

Regional Guide – General

A Journey through the Galápagos

Geography

In the Galápagos archipelago, there are thirteen major islands ranging in area from fourteen square kilometres to 4588 square kilometres, six small islands ranging from one to five square kilometres, and many, many islets some of which are named. The Galápagos are isolated, volcanic, and lie about ninety degrees west of Greenwich. The nearest mainland is Ecuador, only 1,000 kilometres to the east, and Costa Rica, 1,110 kilometres to the northeast. Spread out over 50,000 square kilometres of ocean, most of the islands have two—and sometimes three—names. On the earliest maps of the islands, both English and Spanish names were given. In 1892, the Ecuadorian government gave each island an official name. Thus, each island could have an English, Spanish and official name. For the most part, official names are used.

Geology

The islands were formed four to five million years ago from volcanic eruptions underwater, eventually rising above the ocean's surface as lava cooled. The Galápagos region is volcanically very active, with over fifty eruptions recorded since their discovery in 1535. On May 13, 2005, a volcanic eruption occurred on Fernandina Island at the Cumbre volcano. Since this is considered to be one of the most pristine islands, and is uninhabited, there was no cause for alarm. This was an example of the ongoing process occurring in the Galápagos as the islands continue to form; the archipelago is relatively young compared with the rest of the earth, which is about 1,000 times older. Another active volcano is located on Isla Isabela, and rocks on this island as well as Fernandina are only about 750,000 years old. Compared with rocks on neighbouring islands, they are considered to be the oldest yet discovered, and they are 3.25 million years old on Isla Espanola.

Most of the volcanic rock of the Galápagos is basalt. Basalt, when molten, is more fluid than other types of volcanic rock, and when erupted it tends to flow rather than explode. You won't see any of the cone-shaped volcanoes associated with exploding eruptions, but you will see gently rounded shield volcanoes on the islands. If you get a chance to climb a volcano, you may witness the difference between pahoehoe (pronounced 'paw-hoey-hoey') and aa (pronounced 'ah-ah') lava formations. These lava names, like most volcanological terms, are of Hawaiian origin. The pahoehoe lava flow has a smooth, ropy surface, while the aa lava flow consists of free chunks of very angular pieces of lava. The difference in form reflects the flow dynamics of the lava as it cools.

Aa forms when lava flows rapidly. Under these circumstances, heat is lost rapidly, resulting in an increase in viscosity. When the solid crust is torn by the molten flow underneath, bits of crust tumble in and are coated by the liquid lava forming chunks.

Pahoehoe forms when lava flows more slowly. As the lava cools on the outside, there is time for tears that occur to heal maintaining a steady rope of flow that cools as it rolls.

Isla Baltra (27 square kilometres)

This island is the site of the archipelago's main airport. There are no accommodations or visitor sites here, but transportation from the airport to Puerto Ayora, on nearby Isla Santa Cruz, is available. Luckily, within minutes of leaving the airport you can begin checking wildlife sightings off your list. Pelicans and noddies are your best bet, as there are flocks of these at the harbour.

Isla Santa Cruz (986 square kilometres)

This is the second-largest island in the archipelago. It is also the most populated, with Puerto Ayora as the main city. There are ten visitor sites on Santa Cruz that are operated by the national park, and one that is privately owned and operated.

Sites of interest: Charles Darwin Research Station and Lonesome George, Turtle Bay, lava tubes, Cerro Crocker, Los Gemelos, El Chato Tortoise Reserve, Whale Bay, Conway Bay, Black Turtle Cove, Las Bachas, Cerro Dragon.

Puerto Ayora (Pop: 12,000)

The population of this little town has more than doubled in the last decade. The town has all modern amenities you may need in a tourist village, including laundry, hotels, restaurants, tourist shops, a post office, and banks. This is also where many tour operators base their operations, and you can find many dive shops, as well as an airline office here.

Isla Seymour (1.9 square kilometres)

Though small in size, some of the most active—and largest—seabird breeding colonies are located on this island. Magnificent frigatebirds and blue-footed boobies are a certainty, and swallow-tailed gulls, sea lions, and marine iguanas are common. Fur seals, lava lizards, and Galápagos snakes are possible sightings too.

Isla Isabela (4588 square kilometres)

This is the largest island in the archipelago and occupies over 58% of the entire land mass. It has a chain of five fairly young and active volcanoes, one of which is the highest point in the islands—Volcan Wolf at 1,707 metres. There are a large number of Galápagos tortoises on the island.

Sites of interest: Volcan Alcedo, Punta Garcia, Punta Albemarle, Punta Vicente Roca, Punta Tortuga, Tagus Cove, Urbina Bay, Elizabeth Bay, Punta Moreno, Villamil Lagoon.

Isla Fernandina (642 square kilometres)

The youngest of the main islands' recently formed volcanic landscapes are most impressive on Fernandina. This is where you are most likely to see a volcanic eruption. It has the greatest concentration of marine iguanas, found by the thousands at Punta Espinosa. Flightless cormorants as well as sea lions can be found here.

Isla Floreana (173 square kilometres)

This island is home to the medium tree finch, endemic only to this one island. Eighteenth-century whalers used a wooden barrel on the island as a post office, so that mail could be picked up and delivered to their destinations in Europe and the United States. The first colonist of the Galápagos, an Irishman named Patrick Watkins, was stranded here in 1807, and subsisting by selling food supplies to visiting whaling ships that stopped on their way.

Conservation Efforts

The Ecuadorian government began setting aside some of the islands as wildlife sanctuaries as early as 1934. The entire archipelago of the Galápagos Islands was declared a National Park in 1959. The non-governmental organization (NGO) of the Charles Darwin Research Station was constructed and began operation in 1964 on Isla Santa Cruz. Together with the Galápagos National Park Service, the Charles Darwin Research Station works to manage the islands. In 1986, the islands were granted even more protection by the creation of the Galápagos Marine Resources Reserve by the Ecuadorian government.

Only 3% of the islands are occupied by non-national park land. They are rural farms, and urban areas that existed prior to the creation of the park reserve. The Marine Resources Reserve protects 133,000 square kilometres of ocean and seabed within which the islands are located, as well as a 20,000 square kilometres buffer zone. A law passed in 1998 allowed the park and reserve to protect and conserve the areas, as well as promote educational and scientific research in the areas while allowing sustainable development of the islands.

Tourism

Organized tourism in the islands began only in the 1960s, with little over 1,000 visitors a year. It wasn't long before the numbers increased dramatically, and boats began tour operations between the islands. In 1970, the number of visitors jumped to 4,500, and in response a year later there were six boats in operation as well as one cruise liner. In the early 1990s, the number of visitors skyrocketed to 60,000 annually. There are now over eighty boats with sleeping accommodations carrying between four and one hundred passengers. An aftereffect of the increased number of tourists is growth in permanent population to provide labour for the tourism industry: at 10% per annum, the population of the islands is increasing dramatically.

While great for the economy of the region, and Ecuador, it is inevitable that problems have arisen. Proposals for higher, more luxurious hotels along the coastline, as well as more cruise ships, have been submitted. Luckily the Ecuadorian government has been made aware of the costs of these expansions on the Galápagos wildlife and has taken measures to prevent growth of exponential proportions.

There are several solutions to the booming tourism industry of the Galápagos. An extreme example is prohibition of all tourism and colonization on the islands—few accept this view. The most reasonable solution, and one adopted by islanders, is a combination of responsible tourism management as well as public education for both residents and tourists. In 1998, a Special Law for the Galápagos was enacted where guests to the islands pay a \$200 Visitor Fee. Please note, your fee is covered by Adventure Canada.

The law states that naturalist guides that have been certified and trained through the National Park Service accompany all tour boats. The highest classification is a Naturalist III Guide—they are bilingual, university-educated biologists. There are also park rules in place for visits to sites. Most are common sense: don't feed or handle the animals, don't litter, don't remove any natural object (living or not), do not bring pets, and do not buy objects made of sea lion teeth, black coral, tortoise or turtle shells, or other plants or animals. All visits to the sites must be chaperoned by a certified guide. The guide will be there to answer any questions you may have, as well as to ensure you stay on the marked trails and do not break any park rules.

Rules of the Galápagos National Park

The Galápagos National Park Service regulates all visitor activities within the park's boundaries, including the vessel's itineraries. Visits both within the National Park sites and the Marine Reserve are led by licensed naturalist guides. By following these rules, you are directly contributing to the ongoing preservation efforts of local institutions. Take only photographs and wonderful memories; leave only footprints.

- Please stay on the trails.
- Please do not disturb any wildlife or remove any native plant or rock material.
- Please keep a distance of 2 metres (6 feet) between you and the wildlife.
- Please make sure you do not accidentally transport any live material to the islands, or from island to island. Insular ecosystems are fragile biological units.
- Please be cautious at approaching wildlife, and always follow your guide's advice.
- Animals are not to be fed by humans.
- It is prohibited to bring food to the visitor's sites.

- Please do not startle or chase any animal from its resting or nesting area.
- Smoking is not allowed on the islands, nor is it in any boat (dinghy) during your visits. The use of cellular or satellite phones is prohibited on the visitor's sites.
- Please do not buy any souvenirs made from native Galápagos species (except for wood).