

Pine Rockland Conference 2006 - Abaco Fire Mgmt. Workshop

February 10 -14, 2006

Overall Schedule and Key to Photograph Labeling

Friday Feb. 10 – Participants arrive at Marsh Harbor throughout the day. Evening field trip to central Abaco pine forest. See photos labeled “Abaco Day 1 FT.”

Saturday Feb. 11 – Field trip to Abaco National Park where we will discuss prescribed fire training burns, fire research and Bahama parrot research and give people time to roam around. See photos labeled “Abaco Day 2 FT” # 1-8.

Lunch at Sandy Point.

Travel to southeast Abaco (Road 50) and hike across pine/coppice ecotone and out to the eastern coast to identify fire issues. See photos labeled “Abaco Day 2 FT” # 9-20.

Travel to Cross Harbor wetlands restoration site to see west side of southeast Abaco pineland. See photos labeled “Abaco Day 2 FT” # 21-26.

Dinner at Crossing Rock.

Sunday Feb. 12 - Travel to Friends of the Environment office in Marsh Harbor. Short presentation by Friends on their work. Slideshow by Dave Ralph of on Owens-Illinois forestry operation. Workshop to discuss fire management planning for Abaco National Park, research opportunities, etc. from 9:00-2:00.

Travel to Treasure Cay Blue Hole.

Travel to Wild Horse Preserve to discuss older growth forest and give people time to roam. See photos labeled “Abaco Horse Preserve.”

Dinner at Treasure Cay.

Monday Feb. 13 – Participants depart throughout the day. Field trip to pine hills near airport. See photos labeled “Abaco Day 4.”

Sunday Workshop Agenda with Notes

Introduction to Friends of the Environment's conservation activities – Anita Knowles

Anita described the breadth of Friends' work on land and in the sea. Everyone expressed gratitude for Friends', and particularly Anita Knowles', coordination of the Abaco workshop.

Slideshow on Owens-Illinois forestry operation 1950's and 1960's – Dave Ralph

Dave provided his first-hand account of the forestry operation and insights into the photos he took during Owens-Illinois' stay on Abaco and Grand Bahama. These photos and Dave too, are a treasure trove of information about the past.

Review of the general management planning process and rough draft plan for Abaco National Park (ANP) – Chris Bergh

The information presented below is based on a national park management planning workshop conducted in Nassau in early 2006. The primary goal of the workshop was to introduce park planning team members from Andros, Abaco and New Providence to a planning process. All information is provisional and represents the tip of the general management planning iceberg for Abaco N.P.

Draft Conservation Targets for Abaco N.P. include: Parrot, Pine forest, Coppice, Fresh wetlands, Other birds, Game animals, Atala butterfly/zamia, Blue holes, Rocky shore/mangrove, Beach, Groundwater, Land crabs

Draft Threats to Abaco NP include:

- Adjacent land use changes sneak up on park managers/ stakeholders
- Human-caused fire damage to fire-sensitive targets
- Invasive species (mammals, plants, _____, _____)
- Roads to potential new developments (new roads or improvements)
- Habitat destruction from natural disasters (e.g. Hurricanes)
- Improper hunting practices (fires, land clearing, litter...)
- Lack of law enforcement capacity (all laws)
- Conflict between parrot nesting season and hunting (limited)
- Poaching for pet trade, collectors (plants and animals)
- Incompatible development (e.g. Groundwater extraction, roads...)
- Potential future forestry/agriculture operations

Draft Vision Statement for the ANP:

People value, respect, and enjoy the Abaco National Park because it sustains the Bahama parrot and other native flora, fauna, and the ecosystem that they depend upon.

Draft Goals and Objectives for the ANP:

- Maintain or increase the population of the Bahama parrot
- Promote a more natural forest community structure

Goal: Maintain or increase the population of the Bahama Parrot

Objective 1: Develop and begin to implementation of a fire management plan for park by 2007.

Objective 2: Implement PRP throughout accessible areas by 2007.

Objective 3: Develop a post-hurricane parrot population and habitat assessment and recovery plan by 2007.

Objective 4: Provide regular law enforcement presence by 2007.

Objective 5: Inform all major user groups of direct and indirect human impacts on Bahama parrot and other resources by 2007.

Objective 6: Develop a process by which BNT is informed of proposed development by local and central government within South Abaco.

Review of TNC’s Saddleblanket Lakes Fire Management Plan contents – Chris Bergh

We discussed the contents, goals and objectives (reproduced below) for this plan and their relevance to the Abaco National Park situation.

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FIRE MANAGEMENT GOALS (Saddleblanket Lakes Preserve)

GOAL 1: CONDUCT SAFE FIRE MANAGEMENT OPERATIONS.

Minimize the effects of smoke on surrounding communities and roads.

- Burn with wind directions that minimize the impacts upon homes and roads.
- Avoid burning when organic soils and duff will create long-term smoke problems.
- Burn when the forecasted nighttime smoke dispersion is adequate to avoid smoke settling overnight in residential areas or on roads.
- Establish and maintain relationships with neighbors to obtain feedback and foster public support.
- Ensure that professional standards for prescribed burning are maintained on all burns.

Provide for the safety and well being of neighbors and the general public.

- Post informational signs and blockades to control public access before burning begins.

GOAL 2: MAINTAIN AND ENHANCE THE NATURAL DIVERSITY OF THE SITE.

- Use ecologically based prescribed fire to create appropriate fire regimes for each natural community.
- Monitor the effects of fire management and adapt prescribed fire management as appropriate.

GOAL 3: MAINTAIN AND ENHANCE POPULATIONS OF RARE SPECIES.

- Use prescribed fire to maintain diverse natural communities that support healthy populations of rare species.

Maintain Florida Scrub-jay (*Aphelocoma coerulescens*) population on site.

- Apply high intensity prescribed fire to scrub and scrubby flatwoods to maintain low, open vegetative structure with adequate sand patches to provide suitable habitat for Florida Scrub-jays.
- Conduct prescribed burns that consume less than 50 percent of any scrub-jay territory and avoid burning active nests.
- Schedule prescribed burns and design burn units to maintain a continuous supply of acorns in any territory.
- Conduct territory monitoring to identify approximate boundaries of each family's territory.
- Conduct population monitoring to alert managers of undesirable changes.

Maintain sand skink (*Neoseps reynoldsi*) and scrub lizard (*Sceloporus woodi*) populations on site.

- Conduct burns in xeric habitats to encourage a mosaic of scrub vegetation and open sandy patches.
- Keep vehicles on burn unit perimeter trails as much as possible during burns.

Maintain gopher tortoise (*Gopherus polyphemus*) population on site.

- Conduct burns to encourage low open structure and rapid re-growth of low herbaceous vegetation.
- Avoid caving in burrows during prescribed burns and mop-up.
- Conduct monitoring to alert managers of undesirable changes.

GOAL 4: MAINTAIN AND ENHANCE THE NATURAL COMMUNITIES ON SITE.

Maintain xeric upland communities.

- Burn sand pine scrub every 10 - 40 years or at a frequency to keep shrubs below 3 meters
- Burn scrubby flatwoods every 7 - 15 years or at a frequency to keep shrubs below 3 meters
- Burn scrub and scrubby flatwoods to maintain a sparse, open pine canopy.
- Conduct 50- to 90 percent of burns in the growing-season (April-August) to simulate a lightning initiated fire regime.

Maintain mesic flatwoods community.

- Burn mesic flatwoods every 2 - 7 years to maintain low, herbaceous understory.

- Use frequent fire to maintain an open relatively sparse stand of pines ranging from 1 - 60 trees per acre.
- Reduce immature slash pines in dense stands.
- Conduct 50 to 90 percent of burns in the growing-season (April-August) to stimulate native vegetation to flower and reproduce.

Maintain cutthroat grass, baygall and seasonal pond communities.

- Apply prescribed fire to wetland systems only when soil moistures are high enough to inhibit organic soil consumption.
- Allow fire to create an ecotone along the upland/wetland interface.
- Burn cutthroat areas every 1 - 5 years to prevent woody encroachment.
- Burn seasonal ponds as an imbedded feature of the surrounding upland community.

GOAL 5: MIMIC THE FREQUENCY, INTENSITY, SEASONALITY AND VARIABILITY OF HISTORIC FIRES.

- Conduct prescribed burns with varying return intervals, intensities and completeness (see Table 1).
- Conduct 50 to 90 percent of burns in the growing season.
- Vary return intervals between burns on any given area.
- Maintain a mosaic of burned and unburned areas.

GOAL 6: REDUCE WILDFIRE HAZARDS BY MANAGING FUELS WITH FIRE AND MECHANICAL TREATMENT.

- Manage fuel loads with prescribed fire to minimize the frequency and severity of wildfire.
- Burn natural communities within the range of recommended return intervals.
- Maintain firebreaks along property boundary and interior.

Mow boundaries annually or as needed.

Draft Vision Statement for the ANP Fire Management Plan

The group discussed components of a vision statement and generated the following list;

- Set acreage/spatial extent targets
- Develop spatial dbase to track fires
- Less wildfire/more prescribed burning
- Maintain/enrich native species diversity
- Inventory
- Diversity of seral stages/mixed age and size classes
- Engage stakeholders (esp. hunters)
- Outreach and education for compliance
- Better understanding of good vs. bad fire
- Community-based fire management/harness existing fire use
- Minimum impact of fire infrastructure (e.g. fire breaks)
- Minimize edge/fragmentation
- Minimize fire in coppice (both coastal and inland coppice "islands" in pine forest)
- Better understand pine-coppice ecotone

Draft Vision Statement based on the above: Ten years from now appropriate fire management, which includes cultural fire use and targeted application of fire management techniques (e.g. prescribed fire, fire suppression, prescribed natural fire, etc.), will support native species, culturally important species and natural communities in the Abaco National Park and throughout southern Abaco.

Draft Goals for the ANP Fire Management Plan

Goals were defined as broad-brush statements of desired future condition. The goals listed below will need refinement

Goal for Coppice: No more fire in coppice until its role is better understood

Goal for Pine Forest: Promote structural diversity in the pine stand

Goal for Pine-Coppice Ecotone: Maintain a dynamic ecotone (avoid abrupt community edges)

Goal for Bahama Parrot: Understand role of fire in parrot reproduction, survival and foraging (e.g. nest sites, food supply, predations, roosting sites)

Goal for Wetlands: Understand role of fire (research and monitoring)

Goal for Other Birds: Understand role of fire (research and monitoring)

Goal for Fire Management Capacity: Fire infrastructure, staffing, monitoring, etc. are adequate to accomplish goals and objectives

Goal for Outreach: Existing fire users understand the FMP goals and participate in implementing them.

Draft Objectives for the ANP Fire Management Plan

We did not have time to address objectives in any depth. Many of the ideas expressed throughout the workshop session and on field trips are most appropriately categorized as objectives (i.e. specific, measurable benchmarks by which to measure progress toward goals).

Research and Partnership Opportunities

The following list was generated via open discussion.

- Expand scope, scale, replication of existing fire effects research burns
- GIS mapping of targets and fires
- Satellite mapping of targets and fires (Bahamas National GIS Center is working on this via their International Development Bank project).
- Map existing vegetation communities and pine stand structure
- Model fuels
- Quantify site productivity (e.g. elevation, soils, rainfall, depth to water table, etc.)
- Conduct baseline inventory (e.g. plants, birds, invertebrates, etc.)
- Refine conceptual model of forest ecosystem dynamics and fire's role into a mathematical model with predictive/decision-support capabilities
- Fire effects on parrots, other key targets and possibly indicators
- Identify indicator species (e.g. parrots, parrot food sources, pine trees, pine forest structure, cavity nesting birds, ecotonal species, *Zamia*, ants, herps)