

ALEXANDER von HUMBOLDT: THE FIRST ENVIRONMENTALIST

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[Ed. Note: This is the second installment of a four-part article on the life of Alexander von Humboldt. See Vol. 65 (3) for Part 1 of this article. Dr. Caswell is a retired chemistry professor who has an award winning exhibit on von Humboldt. He is a Director in the Society for Hungarian Philately and also a founding director of the Seattle Philatelic Exhibition.]

The Orinoco Voyage

On 30 March 1800, Humboldt and Bonpland embarked on their voyage up the Orinoco River in a large pirogue (Fig. 14), accompanied by “Don Carlos del Pino” and four native oarsmen. The travelers received the hospitality of the various missions along the Orinoco (Fig. 15).

When there was no mission at the evening stopping time, they camped, preferably on an island, if one was available. Camping on the shore was hazardous because of the local wild life. Twice they had narrow escapes from jaguars.

Along the way, Humboldt collected herbarium specimens, measured latitude and longitude and altitude at each stop, and recorded observations of the weather, the animals and plants (Fig. 16a, 16b, 16c), and the natives (Fig. 17).

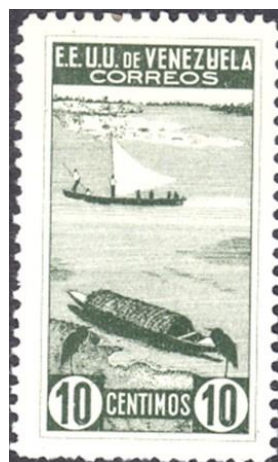


Fig. 14. Pirogue
Venezuela, 1937, Sc#312



Fig. 15. Orinoco Missions
Spain, 1968, Sc#1547



Fig. 16a. Native Animals
Venezuela, 1963, Sc#827/831/C824/C825



Fig. 16b. Aloe
Venezuela, 1982, Sc#1267



Fig. 16c. Pink Princess
Venezuela, 1970, Sc#964

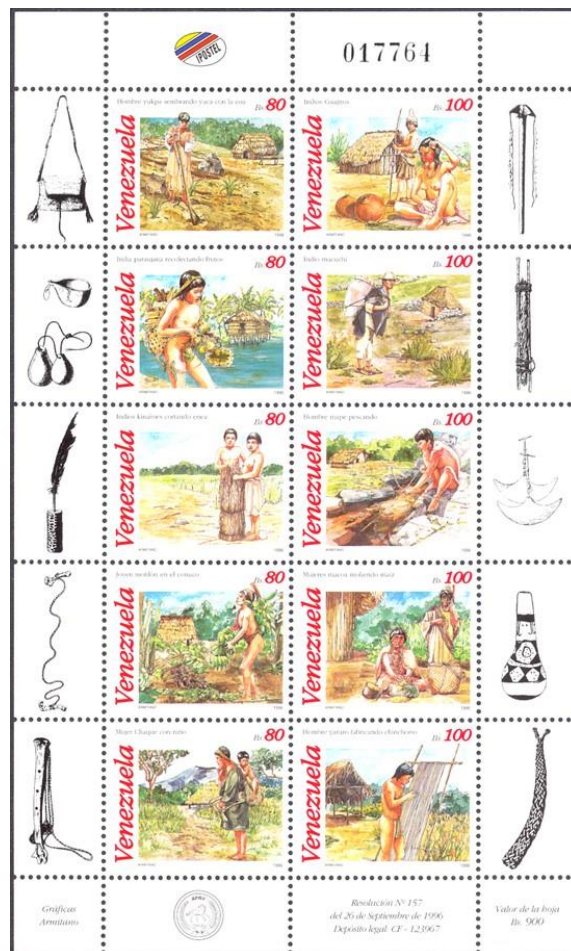


Fig. 17. Native Aborigines
Venezuela, 1996, Sc#1541

On 6 April, Humboldt observed the annual harvest of turtle eggs at the Beach of Eggs on Turtle Mouth Island in the Orinoco. Since some of the turtles have now become endangered species, this harvest is not permitted today (Fig.18). Three days later they visited the camp of the egg-collecting Indians at Pararuma Beach.

A missionary, Father Bernardo Zea, joined the expedition. In order to accommodate the additional passenger and the increasing number of samples and specimens, the travelers obtained a larger pirogue, 40 feet long and three feet wide, and sold their previous craft.

Humboldt observed the processing of rubber-tree sap at the San Baltasar mission.

On the first of May, the travelers came to the point where the Orinoco splits into two rivers. Humboldt showed that the minor branch, the Río Casiquiare, flows into the Río Negro, which is a tributary of the Amazon. They followed the Río Negro as far as the border with Brazil. They did not cross the border. The Portuguese authorities in Brazil had ordered that Humboldt be arrested as a spy if he crossed the border.

During this side journey down the Río Casiquiare, Humboldt observed toucans at the Marca mission. At the island mission Dapa they ate “ant cakes” prepared by the local Indians.

At the border Fort of San Carlos on the Río Negro, they observed passing Portuguese boats with shipments of indigo, and of rice, from Brazil.

The travelers returned to the upper Orinoco. On 20 May, they came to Esmeralda, the last mission up the river. At Esmeralda, Humboldt was impressed with the custom of the Indians to hunt fish with bow and arrow (Fig. 19). He observed the preparation and use of the arrow poison curare, which the natives used on their arrow tips to paralyze animals.

Humboldt's measurements of latitude and longitude at the stops along the Orinoco showed him that the maps of the river were not accurate. He redrew the map of the Orinoco on the basis of his measurements.

After three days, the travelers left Esmeralda for the return trip down the Orinoco. When they arrived at Angostura (now Ciudad Bolívar) on 13 June, Bonpland was ill with a fever. He recovered at a local home, and the travelers left the Orinoco on 11 July. They traveled overland by horseback to Cumaná, with the intent of sailing to Cuba, but the port was blockaded by the English. On 24 November, accompanied by Father Juan González, they found passage to Cuba on an American schooner carrying a cargo of jerked beef.

First Visit to Cuba

Humboldt, Bonpland, and Father González arrived at Havana on 19 December 1800. Humboldt entrusted to Father González, who was going on to Spain, part of his collection of specimens, and letters describing his travels. Father González and the specimens were lost at sea.

The travelers were received in Havana by the Captain-General of Cuba, Luis de las Casas and by Bishop Luis María Peñalver. The Captain-General and the Bishop were the founders of the Economic Society of Friends of the Country, the first technological society in Cuba (Fig. 20).



Fig. 18. Turtles (Nature Protection)
Venezuela, 1992, Sc#1471



Fig. 19. Bow & Arrow Fishing
Venezuela, 1996, Sc#1541h



Fig. 20. de las Casas & Peñalver
Cuba, 1945, Sc#395

In Havana, Humboldt received funds and letters from his brother Wilhelm that had been held for him by Ignacio O'Farril, brother of the Spanish ambassador to Prussia. He met Tomás Romay, “the initiator of the scientific movement in Cuba,” who was the first physician to administer smallpox vaccination in Cuba (Fig. 21).

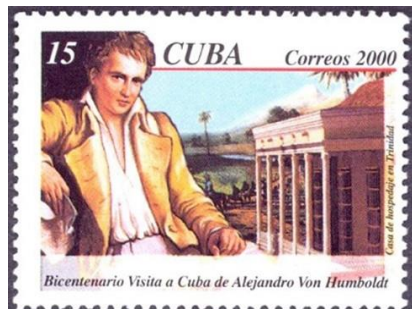


Fig. 22. von Humboldt in Trinidad
Cuba, 2000, Sc#4118

The travelers spent Christmas 1800 and New Year's 1801 in Havana.

During January and February 1801, the travelers explored the island of Cuba, coming finally to the port city of Trinidad on 14 March (Fig. 22).

On the next day they took a ship to South America. The passage was difficult and stormy, and they were at first prevented from coming to port at Cartagena by contrary winds. While waiting for the wind to change, on the night of 29 March, they observed a total eclipse of the moon.



Fig. 21. Tomás Romay
Cuba, 1964, Sc#929

Colombia

On the next day, Humboldt and Bonpland disembarked at Cartagena, in the Viceroyalty of New Granada (now Colombia).



Choloepus didactylus



Fig. 24a.
von Humboldt
Colombia, 1960, Sc#713-15



Ateles sp.

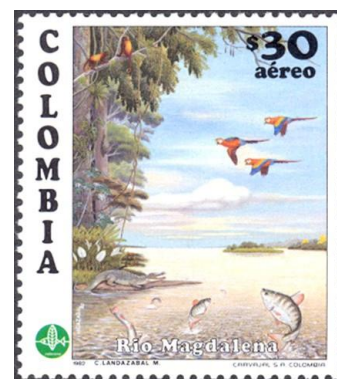


Fig. 23. Magdalena River
Colombia, 1982, Sc#C730

After arranging for transportation, on 6 April they departed Cartagena, and traveled up the Magdalena River (Fig. 23) to the head of navigation at Honda. They made the usual collections of plants and rocks, and observed animals of the viceroyalty (Fig. 24a and 24b).



Myrmecophaga tridactyla



Fig. 24b.
Scarus rubroviolaceus
Colombia, 1960, Sc#C357-59



Dasypus sp.

Along the way, Bonpland became ill with malaria.

On 7 July 1801, the travelers arrived in Bogotá. There they met with José Celestino Mutis, the Director of the Royal Botanical Expedition in New Granada (Fig. 25). Humboldt studied Mutis's herbarium, and exchanged specimens

with him. Mutis treated Bonpland's malaria with an extract of cinchona bark, from which quinine is derived (Fig. 26). Mutis showed Humboldt how to identify the quinine tree (*Cinchona officinalis*) and how to prepare the bark to treat malaria.

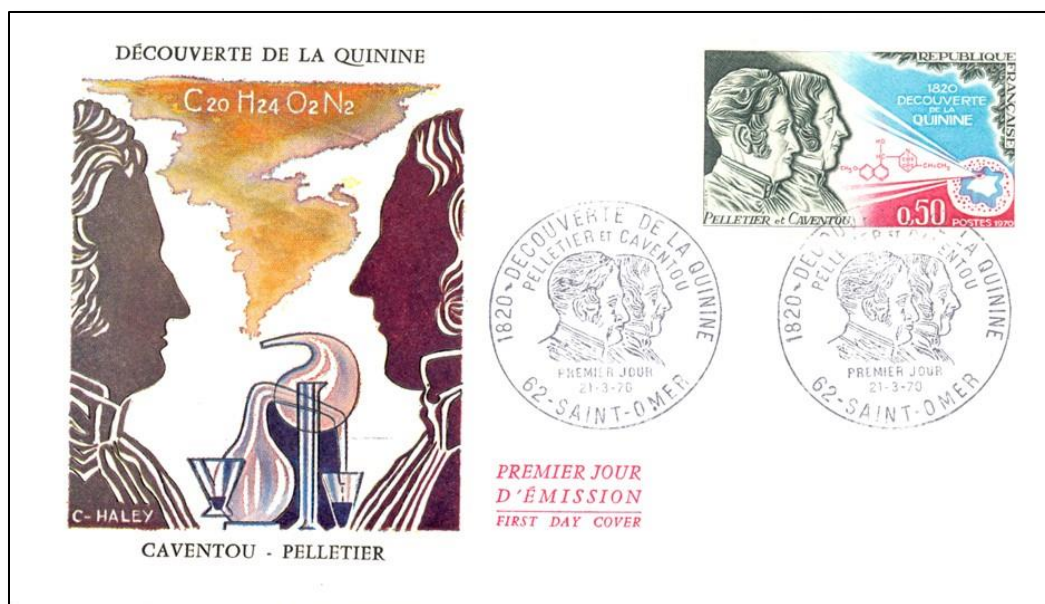


Fig. 26. Identification of Quinine 150th Anniversary First Day Cover
France, 1970, Sc#1268



Fig. 25. Mutis
Spain, 1993, Sc#2748

While Bonpland recovered from his illness, Humboldt explored the area around Bogotá. In August, he measured the height, 433 feet, of the Tequendama Falls of the Bogotá River (Fig. 27).



Fig. 27. Tequendama Falls
Colombia, 1937, Sc#444

He visited the great salt mine of Zipaquirá, now converted to a subterranean cathedral.

Humboldt and Bonpland left Bogotá on 8 September, and traveled south through the Andes. They passed through Cali and Popayán. In the vicinity of Popayán, they explored volcanic deposits and fumaroles near the village of Puracé, and described the Puracé Indians (Fig. 28).

They spent Christmas at Pasto, and climbed the Galeras Volcano, 14,029 feet, (Fig. 29) near Pasto.



Fig. 29. Galeras Volcano
Colombia, 1954, Sc#C244



Fig. 28. Puracé Indians
Colombia, 1976, Sc#841

[to be continued in the next edition]