

Abby Lodge

Galapagos – Conserving the Last Eden Video

Juan Jose Alava, who is an ocean pollution research program scientist, talked about his experiences in the Galapagos. He discussed the complex oceanographic features, variable sea surface temperatures, and high primary production. There are several currents that occur at the Galapagos – the Panama current from north and Humboldt current from south. These two currents then create the south equatorial undercurrent (east to the west). There is also the Cromwell current, which is an upwelling that brings lots of nutrients to the islands – and this is why there is high productivity in the area. Sea surface temperatures vary due to El Niño effects.

Some of the unique species on the islands include: the Galapagos penguins, flightless cormorant, endemic lava gull, and great blue heron. The blue footed boobies are also unique and to mate they have to dance and show their blue feet to female. The flamingos' population is only about 500 and they are very elusive and shy. Flicker birds have red balloons on their chest for attracting a female. There are also mocking birds, flycatchers, and wahlbergs.

The Galapagos hawk is endemic to the islands. They are predators and eat rats and marine iguana. Their population is about 2,000 individuals. There are also marine iguanas and land iguana whose ancestors come from the mainland on rafts of vegetation. Marine iguanas can dive up to 9 or 12 meters and for about one hour. They excrete salt from the water by ejecting it from their noses. The Sally light-foot crab is very common around Galapagos.

Galapagos giant tortoises live up to 150 years. Lonesome George was the last Pinta tortoise and since his death is now exhibited in museums. The Galapagos has the largest biomass of sharks – no other place on earth you can see schools of hammer head sharks and also schools of Galapagos sharks. The hammer heads sharks migrate between Cocos islands and Galapagos islands. The Galapagos orcas eat sharks, manta ray, and other marine mammals. Galapagos fur seals were over hunted in the last century for their pleats and are now wary of humans. The sea lion population is about 20,000.

The Galapagos were established as a national park in 1959 and a World National Heritage site in 1979. The islands are also a biosphere reserve. They were declared a Whale sanctuary in 1990, the special law of Galapagos went into effect in 1998, and were deemed to be a marine reserve in 1998. The biodiversity is in peril because of invasive species, growing human population, burgeoning tourism, and pollution. The Galapagos Geographic Index (GGI) shows a pervasive ecological and social transformation caused in the Galapagos Islands due to a massive influx of human beings, materials, and fuel and energy inputs. Solid waste is estimated to increase over time. Sea lions have been spotted interact with plastic waste out at sea. The Jessica oil spill affected marine iguanas as it stressed their hormones.

Vessel routes and boats create noise, biological pollution and collisions with animals. Juan Alava talked about his research experience and conservation work. There was a capture and rescue operation. A sea lion was caught with can on its nose – the researchers cut it off. They do animal captures and biopsy sampling to assess the level of pollutions. It was found that sea lions are exposed to DDT – the most toxic pesticide. In the 1940s there was an American navy base in the Galapagos and they used DDT to kill all black rats. However, DDT is a persistent pollutant.