



# Report on 10 years of activities in BELIZE (Central America)

A synthesis of the

**BACKGROUND,  
AIMS, ACHIEVEMENTS  
AND PROSPECTS**

of the

***International Tropical  
Conservation Foundation***  
(Neuchâtel-Switzerland)

and the

***Shipstern Nature Reserve***  
(Corozal District, Belize)

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Belize City, June 2000  
(revised 2006)

# I Introduction

## 1990-2006 A touch of history: From the mountains of Switzerland to the northern plains of Belize.

How does a small Swiss and European organisation dedicated to the protection of tropical nature get involved in Belize? The story of the International Tropical Conservation Foundation started because of butterflies! In 1988, the tropical butterfly garden Papiliorama of Marin/Neuchâtel in Switzerland opened its doors to the public. For the first time in Swiss history, the public had the opportunity to admire live tropical butterflies flying under an artificial dome, even during snowy winters. Papiliorama has become a major tourist attraction in Switzerland and has welcomed over 3'350'000 visitors since its inauguration. In 1995, it was completely destroyed by a fire but was rebuilt and re-opened in September of that same year, just a few months after its sister-exhibit, the Nocturama, had been inaugurated. This latest addition to Papiliorama, built also in the shape of a bio-dome, offers visitors a unique opportunity to walk through a tropical american forest at night...but during daytime! This was achieved by artificially reversing the day/night cycle. Many animals that live in the Nocturama are also found in Belize. In 2003, the Papiliorama Swiss Tropical Gardens moved to Kerzers, near Bern, the capital of Switzerland.



Papiliorama Swiss Tropical Gardens /  
Kerzers, Switzerland.

From the very beginning, the main objectives behind the creation of the Papiliorama-Nocturama tropical gardens have been to allow European visitors to catch a glimpse of the astounding diversity of animal and plant life found in the tropics. Of course, one may argue that many books and films about tropical forests are readily available. However, is there anything like experiencing it for oneself ? In 1995, the Papiliorama-Nocturama Charitable Foundation was created. Its objectives remained unchanged, albeit now applied on a nation-wide basis. Since its creation, the Papiliorama-Nocturama Foundation has offered free guided tours through its expositions to more than 10'000 schoolchildren. During such tours, children are taught why it is so important to save tropical nature and biodiversity, although they are many thousands of miles away.



Papiliorama: a tropical garden...  
...in a snowy country.

Displaying tropical biodiversity in a living museum has helped to raise the awareness of its importance for the planet's natural balance. However, from the beginning, another step was deemed essential: a concrete contribution towards the protection of nature in tropical countries, where financial means for conservation are often lacking. In late 1989, the Papiliorama Foundation was offered the unique opportunity of purchasing a large parcel of pristine land in Northern Belize. To this end, as well as for legal reasons, a new sister-foundation was created under the name of :

The **INTERNATIONAL TROPICAL  
CONSERVATION FOUNDATION  
(ITCF).**

## II Preserving Biodiversity

### 1990 : Shipstern Nature Reserve

In 1990, the newly created ITCF, with very little funds to start with, obtained a substantial loan from the Papiliorama Foundation, which allowed the acquisition of a large parcel of land in the south-eastern part of the Corozal District. This land, which lies south of the Chunox-Sarteneja road, was previously owned by a British Limited Company which partly managed the area as a private reserve. Known then as the Shipstern Wildlife Preserve, the name was changed into *Shipstern Nature Reserve*. Simultaneously, the *Shipstern Nature Reserve (Belize) Limited (non profit company)* was created to hold the land and manage the reserve.



The very rare palm  
*Pseudophoenix  
sargentii sargentii*

Numerous forest "islands" amidst vast areas of dwarf mangroves and saline wetlands give Shipstern Nature Reserve its special touch. This "savannah", as it is locally known, is covered with many animal tracks, the soft and swampy earth recording all animals passages, mostly between forest islands. Visitors can easily see tracks of deer, puma, jaguar, tapir etc...



Forest « islands »  
amidst saline wetlands.

*Shipstern Nature Reserve* was soon to play a key-role in the network of Belizean protected areas. Although the northern part of Belize (east of the northern highway) contains large forested areas teeming with wildlife, it is unfortunately one of the least protected parts of Belize. The importance of the reserve's geographical position within the national network was soon to be enhanced by the discovery of an astounding flora and fauna, unique or very rare for Belize.

The reserve covers 22'000 acres (approx. 9'000 hectares) and consists of two parts. It is covered for one third by the Shipstern Lagoon, one third by dwarf mangroves and saline wetlands and, finally, one third by tropical forest. Shipstern Lagoon is very shallow, never exceeding 2-3 ft in depth, and dotted by many mangrove islands, some of which support colonies of various bird species (see below).



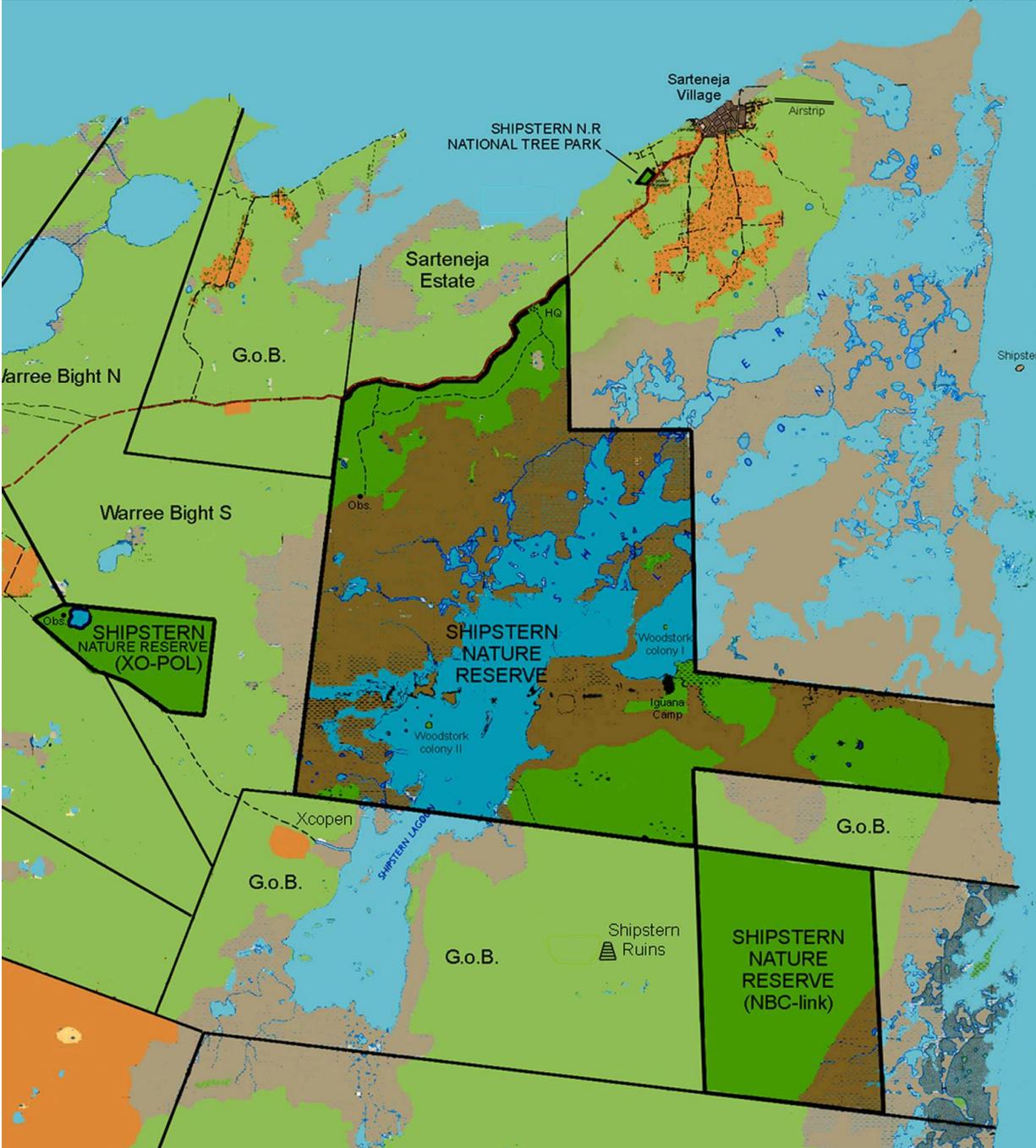
Shipstern Lagoon, with Seaman's Caye  
in the background.

The forests of Shipstern Nature Reserve and those found around Sarteneja Village are of high conservation value, as they are unique for mainland Belize. As a matter of fact, a small patch of tropical dry forest, not exceeding 20 km<sup>2</sup> (12 sq. miles), occurs in the area, half of which is to be found within the reserve's boundaries. This forest belongs to a type found further North in Yucatan, Mexico, and is generally referred to as "low deciduous forest with *Pseudophoenix sargentii*". *Pseudophoenix sargentii* is a palm tree resembling a small royal palm. In addition, many

# Shipstern Nature Reserve

Corozal District (South-East)

Belize, Central America





**Mangrove wetland with sedges**

other plant species grow only in this forest type and are unique for Belize. Furthermore, the distribution of this forest is very patchy throughout the Yucatan Peninsula, and therefore very vulnerable to destruction. This forest type occurs, as far as it is known, only in the following areas :

⇒ in the Bacalar Chico National Park and Marine Reserve, on Ambergris Caye.

⇒ near Tulum, where it is

threatened by urbanisation for mass-tourism

⇒ near Cancun and Merida, both in small patches.

This patchy distribution is, as yet, poorly understood. This forest type seems only to establish itself when a conjunction of various factors (such as very low rainfall, poor soils, proximity to the sea, etc.) occurs.



**Shipstern Lagoon**

## 1990 : inauguration of The Chiclero Botanical Trail

In 1990, a botanical trail was added to the reserve's visitor's centre. This 0.5 mile trail, named in honour of the chicle gatherers, loops around the headquarters through various vegetation formations, such as deciduous dry forest, swamp forests and semi-evergreen yucatan forest. Originally, the trail included approximately 40 species, labelled with scientific and Mayan names. Today, following several botanical studies, this number now exceeds a hundred. Many plant species of Shipstern Nature Reserve are new for Belize, which is not surprising considering that the area had never been thoroughly investigated. A few of these Yucatan plant species are found, on mainland Belize, only in Shipstern Nature Reserve and the surroundings of Sarteneja Village.



**The beginning of the Chiclero Botanical Trail, close to the headquarters of Shipstern Nature Reserve.**

## 1991 : the American Woodstork returns



**Seaman's Caye with a speckling of woodstorks, as seen from the air in 1992**

The reserve manager and staff, while flying over the reserve in February 1991, discovered a mangrove island in the middle of the reserve, covered with white birds! An expedition to the lagoon, organised shortly afterwards, uncovered a fairly large and newly established colony of the American Woodstork, on an island locally known as Seaman's Caye. This large bird was once common in Belize, but its populations had been seriously depleted by people harvesting the unfledged young, which were often sold on markets as "lagoon chicken". Albeit the species has been under protection for quite some years, its populations are only slowly recovering. Soon after this encouraging discovery, action was taken to ensure that the newly

established colony would not be disturbed again. A camp was set-up in a nearby forest island on the shore of the lagoon, which was baptised Iguana Camp. This camp allowed for a round the clock watch of the birds, from January until June, when all young are fully fledged. This protection programme was initially sponsored by the newspaper of Neuchâtel, Switzerland, for three years, after which the protection of the woodstorks was included in the yearly budget of the Shipstern Nature Reserve. In 1999, funds provided by the Northern Biological Corridor Project allowed for a complete renovation of the site. A two-storey building has replaced the original hut, providing decent habitation to the wardens who live at the camp for a period of 6 month every year. It also includes rooms for tourists who wish to stay an overnight at the camp, a kitchen, a bathroom with shower and a composting toilet. Today, the woodstork colony is still growing, totalling approximately 500-600 birds. This growth demonstrated the value of full-time protection in the frontline of conservation. A second island was colonised in 1998, the number of breeding pairs in the whole colony now probably exceeding 300. The main colony is expected to "bud" again soon into a third colony on another island.



**American woodstorks flying over the Shipstern Nature Reserve colony**

## **1994 : Shipstern Nature Reserve enlarged with the Xo-Pol area**



**The observatory at the Xo-Pol ponds, within the 600 acres parcel, now part of Shipstern Nature Reserve**

In 1994, the Swiss Doron Prize received by the President of the ITCF to honour his lifelong commitment towards conservation enabled the Foundation to purchase 600 hectares (approx. 1500 acres) of land to the West of Shipstern Nature Reserve. This area, known as the Xo-Pol parcels, is a very important addition towards Shipstern Nature Reserve, as several freshwater bodies occur within its boundaries. Many animals (such as Tapir, Jaguar, Ocelot and Deer among others) use these ponds and marshes as drinking places, while bird species such as the White Ibis, the Woodstork and

many others use them as feeding grounds. A fairly large population of Morelets crocodiles also inhabit the Xo-Pol ponds, and this has contributed towards its success among visitors. A tree-top observatory funded by the Swiss Agency for Cooperation and Development (DDC) has been constructed on the western shore of the main pond and allows visitors to quietly watch the abundant wildlife, without causing disturbances.



**The view from the observatory. The Xo-Pol ponds harbour over 40 specimens of Morelet Crocodile, according to the latest estimations**

## 1996 : Bacalar Chico National Park & Marine Reserve created

Fernando Alamilla, a fisherman of Sarteneja Village, expressed, as early as 1992, the idea to see the Bacalar Chico region developed into a National Park and Marine Reserve. This area, encompassing the whole of the northern part of Ambergris Caye up to the Mexican border, includes many different habitats such as tropical forests, island lagoons and coral reefs. Its near pristine condition made it a favourite spot for tourists to be taken to. Mr. Alamilla had been doing so for many years and was thus in a position to raise the alarm when the site became seriously depleted because of overfishing.



**Bacalar Chico National Park and Marine Reserve, protecting the northern part of the Belizean Barrier Reef.**

What was at first a dream soon became a serious project: the ITCF started assisting the Belize Coastal Zone Unit in the establishment of a protected area in and around the Bacalar Chico region. After several months of negotiations, a grant obtained from the European Union provided funds for the first three years of a project prepared by the Coastal Zone Management Program in collaboration with the Fisheries and Forestry Departments of Belize.

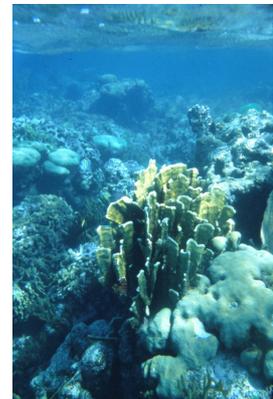
The ITCF channelled the funds through to Belize, while also providing technical assistance and administrative support through its permanent representative in the country. The Bacalar Chico National Park and Marine Reserve was declared open on the 23<sup>rd</sup> of August, 1996. Less than a year later, it was also included in the Belizean network of the UNESCO World Heritage



**Rocky Point, where the land and the reef meet...**

Sites. Presently, the ITCF is a member of the Bacalar Chico NP & MR Advisory Committee and maintains close links with the reserve staff. Because all of the beachfront property was privately owned, the reserve staff had to build their headquarters on the lagoon side of the island on national lands within the reserve. In 1997, ITCF assisted the reserve by purchasing a parcel of beachfront property. With the assistance of Raleigh International, a rangers headquarters with dock and lookout tower was built on this property. ITCF is further promoting the reserve and the

development of eco-tourism in the area by constructing a large screened "sleeping porch" on the property to accommodate overnight visitors to the reserve..



**Corals in the Bacalar Chico Marine Reserve**

## 1999 Helping the Saltwater Crocodile

Belize is recently emerging as being the last refuge for the endangered Morelet Crocodile (*Crocodylus moreletii*). The species is now officially protected, and populations are recovering well, as shown by the large numbers found in the Xo-Pol part of Shipstern Reserve. The other Belizean crocodile species, the Saltwater Crocodile (*Crocodylus acutus*) is also protected by the laws of Belize. However its populations, as scientific studies have shown, do not seem to be recovering as well as those of the Morelet's Crocodile. In 1999, the *Belize Saltwater Crocodile Recovery Programme* was set-up in conjunction with the Belize Crocodile Crèche of Sarteneja.



**Young saltwater crocodile at the Belize Crocodile Crèche of Sarteneja**

The principles behind the Belize Saltwater Crocodile Recovery Programme are very simple. Mortality among hatchlings being extremely high because of natural predators, it surmised that the remaining populations may be too low to allow for proper recovery. Under the Programme, hatchlings are being collected in various lagoons on the Belizean reef, mostly in the Turneffe Islands. The hatchlings are cared for during a period of approximately 2 years at the Belize Crocodile Crèche, whereafter, the then 3-4 ft long crocodiles, being large enough to defend themselves against predators, are released at the original site of capture. In 1999, 35 hatchlings were caught and these are growing steadily. Their release is expected to happen in 2001.

The ITCF, having consulted specialists on crocodile matters, committed itself to support this original project for a period of five years, whereafter the Saltwater Crocodile populations are hoped to be viable on the long term without external help.

### III Community Involvement

#### 1990-2006 Saving biodiversity – creating employment

The number of staff employed at Shipstern Nature Reserve has been growing steadily since 1990. Starting with one manager and two wardens in 1990, the staff now comprises a field manager and five wardens. "Warden" is employed here in a general sense, as all personnel are skilled to take part in patrols, guided tours,



The wardens of Shipstern Nature Reserve

maintenance of building, gardening, tree nursing, reforestation and, for some of them, mechanics and other vehicle maintenance.



A Belizean school class visiting the butterfly facility

Shipstern Nature Reserve has benefitted Sarteneja village in many ways. Much of the monthly budget is spent in the village on supplies and specialised skills such as tire repair, outboard maintenance, welding, building construction, transportation, etc.

Restaurants, bars and hotel facilities in Sarteneja benefit from visitors coming to the area to visit Shipstern Nature Reserve. The reserve's headquarters does not provide accommodations for tourists, except for visiting scientists working in the reserve. See below for a detailed account on conservation and tourism.



Bird roost in Sarteneja Harbour: how a simple solution solves a conflict between birds and fishermen

#### 1992 : PACES created

In 1992, members of the fishing community of Sarteneja interested in environmental issues decided to create, under the impetus of Auriol Samos, Servando Samos and Fernando Alamilla, a group named "Protecting And Conserving the Environment of Sarteneja (PACES)".

The ITCF, much in favour of such initiatives, has made possible many activities of PACES since its creation in 1992.

The creation of PACES was originally motivated by a conflict between roosting birds and fishermen. Many cormorants, terns, bitterns and sea gulls roost at night in the harbour of Sarteneja, and up to 1992, used fishermen's boats as perches. The bird's droppings being poorly appreciated, the conflict between birds and fishermen, quite logically, grew stronger every year. As a first project, PACES decided to build bird roosts constructed with palm trunks and sticks. These were quickly accepted and much appreciated by the birds. An excellent example of how a simple solution can solve a seemingly difficult problem.

The ITCF has, over the past few years, financially supported several PACES projects, such as :

- the upkeep of the bird roosting sites in Sarteneja Bay (ongoing);
- the PACES garbage project, which consisted in a thorough clean-up of the roadsides in and around Sarteneja, together with the creation of a rubbish pit and signs leading to it (1997);
- the creation of a small library with nature-books, available to pupils of the Sartenejan schools (1999);
- a small poster campaign in Sarteneja and in Chunox, explaining the benefit of protected areas in the sustainable management of wildlife and nature in general (1997).

In coming year, it is hoped that PACES projects will once more concentrate on the garbage issue, as well as the needed repairs of bird roosts.



**José Durantes  
(1974-1996)  
warden of  
Shipstern Nature  
Reserve**

## 1996 : the Jose Durantes Prize

All staff members, both in Belize and in Europe, were shocked by the death of Shipstern Nature Reserve warden Jose Durantes in the autumn of 1996. Jose Durantes, barely 22 years old when he passed away, started working for Shipstern Nature Reserve when he was only 16. He soon became a true nature-lover and a much appreciated guide by those visitors who had the chance to explore the reserve with him. In addition to losing a skilled colleague, many of us also lost a friend.

In the hope of perpetuating his memory, the ITCF decided to create the "José Durantes Prize". Every year, Sartenejan pupils moving on towards 6th form join a literary contest, the subject of which deals with environmental matters. The winner receives a BZ\$ 250.- contribution towards the costs of books needed in his first year at high school. Other participants are rewarded with various prizes, such as books dealing with tropical nature. The José Durantes Prize was awarded last in 2001.

## 1997: Tourism and Conservation Sarteneja as an example of true eco-tourism ?

Eco-tourism is a popular definition for tourism related to nature conservation. However, the word is often misused, as many standard tourism activities are designated as being eco-touristic. Eco-tourism should be understood as tourism activities that benefit both nature and local tourism industries. In other words, protected areas attract visitors, while the latter make use of hotels and other facilities in the vicinity. This basic principle has led the ITCF to stop welcoming overnight tourism at the reserve headquarters and visitors are now encouraged to stay in Sarteneja Village. The idea, however, originally met with a challenging problem : the lack of tourism facilities in the village.

The ITCF decided to encourage low-scale, bed & breakfast



**Fernando's Seaside Guesthouse's  
first room, during construction**



**Fernando Alamilla, on his way to Bacalar Chico**

type, family-run tourism by implementing several projects in Sarteneja Village. Early 1997, a Small Embassy Project grant was obtained from the Embassy of the Netherlands in Mexico in order to help the setup of the first two bed & breakfast projects. In a record time of 5 months, the "Fernando Seaside Guesthouse" and the "El Sayab Cabana & Restaurant" opened their doors. Both facilities were inaugurated by the Consul of the Netherlands in Belize, the Minister of Tourism and the Area Representative. A second project, the "Candelie's Guesthouse and Diner" was made possible through a special ITCF loan. This guesthouse has started operating in 2000.

The ITCF is now working on the integration of these facilities within the network of Belizean tourism operations. A Northern Tour, including remote and less visited sites such as Shipstern Nature Reserve, the Sarteneja area, Chetumal Bay and Bacalar Chico National Park and Marine Reserve, will start soon, with the aim of attracting, in addition to North American tourists, visitors from Europe interested in nature and conservation. Direct financial contributions towards the protected areas visited will be included in the price of the tour.

## 1999-2000 the Sarteneja National Tree Park



**Melanie McField, ITCF representative in Belize and Juan Aldana, Shipstern's former station manager, in front of « Big George », the largest Mahogany tree of the Sarteneja National Tree Park**

Reserve.

A small museum completes the park, where the history, biology and ecology of the Mahogany tree are presented, together with many objects, such as dry seeds, raw lumber and handicrafts made of Mahogany. The precarious status of this over-exploited tree is also underlined, while ways of its sustainable use, and the importance of keeping mother-trees, are explained.

The Sarteneja National Tree Park was officially inaugurated at the end of 2000.

The early nineties saw the acquisition by ITCF of approx. 25 acres of forests to the south-west of Sarteneja Village, with the aim of saving one of the last stands of larger Mahogany trees in the area. For many years, the idea of creating a small park dedicated to the National Tree of Belize was nurtured. Today the *Sarteneja National Tree Park* is a reality. Sponsored once again by the Embassy of the Netherlands in Mexico, the Park is now open to villagers during the week-ends, and for schools and tourists upon appointment with the reserve staff. The Park has a loop trail leading to the larger Mahogany trees, including a tree nicknamed "Big George", which is the tallest and most beautiful among them. This tree is also regularly used as a seed-producer for small reforestation projects in and around Shipstern Nature



**The National Tree Museum, close to Sarteneja Village**

# IV Financial summary

## 1989 - 2006 : global investment for conservation and sustainable development in Northern Belize

The International Tropical Conservation Foundation is a Swiss and European non-profit foundation aiming to help tropical countries in developing long-term viable conservation projects, involving nature preservation and related activities. Funds originate mainly from donations in Switzerland and the Netherlands, and are transferred to Belize without deducting overheads. Administrative costs in Europe are assumed by the Papiliorama-Nocturama Foundation.

1989	Land acquisition, management	US\$ 210'000.-
1990	Equipment, management	US\$ 63'700.-
1991	Equipment, management	US\$ 70'000.-
1992	Management	US\$ 56'000.-
1993	Equipment, management	US\$ 76'800.-
1994	Land acquisition, management	US\$ 152'200.-
1995	Management (part)	US\$ 30'000.-
1996	Bacalar Chico EU funds, through ITCF	US\$ 350'000.-
1996	Management	US\$ 56'250.-
1997	Equipment, management	US\$ 71'000.-
1998	Building, management	US\$ 75'000.-
1999	Management, various projects	US\$ 67'700.-
2000	Management,	US\$ 62'500.-
2001	Management	US\$ 75'000.-
2002	Management, equipment	US\$ 119'100.-
2003	Management	US\$ 65'000.-
2004	Management, land acquisition	US\$ 225'000.-
2005	Management, land aquisition	US\$ 110'000.-
2006	(expected)	US\$ 90'000.-

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**Total Belize Project 1989 - 2006**

**US\$ 2'025'250.-**

## Shipstern Nature Reserve Detailed yearly budget\*

<b>Object</b>	<b>US\$</b>
Salaries (5.5 persons) and admin. costs	42'000.-
Vehicle maintenance and fuel	20'000.-
Building maintenance	3'000.-
Various equipment and maintenance	4'000.-
Insurances	1000.-
Fax & phone	1000.-
Vehicle for representative (fuel & maintenance)	2'500.-
Crocodile project	2'500.-
Contribution to touristic development	7'500.-
Sarteneja National Tree Park	2'500.-
Unforeseen	4'000.-
<hr/>	
<b>Total/year</b>	<b>US\$ 90'000.-</b>

\*revised average budget based on 2005-2006

## IV the Future

### Role in the Northern Biological Corridor Project

Shipstern Nature Reserve has been awarded a three-year grant of approximately US\$ 27,000 as part of the Northern Biological Corridor Project. This project aims to conserve the biological diversity of northern Belize by



**The new guardhouse at Iguana Camp, instrumental in protecting the woodstork colonies**

the nesting colonies of Woodstorks, in May 2000. The second year will focus on upgrading the reserve's visitor's center, followed by further infrastructure development in the final year.



**Living quarters at Iguana Camp**

involving local communities in conservation projects and supporting existing conservation efforts with the ultimate goal of greater coordination and ecological linkages among the region's protected areas. The project is financed by the Global Environmental Facility through Programme for Belize. SNR completed the first phase, construction of the Iguana Camp guard house /

tourist lodging in the Shipstern Lagoon overlooking

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