



Ecosystems of The Bahamas



PINE FOREST

SCIENTIFIC NAMES

The Caribbean Pine (*Pinus caribaea* var. *bahamensis*) also known as Yellow Pine. Other flora which can be found in the Bahamian Pine forest are *Bletia purpurea*, Pineyard Pink Orchid, *Andropogon glomeratus*, also known as Bushy Beard Grass, and *Pteridium aquilinum*, Southern Bracken Fern. Shrubs which populate the area are Wild guava (*Tetrazygia bicolor*), Five-finger or Chicken's foot (*Tabebuia bahamense*), and Snowberry (*Chiococca the alba*). The Scale leafed love vine (*Cassytha filiformis*) winds its way through understory and around Poisonwood (*Metopium toxiferum*). The Sabal palmetto (*Coccothrinax argenta*) may dominate ground flora in certain pine forest areas.

DESCRIPTION

Fire Climax Community

The Caribbean Pine is a light-demanding species that requires open areas with no competition from shading broad-leaved plants. Caribbean pinelands are called "fire climax communities" by botanists, for if periodic fires do not occur to remove the shading broad-leaved understory, juvenile pines cannot get sufficient light to take hold and replace the adult trees as they die off. Without fires the pinelands would be succeeded by the broad leafed coppice, a hardwood forest.

Extremely well adapted to fire, the Caribbean Pine adults are rarely killed by the flames. Their fire resistance is due to volatile resins in the bark which explode when heated, putting out any small fires which start at the bark. Juvenile pines are not as resistant as the adults and are generally killed, but reseeding takes place around the base of the adult trees rapidly.

History

The Caribbean Pine has been used by Bahamians for hundreds of years. Large-scale commercial exploitation of the resource did not begin until the early 1900's. In 1905, a sawmill was constructed near Wilson City, Abaco where it ran for twelve years. As local pinelands were utilized, the mill was moved to other areas. By 1943, all of the

virgin pine of Abaco had been cut except for an area north of Crossing Rocks and a forest between Norman's Castle and Marsh Harbour.

In 1944 the Abaco mill was moved to Grand Bahama, where large scale logging operations continued until the 1970's. Meanwhile, commercial harvesting of pine started in Andros in 1906 and in New Providence in 1923. In New Providence, few people can remember the sawmill that was constructed near Jack Pond, south of Gambier. As trees of sufficient diameter for lumber-making became scarce, the industry turned its attention to harvesting immature secondary trees which were ground into pulp for paper making.

STATUS

Pine forest only occurs on the northern islands of the Bahamas: Grand Bahama, Andros, Abaco and New Providence. Reports indicate that it was once found on the Berry Islands and is also known to grow in the Caicos Islands. Areas of pine forest which are protected are the Rand Nature Centre and the Lucayan National Park, Grand Bahama and the Abaco National Park in southern Abaco.

IMPORTANCE

Commercial: Research completed in the 1960's has indicated that the Caribbean pine may be one of the most commercially useful pine species in the world. It is fast growing, has considerable girth (some trees in the virgin forest measure over thirty inches in diameter), makes excellent pulpwood, and is rich in turpentine and resins. Forest biologists have grown it in many environments and it is likely that Caribbean pine will be grown commercially all over the world in years to come.

Recreation (Hunting): The pine forests of the Bahamas are also home to Wild Boar which is popular game species on the island of Abaco. There are also populations of feral cats and Raccoons. Quail, Wood doves and White-crowned pigeon which feed on Poisonwood may also frequent the pine forest and several migratory species of duck, such as the Blue-winged Teal utilize the ponds and lakes of this ecosystem.

Haven for Wildlife: The pine forests of the Bahamas are a bird watcher's paradise. Above the pines can be seen the Turkey vulture (*Cathartes aura*), slowly searching for food. Commonly seen on Andros, Abaco and Grand Bahama, scientists are stumped as to why it is so rarely seen on New Providence. During the winter months, numerous birds flock around the Agave or Century plants which are often found in open spaces between the pines. The Century plant blooms infrequently, or some say every hundred years. The tall asparagus-like flower head bears many clusters of yellow nectar-rich flowers attracting nectar sipping birds, the Bananaquit, Bahama Woodstar hummingbird, Cuban emerald hummingbird and the showy Red-legged Thrush. Over thirty different warblers may frequent the Bahamian pine forest. Two are residents, the endemic Bahama Yellowthroat (*Geothlypis rostrata*), and the Pine Warbler (*Dendroica pinus*). The rest are winter visitors or migrants, such as the Cape May warbler (*Dendroica tigrina*) or Black and White warbler (*Mniotilta varia*) who may return year after year to the same wintering grounds: One of the rarest birds sought by bird watchers is the Kirtland's warbler, (*Dendroica kirtlandii*). Scientists estimate the total population at approximately 1500. Migrating from Michigan to The Bahamas this endangered species is the subject of a joint BNT and MOA&F monitoring program (part of the Nature Conservancy's Wings over the Americas Program). Recent sightings of this bird in The Bahamas have been at the Rand Nature Centre in Grand Bahama and in the Abaco National Park. Another rare occupant of the pinelands is the Atala hairstreak (*Eumaeus atala*) a one-inch butterfly found on Abaco, Grand Bahama and New Providence. The atala caterpillar feeds exclusively on the Coontie (*Zamia integrifolia*), a member of an ancient order of plants known as cycads. The Coontie bears a close resemblance to the Sago Palm another cycad and is sometimes mistakenly called a Sago Palm. These living "fossils" are slow growing and their unprotected seeds make them poor competitors in the changing environment: Human harvesting of the rootstock for sago flour and destruction of the natural habitat are making the future dim for the survival of both the Coontie and the atala hairstreak.

Illustration by John Thompson

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