

General Information

Peninsula of Hicacos: Varadero

The Peninsula of Hicacos is an extension of land about 22 km long and 700 m wide, located north of the province of Matanzas, in the west of the country. The end of the Peninsula, named Hicacos Point, is the northernmost point of Cuba and is the closest point to the United States of America. To the north lies the Strait of Florida, to the south the Bay of Cárdenas, to the east the city of Cárdenas and to the west with the Archipelago Sabana - Camagüey. It is approximately 140 km (hour and a half by road) east of Havana. On the Peninsula is the 20-km long Varadero beach, the most famous and important spa area in Cuba and the main tourist destination of sun and beach for thousands of vacationers.

The Peninsula has a flat relief of carbonated rocks, with an average height of 10 m and a maximum of 27 m towards the north coast, with a system of sandy beaches, sometimes separated by cliffs. The south coast is low, marshy, with mangroves, coastal lagoons, low cliffs, fossil sea niches and small caves of marine origin.

It was populated by aboriginals when it was discovered by Sebastián de Ocampo in 1508. During the sixteenth and seventeenth centuries it was used as a boat dock and for the production of salt and coal. The natural caves served as refuge for aboriginals, pirates and fugitive slaves (maroons), of which there is evidence in the pictographs of the caves of Ambrosio and the Muslims. In the middle of the nineteenth century some neighbors of the neighboring city of Cárdenas raised some houses, and in 1883 managed to build the church, the market square, and the park. The official founding of the town of Varadero was December 15, 1887.

At the beginning of the 20th century there were no more than 25 buildings and the first hotel was built in 1926. In the late 1920s, wealthy families from Cuba and other parts of the world set their sights on Varadero. In 1931 the Xanadu Mansion was built, owned by the Irene Dupont de Nemours family, a wealthy American of French origin, who added a golf course to the residence. On the lawn of this golf course, even in the 70s, it was common to see large iguanas.

In the 1930s and 1940s the urbanization of the Peninsula continued, and from the 1950s prosperous and rapid development occurred. Subsequently, in the 1990s there was a new construction boom of a large number of hotels and hotel complexes under the concept of "all inclusive". The Varadero resorts continue to grow and currently supports some 16,000 rooms. In the Peninsula there are about 7,000 inhabitants who are mostly linked to the tourism industry. About 20 km from Varadero is Juan Gualberto Gómez Airport, the second busiest in the country in terms of number of passengers.

After 2000, environmental codes were more strictly enforced to reduce damage caused by construction and the tourism industry. However, the rapid development has left little in terms

of natural areas. Only a small amount of territory remained in a natural state and has been declared protected.

Varahicacos Protected Natural Landscape

The name of the protected area combines the names of Varadero Beach and the Hicacos Peninsula. Created in 1997 and legally recognized in 2010 with the category of Protected Natural Landscape (V IUCN). It is ~125 ha in size and is administered by the Ministry of Science, Technology, and Environment. It is located at the eastern end of the Hicacos Peninsula and access is by a motorway that runs along the entire southern coast. The area is composed of three separate sectors: Chapelín Sector (17 ha), Punta Hicacos Sector (107 ha) and El Patriarca site of interest (0.7 ha).



There are more than 240 plant species in the area, 30 of which are endemic, including a cacti known as Cimarron's Aguacate (*Dendrocereus nudiflorus*), Guairaje (*Eugenia faramioides*), Costa Romero (*Croton litoralis*), Cuero (*Guettarda undulata*) and Cocuyo Blanco (*Polygala cuneata*). A centennial representative of the cactus *Dendrocereus nudiflorus* (image above on the right) was baptized El Patriarca for its longevity, and a small portion of its habitat, was preserved from the constructive push of the hotels. The vegetation of the Peninsula is composed of Evergreen Forest, Mangrove Forest, Coastal Xerophytic Vegetation, and Sandy Coastal Vegetation on the sand dunes that are still preserved and have not been impacted by the buildings or gardening at hotels.

To date, some 227 species of terrestrial invertebrates have been identified, including 121 species of butterflies (42 diurnal and 79 nocturnal), 31 species of arachnids, 32 species of crustaceans, 14 of mollusks, among others.

There are 178 bird species (six endemic) recorded and the area is an important refuge for feeding and resting nearctic birds during autumnal and spring migration, such as the Bobo Hawk

(*Buteo platypterus platypterus*), the Brown Bijirita (*Dendroica pensylvanica*), and the American Pitirre (*Tyrannus tyrannus*).



Some 24 species of reptiles are recorded, with the family Dactyloidae the most represented. Of interest are the Cuban Iguana (*Cyclura nubila nubila*) and the Sand Bayoya (*Leiocephalus raviceps klinikowskii*), whose populations in the Peninsula of Hicacos have declined during the last 15 years. On the other hand, a new species and genus for Cuba (*Aristelliger reyesi* Díaz and Hedges, 2009) has been defined as exclusive to this area. The iguana practically disappeared from the Peninsula and today only one population is conserved in two sectors of the protected area, but they can only be observed very sporadically.

In the area there are several archaeological sites, the most well-known being the Cueva de Ambrosio, a ceremonial cave that has 47 aboriginal pictographs, among them concentric circles, which together with the Cuevas de Punta del Este Youth, (formerly the Isle of Pines), are unique in the country.

Zapata Peninsula

The Zapata Peninsula is an extensive territory where a complex natural, social, and cultural fabric is combined. The peninsula is home to 28 human communities, whose inhabitants are closely linked to the use of forest resources, fishing, apiculture, and more recently tourism. It was internationally recognized as a Biosphere Reserve in 1999 and as a Ramsar Site in 2001. In 2010, the entire Biosphere Reserve was assigned to the Management category of Protected Area of Managed Resources (Category VI IUCN) with an extension of 720,748.74 ha (512,036.96 ha land and 208,711.78 ha marine). Within its limits are four protected areas with more restrictive management categories: Ciénaga de Zapata National Park (418,921 ha: 281,861 ha land and 137,060 ha marine); Natural Element Highlighted System Espeleo-lacustre de Zapata (14,661 ha: 9,107 ha land and 5,554 ha marine); Channels of Hanabana Fauna Refuge (6,710 ha) and Bermejas Fauna Refuge (811 ha). The average height of the Zapata is 6 m above msl and geologically it is formed by two blocks separated by deep earth faults, on both sides of the Bay of Pigs. The Western Ciénaga is lower and marshy, while the Eastern Ciénaga, is higher with a more rocky coast.



Seventy-five percent of the territory is covered by muddy areas and the remaining 25% is covered by swamp grasslands, coastal vegetation, natural savannas, marshes, and semi-deciduous forest on limestone that is flooded during the rainy season. In Zapata, it is estimated that there are about 1,000 species of vascular plants, in 17 plant formations that

include the Complex of Vegetation of Ciénaga Spring in wooded islands called "petenes". Marsh grasses are reminiscent of moist grasses or sawmills of Florida Everglades Wetlands (USA) and are exclusive habitat for endemic species of birds and fish, as well as the endangered Cuban Crocodile.

Among marine organisms, 277 species are known (41 species of sponges, 36 of stony corals, 10 echinoderms, and 114 fishes). There are also 37 species of freshwater fish, of which 11 (28%) are endemic. Among the most notorious is the Manjuari (Cuban Gar) (*Atractosteus tristoechus*), belonging to one of the most primitive bony fish lineages (Lepisosteidae), and blind cave fish of the genus *Lucifuga*. The terrestrial invertebrates have been less studied, although preliminary inventories have identified some 105 species (54 beetles, 17 ants, 18 dragonflies, and 16 mollusks).

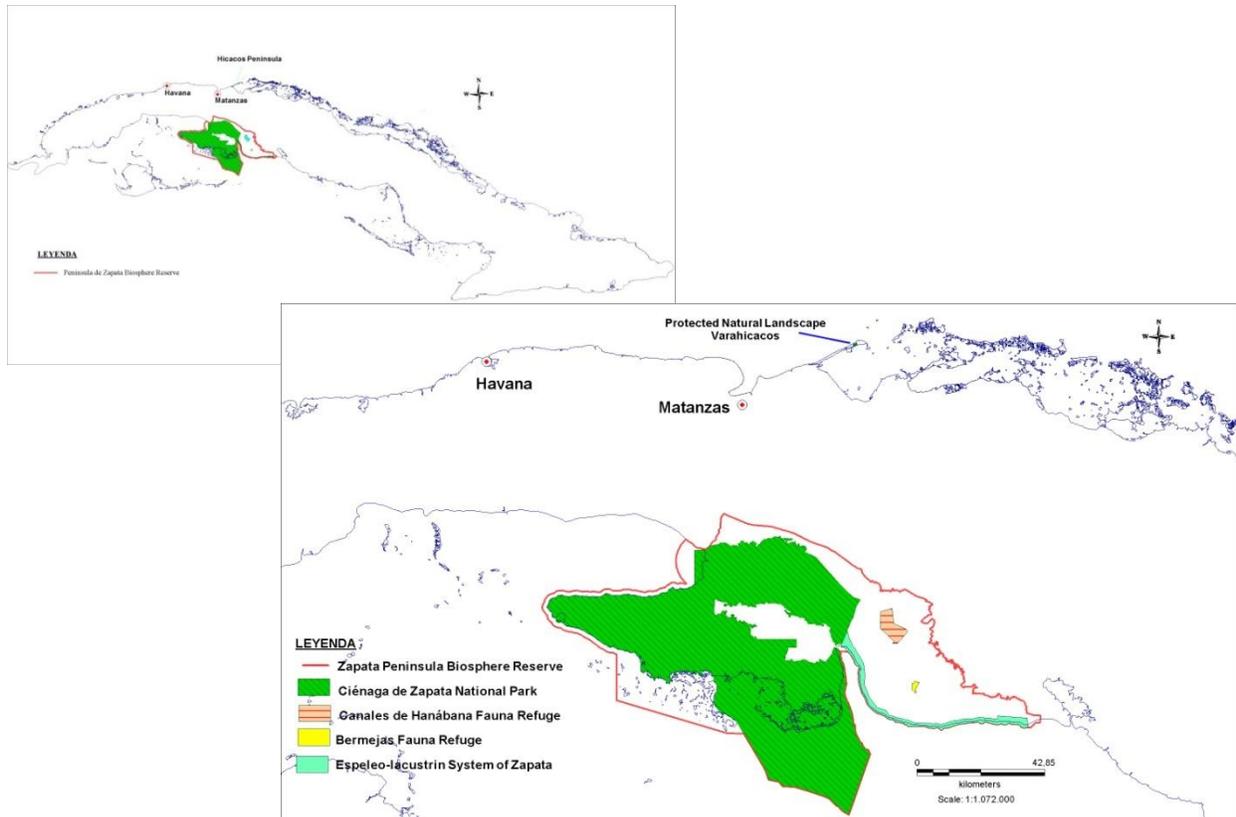
There are 50 species of reptiles (45 terrestrial and 5 marine), 28 of them endemic, such as *Sphaerodactylus richardii*, *Arrhyton procerum*, *Anolis luteogularis calceus*, *Anolis luteogularis jaumei*, *Crocodylus acutus* and *Crocodylus rhombifer*. Among marine reptiles, *Caretta caretta*, *Eretmochelys imbricata*, *Chelonia mydas* and lesser sighted *Dermochelys coriacea* and *Lepidochelys olivacea* are frequently observed. The Cuban Iguana is abundant in all the small cays of the Zapata National Park, south of the Peninsula, but are scarce on the rocky coast of the eastern marsh of the Protected Area Natural Element Highlighted Speleo-lacustrine System of Zapata.

There are 16 species of amphibians identified, of which 13 are endemic. The species *Peltophryne frentinoi* is endemic to the local area of Playa Giron. During a rapid inventory carried out in 2005, new records of species such as *Peltophryne gundlachi*, *Eleutherodactylus atkinsi*, *E. eileenae*, *Peltophryne fustiger* and *Peltophryne peltocephala* were added.

This region is the most important in Cuba because of the diversity of birds and the number of local endemic species. Of the birds, 258 species have been recorded to date (130 breeds in Cuba and 121 are migratory), 23 species are endemic, and five species are restricted to the Zapata Swamp (*Cyanolimnas cerverai*, *Ferminia cerverai*, *Torreornis inexpectata*, *Teretistris fernandinae* and *Agelaius assimilis*). There are also six of the seven endemic Cuban genera, the most important populations of the Zunzuncito (*Mellisuga helenae*), Carpintero Churroso (*Colaptes fernandinae*), Camao (*Geotrygon caniceps*), Dove Partridge (*Starnoernas cyanocephala*), Cuban Cotorra (*Amazona leucocephala leucocephala*) and the Catey (*Aratinga euops*). The region is home to all the species of herons described for the country and significant populations of aquatic birds reside mainly in the zone known as Las Salinas, where birds such as the very numerous Florida Duck (*Anas discors*), Pato Lavanco (*Anas americana*) and Pink Flamingo (*Phoenicopterus ruber*) can be observed.

Mammals are represented by five species and three genera (*Capromys*, *Mesocapromys* and *Mysateles*) of the Order Rodentia, known as Jutías and 10 species of bats (Orden Chiroptera).

Among marine mammals, it is common to observe the Antillean Manatee (*Trichechus manatus manatus*) at the mouth of the Hatiguanico River.



Featured Natural Element Speleo-lacustrine System of Zapata

This is a strip of karst rocks of different types and geological ages of about 80 kilometers long and 5 to 10 kilometers wide on the west coast of the Bay of Pigs (East Ciénaga de Zapata), where there are a number of flooded caves that superficially present the appearance of small lakes, very similar to those in the Yucatan Peninsula, Mexico, known as "cenotes". One of these "cenotes" is 73 meters deep below current sea level and the longest is 680 meters long. Vertically there are different areas of life, especially for the ichthyofauna, ranging from marine fish to purely cave species. In some deep "cenotes", and with an underground connection with the sea, by the lenticular arrangement of fresh water on the sea water, it is possible to observe freshwater aquatic fauna on the surface and marine species in the depths. Another typical form of the coastal carso in this area, are the so-called "coves", formed from the collapse of vaults of caverns that flowed into the sea. One of the best known is "Caleta Buena", very visited by tourism.