



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

REPORT

WATERBIRDS IN HAITI



PHOTO: JEAN VILMOND HILAIRE/SAH

Author: FLORENCE SERGILE (SOCIÉTÉ AUDUBON HAITI/UNIVERSITY OF FLORIDA)

With the collaboration from: PHILIPPE BAYARD AND JEAN VILMOND HILAIRE (SOCIÉTÉ AUDUBON HAITI)



Edited by: Verónica Anadón-Irizarry and David Wege (BirdLife International)

Part of an evaluation of waterbirds population and their conservation in the Caribbean, a project coordinated by BirdLife International within the initiative of Waterbird Conservation for the Americas and sponsored by the U.S. Fish and Wildlife Service (Neotropical Migratory Bird Conservation Act)

2008

This report is based on: BirdLife International (2008) *Important Bird Areas in the Caribbean: key sites for conservation*. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No. 15)



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

CONTENT

1. Introduction 2
2. Protected Areas and Conservation System 2
3. Waterbirds species occurring within Haiti 3
4. Species of special concerns and population estimates 3
5. Locations and descriptions of key sites used by aquatic species 4-6
6. Formal and informal international instruments for aquatic bird conservation 6
7. Recomendations 6
8. Acknowledgments 6
8. References/experts consulted 6
6. Key references 7

Appendixes

Table1. Waterbirds occurrence, distribution, habitat and population estimates in Haiti..... 9



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

1. Introduction

The Republic of Haiti is situated on the western third of the island of Hispaniola, the second largest island in the Caribbean. The Dominican Republic, with which Haiti shares a 360-km border, occupies the rest of Hispaniola. Northwestern Haiti is just 80 km east of Cuba. Haiti's landscape of rugged mountains interspersed with small coastal plains and river valleys has been divided politically into 10 "départements": Artibonite, Centre, Grande-Anse, Nippes, Nord, Nord-Est, Nord-Ouest, Ouest, Sud, Sud-Est. Haiti also has six satellite islands (totalling 954 km²), namely Île de la Tortue (off the north coast), La Gonâve, (north-west of Port-au-Prince), Île à Vache (off the southern tip of south-western Haiti), Les Cayemites (off the north coast of the Southern Peninsula) and the disputed island of Navassa (see separate Navassa appendix). The northern region of Haiti consists of the Massif du Nord mountain range (an extension of the Dominican Republic's Cordillera Central) which extends from the border through the north-west peninsula. The Plaine du Nord lowlands lie along the northern border with the Dominican Republic, between the Massif du Nord and the Atlantic Ocean. Haiti's central region consists of the Plateau Central that runs southeast to north-west along both sides of the Guayamouc River, south of the Massif du Nord. South-west of this plateau are the Montagnes Noires, the north-western parts of which merge with the Massif du Nord. The southern region consists of the Plaine du Cul-de-Sac in the south-east, and the mountainous southern Tiburon Peninsula. The Plaine du Cul-de-Sac is a natural depression in which lies the lake of Trou Caïman and Haiti's largest lake, Lac Azuei. The Chaîne de la Selle mountain range is an extension of the Sierra de Bahoruco in the Dominican Republic. It extends from the Massif de la Selle in the east (Pic la Selle is Haiti's highest point) to the Massif de la Hotte in the west.

Haiti has a tropical climate with two main wet seasons: the north-east trade winds bring rain from April to June, and northerly winds bring drizzle from about September through November. However, the country's topography produces significant regional (and altitudinal) differences in temperature and rainfall. The resultant vegetation varies from subtropical very dry forest formations where cacti and scrub predominate, to tropical montane wet forest at the higher altitudes where Hispaniolan pines *Pinus occidentalis* and temperate vegetation thrive. Wetlands, lakes, lagoons, estuaries and a varied coastline provide additional diversity. In 1925, Haiti was lush, with 60% of its original forest cover. Since then, the population (which is now at a density of c.300/km² and growing at a rate of 2.3% each year) has cut down all but c.2%, and in the process fertile farmland soils have been destroyed which in turn has contributed to desertification. Most Haitian logging is done to produce charcoal, the country's chief source of fuel. Deforestation has led to severe erosion in the mountainous areas, and also periodic (but often catastrophic) flooding. Droughts, earthquakes and hurricanes add to the human and environmental suffering. Haiti has remained the least developed country in the Americas with c.80% of the population estimated to be living in poverty in 2003 (on an average income of <US\$1 per day). About 66% of all Haitians work in the agricultural sector, which is mainly small-scale subsistence farming although mangos and coffee are Haiti's two most important exports.

2. Protected Areas and Conservation Systems

Since 1983, biodiversity protection in Haiti slowly turned into a reality resulting from a combination of government commitment, dedicated people and a national environmental awareness campaign. In spite of economic hardships the Ministry of the Environment (Ministère de l'Environnement, MDE) and Ministry of Agriculture, Natural Resources, and Rural Development (Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural, MARNDR) managed to establish a protected area system encompassing c.25,000 ha (c.1% of the country's land area) in four reserves. The reserves are: Macaya Biosphere Reserve in the Massif de la Hotte, the Parc National La Visite and the Forêt des Pins in the Massif de la Selle, and the Parc Historique La Citadelle, Sans Souci, les Ramiers in the north. Recognizing that the full range of Haiti's ecosystems was not covered in these primarily montane reserves, 18 additional areas (totaling another 23,000 ha) were identified as potential protected areas, although none of these have yet been officially designated.



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

Management of the protected areas started in 1992, initially with USAID funding targeting Macaya Biosphere Reserve, and then through a John D. and Catherine T. MacArthur Foundation project that ran until 1998. These projects facilitated the development of a World Bank financed park and forest technical assistance initiative (Appui technique à la Protection des Parcs et Forêt, ATPPF) that started in late 1998. Bridging the gap between the USAID and World Bank projects, the University of Florida focused activities on bird monitoring, species recovery plans and environmental education within Macaya Biosphere Reserve, La Visite and La Citadelle parks, updating the bird work done in these areas during the 1980s. The World Bank ATPPF project aimed to develop the Mayaca, La Visite and Forêt des Pins protected areas and their buffer zones and train Haitian professionals. It led to the inclusion of Morne d'Enfer and Pic La Selle in the Parc La Visite boundary, and the Sapotille area into the northern side of the Macaya reserve. The MDE (which was created in 1995) and MARNDR are both chronically financially under-resourced. MARNDR (through its Service des Parcs et Sites Naturels) is responsible for managing the protected areas. However, natural resource management was moved down the agenda by the transitional government (2004–2006) who put a greater emphasis on agricultural production. With the country's high population density, poverty, and political instability, compounded by the small budgets for conservation, absence of trained staff, lack of clear policies, and shifting government priorities, sustained conservation efforts have been prevented from establishing. The protected areas in Haiti are essentially unprotected. There are personnel responsible for the parks, and basic offices do exist, but staff seem to be present only intermittently and access is entirely uncontrolled.

The conservation NGO sector includes Haiti-Net, created in 1992 to promote ecosystem management and environmental education in Haiti, Société Audubon Haïti (SAH) which was established in 2003 to conserve Haiti's natural ecosystems focusing on birds. SAH works in collaboration with the Vermont Center for Ecostudies, Sociedad Ornitológica de la Hispaniola and BirdLife, and is implementing conservation projects in both Macaya and La Visite. In 2005 SAH published Haiti's first book on birds as an educational tool to raise awareness about the country's unique biodiversity. The pressures on Haiti's ecosystems and biodiversity are huge. They are primarily a result of the country's large, growing but economically impoverished population. Habitat destruction is leading to desertification, erosion and sedimentation, all of which negatively impact the human population. With so little forest left, its continued destruction will result in numerous species extinctions in the country. Habitat loss is compounded by unregulated, unsustainable hunting which is widespread, invasive mammalian predators, introduced exotic plants which are outcompeting the native flora, and the commercial export of plants and animals (e.g. for the pet trade) that has impoverished many life zones. To move forward with conservation in Haiti it will be essential to: focus on a few priority sites such as the Important Bird Areas (IBAs); address the livelihood needs of the people dependent on the resources (at both the site and species level) being conserved; involve these same stakeholders in the design and implementation of conservation actions; raise the level of awareness of biodiversity and conservation issues at the site level, but also within the government; conservation management training for local practitioners and national institutions; establish clear monitoring frameworks to determine the success or failure of particular management actions; and ensure projects are developed with long-term sustainability and commitment as prerequisites.

3. Waterbirds species occurring within Haiti

The Republic of Haiti supports over 245 species of bird, of which more than 73 are resident landbirds. More than 155 waterbirds are found in Haiti. Although work has been done to survey and monitor the ducks (by Ducks Unlimited) there is very little documentation concerning the populations of shorebirds passing through or wintering in Haiti, or the numbers of resident waterbirds at the various wetlands. Seabirds are also poorly known in terms of colony sizes (or indeed distribution and species composition).

4. Species of special concern and population estimates

The **Black-capped Petrel** *Pterodroma hasitata* is classified as Endangered (IUCN), and is threat in Haiti by habitat destruction and hunting (for food). The main known breeding areas are in southern Haiti



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

(mostly in La Visite of Massif de la Selle and Pic Macaya region of Massif de la Hotte) with a breeding population estimated of 1,000 breeding pairs. The global population is estimated as over 5,000 individuals.

5. Locations and descriptions of key sites used by aquatic species

Waterbird sites that are known about (albeit with limited population data available) include Lagon-aux-Boeufs; Acul Bay near Cap-Haitian; île de la Tortue in Basse-Terre and Coquillage; Petit Paradis; Artibonite Delta and Étang Bois Neuf; Sources Puantes; Lac Azuéi; Trou Caïman; Étang de Miragoâne; Baradères—Cayemite mangroves; Étang Laborde-Lachaux near Camp-Perrin; îleà-Vache wetlands and mangroves; and the Île de la Gonâve mangroves.

The following are four key internationally sites, other sites could be identified when more knowledge on waterbird species/sites is available.

KEY SITES (of international importance- Important Bird Areas, IBAs)

A. LAGON-AUX-BŒUFS (19°40'N 71°46'W)

- **Location:** Located on the coastal plain of Dauphin, northeasternmost Haiti; east of Fort-Liberté and is bounded to the north by the Baie de Mancenille, east by the Massacre River and the town of Melliac, to the west by Dérac and south by the tertiary road to Melliac.
- **Size:** 700 ha
- **Habitats:** Lagon-aux-Boeufs is a brackish (20 parts per thousand) estuarine lake fringed with mangroves and xerophytic shrubland set within the otherwise agricultural coastal plain. Around the lake, sisal, annual staple crops and grazing are commonplace, but rice is the major crop, irrigated by the nearby Massacre River and Maribaroux irrigation system.
- **Conservation Status:** Lagon-aux-Boeufs is state owned but unprotected. The area was included within a biosphere reserve nomination, and the Ministry of Environment identified the area as in need of protection (and as a recreational area) within a departmental environmental action plan, but no conservation action has been implemented. Approximately 20,000 people live around this wetland, living on fisheries, agriculture, charcoal production and occasionally boat rides. It is also used by local fishermen, hunters (shooting waterbirds), and local population for watering cattle and washing clothes.
- **Importance:** Supports an important population of the Vulnerable West Indian Whistling-duck *Dendrocygna arborea*. It is suspected that the Near Threatened Caribbean Coot *Fulica caribaea* and Piping Plover *Charadrius melodus* occur, but this requires confirmation. Large numbers of migratory ducks and shorebirds use the site which supports a population of Caribbean Flamingo *Phoenicopterus ruber*.
- **Threats:** The threats include water pollution, introduced predators (cats, dogs, mongooses and rats), surface water diversion (for irrigation and industrial needs), over-fishing, fuelwood extraction, hunting (especially coots *Fulica* spp., locally called “poule d’eau”), and conversion of habitat to agriculture.
- **Recommendations:** It is considered an area to be protected.
- **Involved institutions:** Ministry of Environment

B. TROU CAÏMAN (or Dlo Gaye) (18°38'N 72°08'W)

- **Location:** Situated at c.20 km north-east of Port-au-Prince, in the Plaine du Cul-de-Sac.
- **Size:** 1,000 ha
- **Habitats:** It is a shallow, freshwater lake. Reeds, sedges and cattails predominate in the north and east of the lake, grass fringes the western edge and there is dry shrubland on the southern



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

edge. Mangroves growing on the north-eastern side are a remnant of the coastal vegetation of a shallow sea that separated Hispaniola into two Paleo-islands during the Pleistocene.

- **Conservation Status:** It is unprotected and no conservation actions have been undertaken, although the site was identified for protection over 20 years ago. Due to the development of sugar industry during colonial times, this area was heavily exploited for its hardwood to provide lumber for the railroad system and logs for energy.
- **Importance:** The Near Threatened Caribbean Coot *Fulica caribaea* occurs, and the Vulnerable West Indian Whistling-duck *Dendrocygna arborea* occurred historically, although there are no recent records. Flocks of Caribbean Flamingo *Phoenicopterus ruber* are present along with good (but unknown) numbers of waterbirds and shorebirds
- **Threats:** Current threats come from industrial development (using both land and water), hunting (of ducks and other waterbirds), pollution and the general unregulated direct and indirect impact of 20,000 people using the lake's resources (e.g. cultivating surrounding land for sugarcane, sweet potatoes, beans etc.) Over 150 fishermen work the lake, and artisans use the reeds and sedges to weave straw products.
- **Recommendations:** Its proximity to the capital provides an excellent opportunity to develop it as a "Watchable Wildlife Pond".
- **Involved institutions:** The ducks were monitored by Ducks Unlimited (2002–2005) and birdwatchers regularly visit the lake.

C. LAC AZUÉI (also called Etang Saumâtre) (18°34'N 72°02'W)

- **Location:** Lies south-east of Trou Caïman, close to the Haiti–Dominican Republic border in the Neiba–Culde-Sac depression.
- **Size:** 13, 240 ha
- **Habitats:** It is Haiti's largest lake, waters are brackish. Reeds, sedges and cattails predominate in the north-west, adjacent to the wetland leading to the Trou Caïman lake. Grass fringes the western edge and there is dry shrubland on the karstic southern edge. Mangroves growing on the north-western side are a remnant of the coastal vegetation of a shallow sea that separated Hispaniola into two Paleo-islands during the Pleistocene.
- **Conservation Status:** A number of springs provide drinking water to the populations of Malpasse and Fond Parisien. Surrounding settlements house 60,000 people supported by (irrigated) agriculture, hunting and fishing. Lac Azuéi is state owned, and although listed by the government to become a protected area, it is not protected yet. Due to the development of the indigo and sugar industry during colonial times, this area was heavily exploited for its hardwood to provide lumber for the railroad system and logs for energy. Rice, sugarcane and other staples are grown in the surrounding land, with vegetables under irrigation during the cool season.
- **Importance:** This important wetland supports a large population (up to 300) of the Near Threatened Caribbean Coot *Fulica caribaea*. Flocks of (up to 100) Caribbean Flamingo *Phoenicopterus ruber* are present along with good (but unknown) numbers of waterbirds and shorebirds. The Vulnerable West Indian Whistling-duck *Dendrocygna arborea* has been reported, but its continued presence needs to be confirmed.
- **Threats:** Over 300 fishermen work the lake, along with hunters (shooting ducks and flamingos). The slopes on the lower Massif de la Selle are being exploited for limestone building materials. Being very close to the transnational road and international border between Haiti and the Dominican Republic, the lake serves as a garbage "landfill" and as a toilet for passengers waiting to pass through immigration.
- **Involved institutions:** The lake's waterbirds were surveyed by Ducks Unlimited (2002–2005) and birdwatchers visit the lake frequently



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

D. AUX DIABLOTINS (18°20'N 72°15'W)

- **Location:** It extends along the escarpment that forms the northern boundary of La Visite National Park in the Massif de la Selle, south-eastern Haiti. It embraces a narrow band c.20 km long from Morne d'Enfer (in the east) to Morne Kaderneau (in the west), including Morne La Visite, Morne Tête Opaque and Morne Cabaio (all of which are c.2,000–2,200 m high).
- **Size:** 1,980 ha
- **Habitats:** Rocky areas, forest The scarp face supports montane broadleaf forest, with small remnant patches also on the southern slopes. There is pine (*Pinus occidentalis*) forest along the southern border.
- **Conservation Status:** Aux Diablotins is state-owned land along the northern side of Parc National La Visite. It has been identified as a core zone of the park due to the endemism of the biodiversity, scenic view and water catchment importance. Various studies have been undertaken to document the biodiversity (especially birds in recent years) and develop management plans, but formal park management is non-existent.
- **Importance:** It is home to one of the few known breeding sites of the Endangered Black-capped Petrel *Pterodroma hasitata*. Small numbers nest in colonies along the cliffs (Morne La Visite escarpment) north-east of Seguin.
- **Threats:** Almost all the forest (except on the scarp face) has been cleared for vegetable and corn cultivation.
- **Involved institutions:** Local NGOs (e.g. Fondation Seguin) are working with communities in the park to try and reduce threats, although the socio-economic needs of the people are great. As a result there has been significant habitat loss and very little montane broadleaf forest remains.

6. Formal and informal international instruments for aquatic bird conservation:

Haiti is party to the following international agreements:

- Convention on Biological Diversity (CBD) = *Signed and ratified*
- World Heritage Convention (WHC) = *Signed and ratified*

7. Recommendations

- Urgent fieldwork looking at waterbird populations and seabird colony size are needed to assess numbers of shorebirds, waterbird and seabirds in the country.
- Surveys and subsequent monitoring will help inform the assessment of state, pressure and response variables at each key site to provide an objective status assessment and to highlight the management interventions that are required to maintain these internationally important biodiversity sites.

8. Acknowledgments

The author would like to thank Charles Woods (Bear Mountain Natural History Center), Judex Edouarzin (Ministère de l'Environnement), Jamie Rhodes, Chris Rimmer (Vermont Center for Ecostudies), Eladio Fernandez (SOH), Jim Goetz (Cornell Laboratory of Ornithology) and Fondation Seguin.



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

9. References/experts consulted

Institution	Address	Telephone	Email	Name	Contribution to the report
-------------	---------	-----------	-------	------	----------------------------

10. Key references:

BirdLife International (2008) Species factsheet: *Pterodroma hasitata*. Downloaded from <http://www.birdlife.org> on 14/1/2009

Bond, J. (1928) The distribution and habitats of the birds of the Republic of Haiti. Proceedings of the Academy of Natural Science in Philadelphia 80:483-521.

CEP (1996) *Status of protected area systems in the wider Caribbean region*. Kingston, Jamaica: UNEP-Caribbean Environment Programme (CEP Technical Report 36).

KEITH, A. R., WILEY, J. W., LATTA, S. AND OTTENWALDER, J. (2003) *The birds of Hispaniola: Haiti and the Dominican Republic*. Tring, U.K.: British Ornithologists' Union (BOU Check-list No 21).

LATTA, S., RIMMER, C., KEITH, A., WILEY, J., RAFFAELE, H., MCFARLAND, K. AND FERNANDEZ, E. (2006) *Birds of the Dominican Republic and Haiti*. Princeton, New Jersey: Princeton University Press.

MCPHERSON, H. AND GRAHAM, C. (1993) A survey of the birds of the Citadelle area, April 23–24, 1993. (Unpublished report).

MCPHERSON, H., FONDOTS, C. AND GRAHAM, C. (1993) Birds of the Parc National Macaya, mist-netting January–April 1993. (Unpublished report).

MARNDR (1988) Pour une déclaration officielle de l'état d'urgence face à la dégradation de l'environnement national. Groupe de Travail pour le suivi du Colloque sur le reboisement tenu à Damien en avril 1987. Port-au-Prince : Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural. (Unpublished report).

PARYSKI, P. E., WOODS, C. A. AND SERGILE, F. E. (1989) Conservation strategies and the reservation of biological diversity in Haïti. Pp.855–878 in C. A. Woods, ed. *Biogeography of the West Indies*. Gainesville, Florida: Sandhill Crane Press, Inc.

RAFFAELE, H. WILEY J., GARRIDO, O., KEITH, A. AND RAFFAELE, J. (1998) *A guide to the birds of the West Indies*. Princeton, New Jersey: Princeton University Press.

RIMMER, C. C., GARRIDO, E. AND BROCCA, J. L. (2005) Ornithological field investigations in La Visite National Park, Haiti, 26 January – 1 February 2005. Woodstock, Vermont: Vermont Institute of Natural Science. (Unpublished report).

RIMMER, C. C., TOWNSEND, J. M., TOWNSEND, A. K., FERNÁNDEZ, E. M. AND ALMONTE, J. (2004) Ornithological field investigations in Macaya Biosphere Reserve, Haiti, 7–14 February 2004. Woodstock, Vermont: Vermont Institute of Natural Science. (Unpublished report).

RIMMER, C.C., TOWNSEND, J. M., TOWNSEND, A. K., FERNÁNDEZ, E. M. AND ALMONTE, J. (2005) Avian diversity, abundance, and conservation status in the Macaya Biosphere Reserve of Haiti. *Orn. Neotrop.* 16: 219–230.



Waterbird Conservation for the Americas Conservación de las Aves Acuáticas para las Américas

- RIMMER, C. C., KLAVINS, J., GERWIN, J. A., GOETZ, J. E. AND FERNÁNDEZ, E. M. (2006) Ornithological field investigations in Macaya Biosphere Reserve, Haiti, 2–10 February 2006. Woodstock, Vermont: Vermont Institute of Natural Science. (Unpublished report).
- SERGILE, F. E. (1990) The Biosphere Reserve Henry Christophe: Potential for the management and conservation of natural resources in Haiti. Gainesville, Florida: University of Florida. (Unpublished MA Thesis).
- SERGILE, F. E. (2005) *A la découverte des oiseaux d'Haïti*. Petionville, Haiti: Société Audubon Haïti.
- SERGILE, F. E. AND MÉRISIER, J. R. (1994) *Connaître et protéger la richesse naturelle d'Haïti*. Gainesville, Florida: Florida Museum of Natural History.
- SERGILE, F. E. AND WOODS, C. A. (1993) Haiti National Parks and Conservation Project: June 1992 – July 1993 report. Gainesville, Florida: University of Florida. (Unpublished report).
- SERGILE, F. E. AND WOODS, C. A. (1995) Guide de terrain des aires protégées en Haïti. Gainesville, Florida: Florida Museum of Natural History. (Unpublished report).
- SERGILE, F. E. AND WOODS, C. A. (1995) Veye richès peyi d'Ayiti. Gainesville, Florida: Florida Museum of Natural History. (Unpublished report).
- SERGILE, F. E. AND WOODS, C. A. (1998) Ile de la Tortue: profil de l'environnement. Haïti-NET: Statut de l'environnement naturel, 4. (Unpublished report prepared for the PNUD/UNOPS HAI/92/001 project).
- SERGILE, F. E. AND WOODS, C. A. (2001) Status of conservation in Haiti: a 10-year retrospective. Pp.547–560 in C. A. Woods and F. E. Sergile, eds. *Biogeography of the West Indies: patterns and perspectives*. Boca Raton, Florida: CRC Press.
- SERGILE, F. E., WOODS, C. A. AND PARYSKI, P. (1992) Final report of the Macaya Biosphere Reserve Project. Gainesville, Florida: Florida Museum of Natural History. (Unpublished report).
- WINGATE, D. (1964) Discovery of breeding Black-capped Petrels in Hispaniola. *Auk* 81: 147–159.
- WOODS, C. A. (1983) Biological survey of Haiti: status of the endangered birds and mammals. *National Geographic Society Research Reports* 15: 759–768.
- WOODS, C. A. (1986) The West Indian Flamingo in Haiti: aerial surveys and review status. *Flamingo Research Specialist Group Newsletter* 3: 19–23.
- WOODS, C. A. AND HARRIS, L. (1986) Stewardship Plan for the national parks of Haiti. Port-au-Prince, Haiti. (Unpublished report for USAID-Haiti).
- WOODS, C. A. AND OTTENWALDER, J. A. (1986) The birds of the National Parks of Haiti. Port-au-Prince, Haiti. (Unpublished report for USAID-Haiti).
- WOODS, C. A. AND OTTENWALDER, J. A. (1992) The natural history of the Southern Peninsula. Gainesville, Florida: Florida State Museum. (Unpublished report).
- WOODS, C. A., SERGILE, F. E. AND OTTENWALDER, J. A. (1992) *Stewardship plan for the national parks and protected areas of Haiti*. Gainesville, Florida: Florida Museum of Natural History.



Waterbird Conservation for the Americas
 Conservación de las Aves Acuáticas para las Américas

Table 1. Waterbirds occurrence, distribution, habitat and population estimates in Haiti.									
Family	Species	English name	Category (IUCN)	Ocurrence	Habitat	Nat.pop.est.	Distribution	In-country trends	References
Anatidae	<i>Dendrocygna bicolor</i>	Fulvous Whistling-duck	LC						
Anatidae	<i>Dendrocygna viduata</i>	White-faced Whistling-duck	LC						
Anatidae	<i>Dendrocygna arborea</i>	West Indian Whistling-duck	VU	Breeding	Shrubland, brackish wetland, wetland, mangrove, coast		Lagon-aux-Boeufs, Trou Caïman, Lac Azuei		Florence Sergile 2008
Anatidae	<i>Branta canadensis</i>	Canada Goose	LC						
Anatidae	<i>Aix sponsa</i>	Wood Duck	LC	Vagrant					
Anatidae	<i>Anas strepera</i>	Gadwall	LC						
Anatidae	<i>Anas penelope</i>	Eurasian Wigeon	LC						
Anatidae	<i>Anas americana</i>	American Wigeon	LC	Winter			Trou Caïman		
Anatidae	<i>Anas platyrhynchos</i>	Mallard	LC						
Anatidae	<i>Anas discors</i>	Blue-winged Teal	LC	Winter			Lac Azuéi, Trou Caïman		Bond (1928)
Anatidae	<i>Anas clypeata</i>	Northern Shoveler	LC						
Anatidae	<i>Anas bahamensis</i>	White-cheeked Pintail	LC	Breeding			Lac Azuéi, Trou Caïman		Bond (1928)
Anatidae	<i>Anas acuta</i>	Northern Pintail	LC						
Anatidae	<i>Anas crecca</i>	Common Teal	LC	Passage					
Anatidae	<i>Anas crecca</i>		NR						
Anatidae	<i>Anas carolinensis</i>		NR	Passage					
Anatidae	<i>Aythya americana</i>	Redhead	LC	Passage			Lac Azuéi		
Anatidae	<i>Aythya collaris</i>	Ring-necked Duck	LC						



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Anatidae	<i>Aythya affinis</i>	Lesser Scaup	LC	Passage			Lac Azuéi, Trou Caïman		Bond (1928)
Anatidae	<i>Lophodytes cucullatus</i>	Hooded Merganser	LC						
Anatidae	<i>Mergus serrator</i>	Red-breasted Merganser	LC						
Anatidae	<i>Nomonyx dominicus</i>	Masked Duck	LC	Present			Lac Azuéi		
Anatidae	<i>Oxyura jamaicensis</i>	Ruddy Duck	LC	Present			Lac Azuéi, Trou Caïman		Bond (1928)
Procellariidae	<i>Pterodroma hasitata</i>	Black-capped Petrel	EN	Breeding	Rocky areas, forest	1,000 pairs	Aux Diablotins	Decreasing	Florence Sergile 2008
Procellariidae	<i>Puffinus lherminieri</i>	Audubon's Shearwater	LC				Tortuga Island		Bond (1928)
Hydrobatidae	<i>Oceanodroma leucorhoa</i>	Leach's Storm-petrel	LC						
Podicipedidae	<i>Tachybaptus dominicus</i>	Least Grebe	LC						
Podicipedidae	<i>Podilymbus podiceps</i>	Pied-billed Grebe	LC	Breeding			Lac Azuéi, Trou Caïman,		
Phoenicopteridae	<i>Phoenicopterus ruber</i>	Caribbean Flamingo	LC	Passage	Shrubland, brackish wetland, wetland, mangrove, coast		Lac Azuéi, Lagon-aux-Boeufs, Trou Caïman		Florence Sergile 2008
Ciconiidae	<i>Mycteria americana</i>	Wood Stork	LC						
Threskiornithidae	<i>Eudocimus albus</i>	White Ibis	LC	Breeding			Lac Azuéi		Bond (1928)
Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy Ibis	LC	Breeding			Lac Azuéi, Trou Caïman		Bond (1928)
Threskiornithidae	<i>Platalea ajaja</i>	Roseate Spoonbill	LC	Vagrant					Bond (1928)
Ardeidae	<i>Botaurus lentiginosus</i>	American Bittern	LC						
Ardeidae	<i>Ixobrychus exilis</i>	Least Bittern	LC	Breeding			Lac Azuéi, Trou Caïman,		Bond (1928)



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Ardeidae	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron	LC	Breeding			Lac Azuéli		
Ardeidae	<i>Nyctanassa violacea</i>	Yellow-crowned Night-heron	LC	Breeding			Lac Azuéli, Gonave Island		Bond (1928)
Ardeidae	<i>Butorides virescens</i>	Green Heron	LC	Breeding			Lac Azuéli, Trou Caïman, Gonave Island		Bond (1928)
Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	LC	Breeding			Lac Azuéli		
Ardeidae	<i>Ardea herodias</i>	Great Blue Heron	LC	Winter					Bond (1928)
Ardeidae	<i>Casmerodius albus</i>	Great Egret	LC	Breeding			Lac Azuéli, Trou Caïman,		Bond (1928)
Ardeidae	<i>Egretta rufescens</i>	Reddish Egret	LC	Vagrant					
Ardeidae	<i>Egretta tricolor</i>	Tricoloured Heron	LC	Breeding			Lac Azuéli, Trou Caïman, Gonave Island		Bond (1928)
Ardeidae	<i>Egretta caerulea</i>	Little Blue Heron	LC	Breeding			Lac Azuéli, Gonave Island		Bond (1928)
Ardeidae	<i>Egretta thula</i>	Snowy Egret	LC	Breeding			Lac Azuéli		Bond (1928)
Phaethontidae	<i>Phaethon aethereus</i>	Red-billed Tropicbird	LC						
Phaethontidae	<i>Phaethon lepturus</i>	White-tailed Tropicbird	LC	Breeding	Coastline, rocky areas, shrubland, coastal wetlands		Coquillage-Pointe Est, Tortuga Island		Florence Sergile 2008, Bond (1928)
Fregatidae	<i>Fregata magnificens</i>	Magnificent Frigatebird	LC	Present			Gonave Island		Bond (1928)
Pelecanidae	<i>Pelecanus erythrorhynchos</i>	American White Pelican	LC	Vagrant					
Pelecanidae	<i>Pelecanus occidentalis</i>	Brown Pelican	LC	Present			Gonave Island		Bond (1928)
Sulidae	<i>Sula dactylatra</i>	Masked Booby	LC						
Sulidae	<i>Sula sula</i>	Red-footed Booby	LC						
Sulidae	<i>Sula leucogaster</i>	Brown Booby	LC						



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Phalacrocoracidae	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	LC	Present					
Anhingidae	<i>Anhinga anhinga</i>	Anhinga	LC	Vagrant					
Rallidae	<i>Laterallus jamaicensis</i>	Black Rail	NT	Breeding					
Rallidae	<i>Rallus longirostris</i>	Clapper Rail	LC	Present	mangrove swamps		Gonave Island		Bond (1928)
Rallidae	<i>Porzana carolina</i>	Sora	LC	Winter	marsh grass		Lac Azuéli		Bond (1928)
Rallidae	<i>Porzana flaviventer</i>	Yellow-breasted Crake	LC						
Rallidae	<i>Pardirallus maculatus</i>	Spotted Rail	LC						
Rallidae	<i>Porphyrio martinica</i>	Purple Gallinule	LC	Breeding	fresh water swamps		Trou Caïman		Bond (1928)
Rallidae	<i>Gallinula chloropus</i>	Common Moorhen	LC	Breeding			Lac Azuéli, Trou Caïman		
Rallidae	<i>Fulica americana</i>	American Coot	LC	Winter	swamp, lakes				Bond (1928)
Rallidae	<i>Fulica caribaea</i>	Caribbean Coot	NT	Breeding	Shrubland, brackish wetland, wetland, mangrove, coast	250-300	Lac Azuéli, Lagon-aux-Boeufs, Trou Caïman		Florence Sergile 2008
Aramidae	<i>Aramus guarauna</i>	Limpkin	LC						
Burhinidae	<i>Burhinus bistriatus</i>	Double-striped Thick-knee	LC				near Acul-Samedi		Bond (1928)
Haematopodidae	<i>Haematopus palliatus</i>	American Oystercatcher	LC						
Recurvirostridae	<i>Himantopus mexicanus</i>	Black-necked Stilt	LC	Breeding	fresh water swamps, mangrove lagoon on the coast		Lac Azuéli, Trou Caïman, Gonave Island, Tortuga Island		Bond (1928)
Charadriidae	<i>Pluvialis dominica</i>	American Golden Plover	LC						
Charadriidae	<i>Pluvialis squatarola</i>	Grey Plover/Black-bellied Plover	LC	Winter			Lac Azuéli		Bond (1928)



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Charadriidae	<i>Charadrius semipalmatus</i>	Semipalmated Plover	LC						
Charadriidae	<i>Charadrius wilsonia</i>	Wilson's Plover	LC	Breeding			Lac Azuéli, Gonave Island, Tortuga Island		Bond (1928)
Charadriidae	<i>Charadrius vociferus</i>	Killdeer	LC	Breeding	marshes, rivers, streams		Lac Azuéli, Trou Caïman		Bond (1928)
Charadriidae	<i>Charadrius melodus</i>	Piping Plover	NT	Non Breeding	Shrubland, brackish wetland, mangrove, coast		Lagon-aux-Boeufs		Florence Sergile 2008
Charadriidae	<i>Charadrius alexandrinus</i>	Kentish Plover	LC						
Jacanidae	<i>Jacana spinosa</i>	Northern Jacana	LC	Breeding			Lac Azuéli		Bond (1928)
Scolopacidae	<i>Gallinago gallinago</i>	Common Snipe	LC	Winter			Lac Azuéli, Trou Caïman		Bond (1928)
Scolopacidae	<i>Limnodromus griseus</i>	Short-billed Dowitcher	LC						
Scolopacidae	<i>Limnodromus scolopaceus</i>	Long-billed Dowitcher	LC						
Scolopacidae	<i>Limosa fedoa</i>	Marbled Godwit	LC						
Scolopacidae	<i>Numenius phaeopus</i>	Whimbrel	LC						
Scolopacidae	<i>Bartramia longicauda</i>	Upland Sandpiper	LC						
Scolopacidae	<i>Tringa melanoleuca</i>	Greater Yellowlegs	LC	Winter			Lac Azuéli		
Scolopacidae	<i>Tringa flavipes</i>	Lesser Yellowlegs	LC	Winter			Lac Azuéli, Gonave Island, Trou Caïman, Tortuga Island		Bond (1928)
Scolopacidae	<i>Tringa solitaria</i>	Solitary Sandpiper	LC	Winter			Trou Caïman		Bond (1928)



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Scolopacidae	<i>Actitis macularius</i>	Spotted Sandpiper	LC	Migrant	along streams and rivers		Lac Azuéi		
Scolopacidae	<i>Catoptrophorus semipalmatus</i>	Willet	LC						
Scolopacidae	<i>Arenaria interpres</i>	Ruddy Turnstone	LC	Winter					Bond (1928)
Scolopacidae	<i>Calidris canutus</i>	Red Knot	LC						
Scolopacidae	<i>Calidris alba</i>	Sanderling	LC	Winter			Tortuga Island		Bond (1928)
Scolopacidae	<i>Calidris pusilla</i>	Semipalmated Sandpiper	LC	Winter			Gonave Island		Bond (1928)
Scolopacidae	<i>Calidris mauri</i>	Western Sandpiper	LC						
Scolopacidae	<i>Calidris minutilla</i>	Least Sandpiper	LC	Winter			Gonave Island		Bond (1928)
Scolopacidae	<i>Calidris fuscicollis</i>	White-rumped Sandpiper	LC						
Scolopacidae	<i>Calidris melanotos</i>	Pectoral Sandpiper	LC						
Scolopacidae	<i>Calidris himantopus</i>	Stilt Sandpiper	LC						
Scolopacidae	<i>Tryngites subruficollis</i>	Buff-breasted Sandpiper	NT	Passage					
Scolopacidae	<i>Steganopus tricolor</i>	Wilson's Phalarope	LC						
Scolopacidae	<i>Phalaropus lobatus</i>	Red-necked Phalarope	LC						
Laridae	<i>Larus delawarensis</i>	Ring-billed Gull	LC						
Laridae	<i>Larus marinus</i>	Great Black-backed Gull	LC						
Laridae	<i>Larus argentatus</i>	Herring Gull	LC						
Laridae	<i>Larus philadelphia</i>	Bonaparte's Gull	LC						
Laridae	<i>Larus atricilla</i>	Laughing Gull	LC	Passage			Lac Azuéi, Trou Caïman		
Laridae	<i>Larus pipixcan</i>	Franklin's Gull	LC	Vagrant					
Laridae	<i>Rissa tridactyla</i>	Black-legged Kittiwake	LC	Vagrant					
Laridae	<i>Sterna nilotica</i>	Gull-billed Tern	LC	Present			Trou Caïman		
Laridae	<i>Sterna caspia</i>	Caspian Tern	LC	Passage			Lac Azuéi, Trou Caïman		
Laridae	<i>Sterna maxima</i>	Royal Tern	LC	Passage			Lac Azuéi		
Laridae	<i>Sterna sandvicensis</i>	Sandwich Tern	LC						
Laridae	<i>Sterna hirundo</i>	Common Tern	LC						
Laridae	<i>Sterna forsteri</i>	Forster's Tern	LC						



Waterbird Conservation for the Americas
Conservación de las Aves Acuáticas para las Américas

Laridae	<i>Sterna antillarum</i>	Least Tern	LC				Gonave Island		Bond (1928)
Laridae	<i>Sterna anaethetus</i>	Bridled Tern	LC						
Laridae	<i>Sterna fuscata</i>	Sooty Tern	LC	Breeding					Bond (1928)
Laridae	<i>Chlidonias niger</i>	Black Tern	LC						
Laridae	<i>Anous stolidus</i>	Brown Noddy	LC						
Laridae	<i>Rynchops niger</i>	Black Skimmer	LC						
Stercorariidae	<i>Stercorarius pomarinus</i>	Pomarine Jaeger	LC	Vagrant					
Stercorariidae	<i>Stercorarius parasiticus</i>	Parasitic Jaeger	LC						
Stercorariidae	<i>Stercorarius longicaudus</i>	Long-tailed Jaeger	LC	Vagrant					

Legend:

The ranges are based on Wetlands International estimates:

B: 10.000-25.000

C: 25.000-100.000

D: 100.000-1.000.000

E: >1.000.000

For numbers below 10.000:

A.a 0-50

A.b 50-100

A.c 100-250

A.d 250-500

A.e 500-1000

A.f 1000-5000

A.g 5,000-10,000