

Brown Noddy nesting in Graham's Harbour IBA, San Salvador: the Bahamas islands support significant populations of many seabird species. (PHOTO: WILLIAM HAYES)

#### **INTRODUCTION**

The Commonwealth of The Bahamas is an archipelago of c.700 islands and c.2,000 cays and rocks extending over 1,100 km. The archipelago, which lies north and east of Cuba, runs from east of the southern end of Florida (USA), south-east until it terminates at the Turks and Caicos Islands (to the UK) which are geologically a continuation of the islands. The Bahamas are exposed parts of a limestone platform that is divided into several shallow banks. Little Bahama Bank is located along the northern coasts of Grand Bahama and encompasses all of Abaco and its North Atlantic offshore rocks and cays. The Great Bahama Bank (which is rich in marine life) stretches from north of the Biminis and Berry Islands, southward to hug the southern shoreline of New Providence and the western shores of Andros, Eleuthera, Cat Island, the Exumas, Long Island and the Ragged Islands. The Cay Sal Bank (which is biologically impoverished) is located at the extreme western sea border of The Bahamas, very close to Cuba. The islands of the Bahamas are low and flat with ridges that usually rise to no more than 15-20 m. However, there are precipitous slopes under water, between and within the convoluted banks. The Tongue of the Ocean is a 30-km wide trench between New Providence and Andros which drops

to depths of 2,000 m. The islands have no rivers or streams and the soil is fertile but thin, and often lodged in shallows and "banana holes" within the harsh limestone rock. A freshwater lens exists close to the surface, resting on the underlying salt-water.

The Bahamas are often divided, ecologically, into three regions: Northern Bahamas (Grand Bahama, Biminis, Berry Islands, Abacos, North Andros, and New Providence) where all the larger islands are covered primarily by Caribbean pine Pinus caribaea woodland (with a broadleaf shrub and palm understorey), although much of this woodland was logged in the mid-twentieth century; Central Bahamas (South Andros, Eleuthera, Cat Island, the Exumas, Ragged Islands, Long Island, Rum Cay, Conception Island and San Salvador), in which the islands are covered primarily in broadleaf "coppice"—a dense, low semi-evergreen forest; and Southern Bahamas (Crooked Island, Acklins Island, Samana Cay, Mayaguana, Little and Great Inagua), where the islands are drier and support dry shrubland. New Providence, in spite of being one of the smaller islands, is home to c.69% of the Bahamian population and the nation's capital. Grand Bahama is second only to New Providence in terms of development, and it supports 16% of the population. It is also home to the longest underwater cave system in the world. The rest of the



The Exuma Cays Land and Sea Park IBA in the northern Exumas, Central Bahamas. (PHOTO: OLGA STOKES)

Bahamas islands are called the "Family Islands" which are sparsely populated and retain their natural beauty. Of these Family Islands, Great and Little Abaco (and its cays) are considered "the sailing capital of the world", and the islands have a booming tourist trade. Andros is the largest island in the Bahamas, with extensive creeks, interlacing channels, bays, bights and inlets. It is also home to many blue holes and as a result is renowned for its cave-diving. Inagua is the southernmost island in the Bahamas with the nation's only Ramsar site—Inagua National Park—which is home to over 40,000 Caribbean Flamingo *Phoenicopterus ruber* (and many other waterbirds). The company Morton Bahamas Ltd. produces salt from the salinas at one end of Lake Rosa (which occupies c.30% of the island). Morton is one of the largest salt producers in North America.

The Bahamas has the third highest per capita income in the western hemisphere (after the USA and Canada). Tourism is the primary economic activity, accounting for c.65% of the gross domestic product (GDP). The government's current economic thrust is to put an anchor resort on each of the major Family Islands which will have huge implications for the biodiversity of these otherwise relatively untouched islands. Offshore finance is the nation's second largest industry, accounting for c.15% of GDP. The settlement history of the Bahamas is convoluted and often different on each island. Plantations were established on some of the islands during the late eighteenth century, and large-scale agriculture was trialed in the mid-twentieth century when much of remaining virgin pine forests in the Northern Bahamas were logged. Subsequent development (especially on New Providence and Grand Bahama, but also locally on the other inhabited islands) has had a profound negative impact on the surrounding habitats.

The climate of the Bahamas is subtropical to tropical, and is moderated significantly by the waters of the Gulf Stream which keeps the islands warmer than Florida in the winter and cooler in the summer. Summer is the rainy season with June and October the wettest months. However, the Southern Bahamas only get half the rainfall that the northern Bahamas receive. The islands are frequently hit by hurricanes; for example, Hurricane Andrew in 1992, Floyd in 1999, Francis and Jeanne in 2004, and Wilma in 2005. Low-pressure systems associated with tropical waves and resulting in strong winds and drenching rain are a regular feature in the Bahamas.

## Conservation

In the Bahamas, the Ministry of Environment is currently the principal government department involved in conservation and the environment. Within this ministry is the Bahamas Environment Science and Technology Commission, also known as the BEST Commission, which was established in 1994. The

BEST Commission manages the implementation of multilateral environmental agreements and reviews environmental impact assessments and environmental management plans for development projects within the Bahamas. The Bahamas National Trust (BNT)<sup>1</sup> was established in 1959 under the Bahamas National Trust Act. It is a non-profit organisation, funded by private donations, an endowment fund and a significant subvention from the Government of the Bahamas. BNT advises the government on conservation policies and is charged with safeguarding the nation's environmental heritage. One of its statutory roles is to hold environmentally important lands in trust for the country. BNT also has the responsibility for managing the national park system. The park system now consists of 25 parks and protected areas (10 parks were designated in 2002), covering 283,400 ha throughout the archipelago. Many of these extraordinary and often innovatively managed parks are also IBAs and are mentioned in more detail within the individual IBA profiles below. BNT works in partnership with the Bahamas government, local business, national and international conservation organisations, schools and the community.

In the Bahamas, there is a constant quest for economic advancement, but without the necessary knowledge and appreciation that the nation's environment has limitations, this could have catastrophic long-term consequences. In the past, valuable timber (pine and coppice) were cut, monoculture agriculture was practiced, and introduced livestock (goats) and slash-and-burn agriculture expanded to less arable areas. At the same time, subsistence, commercial and recreational hunting and fishing, introduction of alien species, urban sprawl, road works, careless tapping of the freshwater lens, interference with natural drainage, dredging and reclamation of wetlands and tidal mangroves, pesticide spraying to eradicate mosquitoes, malaria, yellow fever, crop pests, problems of sewage and solid waste disposal and many other human intrusions have all taken a huge toll on local biodiversity, and thus threaten the essence of the nation's valuable tourism product.

In order to promote appropriate development for the Family Islands (which have previously been little impacted by development), there is an urgent need for a national land management or development plan. This would help identify sensitive areas (such as the IBAs) which should be subject to limited exploitation and/or should be placed in the protected area system. As an island archipelago, the Bahamas needs to be particularly sensitive to the tourism carrying capacity, water resource use and wetland destruction. Strategic planning for

<sup>1</sup> The Bahamas National Trust (BirdLife in the Bahamas) is referred to throughout this chapter by the acronym BNT.

the marina needs for the entire archipelago could effectively limit destruction of mangrove wetlands and tidal creeks. However, for such planning to be adopted there needs to be a clear appreciation and understanding of the need to limit or mitigate the effects of development on the biodiversity of the islands.

Lack of environmental legislation and, more importantly, the lack of enforcement of environmental legislation continue to be an obstacle for conservation in the Bahamas. The very nature of the archipelagic nation creates enforcement problems compounded by insufficient human resources in both the Royal Bahamas Police Force and the Royal Bahamas Defense Force. Draft enabling legislation for the environment has recently been developed by the BEST Commission, and includes Environmental Impact Assessment Final Draft Regulations; Pollution Control and Waste Management Final Draft Regulations; Draft National Environmental Policy; and Environmental Management Final Draft Legislation. Enactment of such legislation will provide the basic framework for the coherent management of the nation's unique environment.

All conservation partners in the Bahamas agree that a stronger environmental ethic needs to be established. This can only be accomplished through a major public outreach campaign targeting both school-age and adult citizens as well. In particular, decision-makers need to be made aware of our environmental responsibilities so that collectively the threats outlined below can be addressed. Government agencies and the BNT are faced with a paucity of trained environmental staff. Many of those that are trained seek employment in unrelated but higher salaried professions in the financial or legal sectors. Even in-country field research capacity is minimal but vital to inform regulations for marine and terrestrial natural resource management. However, there is growing awareness that visiting researchers and international projects have a responsibility to help with this training and capacity issue. The Kirtland's Warbler Training and Research Program, a collaboration between BNT, U.S. Forest Service, The Nature Conservancy and the College of the Bahamas has been exemplary in providing opportunities for Bahamian students to gain expert field and academic training.

Habitat destruction and degradation caused by human population growth and extensive changes in land use practices is impacting on the birdlife and other biodiversity. Local species extinctions are happening, e.g. the Great Lizard-cuckoo Saurothera merlini has been extirpated from New Providence over the last 10 years. While the habitat loss that leads to such extinctions is best addressed through improved planning, legislation, protection and enforcement, the BNT is working to engage local communities in the protection of critical areas. For example, local Site Support Groups in Abaco, New

Infrastructure for visitation (and education and awareness) is being put in place by BNT in a number of IBAs such as this viewing platform and boardwalk in the Blue Holes National Park, Central Andros. (PHOTO: SHELLEY CANT)



Providence and Inagua are working with the BNT to develop native tree nurseries and to re-plant areas with native vegetation. BNT is also working with local nurseries to promote the propagation of native trees and vegetation by these privatesector businesses. In the Bahamas, it is common practice to treat the wetlands as wastelands to be filled in to provide more land or to be dredged for canals and marinas. The work of the BNT through the West Indian Whistling-duck and Wetlands Conservation Program (a program of the Society for the Conservation and Study of Caribbean Birds) has gone some way to raising awareness of the critical importance of wetlands for biodiversity, as nursery grounds for economically important fisheries, and for coastal zone protection (including flood and hurricane damage mitigation). BNT has recently partnered with RARE Conservation to implement a Pride Campaign, a social marketing campaign to educate Bahamians about the value of wetlands and change the perception of them as "wastelands" or dumping grounds. The site focus for this Pride Campaign is Harrold and Wilsons Ponds National Park, one of the IBAs described below.

Biodiversity in the Bahamas is facing a constant threat by introduced or invasive species, both plants (e.g. Brazilian pepper Schinus terebinthefolius and casuarina Casuarina equisetifolia) and animals (e.g. feral cats Felis catus, raccoons Procyon lotor and wild hogs Sus scrofa) alike. The historic and cultural practice of using small islands as natural corrals for goats has impacted the vegetation on many remote cays. The BNT is working with a Site Support Group to manage invasive plants at Harrold and Wilsons Ponds National Park, and with Friends of the Environments (another Site Support Group) in Abaco to manage the feral cat population. In the last two years, feral cats predated 50% of the "Bahama Parrot" Amazona leucocephala bahamensis nests on the island. Conservation agencies in conjunction with the BEST Commission have adopted, and are promoting, a National Invasive Species Policy.

#### Birds

Over 300 species of bird have been recorded from the Bahamas, 109 of which breed on the islands, 169 are migrants that pass through the islands or winter, and 45 are vagrants that have occurred only a few times each. Only three breeding landbirds are summer visitors: Antillean Nighthawk Chordeiles gundlachii, Grey Kingbird Tyrannus dominicensis and Black-whiskered Vireo Vireo altiloquus. However, many of the seabirds are only present during their spring and summer breeding seasons. Neotropical migrants (that breed in North America) comprise c.50% of the total land bird population in the northern islands from November through March. The number and diversity of migrants declines from north to south through the islands. Bahamas Endemic Bird Area (EBA) restricted-range birds total seven extant species (see Table 1).

The "Bahama Parrot" has been the focus of research and conservation project actions such as the management of the predatory feral cat population on Abaco. (PHOTO: HENRY NIXON)



				BS001	BS002	BS003	BS004	BS005	BS006	BSO
		National	eria			•	- :		- 1	
Key bird species	Criteria	population	Criteria		•	•	_			
Vest Indian Whistling-duck Dendrocygna arborea	VU 📕	•								
Audubon's Shearwater Puffinus Iherminieri								315		
Caribbean Flamingo Phoenicopterus ruber										
Reddish Egret Egretta rufescens		_								
White-tailed Tropicbird Phaethon lepturus		-						258	50–249	
Magnificent Frigatebird Fregata magnificens Brown Pelican Pelecanus occidentalis								50–249 <50		
Masked Booby Sula dactylatra		•						<30		
Brown Booby Sula leucogaster										
Piping Plover Charadrius melodus	NT	•				70				
aughing Gull Larus atricilla								1,923		250-9
Gull-billed Tern Sterna nilotica										
Royal Tern Sterna maxima										50-2
Sandwich Tern Sterna sandvicensis										
Roseate Tern Sterna dougallii		_						990		
Common Tern Sterna hirundo		-						654		
east Tern Sterna antillarum  Bridled Tern Sterna anaethetus					480			654 10,665		
Sooty Tern Sterna anaetnetus					480			10,665		
Brown Noddy Anous stolidus								1,281		
White-crowned Pigeon Patagioenas leucocephala	NT						250-999	1,201		250-9
Cuban Amazon Amazona leucocephala	NT								3,600	
Bahama Woodstar Calliphlox evelynae							<50		50-249	
Thick-billed Vireo Vireo crassirostris				<50			<50			50-2
Bahama Swallow Tachycineta cyaneoviridis	VU 🔳 🔳			50-249						50-2
Bahama Mockingbird Mimus gundlachii									<50	50-2
Pearly-eyed Thrasher Margarops fuscatus										
Olive-capped Warbler Dendroica pityophila				50–249			<50		<b>√</b>	
Kirtland's Warbler Dendroica kirtlandii	NT =						.50		<50	
Bahama Yellowthroat Geothlypis rostrata				BS021	BS022	BS023	<50 <b>BS024</b>	BS025	50–249 <b>BS026</b>	BSO
			_	D3021	D3022	D3023	D3024	D3023	D3020	D30
		National population	eria			_		_		
Key bird species	Criteria	population	Ë	•	•	•	•	•	•	
West Indian Whistling-duck Dendrocygna arborea	VU 📕			<50	50-249		50-249		250-999	
Audubon's Shearwater Puffinus Iherminieri								750–2,997		50–2
Caribbean Flamingo Phoenicopterus ruber										
Reddish Egret Egretta rufescens		•								750-2,9
Nhite-tailed Tropicbird Phaethon lepturus  Magnificent Frigatebird Fregata magnificens										730-2,5
Brown Pelican Pelecanus occidentalis		•						<50		
Masked Booby Sula dactylatra								230		
Brown Booby Sula leucogaster										
Piping Plover Charadrius melodus	NT									
aughing Gull Larus atricilla					50-249		250-999		50-249	
Gull-billed Tern Sterna nilotica					50-249		50-249			
Royal Tern Sterna maxima		•						50–249		
		_						50–249		
Sandwich Tern Sterna sandvicensis						50–249		50–249		
Roseate Tern Sterna dougallii		_					50-249			
Roseate Tern Sterna dougallii Common Tern Sterna hirundo					50 249					50-2
Roseate Tern Sterna dougallii Common Tern Sterna hirundo .east Tern Sterna antillarum					50-249	50_249	30-243	250_999		30 2
toseate Tern Sterna dougallii Common Tern Sterna hirundo ceast Tern Sterna antillarum Bridled Tern Sterna anaethetus					50–249	50–249	30-243	250–999 7.500–29.997		
toseate Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum Bridled Tern Sterna anaethetus ooty Tern Sterna fuscata					50–249	50–249	30-243	250–999 7,500–29,997		250-9
toseate Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum Bridled Tern Sterna anaethetus ooty Tern Sterna fuscata Brown Noddy Anous stolidus	NT ■			<50	50–249	50–249	30-247			250-9
oseate Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum vidled Tern Sterna anaethetus ooty Tern Sterna fuscata vrown Noddy Anous stolidus Vhite-crowned Pigeon Patagioenas leucocephala	NT NT NT			<50			30-247	7,500–29,997		250-9
Common Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum Gridled Tern Sterna anaethetus cooty Tern Sterna fuscata Grown Noddy Anous stolidus White-crowned Pigeon Patagioenas leucocephala Cuban Amazon Amazona leucocephala Gahama Woodstar Calliphlox evelynae	NT ■			<50			<b>√</b>	7,500–29,997		250-9
Common Tern Sterna dougallii Common Tern Sterna hirundo Least Tern Sterna antillarum Leridled Tern Sterna anaethetus Leron Sterna fuscata Leron Noddy Anous stolidus White-crowned Pigeon Patagioenas leucocephala Cuban Amazon Amazona leucocephala Lahama Woodstar Calliphlox evelynae Lihick-billed Vireo Vireo crassirostris	NT ■			<50				7,500–29,997		250- <sup>9</sup>
common Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum Gridled Tern Sterna anaethetus Gooty Tern Sterna fuscata Grown Noddy Anous stolidus White-crowned Pigeon Patagioenas leucocephala Cuban Amazon Amazona leucocephala Gahama Woodstar Calliphlox evelynae Chick-billed Vireo Vireo crassirostris Gahama Swallow Tachycineta cyaneoviridis	NT ■			<50			<b>√</b> 50–249	7,500–29,997		250-9
Common Tern Sterna dougallii Common Tern Sterna hirundo Least Tern Sterna antillarum Leridled Tern Sterna anaethetus Leron Noddy Anous stolidus White-crowned Pigeon Patagioenas leucocephala Lean Amazon Amazona leucocephala Lean Moodstar Calliphlox evelynae Lihick-billed Vireo Vireo crassirostris Lean Mockingbird Mimus gundlachii	NT NT VU			<50			<b>√</b>	7,500–29,997		250-9
common Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum Gridled Tern Sterna anaethetus Gooty Tern Sterna fuscata Grown Noddy Anous stolidus White-crowned Pigeon Patagioenas leucocephala Guban Amazon Amazona leucocephala Gahama Woodstar Calliphlox evelynae Chick-billed Vireo Vireo crassirostris Gahama Swallow Tachycineta cyaneoviridis Gahama Mockingbird Mimus gundlachii Vearly-eyed Thrasher Margarops fuscatus	NT ■			<50			<b>√</b> 50–249	7,500–29,997		250-9
coseate Tern Sterna dougallii Common Tern Sterna hirundo east Tern Sterna antillarum tridled Tern Sterna anaethetus ooty Tern Sterna fuscata trown Noddy Anous stolidus Vhite-crowned Pigeon Patagioenas leucocephala tahama Woodstar Calliphlox evelynae hick-billed Vireo Vireo crassirostris tahama Swallow Tachycineta cyaneoviridis tahama Mockingbird Mimus gundlachii tearly-eyed Thrasher Margarops fuscatus Dlive-capped Warbler Dendroica pityophila	NT VU			<50			<b>√</b> 50–249	7,500–29,997		250-9
oseate Tern Sterna dougallii common Tern Sterna hirundo east Tern Sterna antillarum ridled Tern Sterna anaethetus ooty Tern Sterna fuscata rown Noddy Anous stolidus Vhite-crowned Pigeon Patagioenas leucocephala tuban Amazon Amazona leucocephala ahama Woodstar Calliphlox evelynae hick-billed Vireo Vireo crassirostris ahama Swallow Tachycineta cyaneoviridis ahama Mockingbird Mimus gundlachii early-eyed Thrasher Margarops fuscatus	NT NT VU			<50			<b>√</b> 50–249	7,500–29,997		250-

BS008	BS009	Bahama BS010	s IBAs BS011	BS012	BS013	BS014	BS015	BS016	BS017	BS018	BS019	BS020
					_	•	•	_	_			_
<50				•	•				•			
											150–747	250–999
												750 2 007
												750–2,997
	85			38			<50					
	03			30		250–999	50–249	50-249	50-249			
						<50 <50	<50					
						230	30					
									50-249			
					50-249				50-249 50-249			50-249
									30-243			
			50-249	250–999	250–999	<50				250-999		
✓	<50	<50	<50	<50		<50				<50		
<b>v</b>	₹30	<30	<50	<50		<50				250–999		
50–249	<50	50.240	.50	-50		50-249				50.240		
	<50	50–249	<50	<50						50–249		
		<50								60		
<50	<50	<50	<50	<50						✓		
BS028	BS029	BS030	BS031	BS032	BS033	BS034	BS035	BS036	BS037	BS038	BS039	
											50-249	
279			150–747				150–747				20,000–49,999	
											250–999	
60						297		50-249		50–249		
										<50	250–999	
150		50-249				1,650	150–747		50-249	<50 250–999		
	50.040										50.040	
	50–249 15										50–248 50–249	
30				<50						<50	50-249	
					150–747			750–2,997 50–249			50–249 50–249	
		150 747	150 747								50-249	
		150–747	150-747 50-249	150–747	150–747 50–249			50-249 50-249				
900												
700										50-249	50-249	
	✓	✓									2,500–9,999	
	✓	<50										
	✓	<50										
	✓	<50										



The Bahama Yellowthroat is endemic to the Bahamas while the Bahama Woodstar occurs also in the Turks and Caicos Islands. (PHOTOS: ANTHONY HEPBURN)

The Bahamas EBA includes the Turks and Caicos Islands (to the UK) with which the Bahamas share four of the restrictedrange birds, namely Bahama Woodstar Calliphlox evelynae, Bahama Mockingbird Mimus gundlachii, Pearly-eyed Thrasher Margarops fuscatus and Thick-billed Vireo Vireo crassirostris. Of the remainder, Olive-capped Warbler Dendroica pityophila occurs also in Cuba, but Bahama Yellowthroat Geothlypis rostrata and Bahama Swallow Tachycineta cyaneoviridis are endemic to the islands. The vellowthroat is common on Grand Bahama and Abaco, less common on Andros and Cat Island, uncommon on New Providence and non-existent on the other islands. The swallow is locally common and breeds on Grand Bahama, Abaco and Andros, less common on New Providence, and uncommon to non-existent in the central and southern Bahama Islands. An eighth restricted-range bird (and third national endemic) was the Brace's Emerald Cholorostilbon bracei which is now extinct. It was known only from a single specimen collected in 1877. A subspecies of the Greater Antillean Oriole, Icterus dominicensis northropi is found only on Andros (where it is threatened), having been extirpated from Abaco.

Globally threatened birds in the Bahamas include the Vulnerable West Indian Whistling-duck Dendrocygna arborea and Tachycineta cyaneoviridis, and the Near Threatened White-crowned Pigeon Patagioenas leucocephala, Cuban Amazon Amazona leucocephala bahamensis. Piping Plover Charadrius melodus and Kirtland's Warbler Dendroica kirtlandii. Dendrocygna arborea only occurs on Andros, Inagua, Cat Island, Long Island and Exuma where significant numbers occur in a few areas (such as Hog Cay off Long Island). The species is protected by law under the Bahamas Wild Birds (Protection) Act. Tachycineta cyaneoviridis relies on pine forests for breeding, but the movements of the species outside the breeding season are poorly known although it appears that significant numbers over-winter in the country. Patagioenas leucocephala is a target for recreational hunting, but poaching and excessive hunting is common because although laws exist for the species' protection, enforcement is inadequate. Charadrius melodus is an uncommon winter resident in the Bahamas although some specific beaches and tidal flat areas (which need to be designated as protected areas) do support significant numbers. Eleuthera supports the largest

population of wintering *Dendroica kirtlandii* currently known, and is the focus of a multi-institutional initiative, the Kirtland's Warbler Training and Research Program.

Over 14 species of seabirds breed in the Bahamas, but their preferred habitats of isolated cays with steep cliffs or rocky shorelines, and with low vegetation near to deep water, are being lost due to increased human uses of coastal areas through resort developments, disturbance, and increased pollution of near-shore waters. Seabird eggs (and adults) are also collected. Recent (2002–2006) surveys in the Northern Bahamas identified over 60 seabird breeding locations in Grand Bahama, Biminis, Berry Islands and Abacos showing just how important these northern islands are for their seabird populations.

The Bahama islands are of great importance to wetland birds, but their usage of individual wetland sites varies seasonally and between years depending on weather and local conditions. This suggests that a network of protected wetland sites is critical to the long-term viability of the nation's waterbird populations. Large numbers of migratory shorebirds use these wetlands as stop-over sites and as wintering grounds, as do ducks and significant numbers of resident egrets and herons and other species. However, these waterbirds face many threats including draining and infilling of wetlands, contamination of food supplies, oil spills, introduced mammalian predators, disturbance, and hunting. However, conservation efforts can have a profound impact. In 1905, the National Audubon Society (BirdLife in the US) requested the Government of the Bahamas to provide legal protection for the Caribbean Flamingo *Phoenicopterus ruber*. The government responded by passing the Wild Birds (Protection) Act. An initial attempt to save the flamingo breeding colonies on Andros failed in the 1950s, but a research program was established and a colony was discovered on Great Inagua. A 99-year lease was agreed, the Inagua National Park was established, and the flamingo colony (over the next 40 years) increased from less than 10,000 birds to over 40,000. Conservation of birdlife in the Bahamas has been concentrated on a few high-profile species such as the Caribbean Flamingo Phoenicopterus ruber, West Indian Whistling-duck Dendrocygna arborea, "Bahama Parrot" Amazona leucocephala bahamensis, White-crowned Pigeon Patagioenas



Over 40,000 Caribbean Flamingos breed in Great Inagua as a result of successful, long-term conservation action on the island.

(PHOTO: OLGA STOKES)

leucocephala and Kirtland's Warbler Dendroica kirtlandii. However, more attention is now being paid to critical sites (such as IBAs) and habitats (such as the dry forests) as well as the species themselves.

## **IMPORTANT BIRD AREAS**

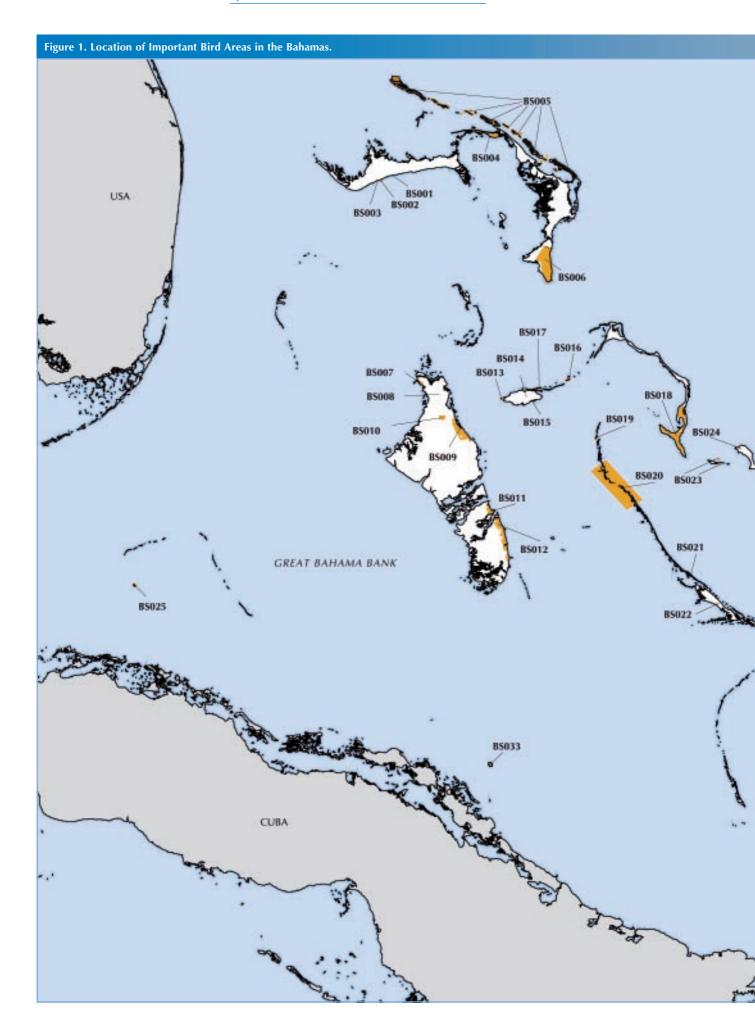
The Bahamas' 39 IBAs—the nation's international site priorities for bird conservation—cover 4,700 km² (including extensive marine areas). The IBAs include nine of the BNT-managed national parks and protected areas. However, just two IBAs are protected in their entirety. Seven are part protected, part unprotected, while for 30 of the IBAs there is currently no legal protection.

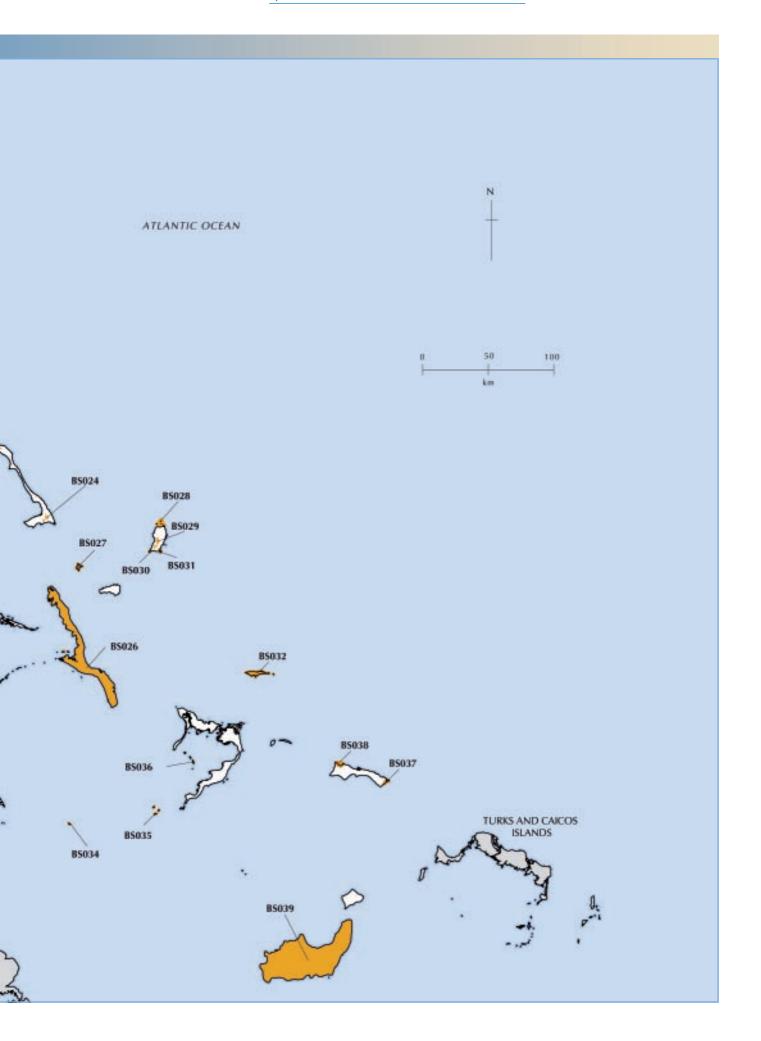
The IBAs have been identified on the basis of 30 key bird species (listed in Table 1) that variously trigger the IBA criteria. These 30 species include six globally threatened birds (two Vulnerable and four Near Threatened), all seven restricted-range species, and 20 congregatory waterbirds/seabirds.

Significant populations of the Bahamas' key bird species are found in two or more IBAs. Also, as the IBAs are almost evenly split between the Northern, Central and Southern Bahamas, there is good geographic representation for most species (where this is possible) throughout the archipelago. For shear numbers, both the North Atlantic Abaco Cays IBA (BS005) and Cay Sal IBA (BS025) stand out as supporting the largest numbers of seabirds, while Great Inagua IBA (BS039) is home to the largest congregation of waterbirds.

Great Inagua IBA supports huge numbers of waterbirds. (PHOTO: LYNN GAPE)







Monitoring currently being undertaken by local Site Support Groups, and also on some of the high profile species should be used to feed into the annual assessment of state, pressure and response variables at each of the Bahamas' IBAs in order to provide an objective status assessment, and highlight management interventions that might be required to maintain these internationally important biodiversity sites. With over 75% of IBAs unprotected, key species monitoring and status assessments will be critical to lobby for protection and develop conservation strategies.

## **KEY REFERENCES**

BAINTON, A. M. AND WHITE, A. W. (2006) A bibliography of birds, ornithology and birding in The Bahamas and Turks and Caicos Islands. Nassau, Bahamas: Media Enterprises Ltd.

Bendon, J. (1997) Moon over Mayaguana: return to Booby Cay. *Iguana Times* 6(4): 81–88.

ETHERIDGE, H. (2001) Yachtman's guide to the Bahamas (including Turks and Caicos). Coral Gables: Tropic Island Publishers.

HALLETT, B. (2006) Birds of The Bahamas and the Turks and Caicos Islands. Oxford, U.K.: Macmillan Caribbean.

Kushlan, J. A. (2006) Seabird nesting and conservation in the northern Bahamas. (Unpublished report for the Bahamas National Trust).

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.

SEALEY, N. E. (1994) Bahamian landscapes: an introduction to the geography of the Bahamas. Nassau, Bahamas: Media Publishing Ltd

Sprunt, A. (1984) The status and conservation of seabirds of the Bahama Islands. Pp157–168 in J. P. Croxall, P. G. H. Evans and R. W. Schreiber eds. *Status and conservation of the world's seabirds*. Cambridge, U.K.: International Council for Bird Preservation (ICBP Techn. Publ. 2).

SUTTON, A. H., Sorenson, L. G. and Keeley, M. A. (2001) *Wondrous West Indian wetlands: teachers' resource book.* Boston, Mass.: West Indian Whistling-Duck Working Group of the Society of Caribbean Ornithology.

WARDLE, C. AND MOORE, P. (2006) Important Bird Area program field trip to Mangrove Cay and South Andros. Nassau: Bahamas National Trust. (Unpublished field trip report).

WARDLE, C. AND MOORE, P. (2007) Important Bird Area program field trip to Cat Island. Nassau: Bahamas National Trust. (Unpublished field trip report).

WARDLE, C. AND MOORE, P. (2007) Important Bird Area program field trip to South Andros. Nassau: Bahamas National Trust. (Unpublished field trip report).

WHITE, A. W. (1998) A birder's guide to the Bahama Islands (including Turks and Caicos). Colorado Springs, Colorado: American Birding Association.

#### **ACKNOWLEDGEMENTS**

The authors would like to thank the BNT Ornithology Group, The Sam Nixon Bird Club (Inagua), Carolyn Wardle, Henry Nixon, Anthony White, Herb Rafaelle, Bruce Hallett, Rosemarie Guam, William Mackin, Lisa Sorenson, Jim Kushlan, William Hayes, David Ewert, Joe Wunderle, Kim Thurlow, The Nature Conservancy Bahamas Programme, Morton Bahamas Ltd., Friends of the Environment, Anita Knowles, David Knowles, Caroline Stahala and Frank Rivera for their invaluable contributions to bird conservation in the Bahamas, and thus to the development of the Important Bird Area program.



#### **■** Site description

Lucayan National Park IBA encompasses a section of south-central Grand Bahama including the tidal Gold Rock Creek and adjacent beach. The IBA supports a wide diversity of habitats including a tall dune system, mixed scrub, wet coppice, pine forest, mangrove swamp and beach. Within the park, Ben's Cave and Burial Ground Cave are entrances to one of the longest underwater cave system in the world. Explorers have found pre-Columbian human skeletons and artefacts in Burial Mound Cave. The Grand Bahama South Shore IBA (BS003) adjoins the park to the west.

## Birds

This IBA is significant for supporting three (of the 7) Bahamas EBA restricted-range birds, namely Thick-billed Vireo *Vireo crassirostris*, Bahama Swallow *Tachycineta cyaneoviridis* and Olive-capped Warbler *Dendroica pityophila*. *Tachycineta cyaneoviridis* is Vulnerable, and is regularly seen in the Lucayan National Park during the breeding season. The key bird species are all confined to the coppice and pine forest north of the

east—west Queen's Highway. Waterbirds frequent the mangrove swamps, and shorebirds and terns occur along the beach.

#### Other biodiversity

The recently discovered Lucayan oar-foot "shrimp" *Spelionectes lucayensis* is endemic to the caves in this IBA. The Bahamas blind cave fish *Lucifuga* (Stygicola) spelaeotes (a Bahamian endemic) occurs. Buffy flower bat *Erophylla sezekorni* occurs in Ben's Cave during the summer. Two endemic orchids *Encyclia fucata* and *Cattleyopsis lendenii* flourish in the park.

# **■** Conservation

Lucayan National Park IBA is managed by BNT, and there is a boardwalk through the mangroves at Gold Rock Creek. Speculative proposals to develop a resort in eastern Grand Bahama could impact on the borders of this IBA, and developments are occurring all the time outside of the national park. Natural forest fires within the pine forest are a threat that needs management.



Peterson Cay National Park IBA lies c.2 km offshore on the south (leeward) side of Grand Bahama, c.2 km east of the entrance to the Grand Lucayan Waterway. It is a windswept and sparsely vegetated limestone island, and the only cay on the south side of Grand Bahama. The cay has a rocky shoreline with a sandy beach on the north side, and shrubland on the top of the cay. Shallow sand bars and coral reefs extend to the west of the cay. The IBA includes all marine areas up to 1 km from the cay.

#### Birds

This IBA supports a globally significant nesting colony of Bridled Tern *Sterna anaethetus*, with 160 pairs found in 2005.

## **■** Other biodiversity

No globally threatened or restricted-range species have been recorded.

## **■** Conservation

Peterson Cay National Park IBA is crown owned, and managed as a national park (the smallest in the Bahamas) by BNT. Marine areas up to 500 m from the cay are protected as part of the national park, leaving some of the marine areas of the IBA unprotected. The cay is uninhabited, but is actively used for ecotourism by resident kayak tour guides and resident and visiting boaters. There is potential for uncontrolled tourism to introduce predators such as rats *Rattus* spp. (or indeed other animals) to the cay. It is not know if this has already happened. Disturbance to the tern colony is also a threat, and the extent to which this already happens is unknown.



# ■ Site description

The Grand Bahama South Shore IBA extends along the south coast of Grand Bahama from the Grand Lucayan Waterway's south entrance eastward for c.11 km through the settlement of Ole Freetown and on to the western boundary of the Lucayan National Park (IBA BS001). It comprises a long stretch of uninterrupted sandy beach, beach flats and dunes including Barbary beach

## **■** Birds

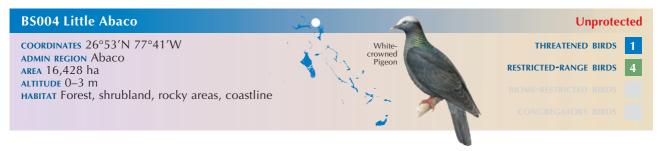
This IBA is significant for the Near Threatened Piping Plover *Charadrius melodus* which winters on the beach along with a range of other shorebirds, and also herons and egrets. During the 2006 census 70 *Charadrius melodus* were recorded at this site.

# Other biodiversity

Nothing recorded.

#### **■** Conservation

Grand Bahamas South Shore IBA is crown land but is unprotected. It is a popular beach for recreational activity, attracting hundreds of residents and tourist alike. There are small restaurant and bar developments along the beach (outside of the IBA), but currently no large developments (as yet). The heavy recreational use of the beach causes disturbance to *C. melodus* and other wintering shorebirds. Invasive alien *Casuarina* trees threaten the stability of the beach, and the native vegetation behind the beach.



Little Abaco IBA is at the northernmost end of Abaco where it is just 15 km north of Grand Bahama. Little Abaco extends for about 30 km west of the northern point of Great Abaco Island (at Angel Fish Point) to which it is joined by a short causeway ("the bridge"). The island supports extensive tracts of virgin Caribbean pine *Pinus caribaea* forest, and has long stretches of sandy beach. There are five settlements: Crown Haven (at the westernmost tip), Fox Town, Wood cay, Mount Hope and Cedar Harbour.

#### Birds

The pine forests in this IBA support four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar Calliphlox evelynae, Thick-billed Vireo Vireo crassirostris, Olive-capped Warbler Dendroica pityophila and Bahama Yellowthroat Geothlypis rostrata. The resident endemic race of Yellow-throated Warbler Dendroica dominica also occurs.

A sizeable population of the Near Threatened White-crowned Pigeon *Patagioenas leucocephala* breeds. Little Abaco can be the first landfall for many Neotropical migrants in the fall.

#### Other biodiversity

No globally threatened or restricted-range species have been recorded.

#### Conservation

Little Abaco IBA is a mixture of crown and private lands, but it is currently unprotected. The pine forest in the IBA is thought to be the oldest, and only remaining virgin stand in the Bahamas. However, it is being degraded through illegal clearance, bulldozing and other human activities. The Government is currently building a trash transfer station within the pine forest, and as the human population of Abaco increases, the pressure on the forest for development and lumber will intensify.



## ■ Site description

North Atlantic Abaco Cays IBA embraces the cays along the northern and north-eastern edge of the Little Bahama Bank. It runs from the 1,555-ha Walker's Cay National Park in the north (the northernmost point of the Bahamas), east and south-east to Scotland Cay (north of Marsh Harbour) including Pensacola, Spanish, Powell, Manjack, Green Turtle, Whale and Great Guana cays, and many isolated rocks. The vegetation on many of the cays comprises fringing mangroves and scrub. Gilliam Bay, at the south-east point of Green Turtle Cay, has extensive sand and mudflats at low tide.

#### Birds

This IBA is significant for its breeding seabirds. The breeding populations of Laughing Gull Larus atricilla, Roseate Tern Sterna dougallii, Least Tern S. antillarum and Bridled Tern S. anaethetus are globally important. Those of Audubon's Shearwater Puffinus Iherminieri, White-tailed Tropicbird Phaethon lepturus, Magnificent Frigatebird Fregata magnificens, Brown Pelican Pelecanus occidentalis, Sooty Tern

S. fuscata and Brown Noddy Anous stolidus are regionally so. Brown Booby Sula leucogaster also breeds and the flats at Gilliam Bay support many shorebirds.

## Other biodiversity

Nothing recorded.

#### Conservation

North Atlantic Abaco Cays IBA is a mixture of private and crown ownership. Walker's Cay is protected as a national park and managed by BNT. This includes a large marine area as well as the cay. The rest of the IBA is unprotected. Many of the cays are uninhabited. Others are sparsely populated all or part of the year. Game and commercial fishing and tourism related activities are the primary occupation of the residents within the IBA. Threats include illegal egg collecting and hunting, clearance for development, pollution (from urban developments and visiting boaters), disturbance, and introduced alien predators.



Southern Abaco IBA embraces a large swathe of southern Abaco including the 8,296-ha Abaco National Park, and areas up to the east coast of southern Abaco, Hole-in-the-Wall at the southernmost tip of the island (where there are some low, coastal cliffs), and areas to the west of the park. Most of the IBA comprise undeveloped Caribbean pine *Pinus caribaea* forest and black land coppice.

#### **■** Birds

The IBA is significant for supporting the majority of the Abaco population of the Near Threatened Cuban Amazon ("Bahama Parrot") *Amazona leucocephala*. Surveys in 2006 estimated c.3,600 individuals. Based on a number of recent sightings, small numbers of the Near Threatened Kirtland's Warbler *Dendroica kirtlandii* are thought to winter in the IBA. The pine forests support good populations of four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar *Calliphlox evelynae*, Bahama Mockingbird *Mimus gundlachii*, Olive-capped Warbler *Dendroica pityophila* and Bahama Yellowthroat *Geothlypis rostrata*. The resident race of Yellow-throated Warbler *Dendroica dominica* also occurs, as do Cuban Emerald *Chlorostilbon ricordii* and Key West

Quail-dove *Geotrygon chrysia*. A regionally significant population of White-tailed Tropicbird *Phaethon lepturus* breed at Hole-in-the-Wall.

#### Other biodiversity

The Atala hairstreak butterfly *Eumaeus atala* (confined to southern Florida, Cuba and Bahamas) is abundant in the pine forests of southern Abaco.

#### Conservation

Over 40% of this IBA is protected within the Abaco National Park which was established in 1994, primarily to protect the "Bahama Parrot". The parrot nests in limestone sinkholes within the pine forest areas, but uses the coppice extensively for feeding. BNT has developed a management plan for the park, and for the parrot which is vulnerable to predation by feral cats, introduced racoons and other predators. Game and pig hunting takes place in the park and surrounding areas which are primarily privately owned and unprotected. Fire is a significant threat and has been the focus of significant conservation efforts. The parrot has also been the focus of much conservation and research attention.



## ■ Site description

Red Bays IBA it at the northernmost end of Andros island, on the west coast. It is centred on the settlement of Red Bay, the only settlement on the west coast of Andros. It was founded in the 1800s by Seminole Indians and escaped slaves from Florida. Sponge fishing is an active occupation as is the unique woven straw work produced by the residents. The IBA embraces a diverse area of Caribbean pine *Pinus caribaea* forest, broadleaf coppice, mangroves, shoreline scrub and beach. There is some small-scale agriculture (mostly slash-and-burn agriculture) with second-growth vegetation taking over abandoned areas.

#### Birds

This IBA supports regionally significant numbers of wintering Laughing Gull *Larus atricilla* and breeding Royal Tern *Sterna maxima*. Six (of the seven) Bahamas EBA restricted-range birds occur, including the Vulnerable Bahama Swallow

Tachycineta cyaneoviridis. The Near Threatened Whitecrowned Pigeon Patagioenas leucocephala is found in significant numbers. Other species such as Cuban Emerald Chlorostilbon ricordii, Western Spindalis Spindalis zena and Great Lizard-cuckoo Coccyzus merlini are present, and the endemic subspecies of Greater Antillean Oriole Icterus dominicensis northropi occurs in the coconut palm trees within the Red Bay settlement. A diversity of waterbirds frequents the coast.

# Other biodiversity Nothing recorded.

#### Conservation

Red Bays IBA is a mixture of crown and privately owned land and is unprotected. Local development (in the form of slash-and-burn to cultivate and build) is causing some habitat destruction, and there is disturbance to breeding seabirds.



San Andros Pond IBA is located in northern North Andros where it is situated within the security boundary at the San Andros Airport. It comprises a small freshwater pond with associated shrubland and coppice (but also cultivated fields and verges associated with the airport). The pond is immediately surrounded by overgrown vegetation. The IBA is situated within the airport security boundary.

#### Birds

This IBA supports a significant number of Vulnerable West Indian Whistling-duck *Dendrocygna arborea*. The current status of the ducks is unknown since the sides of the pond became overgrown thus precluding easy observation. The Vulnerable Bahama Swallow *Tachycineta cyaneoviridis* also occurs at the IBA in good numbers. Three (of the seven) Bahamas EBA restricted-range birds occur, namely Bahama

Woodstar *Calliphlox evelynae*, *T. cyaneoviridis* and Bahama Yellowthroat *Geothlypis rostrata*. The pond attracts a range of waterbirds while the coppice is important for wintering Neotropical migrant landbirds.

#### Other biodiversity

Nothing recorded.

#### **■** Conservation

San Andros Pond IBA is on a mix of crown and private lands, and is within the airport security boundary. Access is restricted within the airport boundary due to increased security measures, and the pond can only be visited by special permission. This provides the pond and the associated birds some degree of *de facto* protection. However, any expansion of the airport could easily destroy this IBA.



## ■ Site description

Stafford Creek to Andros Town IBA embraces a large tract of land extending along the north-east coast of Central Andros from the settlements of Stafford Creek in the north, through Staniard Creek and Coakley Town to Andros Town (also known as Fresh Creek) in the south. It encompasses the sandy beach flats, Caribbean pine *Pinus caribaea* forest, broadleaf coppice, wetland, and inland blue holes. In extends inland to include the Blue Hole National Park. The area is used for large scale domestic and commercial agriculture; fly, sport, and commercial fishing; and ecotourism, general tourism and research.

#### Birds

This IBA supports important populations of four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar Calliphlox evelynae, Bahama Swallow Tachycineta cyaneoviridis, Bahama Mockingbird Mimus gundlachii and Bahama Yellowthroat Geothlypis rostrata. Tachycineta cyaneoviridis is a Vulnerable species. Up to 85 Near Threatened Piping Plover Charadrius melodus have been recorded wintering along this stretch of coast. Other characteristic birds within the IBA include Great Lizard-

cuckoo Coccyzus merlini, Key West Quail-dove Geotrygon chrysia, Cuban Emerald Chlorostilbon ricordii and many others.

## Other biodiversity

The Vulnerable rock iguana Cyclura cychlura cychlura occurs throughout the pine and coppice areas.

#### **■** Conservation

Stafford Creek to Andros Town IBA is a mix of crown and private lands, most of which is unprotected. However, the western portion of the IBA (including areas of pine forest and coppice) is protected within the Blue Holes National Park (managed and being developed for visitation by the BNT). Offshore from the beaches (and just outside) of this IBA is the Andros Barrier Reef National Park. There are two research centres within the IBA: Forfar Field Station, midway between Stafford and Staniard Creeks, which is a field site of the International Field Studies Program; and the Bahamas Environmental and Research Centre located at Staniard Creek, a joint project of George Mason University and College of the Bahamas. Development and agriculture threaten vital habitats and hunting causes disturbance to the birds.



Owenstown IBA is in northern Central Andros, inland from the northern end of the Stafford Creek to Andros Town IBA (BS009). It comprises the former commercial lumber settlement of Owenstown, on the north bank of Stafford Creek, and includes the western portion of the creek. The town was abandoned after major deforestation of the native Caribbean pine *Pinus caribaea* forest in the 1970s and is now overgrown with landscaping vegetation and weeds. Some native trees have returned. The habitat immediately surrounding the town consists of pine forest, broadleaf coppice and coconut palms. The area remains uninhabited.

#### Birds

This IBA supports important populations of four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar *Calliphlox evelynae*, Bahama Mockingbird *Mimus gundlachii*, Olive-capped Warbler *Dendroica pityophila* and

Bahama Yellowthroat *Geothlypis rostrata*. Other characteristic birds within the IBA include the endemic subspecies of Greater Antillean Oriole *Icterus dominicensis northropi*, Greater Antillean Bullfinch *Loxigilla violacea*, Western Spindalis *Spindalis zena*, Northern Bobwhite *Colinus virginianus* and many Neotropical migrant warblers. Stafford Creek supports many waterbirds, including Black Rail *Laterallus jamaicensis*.

## Other biodiversity

Nothing recorded.

#### Conservation

Owenstown IBA is on crown land but is currently unprotected. As an abandoned town there are seemingly no threats although there has been little research in this area to support this assumption.



## ■ Site description

Mangrove Cay IBA lies between Middle Bight and South Bight in the middle of Andros, with Bog Wood Cay to the north, and South Andros Island to the south. Settlements are confined to the east coast of the island where a mangrove creek runs parallel to the seashore behind a sand dune. The west side of the island is uninhabited. The island consists of Caribbean pine *Pinus caribaea* forest, broadleaf coppice, freshwater blue holes, inland wetlands and mangroves and beaches. There is some agriculture practiced around the settlements.

## Birds

This IBA supports populations of four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar Calliphlox evelynae, Thick-billed Vireo Vireo crassirostris, Bahama Mockingbird Mimus gundlachii and Bahama

Yellowthroat *Geothlypis rostrata*. The IBA is also significant for the Near Threatened White-crowned Pigeon *Patagioenas leucocephala*. The mangrove creek supports wintering shorebirds and other waterbirds.

# Other biodiversity

Nothing recorded.

#### **■** Conservation

Mangrove Cay is a mix of private and crown land, but is currently unprotected. The communities of Moxey Town, Bastian Point and Lisbon Creek are expanding and the gradual development is resulting in habitat loss and fragmentation. The mangrove creek has been severely degraded in places by causeways and other obstacles cutting off the flow of water. There has been little research of conservation activity on Mangrove Cay.



Driggs Hill to Mars Bay IBA is on the eastern side of South Andros Island. From Driggs Hill at the northernmost tip of South Andros it runs south (following the road) for c.48 km through Congo Town, The Bluff, Kemp's Bay, over deep creek and Little Creek to Mars Bay in the south. The IBA extends c.5 km inland from the east coast, and embraces a number of blue holes including Rat Bat Lake and Twins, north of Congo Town airport, and Nine Tasks Blue Hole and Evelyn Green Blue Hole south of The Bluff. The IBA supports impenetrable shrubland coppice and unexplored wetlands, numerous creeks and a shallow shoreline with tidal flats. The human population is small and focus on low key agriculture, fishing and tourism activities

#### **■** Birds

This IBA supports populations of four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar Calliphlox evelynae, Thick-billed Vireo Vireo crassirostris, Bahama Mockingbird Mimus gundlachii and Bahama Yellowthroat Geothlypis rostrata. The IBA is also significant for the Near Threatened White-crowned Pigeon Patagioenas leucocephala. Mars Bay is important for wintering Near

Threatened Piping Plover Charadrius melodus. Other species present in the IBA include Great Lizard-cuckoo Coccyzus merlini, the endemic subspecies of Greater Antillean Oriole Icterus dominicensis northropi and the Bahamas only known nesting site for Cave Swallow Petrochelidon fulva (in limestone cavities in Nine Tasks Blue Hole and at Twins Blue Hole). The IBA also supports many waterbirds.

#### Other biodiversity

The Vulnerable Andros rock iguana Cyclura cychlura cychlura occurs in this IBA.

#### Conservation

Driggs Hill to Mars Bay IBA is a mix of private and crown land, but is unprotected. The ecosystem is currently relatively intact, although development is an ever-present threat while this IBA remains unprotected. The IBA is one of the premier *Patagioenas leucocephala* hunting sites in the Bahamas, and this should be monitored in relation to annual population estimates for this Near Threatened bird. Disturbance (by people and dogs) of shorebirds (especially *Charadrius melodus*) on the tidal beach flats is a problem that needs to be monitored and managed.



# **■** Site description

Goulding Cay IBA lies 3 km off the westernmost end of New Providence. It is directly offshore of Jaws Beach, near Lyford Cay. Goulding Cay is a 4-ha uninhabited offshore rocky cay with low coastline vegetation such as bay marigolds, bay lavender, bay cedar, sea purslane and railroad vines. The IBA includes all marine areas within 1 km of the cay.

#### ■ Rirds

This IBA is seabird colony. Regionally significant numbers of Bridled Tern *Sterna anaethetus* and Brown Noddy *Anous stolidus* nest on the cay each summer (May–August). Sooty Tern *S. fuscata* also breed on the cay.

# Other biodiversity

Nothing recorded.

## Conservation

Goulding Cay Wild Bird Reserve is crown owned land and legally recognised reserve, making hunting on the island illegal. However, formal protected status has yet to be granted by the government. The BNT Ornithology Group has been monitoring the seabirds since 2004 with little apparent change in the populations being counted each year. There is no evidence of egg collecting or indeed of the presence of rats *Rattus* spp. on the island, and disturbance from tourist and diving boats (the cay is a popular dive site, but landing is difficult) appears to be minimal.



Harrold and Wilson Ponds National Park IBA is in central New Providence, south-west of Nassau. It encompasses a large area of freshwater ponds with areas of mud, and fringing vegetation of reeds, sedge, broadleaf coppice and some pine lands. Being so close to the nation's capital agriculture and commercial and residential development had encroached on the site before it was designated a national park in 2002.

#### Birds

This IBA supports a diversity of species and is particularly important for its waterbirds. The population of Laughing Gull *Larus atricilla* is globally significant, while those of Gull-billed Tern *Sterna nilotica* and Royal Tern *S. maxima* are regionally so. Large numbers of cormorants, herons, egrets, ibises, ducks and shorebirds frequent the IBA. The Near Threatened Whitecrowned Pigeon *Patagioenas leucocephala* occurs, as does the Vulnerable Bahama Swallow *Tachycineta cyaneoviridis* which is one of three Bahamas EBA restricted-range birds to be found around the ponds.

# Other biodiversity

Nothing recorded.

## Conservation

Harrold and Wilson Ponds National Park IBA is a mix of crown and private lands. However, the area is now designated a national park under the management of the BNT. Being so close to Nassau, this IBA is an ideal educational and ecotourism site, and an interpretation and public use plan has been developed. Implementation of this plan has started (2007) and boardwalks, observation platforms and educational signage have been installed. The IBA still faces the threat of pollution from adjacent housing developments (and squatters) and dumping and infill to "reclaim" land. A commercial chicken farm has been closed down and the land will be annexed to the park. Invasive plants such as *Casuarina* and Brazilian pepper crowd out native species, but are the focus of a BNT invasive species management project in the park.



## ■ Site description

South Beach Tidal Flats IBA extends along c.3 km of New Providence's south-eastern coastline. It follows the line of Marshall Road, from Blue Hill Road, south-west towards Cay Point. The IBA is characterised by sand and limestone tidal flats, with rocky banks supporting low mangroves. It also includes some freshwater wetlands just inland of the beach, and shrublands adjacent to the beach.

#### Birds

This IBA is significant for its wintering population of the Near Threatened Piping Plover *Charadrius melodus*. The numbers of Laughing Gull *Larus atricilla* and Royal Tern *Sterna maxima* are regionally important. Large numbers of a wide diversity of shorebirds use this IBA as a stop-over site and as wintering habitat. Least Tern *S. antillarum* are common in the nesting season, migrant warblers and resident land birds

can be found in the shrubland along the shoreline, and the freshwater wetlands Marshall Road support a wide range of waterbirds.

# Other biodiversity

Nothing recorded.

## Conservation

South Beach Tidal Flats IBA comprises crown lands (the tidal zone) and private lands inland, none of which is currently protected. The population in this area is expanding rapidly leading to habitat destruction from development and disturbance of birds by people and dogs. The shoreline is a popular beach and picnic area, and it is also a favoured launching point for resident fishermen. Pollution from adjacent developments and illegal dumping are additional threats to this IBA.



Salt Cay IBA is an island c.5 km north-east of Nassau, and c.1.5 km north of the eastern end of Paradise Island. Also known as Blue Lagoon Island, it is the easternmost island in a chain of cays that extends towards Eleuthera. The island has been much altered over time. Originally supporting a salt marsh, this was dredged out in the 1900s and connected to the sea to make the lagoon. Over 5,000 palm trees were planted at this time. The eastern end of the island is a popular tourism and recreation destination. The western end is very narrow and rocky. The island, which is c.3 km long, supports shrubland and has a mix of sandy and rocky shoreline. The IBA includes marine areas up to 1 km from the cay.

#### Birds

This IBA is regionally significant for its population of Laughing Gull *Larus atricilla*. Many wintering shorebirds occur, and Roseate Tern *Sterna dougallii* is reported to nest

although numbers are unknown. White-cheeked Pintail *Anas bahamensis* nest on Salt Cay, but move their young to Paradise Island once they have fledged.

## Other biodiversity

Nothing recorded.

#### Conservation

Salt Cay IBA is privately owned and unprotected. The eastern end of the island is heavily used by day visitors (taking boat trips from Nassau). Dolphin Encounters—a natural seawater dolphin experience facility—is based around the lagoon and is one of the Bahamas' premier tourist attractions. Further development will impact three breeding seabirds. It is unknown what introduced predators are present on the island, although it is likely that rats *Rattus* spp. occur and are predating gull and tern eggs and chicks.



## ■ Site description

Booby Island ÎBA lies 22 km north-east of the eastern end of New Providence, towards the western end of the chain of cays that extends towards Eleuthera. It is north-east of Rose island. Booby Island is 3 km long and less than 100 m wide, and has a low, rocky coralline shoreline that makes access difficult. It supports minimal vegetation such as sea purslane, bay cedar and other salt resistant plants. The IBA includes marine areas up to 1 km from the island.

#### Birds

This IBA supports a number of breeding seabirds. The population of Roseate Tern *Sterna dougallii* is globally significant, while those of Laughing Gull *Larus atricilla*, Least Tern *S. antillarum* and Bridled Tern *S. anaethetus* are

regionally so. Brown Noddy *Anous stolidus*, Sooty Tern *S. fuscata* and Brown Booby *Sula leucogaster* also breed in the IBA. A range of shorebirds have been recorded.

# Other biodiversity

Nothing recorded.

## Conservation

Booby Island IBA is crown land but is unprotected. The BNT Ornithology Group visited the island to count breeding seabirds in September 2007 which could form the baseline for monitoring this important seabird island. Rats *Rattus* spp. and illegal egg collecting are potential but unconfirmed problems.



South Tarpum Bay IBA embraces the southern third of Eleuthera Island. It extends from Tarpum Bay and Winding Bay in the north for c.35 km through Rock Sounds to Bannerman Town at the southernmost end of the island. The IBA is a mosaic of small agricultural and fishing settlements, small agricultural plots, mature broadleaf coppice of varying heights, abandoned plantation, shrubland, coastal coppice and beach habitats.

#### Birds

This IBA supports the largest known concentration of wintering Near Threatened Kirtland's Warbler *Dendroica kirtlandii* which was discovered in the IBA in 2002. During the winter 2003–2004 at least 60 birds were recorded at 15 different locations in southern Eleuthera. The Near Threatened White-crowned Pigeon *Patagioenas leucocephala* also occurs in significant numbers, and four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar *Calliphlox evelynae*, Bahama Yellowthroat *Geothlypis rostrata*, Thick-billed Vireo *Vireo crassirostris* and Bahama Mockingbird *Mimus gundlachii* are present. Great

Lizard-cuckoo *Coccyzus merlini* and Greater Antillean Bullfinch *Loxigilla violacea* also occur.

## Other biodiversity

No globally threatened or endemic terrestrial species have been recorded.

#### Conservation

South Tarpum Bay IBA is a mix of crown and privately owned land, but none of it is protected. Habitat is being lost as a result of increased residential and resort development, and slash-and-burn land clearance is common. The BNT Ornithology Group discovered *D. kirtlandii* in this IBA in 2002 since when the species has been the focus of an intensive, multi-institutional research program (the Kirtland's Warbler Research and Training Program). The species' winter habitat preferences are for early successional fruiting scrub and low coppice. Wild sage (*Lantana involucrata* and *L. bahamensis*), West Indian snowberry (*Chiococca alba*), and black torch (*Erithalis fruticosa*) appear to be especially important and this should be considered in relation to any conservation management interventions.



## ■ Site description

Allan's Cays IBA is at the northern end of the Exuma Cays between Ship Channel Cay and Highborne Cay. It comprises three small, uninhabited cays, namely Allan's Cay, Southwest Allan's Cay and Leaf Cay. The shoreline of Allan's and Southwest Allan's Cays is comprised of mainly honeycomb limestone rock (including cliffs on Allan's Cay) and Leaf Cay has sandy soil and beaches. The cays support some areas of shrubland. The IBA includes marine areas up to 1 km from the cays.

#### Birds

The rocky cliffs on Allan's Cay support a regionally significant colony of Audubon's Shearwater *Puffinus lherminieri*.

## **■** Other biodiversity

The Vulnerable rock iguanas *Cyclura cychlura inornata* and *C. c. figginisi* occur on Leaf Cay and Southwest Allan's Cay. All iguanas are protected by law in the Bahamas.

## **■** Conservation

Allan's Cay IBA is crown owned but unprotected. The cays are a popular scuba-diving and snorkelling destination and there are daily powerboat trips to the cays from Nassau. There is a constant threat of disturbance to the birds and the iguanas by commercial and private boating activity, including from dogs taken ashore for exercise. *Puffinus Iherminieri* faces natural threats from resident Barn Owl *Tyto alba* and wintering Peregrine Falcon *Falco peregrinus*, but more worryingly rats *Rattus* spp. were confirmed as present in 2007.



Exuma Cays Land and Sea Park IBA embraces a large section of the northern Exumas. It stretches for 35 km from Wax Cay Cut in the north to Conch Cut in the south and includes Little Wax Cay, Shroud Cay, Hawksbill Cay, Cistern Cay, Warderick Wells, Halls Pond Cay, Bells Cay, Little Bells Cay and many others. The IBA boundary is the same as the land and sea park, and thus extends about 7.5 km either side of the cays. The cays support a variety of habitats including shrubland and low coppice, wetlands, mangroves, sandy and rocky beaches, tidal flats, low cliffs and coral reef. The park headquarters building and visitors centre is located on Warderick Wells.

#### Birds

This IBA supports a globally significant population of White-tailed Tropicbird *Phaethon lepturus* (primarily on the eastern cliffs of Shroud Cay, and the northern cliffs of Warderick Wells). The breeding population of Audubon's Shearwater *Puffinus lherminieri* on Long Rock (also called Long Cay) is regionally important, as are the breeding Least Terns *Sterna antillarum* (primarily on Warderick Wells). The mangroves support a range of waterbirds, and the restricted-range Bahama Mockingbird *Mimus gundlachii* and Thick-billed Vireo *Vireo crassirostris* occur in the shrubland.

## Other biodiversity

The Vulnerable Bahamian hutia *Geocapromys ingrahami* has been introduced on Little Wax Cay (where they have devastated the cay's vegetation) and Waderwick Wells (where the population is c.25,000). Critically Endangered hawksbill *Eretmochelys imbricata* and Endangered green *Chelonia mydas* and loggerhead *Caretta caretta* turtles forage in the park. The Endangered rock iguana *Cyclura riley rileyi* is (introduced) on Bush Hill Cay, and the Vulnerable *C. cychlura inornata* and *C. cychlura figginisi* are also present (introduced) on a number of cays.

#### Conservation

Exuma Cays Land and Sea Park IBA includes some privately owned islands, but all cays are covered by the regulations of the land and sea park which is managed by the BNT. It is the oldest land and sea park in the world (established in 1958) and since 1986 it has been managed as a strict no-take zone—nothing living or dead, can be removed from the park, which is essentially pristine. The IBA is a popular yachting (and tourist) destination resulting in some disturbance of nesting seabirds, although this threat is being actively managed by the BNT. Predation of nests and adult birds by rats *Rattus* spp. and other introduced predators is a problem.



## ■ Site description

Lee Stocking Island is in the southern Exumas, just north of Great Exuma Island. The island is c.7 km long. There are no roads on the island, but there is some settlement. The Hotel Higgins eco-resort is in the IBA, as are a marine research centre, and an airstrip. The island comprises sandy beaches, rocky areas, tidal flats, lagoons, wetlands, coral reefs and shrubland. There are two small freshwater ponds at the north end of the airstrip. The IBA includes marine areas up to 1 km from the island.

#### Birds

This IBA is significant for supporting a population of the Vulnerable West Indian Whistling-duck *Dendrocygna arborea* (which frequent the airstrip ponds), and the Near Threatened White-crowned Pigeon *Patagioenas leucocephala*. The restricted-range Bahama Mockingbird *Mimus gundlachii* and Thick-billed Vireo *Vireo crassirostris* occur along with other characteristic birds including Burrowing Owl *Athene cunicularia*, Greater Antillean Bullfinch *Loxigilla violacea* and a range of waterbirds.

## **■** Other biodiversity

The marine environment surrounding this IBA supports the Endangered Nassau grouper *Epinephelus striatus* and queen conch *Strombus gigas*, both of which are commercially valuable and are being studied by researchers based on the island. Critically Endangered hawksbill *Eretmochelys imbricata* and Endangered green *Chelonia mydas* and loggerhead *Caretta caretta* turtles forage in the IBA.

# **■** Conservation

Lee Stocking Island IBA is a mix of crown and privately owned lands, but is unprotected. The Caribbean Marine Research Centre is on the island and serves marine scientist from the USA and the Bahamas. Tourists from yachts can visit the centre. There is currently minimal development on the island and as long as it remains ecologically sensitive the threats to the IBA and its key species will be minimal. It is unknown whether rats *Rattus* spp. (or other predators) are a problem and this should be investigated.



Grog Pond IBA is situated c.16 km north-west of George Town on Great Exuma. It is bounded on the north by the Queen's Highway, and on the east, south and west by Bahama Sound Development. Grog Pond is an inland wetland. Grog Pond is a shallow, brackish water lake with clumps of black mangroves and fringing saltmarsh, buttonwood and coppice.

#### Birds

This IBA is significant for supporting a population of the Vulnerable West Indian Whistling-duck *Dendrocygna arborea*, and the Near Threatened White-crowned Pigeon *Patagioenas leucocephala*. The numbers of Laughing Gull *Larus atricilla*, Gull-billed Tern *Sterna nilotica* and Least Tern *S. antillarum* present in the IBA are regionally significant. The restricted-range Bahama Mockingbird *Mimus gundlachii* and Thick-billed Vireo *Vireo crassirostris* occur along with Greater Antillean Bullfinch *Loxigilla violacae* and a range of

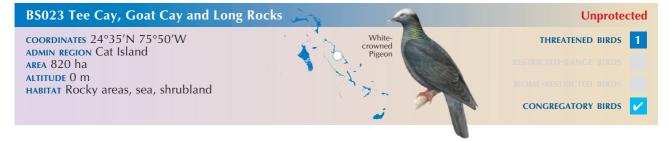
waterbirds including duck, herons, egrets, ibises and shorebirds

# Other biodiversity

Nothing recorded.

#### Conservation

Grog Pond IBA is privately owned and unprotected. It has the potential to become a community-led eco-tourism site, recreation area and a centre for students and adults to learn about the environment, and the BNT has been pursuing this concept. However, the surrounding coppice has been divided into residential plots and it appears that development is imminent. The area has been used as an illegal garbage dump (despite the "no dumping" signs). Hunting is also prevalent at this site, as is the collection of pond-stone by local builders for patios and walkways.



## ■ Site description

Tee Cay, Goat Cay and Long Rocks IBA is located between northern Cat Island and (to the west) Little San Salvador. The islands are physically nearer to (1–3 km from) Little San Salvador. Goat Cay lies north-east of Little San Salvador, Long Rocks lies due east, Tee Cay south-east. The cays are uninhabited limestone ridges partially covered with scrubland vegetation such as seagrape, cacti, haulback and other native plants. There is a sandy cove on Goat Cay. The IBA includes marine areas up to 1 km from the cays.

#### Rirds

This IBA is significant for its breeding seabirds. The population of Roseate Tern *Sterna dougallii* is thought to be globally significant and that of Bridled Tern *Sterna anaethetus* regionally so. Sooty Tern *S. fuscata*, Brown Noddy *Anous stolidus*,

Magnificent Frigatebird *Fregata magnificens* and Brown Booby *Sula leucogaster* are all thought to breed on the cays. The Near Threatened White-crowned Pigeon *Patagioenas leucocephala* has been reported nesting on Goat Cay.

## Other biodiversity

Nothing recorded.

#### **■** Conservation

Tee Cay, Goat Cay and Long Rocks IBA is poorly known and there is little direct information available except from boaters. Breeding season surveys of the seabirds are a clear priority. The cays are unprotected. The seabirds are prone to predation from introduced species (e.g. rats *Rattus* spp.) from visiting boats, and from refugees that are occasionally landed in the IBA.



Cat Island IBA is south-east of Eleuthera on the Atlantic edge of the Great Bahama Bank. The island is c.80 km long and just a few kilometres wide except at the southern end which broadens out to embrace the large, brackish Gambier Lake. A paved road runs the length of the island with a series of dirt roads crossing the island to the ocean side (locally called the "north shore"). There are a number of settlements along the road on the western shore. The 63-m Mount Alvernia is towards the south of the island and is the highest point in the Bahamas. The island supports a range of freshwater and saltwater wetlands, tidal flats, beach and adjacent broadleaf coppice.

#### Birds

This IBA is significant for its population of the Vulnerable West Indian Whistling-duck *Dendrocygna arborea*. The population of Laughing Gull *Larus atricilla* is globally important while those of Gull-billed Tern *Sterna nilotica* and Least Tern *Sterna antillarum* are regionally so. The terns breed at Gambier Lake which is also a nesting site for other terns,

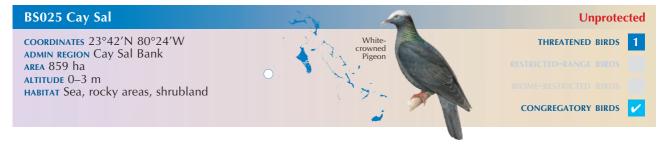
Reddish Egret Egretta rufescens and a range of waterbirds. Four (of the seven) Bahamas EBA restricted-range birds, namely Bahama Woodstar Calliphlox evelynae, Bahama Yellowthroat Geothlypis rostrata, Thick-billed Vireo Vireo crassirostris and Bahama Mockingbird Mimus gundlachii are present.

#### Other biodiversity

The Bahamian endemic Bahama pygmy boa *Tropidophis canus* occurs, as do a number of other snakes, lizards, frogs and freshwater turtles.

#### Conservation

The Cat Island Wetlands IBA is a mixture of crown and privately owned land, but is unprotected. Small scale farming (including corn, which *D. arborea* feeds on) and fishing supports most of the local population. However, local and international tourism has begun to grow on the island resulting in habitat destruction from urban development. Illegal hunting of birds is a problem, as are introduced predators.



## ■ Site description

Cay Sal IBA is located due south of Miami, midway between Florida and Cuba. It is closer to Florida and Cuba than to Andros. The IBA comprises Double Headed Shot Cays, Elbow Cay, Damas and Anguilla Cays and Cay Sal that are situated along the northern and eastern edges of the Cay Sal Bank. These cays are presently uninhabited, except as a harbour for yachts sailing between Cuba and Florida. The cays are rocky, with some sandy beaches, a saltwater lagoon on Cay Sal, and some low shrubland. The IBA includes marine areas up to 1 km from the cays.

## Birds

This IBA supports significant numbers of seabirds. The populations of Roseate Tern Sterna dougallii and Bridled Tern S. anaethetus are globally important, and those of Audubon's Shearwater Puffinus Iherminieri, Brown Pelican Pelecanus occidentalis, Royal Tern S. maxima, Sandwich Tern S. sandvicensis and Sooty Tern S. fuscata are regionally so. Other seabirds frequent the IBA as non-breeding residents. Elbow Cay is the main nesting cay for the seabirds. The Near Threatened White-crowned Pigeon Patagioenas leucocephala

breeds along with a small number of other resident landbirds. The IBA is an important stop-over site for Neotropical migratory landbirds and shorebirds.

# Other biodiversity

Critically Endangered hawksbill *Eretmochelys imbricata*, and Endangered green *Chelonia mydas* and loggerhead *Caretta caretta* turtles nest in the IBA. The Cay Sal anole *Anolis fairchildi* is endemic to the IBA, and the Bahama pygmy boa *Tropidophis canus* occurs.

## Conservation

Cay Sal IBA is crown land, but is currently unprotected. There are apparently plans to build a marina on Cay Sal which will inevitably lead to habitat loss and disturbance of the nesting seabirds. Elbow Cay has a fresh water cistern and refugees from Cuba frequently stop there, and have decimated the *Puffinus lherminieri* colony to obtain fresh meat. Introduced predators such as rats *Rattus* spp. are a potential threat, although it is not know whether they are present on the islands. The seabirds and the threats to them are seldom monitored.



Long Island and Hog Cay IBA lies south of Cat Island and south-east of the southern end of the Exumas. The island is about 128 km long and a maximum of 6.5 km wide. Hog Cay is a privately-owned island on the leeward side of northern Long Island. Long Island supports a variety of habitats including shrubland, coppice, freshwater and saltwater wetlands, mangroves swamps and tidal flats. Wetlands are scattered throughout the interior of the island and there are frequent roadside ponds. Fishing and farming are the main occupations of the local population.

#### Birds

This IBA is significant for supporting a large population of the Vulnerable West Indian Whistling-duck *Dendrocygna arborea* which roost on Hog Cay each night. The island's wetlands are also home to a diversity of waterbirds including ducks, herons, egrets and migratory shorebirds. Sandwich Tern *Sterna sandvicensis* and Roseate Tern *S. dougallii* breed on Hog and Galliott Cays. The breeding population of

Laughing Gull *Larus atricilla* is regionally important. The restricted-range Bahamas Mockingbird *Mimus gundlachii* and Thick-billed Vireo *Vireo crassirostris* also occur. A population of the Near Threatened White-crowned Pigeon *Patagioenas leucocephala* occurs, but the numbers involved are unknown.

#### Other biodiversity

The Near Threatened Gervais's funnel-eared bat *Nyctiellus lepidus* and Brazilian free-tailed bat *Tadarida brasiliensis* occur (along with a number of other bat species).

#### Conservation

Long Island and Hog Cay IBA is a mixture of crown and privately owned land, but none of it is protected. The owner of Hog Cay provided daily feed for the large flock of *D. arborea* which roost on the cay at night. Residential and urban development is leading to habitat destruction, and illegal hunting is a problem. Feral cats, wild goats and pigs are all common and are impacting the vegetation and nesting birds.



# **■** Site description

Conception Island IBA lies c.40 km south-west of San Salvador, midway between Cat Island and Rum Cay. It is c.5 km by 2.5 km and it encircles an interior lagoon. The island is uninhabited and comprises coral reefs, sandy beaches, rocky and low coralline cliff shores, mangrove, low scrub and coppice. Offshore to the east lies Booby Cay, and to the southwest is South Rocks. The island is an attractive destination for yachts. The IBA includes marine areas up to 1 km from the islands.

#### Birds

This IBA is characterised by its breeding seabirds. The population of White-tailed Tropicbird *Phaethon lepturus* is globally significant while those of Audubon's Shearwater *Puffinus lherminieri*, Bridled Tern *Sterna anaethetus* and Brown Noddy *Anous stolidus* are regionally so. Booby Cay has one of the largest colonies of Sooty Tern *S. fuscata* in the Bahamas (and is also where the *A. stolidus* nests). The restricted-range Bahama Mockingbird *Mimus gundlachii* and Bahama Woodstar *Calliphlox evelynae* are present and ducks,

herons and shorebirds are common in the interior lagoon. A population of the Near Threatened White-crowned Pigeon *Patagioenas leucocephala* occurs, but the numbers involved are unknown.

## **■** Other biodiversity

Critically Endangered hawksbill *Eretmochelys imbricata* and Endangered green *Chelonia mydas* turtles are common in the interior lagoon.

# **■** Conservation

Conception Island is owned by the crown and is protected as a national park under the management of the BNT. However, Booby Cay and South Rocks and the surrounding shallow water are not included in the protected area. Hunting and illegal egg collecting by boaters and fishermen stopping over on the island are significant threats to the breeding seabirds. The mouth of the lagoon is sometimes illegally blocked by fishermen in order to catch fish and turtles trapped in the interior.



Graham's Harbour IBA lies off the north coast of San Salvador where several pristine cays are found in the "harbour's" shallow waters. The area is characterised by shallow reefs and rock throughout the bay, with White Cay nearest the reef edge, Green Cay on the north-western side, and Gaulin, Cato and Cut cays near to the north shore of San Salvador. The cays are uninhabited with rocky shorelines and some sandy beaches, and supporting low scrub.

#### Birds

The cays in Graham's Harbour are important seabird colonies. Regionally significant populations of Brown Booby *Sula leucogaster* and Bridled Tern *Sterna anaethetus* nest on Green Cay, which also supports some breeding Magnificent Frigatebird *Fregata magnificensis*. Frigatebirds and Brown Booby *Sula leucogaster* nest on White Cay, and Brown Noddy *Anous stolidus*, *Sterna anaethetus* and Sooty Tern *S. fuscata* 

nest on Gaulin and Cato Cays, albeit not in significant numbers.

## Other biodiversity

About 250 Endangered rock iguanas *Cyclura rileyi rileyi* were living on Green Cay in 1997.

#### Conservation

Graham's Harbour IBA is a mix of crown and privately owned land and is currently unprotected. However, the BNT has targeted this area as a potential national park and a managed ecotourism site. Invasive plants (that crowd out native flora) are a potential threat that needs monitoring as it would ruin the pristine state of the cays. Similarly, invasive predators such as rats *Rattus* spp. could deplete the seabird populations. The arrival of such alien invasives should be monitored for, along with the seabird populations. Visitation by tourists needs to be well controlled to avoid disturbance to nesting seabirds.



## ■ Site description

Southern Great Lake IBA embraces the saline wetland that occupies a large proportion of the interior of southern San Salvador. The wetlands are extensive and largely unobserved or explored due to the difficulty of access. The wetland is surrounded by dry shrubland and there are fringing mangroves. San Salvador is a small island (8 km by 19 km) with less than 1,000 people resident. The southern wetlands are therefore little disturbed.

#### Birds

This IBA supports globally significant breeding populations of Gull-billed Tern *Sterna nilotica* and Laughing Gull *Larus atricilla*. The Great Lake is home to a wide diversity of waterbirds including the endemic diminutive race of Double-crested Cormorant *Phalacrocorax auritus*, egrets and herons. Four (of the 7) Bahamas EBA restricted-range birds, namely Bahama Woodstar *Calliphlox evelynae*, Pearly-eyed Thrasher *Margarops fuscatus*, Thick-billed Vireo *Vireo crassirostris* and

Bahama Mockingbird *Mimus gundlachii* are present. The endemic race of West Indian Woodpecker *Melanerpes superciliaris* is present in the IBA.

## Other biodiversity

The Endangered rock iguanas *Cyclura rileyi rileyi* is found in the interior lake areas. An endemic blind snake *Leptotypholops columbi* is present.

#### Conservation

Southern Great Lake IBA is crown land, but is currently unprotected. An observation platform overlooking the northern end of the lake (near Cockburn Town) is the only easily accessible viewing point and thus the wetland and the populations of its waterbirds are poorly known. Resort development is an ever present (but as yet unrealised) threat. The expanded airport at Cockburn Town has recently caused considerable habitat destruction although this has not impinged on the lake system.



Sandy Point IBA is located at the south-western tip of San Salvador. The IBA includes residential areas (a subdivision of an urban development called "Columbus Landing"), the ruins known as Watling's Castle and surrounding shrubland. However, the primary interest is the sandy beaches.

#### Birds

The beaches in this IBA support a regionally important population of Least Tern *Sterna antillarum*. Many *Charadrius* spp. plovers use the beaches too. The surrounding shrubland is home to four (of the 7) Bahamas EBA restricted-range birds, namely Bahama Mockingbird *Mimus gundlachii*, Bahama Woodstar *Calliphlox evelynae*, Pearly-eyed Thrasher *Margarops fuscatus* and Thick-billed Vireo *Vireo crassirostris*.

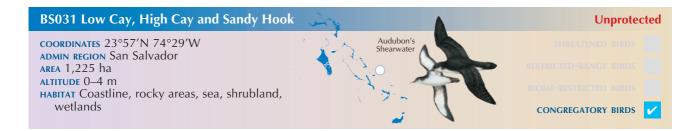
The endemic race of West Indian Woodpecker *Melanerpes* superciliaris also occurs.

# Other biodiversity

Nothing recorded.

#### Conservation

Sandy Point IBA is a mix of crown and privately owned land and is unprotected. The beaches are public and are a popular destination for tourists and locals from the residential community within the IBA. The recreational traffic on the beaches poses a serious threat to the nesting *S. antillarum*. Predation from household pet cats and dogs, and also from introduced predators such as rats *Rattus* spp. is also a problem.



## **■** Site description

Low Cay, High Cay and Sandy Hook IBA is at the south-eastern end of San Salvador. Sandy Hook is a subdivision of an urban development called "Columbus Landing". It is a peninsula with the sandy Snow Bay Beach on it eastern side, and Pigeon Creek (a tidal lagoon) to its north and west. Low and High Cays are small rocky cays located 0.5–1 km offshore to the south-east of Sandy Hook. Pigeon Creek supports mangrove and there is some shrubland on Sandy Hook, but the primary habitats of importance are the sandy beaches and rocky cays. The IBA includes marine areas 1 km from the shore and from the cays.

#### Birds

This IBA is home to regionally significant populations of breeding Least Tern *Sterna antillarum* (on the beaches at Sandy Hook), and Audubon's Shearwater *Puffinus lherminieri* and Bridled Tern *S. anaethetus* (on the offshore cays). Mixed

flocks of seabirds, including (additionally) Roseate Tern S. dougallii, Sooty Tern S. fuscata and Brown Noddy Anous stolidus are seen feeding close to the mouth of Pigeon Creek in the fall.

## Other biodiversity

Nothing recorded.

#### **■** Conservation

Low Cay, High Cay and Sandy Hook IBA is a mix of crown and privately-owned land. The residential development at Sandy Hook is likely to be further expanded which will cause inevitable habitat destruction and increase the disturbance to birds on Snow Bay Beach. The cays are visited by tourists (on jet skis) from the Club Med Resort. Local "guides" use the cays for commercial purposes. This visitation is unregulated and will cause inevitable disturbance to the nesting seabirds. It is unknown whether rats *Rattus* spp. are present on the cays.



Samana Cay is located 32 km north-east of Crooked Island (Crooked and Acklins islands). It is a small island (c.16 km by 3 km) completely surrounded by coral reefs and with a small offshore islet—Propeller Cay—situated off its eastern end. The cascarilla tree *Croton elutaria* grows profusely on the island. Samana Cay is uninhabited (although there is evidence of Lucayan inhabitants present up until the 1500s). However, it is visited frequently by locals for fishing and collecting cascarilla bark. There is no fresh water on the cay. The IBA includes marine areas up to 1 km from the cay.

#### Birds

A globally significant population of Bridled Tern *Sterna anaethetus* nests on Propeller Cay, along with a range of other seabirds including Audubon's Shearwater *Puffinus lherminieri*,

Sooty Tern *S. fuscata* and Brown Noddy *Anous stolidus*. A regionally important population of Royal Tern *S. maxima* breeds in the IBA. Brown Booby *Sula leucogaster* has been found roosting on Propeller Cay although there is no evidence of breeding.

## Other biodiversity

Nothing recorded.

#### Conservation

Samana Cay is crown land but is unprotected. Disturbance to seabirds is likely to be caused by visitors (locals collecting bark and fishing and boaters). There is some local, small scale farming practiced on the island, and refugees land on the island seeking food and shelter. It is unknown whether rats *Rattus* spp. are present on the cays.



## ■ Site description

Cay Lobos IBA is a minute cay (c.250 long) located on the southern edge of the Great Bahama Bank, c.32 km north of Cuba's Cayo Romano. The cay (which is in Bahamian territorial waters) is uninhabited. The Cay Lobos lighthouse was built on the island in 1860, and this is the dominant feature. A small area of low shrubland surrounds the lighthouse, but the rest of the cay comprises sandy beach and surrounding reef.

#### Birds

This IBA supports a globally significant breeding population of Roseate Tern *Sterna dougallii*, and regionally important populations of Least Tern *S. antillarum* and Bridled Tern *S. anaethetus*. Many Neotropical migratory birds were collected on the island (attracted by the light of the lighthouse)

between 1899 and 1901, but there is little subsequent information on the landbirds using this site.

## **■** Other biodiversity

Nothing recorded.

## **■** Conservation

Cay Lobos is crown land but is unprotected. There is no threat of development on the island which is, however, a stopping point for fishermen (both Bahamian and Cuban) who inevitably disturb the breeding seabirds. Illegal egg collecting and killing of the birds by refugees and fishermen is thought to be a threat to the seabird populations. It is unknown if rats *Rattus* spp. are present on the cay. Scuba-divers visit the cay to dive on the surrounding reefs.



Cay Verde IBÅ is an isolated cay at the south-easternmost edge of the Grand Bahama Bank, 48 km east of Greater Ragged Island and 110 km west of the southern tip of Acklins Island. It covers about 16 ha and supports extensive growth of sea grape *Coccoloba uvifera*, prickly pear *Opuntia sp.* and sea lavender. However, there is no fresh water on the cay, and it is uninhabited. The IBA includes marine areas up to 1 km from the cay.

#### **■** Birds

This IBA supports a large seabird colony. The breeding populations of Magnificent Frigatebird *Fregata magnificens* (99 pairs) and Brown Booby *Sula leucogaster* (550 pairs) are regionally significant although these estimates (made in 1979) were 60% lower than counts done in 1907. Other seabirds nest

on the island including Sooty Tern Sterna fuscata, Bridled Tern S. anaethetus, Brown Noddy Anous stolidus and Audubon's Shearwater Puffinus lherminieri although there is no recent data.

# **■** Other biodiversity

Nothing recorded.

#### Conservation

Cay Verde IBA is crown owned but is unprotected. Illegal egg collecting and killing of the birds by refugees and fishermen is thought to be a threat to the seabird populations. It is unknown if rats *Rattus* spp. are present on the cay. With little recent information concerning the status of the island and its seabirds, this IBA should be a target for monitoring expedition.



## ■ Site description

Mira Por Vos IBA comprises a series of uninhabited rocky islands and shoals spread across c.100 km². It is located c.14 km south-west of Salina Point, Acklins. South Cay supports a pond and North Rock one of the main seabird colonies.

## Birds

This IBA is home to many seabirds. The breeding populations of Brown Booby *Sula leucogaster* (on North Rock) and Audubon's Shearwater *Puffinus lherminieri* are regionally significant. Sooty Tern *Sterna fuscata*, Bridled Tern *S. anaethetus* and Brown Noddy *Anous stolidus* also breed in

the IBA. Caribbean Flamingo *Phoenicopterus ruber* and Reddish Egret *Egretta rufescens* have been seen at a pond on South Cay.

# Other biodiversity

Nothing recorded.

# Conservation

Mira Por Vos IBA is crown land but is currently unprotected. Little is known about the threats to the islands and their seabirds, but it is possible that refugees and fishermen land on the rocks to take eggs and birds for food. It is unknown if rats *Rattus* spp. are present on any of the islands.



Guana Cays IBA comprises a group of small cays (including North Cay, Fish Cay and Guana Cay) and associated rocks and reefs. The cays are aligned in a loose chain across the south-western reef edge and entrance to the Bight of Acklins, lying between Crooked Island's Long Cay to the north and Binnacle Hill on Acklins Island to the south. They are assumed to be uninhabited, have rocky (coralline) coastlines, and support some scrub vegetation. The IBA extends to include marine areas up to 1 km from the cays.

#### Birds

This IBA supports a range of seabirds. The breeding colonies of Sandwich Tern *Sterna sandvicensis* and Roseate Tern *S. dougallii* are globally significant, while those of Least Tern *S.* 

antillarum, Bridled Tern S. anaethetus and Magnificent Frigatebird Fregata magnificens are regionally so.

## Other biodiversity

Nothing recorded, although it is likely that globally threatened sea-turtles are present.

#### Conservation

Guana Cays IBA is crown land but is unprotected. The cays are poorly known in terms of their biodiversity, and an up-to-date assessment of their seabird populations is needed. Any such visit should assess current threats to the IBA such as disturbance from tourists (scuba divers, bone-fishers) and fishermen, or indeed the potential presence of predators such as rats *Rattus* spp.



## ■ Site description

Booby Cay IBA lies less than 500 m offshore from the easternmost end of the isolated Mayaguana Island. This uninhabited cay covers only c.75 ha, and dips in the centre of the island have formed two ponds which shrink and grow in water level and salinity according to rainfall (although they occupy c.30% of the island). There is a sandy beach along the north-western shore, and the south-east portion of the cay supports impenetrable shrubland coppice vegetation. Buttonwood, cacti and other plants grow around the central ponds.

## Birds

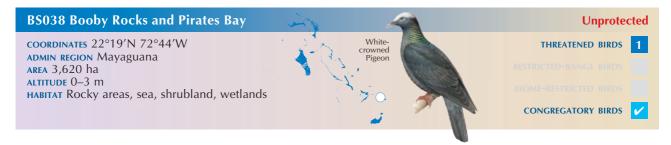
This IBA supports a regionally significant population of Brown Booby *Sula leucogaster*. It is unknown if other seabirds breed on the island. There are reports of up to 80 non-breeding Caribbean Flamingo *Phoenicopterus ruber* on the cay (presumably part of the resident non-breeding flock on Mayaguana).

## **■** Other biodiversity

A subspecies of the Critically Endangered Bahamas rock iguana *Cyclura carinata bartschi* is endemic to Booby Cay (although in 1998 a colony was established on Mayaguana).

## **■** Conservation

Booby Cay IBA has been leased by the crown to a private individual who established the goats on the island that have significantly impacted the vegetation. There is no protection afforded this cay, although the BNT has proposed that it be included in the national parks system on the basis of the presence of the iguana and the breeding seabirds. Some goats have been removed, but this action needs to be completed to safeguard the island's biodiversity. Local conch fishermen occasionally overnight on the island. The status of introduced predators including cats and rats *Rattus* spp. is unknown.



Booby Rocks and Pirates Bay IBA is located on the north-western tip of the isolated Mayaguana Island. Booby Rocks are a cluster of rocks c.400 m offshore from the rocky shore of Northwest Point, at the head of the wide shallow Pirates Bay. Sandy beaches extend along Pirates Bay to Blackwood Point at the north-eastern tip of the bay. The IBA includes marine areas up to 1 km from the shore and Booby Rocks, and also the shallow mangrove wetlands (with adjacent coppice) lie on the landward side of the bay.

#### Birds

This IBA supports a range of seabirds, all in regionally significant populations. There is a Brown Booby Sula leucogaster nesting colony on Booby Rocks, and White-tailed Tropicbird Phaethon lepturus nest on the cliffs at Northwest Point. Non-breeding numbers of Brown Pelican Pelecanus occidentalis, Masked Booby Sula dactylatra and Royal Tern Sterna maxima are also regionally important. Magnificent Frigatebird Fregata magnificens nest in the IBA. The wetlands

support shorebirds, ducks, herons and egrets. Reddish Egret Egretta rufescens is apparently common, and up to 200 Caribbean Flamingo Phoenicopterus rubber frequent the wetlands at Blackwood Point. The Near Threatened Whitecrowned Pigeon Patagioenas leucocephala breeds in the IBA.

# Other biodiversity

Nothing recorded.

## **■** Conservation

Booby Rocks and Pirates Bay IBA is unprotected crown and private land. A mega resort development started to be built in 2006. It includes plans to connect the wetlands to the sea for a commercial marina in the north-western corner of the island (within the IBA) which will have a serious impact on the natural vegetation and these currently undisturbed fresh and salt-water habitats. It is unknown if predators are present on Booby Rocks, or indeed if there are other threats impinging on the seabird populations within the IBA.



## ■ Site description

Great Inagua IBA embraces the entire island of Great Inagua—the southernmost (and third largest) island in the Bahamas, lying just 90 km north-east of the easternmost tip of Cuba. The island is c.90 km by 30 km, and Lake Rosa occupies c.30% of the western end. Lake Rosa is a permanent shallow brackish lake, up to 1.5 m deep with small islands scattered throughout. It is fringed with brackish marshes, and dense mangrove swamps on the northern and eastern borders. The rest of the island comprises seasonal marshes, open shrubland and broadleaf coppice on the higher ground. The western portion of Lake Rosa is managed for commercial salt production.

#### Birds

This IBA is home to a wide diversity and large numbers of waterbirds. Over 40,000 Caribbean Flamingo *Phoenicopterus ruber* occur (the largest colony outside of Cuba), and populations of Reddish Egret *Egretta rufescens*, Roseate Tern *Sterna dougallii*, Common Tern *Sterna hirundo* and the Vulnerable West Indian Whistling-duck *Dendrocygna arborea* are globally significant. A number of other waterbirds are present in regionally important numbers. Over 6,000 Near

Threatened Cuban Amazon ("Bahama Parrot") *Amazona leucocephala bahamensis* occur on the island, and there are records of the Vulnerable Bahama Swallow *Tachycineta cyaneoviridis* although numbers involved are unknown.

## Other biodiversity

Critically Endangered hawksbill *Eretmochelys imbricata* and Endangered green *Chelonia mydas* turtles are present, and the endemic Inagua freshwater turtle *Chrysemys malonei* occurs.

# **■** Conservation

Great Inagua is a mix of crown and private land. About 50% of it is protected within the Inagua National Park (which is also designated a Ramsar site), although the park has just one warden to manage and monitor it. Recognising these issues, the BNT has been working with the local Sam Nixon Bird Club (a Site Support Group) to monitor the IBA and its birds and to develop micro-enterprises to assist in the establishment of ecotourism on the island. Wild pigs, donkeys and cats all represent a threat to the natural vegetation and nesting waterbirds. Occasional unauthorised hunting occurs within portions of the national park.