

Status and Conservation of the Scarlet Ibis
(*Eudocimus ruber*) in Brasil

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INTRODUCTION

General Summary:

Historic distribution. The Scarlet Ibis occurred in the past from the Brazilian border with French Guiana to Santa Catarina Island on the southern coast of Brasil (Sick 1984, see Figure 1). The species has always been found on the coast, and the southern limit nearly coincided with the mangroves (28° 20' S). Records from the interior of the country are rare, and only from as far inland as the Trombetas River (a northern tributary) on the Amazon River (Sick 1984). Scarlet Ibises formerly bred in most of the range, though no regional movements were noted in the past.

At some point, the species became clearly divided into northern and southern coastal populations, with the easternmost record for the northern coastal population being Fortaleza (1973).



Figure 1. Map of Brazil showing present and past distributions of Scarlet Ibises

The southern population is now extinct or nearly so, though Guanabara Bay (Rio de Janeiro city) harbored large numbers of ibises until the first part of this century, and a few individuals (possibly vagrants) have been sighted recently. The last known southern flock, which contained immatures, was seen between May and August of 1952 on the mouth of the Mage River. The northern population has fared somewhat better, though it has become fragmented and much reduced through consumptive human activities.

Previous research and censuses

A colony of Scarlet Ibises was reported by A. Saint-Hilaire in 1822 near Morretes, in Parana state (Sick 1984), though the numbers of breeding birds were not given. Emilio Goeldi (1894) considered the Scarlet Ibis to be the commonest waterbird in the country at the time, and estimated thousands on the coasts of Amapa Territory and Marajo Island. Sick (1984) listed colonies at Amapa town and Vitoria Island (Araguari River mouth, Amapa territory) in 1970/1972, and Marajo Island at Soure, and Salvaterra e Muana in 1972. Sick commented that colonies at Araki (the only interior colony in Brasil) and Ilha Caviana had disappeared by 1972, and that a colony was active at Turial. Spaans (1975) found a breeding colony of 1,000 pairs at Cabo Orange, near the French Guiana border. Teixeira and Best (1981) flew over the Amapa coastline in July/September 1978, and located a mixed colony of ibises, Great Egrets (*Casmerodius albus*), Snowy Egrets (*Egretta thula*), and Little Blue Herons (*Egretta caerulea*). Though the numbers of breeding ibises were not counted, the numbers were said to be low. The Oiapoque colony was visited during that survey, but was not active.

Breeding cycle in Brasil

Nesting colonies have been found active in June (1986, Ilha dos Pretos, Maranhao, Paul Roth unpublished), July/September (Amapa coast, Teixeira and Best 1981), and May (Buzina Island, Morrison et al. 1987). At the latter colonies, local fishermen said birds had begun breeding in March. It is interesting to note that the available data suggest a different breeding schedule on sections of the coast north and south of the Amazon. Nesting colonies on the Amapa coastline are active in the second half of the year (beginning in July), when the Maranhao colonies are not active. Data from Trinidad showed a fluctuation in the peak egg-laying period from April until September over a 14-year period, probably changing with the timing of the onset of the rains (Ffrench and Haverschmidt 1970). This process might also explain the differences in timing of breeding observed north and south of the Amazon.

PRESENT STATUS

Current breeding and nonbreeding population

I. Southern coast: In 1985, two adults were sighted in Guaratiba Bay, 50 km west of Rio de Janeiro (Luis A. Gonzaga, pers. comm.). In late June of 1986, between two and 82 adult ibises were repeatedly sighted in Cubatao, 80 km east of Sao Paulo city (Bokermann and Guix 1987). According to these authors, local observers had seen birds there for the two previous years, always during mid-year. The Cubatao region, however, is heavily polluted (see Historic and Current Threats). During aerial surveys carried out by the Canadian Wildlife Service and the Instituto Brasileiro de Desenvolvimento Florestal in January 1983 over most of the range of the former southern population, no Scarlet Ibises were seen. The Scarlet Ibis was the major target species of this survey, and the survey covered all large mangrove stands from Rio de Janeiro city to Paranagua Bay, Paranagua. The survey found apparently adequate stands of large mangroves on Bahia de Todos os Santos and Valenca/Marau Bays in Bahia state. The southern population appears to be extirpated or nearly so.

II. Northern coast: Nonbreeding population. The coastline of Amapa has been surveyed for ibises

by aircraft several times in the last ten years. Teixeira and Best (1981) found 1,380 on 25 August 1978, with 760 between the Araguari and Calçoene river mouths and 420 between the Calçoene and Uaca' river mouths. Young birds were seen mixed in flocks with adult birds.

On 25 January 1982, Morrison et al. (1985) flew the same coastline from south of Cabo Orange to Belém. This survey found 1,276 Scarlet Ibises from Cabo Orange to the Amazon, and ibises were seen no farther than Ilha Bailique on the Amazon. From the main channel of the Amazon to Belém city, this survey found a total of 7,555 birds, with all but 55 of these found on an intertidal flat on the southeastern corner of Ilha Caviana.

Dujardin (in press) flew the northern coast on 5 May 1987, and found 113 ibises on Oiapoque Bay. A second flight (18 May) covered from the Uacá river to the mouth of the Amazon (Ilhas Bailique e Curuá), and found 1,465 birds between the Amapá river and Jipioca Island.

The 2,500 km coastline from Belém to São Luis is deeply cut (Fig. 2), and was surveyed first by Morrison et al. (1985) using fixed wing aircraft on January 26, 1982. Only the outer parts of the deeply cut bays were surveyed, and yielded a total of 291 ibises. Use of helicopters allowed much more complete coverage of this coastline on subsequent surveys. From 15 - 21 January 1986, 5,345 ibises were found (Morrison et al. 1987) and 2,059 found on flights from September 22-27 1986 (see Fig. 3 for detailed breakdown of age classes and distribution along the coast).

II. Northern coast: Breeding population. Paul Roth (unpublished data) found a small active colony at Ilha dos Pretos, Maranhao in June of 1986. Morrison and coworkers found an active colony at

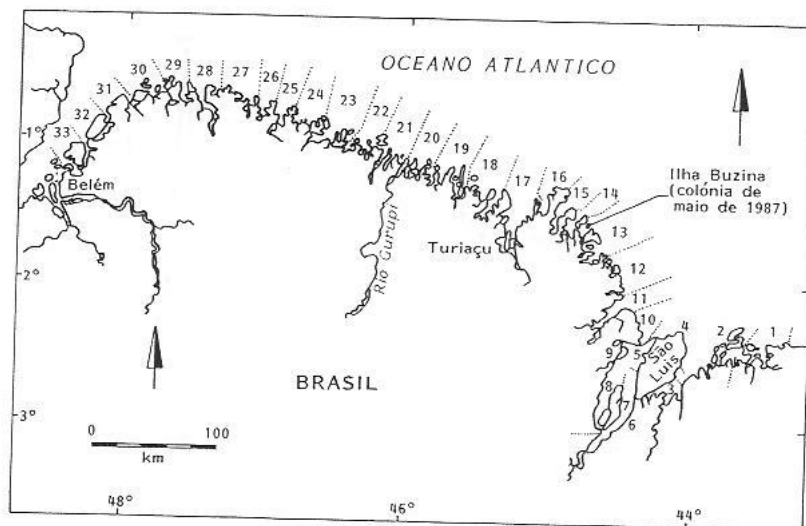


Figure 2. Map of the northeastern coast of Brazil, showing areas surveyed for Scarlet Ibises (in text).

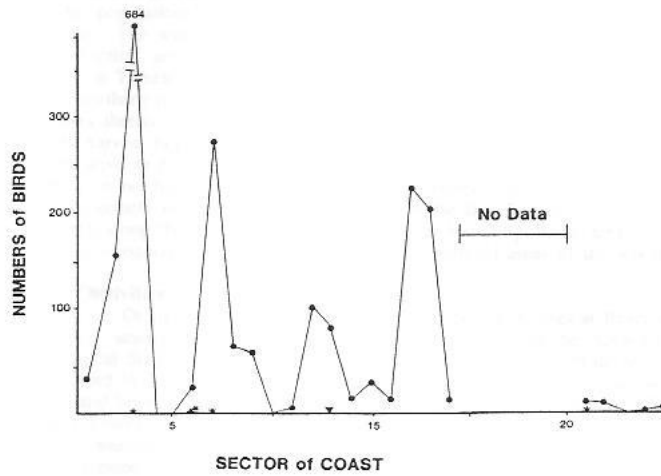
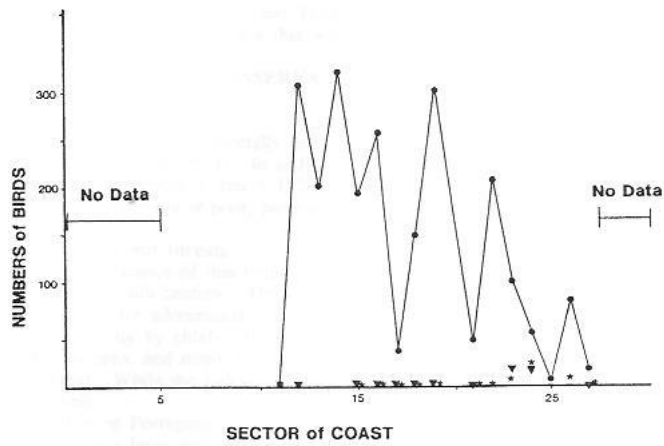


Figure 3. Numbers of Scarlet Ibises seen by sector of the coast on two extensive surveys of the northeastern coast of Brazil in January (upper graph) and September of 1986 (lower graph). Numbers of adults (dots), first year birds (stars), and sub-adults (triangles) are shown. First-year birds had few or no scarlet feathers, subadults had mixed brown, scarlet, and white feathers (Antas 1979).

Buzina Island (sector 13, Fig. 2) on their May, 1987 helicopter surveys of the Belem - Sao Luis coastline. The colony was in 4 to 8 m high mangroves, and contained approximately 5,000 Scarlet Ibis nests in it, along with about 1,000 nests of Yellow-crowned Night Herons (*Nycticorax violaceus*), 100 nests each of Snowy Egrets and Tricolored Herons (*Egretta tricolor*), and 50 nests of Great Egrets. Local fishermen said that this was the third year the colony had been active.

Myctophila
violacea
Hydrochelidon

CURRENT CONSERVATION OF THE SCARLET IBIS IN BRASIL

Legal status

The Scarlet Ibis is officially protected under Brazilian law as an endangered species (Portaria no. 3 481-DN, 31 May 1973). In addition, the nesting colonies of all species of birds are also protected by law (Article 1, law 5 197, 3 January 1967). Although hunting of ibises is prohibited in any season, enforcement is poor, particularly along the northern coast.

Historic and current threats

The importance of this bird for the human population began before colonization by the Portuguese in the 16th century. The Indian tribes of the south and southeastern coast used the feathers of Scarlet Ibises for adornments. The Tubinambas made 2-meter-long mantles of Scarlet Ibis flight feathers, worn only by chiefs. Breeding colonies of ibises were considered property of the tribe inhabiting the area, and many locations still bear the Indian name for Scarlet ibis colony (Guara- plus -tiba or -tuba). While the Indians also hunted ibises for meat, it is unclear if they collected eggs and young as well.

Following Portuguese colonization, Scarlet Ibis meat and eggs were taken for human consumption on a large scale. Hunting for feathers around the turn of this century also had a major impact on ibis populations and probably led to the separation of populations in the northern and southern coasts. The southern coastal population suffered more than the northern from the feather trade, egg collecting, and hunting, probably because of the proximity of major cities and ports there. Goeldi (1897, in Teixeira and Best 1981) suggested that overhunting for feathers was severely reducing the northern population around the turn of the century.

Current threats to the extant northern population come from several sources. Local fishermen still routinely harvest eggs and nestlings from colonies, as law enforcement is quite poor. The young are sold both alive as pets, and as dried, salted meat in towns and cities. Egg collection has been a major problem in northern coastal colonies since the feather market died out. Local fishermen claimed they routinely collected eggs and nestlings in the Ilha Buzina colony. Finally, the few birds recently sighted along the southern coast are feeding in heavily polluted areas. The Cubatão region, for instance, is recognized as one of the most heavily polluted areas of the world.

Conservation activities

The Cabo Orange National Park and the Lago Piratuba Biological Reserve were created in 1980, protecting, among other resources, past colony locations along the Amapa coast. The Ilha Maraca Ecological Station was set up in 1981 by the Secretaria Especial de Meio Ambiente specifically to aid in Scarlet Ibis conservation in Amapa. The Ecological Station has its own headquarters, and both the National Park and the Biological Reserve have Park Ranger houses. The Lago Piratuba Reserve is patrolled intermittently.

On the southeastern coast, no conservation unit is known to exist in areas used by the few Scarlet Ibises sighted there.

RECOMMENDATIONS FOR RESEARCH AND CONSERVATION

Research needs

The surveys of the northern coastal population have so far been unable to estimate the total population, and the majority have not been timed to locate breeding colonies. There is an obvious

need to monitor this population regularly in light of its recent decrease in range, abandonment of previous breeding locations, and the continuing human consumptive activities.

To develop an effective conservation strategy, basic data are especially needed on reproductive productivity, movements of adults and young, and the effect of human harvesting on productivity and colony site tenacity. The seasonal importance of concentration points such as Ilha Caviana to the entire population is also unknown, and should be addressed as soon as possible.

Legal protection

The continued human harvest of ibises, particularly in colonies, undoubtedly exerts a major impact on the population as well as on colony site locations. Since the birds are currently fully protected, this identifies law enforcement as a key area for improvement, especially in the areas currently identified as colony sites, or having high concentrations of ibises.

Protected areas

While the areas created to protect ibises are laudable, they comprise an extremely small proportion both of the range, and the breeding colony sites of the northern coastal population. Further surveys are necessary to more accurately identify breeding and foraging sites before specific areas can be recommended for protection.

Habitat management/improvement

An eventual goal will be to reestablish a southern population, presumably by releasing fledglings from the northern population. Prior to this effort, however, it must be determined whether enough appropriate habitat exists in the southern range to warrant reintroductions, and whether such habitat is protected. The determination of habitat needs will therefore become a research priority.

Education

The level of education throughout the northern range is generally poor, and conservation education needs to be an educational priority. School programs can be expected to reach only a small proportion of the human population. Other possibilities include traveling educational displays, and radio programs. Radio programs have the best potential, since they are relatively cheap and much of the population listens to radio programming.

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