Data Manager attended the Inventory and Monitoring Data Management workshop in Ft. Collins, CO to learn about the NPS databases and other tools to ensure the network was up to date with current developments in the I&M program. (2) Data manager trained the Institute for Regional Conservation staff on the use of the NPSpecies database, during their review and population of vascular plant records, vouchers and supporting literature references for the four South Florida parks. (3) Data manager trained Dr. Gary Ray, University of the Virgin Islands on the use of the NPSpecies database, during their review and population of vascular plant records, vouchers and supporting literature references for the U.S. Virgin Island parks. (4) Data manager provided and trained resource management staff on the latest version of NPSpecies in both USVI parks.
- Scheduled FY2003 Activities and Products: (1) Data manager will train Dr. William Loftus, U.S. Geologic Survey – Biologic Resource Discipline on the use of the NPSpecies database, during their review and population of freshwater fish records, vouchers, and supporting literature references for Everglades National Park. (2) Data manager will train Mrs. Laura Finn, Fly by Night, Inc. on the use of a modified database template and GPS use to ensure field data will be incorporated into NPS standard database format. (3) Data manager will work with Dr. William Smith-Vaniz on developing a cryptic fish database using the database template for the documentation of cryptic reef fish from Buck Island Reef National Monument.

Task 4.2 – Perform data mining throughout network to obtain both historic and current data relevant to the Inventory and Monitoring Program.

- FY2002 Accomplishments: (1) Data manager obtained over 13,000 records of fish vouchers for three Southeast networks from the University of Florida Museum of Natural History. Over 6,000 records supported fish species in or around South Florida and Caribbean national parks. (2) The data manager obtained extensive Geographic Information System data layers from network parks and outside agencies for use throughout the network.
- Scheduled FY2003 Activities and Products: (1) Network staff will continue data mining to uncover current and historical data to support network I&M role. (2) Funds have been set aside to perform data mining to compile information necessary for the Phase 1 Vital Signs Monitoring Plan report.

Task 4.3 – Provide Geographic Information System support to network parks.

- FY2002 Accomplishments: (1) The data manager performed spatial analysis of BISC coral reef resources to determine the area of coral reef resources protected by the current alternatives of the draft General Management Plan (GMP). This analysis was to provide park management with the amount of acreage that GMP alternatives protected coral reef resources compared with the guidelines set out by the U.S. Coral Reef Task Force recommendations from the National Action Plan, which directs federal public land managers to protect at least 20% of coral reef resources by 2010 in all federally protected areas. (2) The data manager created a series of Coral Reef Resource maps that were displayed as part of the Department of the Interior exhibit at the U.S. Coral Reef Task Force Meeting, held October 2-3, 2002 in San Juan, Puerto Rico.
- Scheduled FY2003 Activities and Products: (1) Network staff will continue to support network parks as needed with geospatial analysis.

B. Vital Signs Monitoring

Objective 5 – Draft and finalize a network charter to ensure smooth operation by setting roles and responsibilities, as well as administrative organization in writing.

Task 5.1- Develop a network charter outlining roles, responsibilities, and decision-making framework.

- FY2002 Accomplishments: (1) A draft charter document was presented at the January 2002 network meeting as a straw dog to start from. The draft received some comments and comments were incorporated. (2) The second draft was discussed at the prototype meeting in St. John during May 2002, was reviewed and based on a vote; the charter was ready for signature. (3) The Charter was circulated for signature during August, and was completely signed by September.
- Scheduled FY 2003 Activities and Products: (1) A Board of Directors conference call is scheduled for November 6, 2002 to designate a BOD chairperson, decide on a date for a Spring meeting, and discuss current inventory work.

Objective 6 – Establish Board of Directors and Science Advisory Committee.

Task 6.1 - Form a Board of Directors (BOD).

- FY2002 Accomplishments: (1) A BOD was established to provide overall guidance and oversight to the I & M program. (See Staffing for complete list of participants). (2) A charter outlining the operating procedures of the Board of Directors has been developed by I & M staff and signed by members representing each of the 6 parks in the South Florida / Caribbean Network
- Scheduled FY 2003 Activities and Products: (1) A BOD meeting will be held in Spring 2003 to review projects to date and evaluate activities planned for the remainder of FY 03.

Task 6.2 – Form a Science and Technical Committee (STC)

- FY2002 Accomplishments: (1) A SAC was formed which will include the Network coordinator, appointed resource managers from South Florida / Caribbean parks, and the South Florida / Caribbean CESU Coordinator, USGS, USFWS, and the FKNMS. USGS, USFWS and FKNMS committee members will aid in cross pollination of regional efforts, and ensure partner and neighbor agencies would be in position to provide assistance, insight, and to improve communication.
- Scheduled FY 2003 Activities and Products: (1) The BOD will approve formation of the committee, accept nominations, and support decision making from this group. (2) The STC participants will be designated, and a meeting will be held to develop the FY2003 workplan and discuss long-term strategy.

Objective 7 – Continue to work with partners in the region to ensure long term planning occurs for resource allocation and strategic planning across the network.

Task 7.1 – Continue Dialog with the South Florida I- Team

- FY2002 Accomplishments: (1) The South Florida I- Team is a multi-agency group of scientists which met regularly via teleconference call hosted by the State of Florida to discuss environmental monitoring activities in the greater Everglades region. Members represented county, state, and federal natural resource managers, water management agency representatives, and the ACOE.
- Scheduled FY 2003 Activities and Products: (1) Continue taking part in these calls as appropriate to ensure efficient monitoring of shared resources.

Task 7.2 – Monitor changes in vegetation at Virgin Islands National Park long-term plot.

- Scheduled FY 2003 Activities and Products: (1) Fund Dr. Pete Weaver, USDA, to return to St. John to sample long term vegetation plots in Cinnamon Bay. These plots have been sampled every five years, and this will be the twentieth year for sampling. This trend data will be very important to determine the priority of vegetation monitoring for St. John in the Vital Signs process.

Objective 8 – Begin development of the Phase One Vital Signs Monitoring Report.

Task 8.1 – Hold Vital Signs Scoping Meeting in September 2003

- Scheduled FY 2003 Activities and Products: (1) Funds have been set aside to host a meeting of the SFCN Science and Technical Committee in September to discuss ongoing projects, review data mining efforts, and determine areas where I&M efforts need to be adjusted.

III. Staffing

Inventory and Monitoring Staff

Matt Patterson, South Florida / Caribbean Network I&M Coordinator
 Britton Wilson, South Florida / Caribbean Network Science Information Data Manager
 TBA, South Florida / Caribbean Network Museum Technician
 TBA, 1/5 of the Regional Inventory and Monitoring Administrative Assistant

Board of Directors

Mr. John Donahue, Superintendent, Big Cypress National Preserve
 Ms. Linda Canzanelli, Superintendent, Biscayne National Park
 Mr. Joel Tutien, Superintendent, Buck Island Reef National Monument
 Mr. Bob Howard, Management Assistant, Dry Tortugas National Park
 Ms. Maureen Finnerty, Superintendent, Everglades / Dry Tortugas National Park
 Mr. John King, Superintendent, Virgin Islands National Park
 Mr. Matt Patterson, Network I&M Coordinator
 Mr. Larry West, Regional I&M Coordinator

Science and Technical Advisory Committee

Mr. Ron Clark, Resource Management Chief, Big Cypress National Preserve
 Mr. Rick Clark, Resource Management Chief, Biscayne National Park
 Mrs. Zandy Hillis-Star, Resource Management Chief, Buck Island Reef National Monument
 Dr. Thom Armentano, Chief of Biological Resources, Everglades National Park / Dry Tortugas National Park
 Mr. Rafe Boulon, Resource Management Chief, Virgin Islands National Park
 Dr. Carol Daniels, South Florida / Caribbean Cooperative Ecosystem Studies Unit Coordinator
 USGS Contact - TBD
 USFWS Contact - TBD

IV. Public Interest Highlights

- ✓ A partnership with Fairchild Tropical Gardens was developed for curation, databasing, and webpage development of plant voucher specimens within the network. Authorized users can login to the “NPS Virtual Herbarium”, search for the specimen, and view the digital image of the specimen up to 10X magnification. The relationship allows for long term curation of the collection, with taxonomic updates to be shared with individual parks as they occur.
- ✓ The Biscayne National Park/Big Cypress National Preserve Freshwater Fish Inventory was able to leverage nearly \$350,000 for a USGS sponsored project titled “Inventory of Freshwater Fish Species within the Big Cypress National Preserve, with emphasis on methods testing to design a long-term aquatic-biota sampling program” to expand the fish inventory both spatially and

- temporally across the Big Cypress Swamp.
- ✓ The discover of the Semaphore Prickly Pear Cactus (*Opuntia corallicola*) within Biscayne National Park expanded the range and abundance of this rare cactus. This information led to a U.S. Fish and Wildlife Grant to the Institute for Regional Conservation to expand the mapping of this critically imperiled species throughout the park, and on adjacent state owned lands worth \$17,000. The park was successful at obtaining Regional Natural Resource funding through PMIS project # 85388 “Conservation Biology and Population Genetics of the Critically Endangered Semaphore Cactus” for \$60,360 over two years.

V. Reports, Publications and Presentations

Patterson, M.E. 2002. The National Park Service’s Vertebrate And Vascular Plant Inventory For The South Florida / Caribbean Network. Presentation to the Watershed 2002 Conference, February 24-27, 2002.

VII. Budget

Budget Narrative: In FY 2002, the network received \$390,976 from the NPS Servicewide I&M program for biological inventories. Inventory funds were allocated towards Inventories of vascular plants at Big Cypress and Biscayne, Freshwater fish inventory of Virgin Islands National Park, Bat Inventories of all Network Parks, Freshwater fish NPSpecies database review for Everglades, Vascular Plant NPSpecies Database review for the Virgin Islands, Vascular Plant NPSpecies Database review for South Florida, and Curation and scanning of network herbarium specimens. In addition to the above projects, salary for the network coordinator and data manager, travel for network and park staff to attend the January meeting, as well as other travel, training, operations, and supplies were funded through network inventory funds.

In FY 2003, the network will receive \$250,063 from the NPS Servicewide I&M program for biological inventories. Inventory funds will primarily be spent on vascular plant inventories of Big Cypress National Preserve and Biscayne National Park, curation of herbarium specimens, and an RFP for cryptic reef fish inventories. Additional funding of \$150,000 was provided to the SFCN for Vital Signs monitoring. This funding will cover network coordinator salary, travel, base mapping, and operations. Some funding will be required as network staff moves from Biscayne National Park Headquarter to the Krome Center office building during Spring 2003.

Budget Summary

FY03 Work Plan

Network: South Florida/Caribbean

Category: 1_Income

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Startup funding for Vital Signs Monitoring	\$150,000.00	I&M - VS Monitoring \$\$		
Vertebrate and Vascular Plant Inventory	\$250,063.00	I&M - Biol. Inventory \$\$		
Subtotal	\$400,063.00			

Category: 2_Personnel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Museum Technician	\$23,000.00	I&M - Biol. Inventory \$\$	NPS	To Assist
Network Coordinator	\$79,105.00	I&M - VS Monitoring \$\$	NPS	Network C
Data Manager salary	\$53,443.99	I&M - Biol. Inventory \$\$	NPS	Salary
Regional Administrative Assistant	\$5,000.00	I&M - Biol. Inventory \$\$	NPS	Salary
Subtotal	\$160,548.99			

Category: 3_Coop. Agreements

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
EARRL Overflights - USVI	\$15,000.00	I&M - VS Monitoring \$\$	NPS	USGS-BF
Florida Bay Aerial Georectification	\$5,000.00	I&M - Biol. Inventory \$\$	NPS	Matching
Data Mining	\$20,000.00	I&M - Biol. Inventory \$\$	NPS	Phase O
Florida Bay Aerial Photography	\$20,000.00	I&M - Biol. Inventory \$\$	NPS	Matching
Subtotal	\$60,000.00			

Category: 4_Contracts

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Cryptic Fish Inventory Work	\$20,000.00	I&M - Biol. Inventory \$\$	NPS	
Biscayne Mistletoe Inventory	\$3,000.00	I&M - Biol. Inventory \$\$	NPS	Threaten focused s

BICY Vouchers	\$10,000.00	I&M - Biol. Inventory	\$\$	NPS	To vouch
BISC Vascular Plant Inventory (Year 3)	\$2,970.52	I&M - Biol. Inventory	\$\$	NPS	
Vascular Plant Curation at FTG	\$29,160.00	I&M - Biol. Inventory	\$\$	NPS	
VIIS Veg Monitoring	\$8,500.00	I&M - Biol. Inventory	\$\$	NPS	20 year v
BICY Vascular Plant Inventory (Year 2)	\$61,764.00	I&M - Biol. Inventory	\$\$	NPS	

Subtotal \$135,394.52

Category: 5_Operations/Equipment

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>	
Purchases	\$2,800.00	I&M - Biol. Inventory	\$\$	NPS	Equipment

Subtotal \$2,800.00

Category: 6_Travel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>	
Scoping Meeting	\$5,000.00	I&M - VS Monitoring	\$\$	NPS	Meeting o one repor
Estimated Travel	\$23,900.00	I&M - VS Monitoring	\$\$	NPS	Executive
Network Staff Travel	\$6,039.92	I&M - Biol. Inventory	\$\$	NPS	

Subtotal \$34,939.92

Category: 7_Other

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>	
Rent	\$6,000.00	I&M - VS Monitoring	\$\$	NPS	

Subtotal \$6,000.00

Budget Analysis

Analysis of Expenses by Expense Type

<i>Funding Source</i>	<i>Total \$\$</i>	<i>NPS</i>	<i>USGS</i>	<i>Other</i>	<i>Federal</i>	<i>Univ.-CESU</i>	<i>Univ_Non-CESU</i>
I&M - Biol. Inventory \$\$	\$270,678	\$270,678					
I&M - VS Monitoring \$\$	\$129,005	\$129,005					
Totals	\$399,683	\$399,683					

Analysis of Expenses by Category

<i>Funding Source</i>	<i>Total \$\$</i>	<i>Personnel</i>	<i>Coop</i>	<i>Agree.</i>	<i>Contracts</i>	<i>Operations/Equip.</i>	<i>Travel</i>	<i>Other</i>
I&M - Biol. Inventory \$\$	\$270,678	\$81,444	\$45,000	\$135,395		\$2,800	\$6,040	
I&M - VS Monitoring \$\$	\$129,005	\$79,105	\$15,000				\$28,900	\$6,000
Totals	\$399,683	\$160,549	\$60,000	\$135,395		\$2,800	\$34,940	\$6,000

Expense Totals By Category

<i>Category</i>	<i>SubTotal</i>	<i>Percent</i>
2_Personnel	\$160,549	40.17%
3_Coop. Agreements	\$60,000	15.01%
4_Contracts	\$135,395	33.88%
5_Operations/Equipment	\$2,800	0.70%
6_Travel	\$34,940	8.74%
7_Other	\$6,000	1.50%
	\$399,683	