The endangered Bahama Amazon (Amazona leucocephala bahamensis) persists today on the islands of Abaco and Great Inagua at the northern and southern limits of its former range in the Bahamas. Historically, the Bahama Amazon was recorded on Abaco, New Providence, San Salvador, Long, Crooked, Acklins and Great Inagua islands. A subspecies of the Cuban Amazon, the Bahama Amazon is the only naturally-occurring psittacid in the Bahamas. A large proportion of the Inagua population is protected in a park operated by the Bahamas National Trust; the Abaco population inhabits the southern portion of Abaco, below Crossing Rock.

Since 1966, the Bahama Amazon has been recognized as endangered by the International Union for the Conservation of Nature and by the United States Department of the Interior since 1970. The reasons for its decline in population numbers are a loss and destruction of habitat, hunting pressures, and capture for pets. Although habitat alteration for development has persisted today on the islands of Abaco and Great Inagua at the northern and southern limits of its former range in the Bahamas. Historically, the Bahama Amazon was recorded on Abaco, New Providence, San Salvador, Long, Crooked, Acklins and Great Inagua islands. A subspecies of the Cuban Amazon, the Bahama Amazon is the only naturally-occurring psittacid in the Bahamas. A large proportion of the Inagua population is protected in a park operated by the Bahamas National Trust; the Abaco population inhabits the southern portion of Abaco, below Crossing Rock.

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Results

The Abaco population is recorded as the northernmost breeding population of any species in the genus, *Amazona*. Abaco is the second-largest island (1,681 km²) in the Bahamas and is located 200 miles east of Miami, Florida, and 75 miles north of Nassau. Like the rest of the Bahamas, Abaco is relatively flat and composed of limestone. The island’s climate is subtropical and fairly dry. Bahama Amazons on Abaco, unlike any other New World psittacid, are subterranean nesters, nesting in natural limestone solution cavities beneath the ground. Fourteen parrot nests were found in a nesting area south of Crossing Rock. The primary vegetation in this area is yellow pine (*Pinus caribaea*) with a shrub understudy of
poisonwood (*Metopium toxiferum*), chicken toe (*Tabebiua bahamensis*) and pond top palm (*Sabal palmetto*). All fourteen nests were located in limestone solution cavities beneath the ground, which ranged in depth from 91 to 299 cm, with an average depth of 136 cm. Many of these cavities contained ledges or overhangs within them and eggs were placed under these obstructions, concealing them from view.

Egg laying occurred in early June, and clutch size in the Bahama Amazon is two to three eggs, somewhat smaller than that recorded in other species of *Amazona*. Unsuccessful nests were lost within a week prior to hatching and possible causes of nest failure appear to be related to (a) physical, environmental factors such as rain and nest cavity dimensions, (b) predations, and (c) infertility of eggs and/or immature breeding pairs.

The incubation period averaged 28 days and eggs were presumably incubated by the female. During egg laying and incubation, female Bahama Amazons remained secluded in the nest cavity, leaving the nest three to six times a day to be fed by the male. Males rarely entered the nest during this period to feed the females. They called their mates out of the nest hole by characteristic high-squawk attraction calls which were given from a nearby shrub or pine. Upon exiting the hole, the female joins the male, and together they give take-off squawks and fly to a nearby pine, where the male feeds the female. Preliminary data suggests that these calls play a significant role in the individual recognition of parrots.

Continued on page 60.

**Volunteers Needed**

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In our study area, the Bahama parrot appears to have a low rate of reproductive success — only seven of the fourteen nests (50%) produced live chicks. Of these seven nests, six hatched two chicks, while the remaining nest hatched its entire clutch of three eggs. Hatching was asynchronous. Bahama Amazon chicks are altricial, hatching blind, helpless and naked, with only a few wisps of white down feathers on their bodies.

Both sexes care for the young, and ten to fourteen days after hatching, the female gradually begins to leave the nest to forage with the male. Pairs return to the nest five to seven times a day to feed their chicks. By the time the chicks are twenty-one days old, the female remains out of the nest completely, roosting with the male at night and only enters the nest to feed the chicks.

Chicks fledged the end of August and early September, approximately eight weeks after hatching. Chicks within a nest fledge asynchronously (24 to 72 hours apart) and usually in the early morning or late evening. Prior to fledging, parents spend more time in the nest area but may not enter the nest to feed their chicks. Six of the fourteen nests (43%) in our study area successfully fledged chicks, and a chick flew off with its parents after leaving the nest.

Allofeeding and allopreening behavior appear to play a major role during the nesting cycle, maintaining the pair bond. Allopreening was observed throughout the nesting cycle, whereas allofeeding was rarely observed two weeks after hatching, which seems to correlate with the observed pattern of parental care. In the post-hatching period, males feed the chicks directly and as the nesting cycle progresses, males assume a greater role in feeding the chicks. In this behavior, as with other behaviors we observed, there exists much individual variation.

A major component of the Bahama Amazon’s diet during the breeding season appears to be the seeds extracted from green, unripe pine cones of yellow pine. Parrots also feed upon flowers of chicken toe and the fruit of poisonwood, wild guave (Tetrazygia bicolor), pigeon berry (Duranta repens), fowl berry (Petitia dominensis), pond top palm, and various other fruiting shrubs.

Predation of nests by the large Bahamian land crab (Cardisoma guanhumi) was observed. In addition, feral cats and rats were observed in the nesting area and may be significant nest predators. Red-tailed hawk (Buteo jamaicensis) attacks on flocks of adult Bahama Amazons were observed. The appearance of a red-tailed hawk always elicited alarm calls from a pair or flock of Bahama Amazons.

Field research into this subspecies’ behavior and ecology will continue for the next two years and, hopefully, additional nesting areas will be found. I look forward to reporting back to AFA readers as I learn more about this subspecies’ unique reproductive habits. The long-term objective of this research is to assist in the planning of species management and conservation of the Bahama Amazon.

Acknowledgements

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Agriculture and Fisheries, gave us permission to study the parrots on Abaco. Minolta Camera Corporation kindly loaned this investigator the equipment which was used in taking field photographs. Financial assistance from the American Federation of Aviculture, Jersey Wildlife Preservation Trust, and Wildlife Conservation International of the New York Zoological Society, is gratefully acknowledged. The Leopold Schepf Foundation kindly provided this investigator with grant funding during the academic year.

Allopreening between mates occurs throughout the nesting period. During this behavior, head, facial and neck areas are preened most frequently.
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