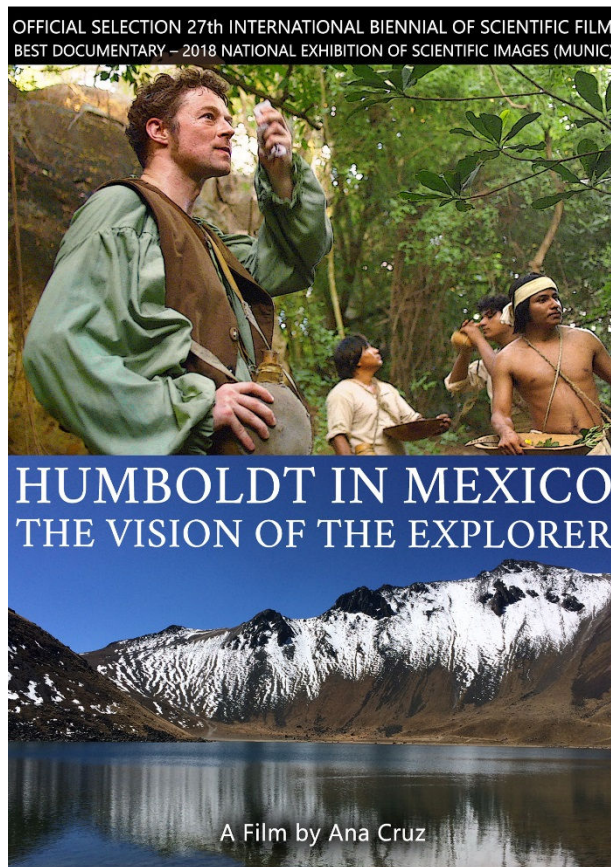




HUMBOLDT IN MEXICO: THE VISION OF THE EXPLORER



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Humboldt in Mexico: The Vision of the Explorer

Synopsis

Humboldt in Mexico: The Vision of the Explorer reveals the amazing story of the greatest explorer of the Americas and Cuba. At the turn of the 19th century, Alexander von Humboldt began a 5-year scientific expedition in the New World. Traveling through dangerous waters and dry deserts, and over treacherous mountains and unforgiving terrain, Humboldt documented the environment, geography and cultures of the continents of North and South America. The most famous scientist of his age, Humboldt changed our understanding of nature. He was also the first person to write about human-induced climate change. This fascinating documentary takes us on Humboldt's amazing adventure of discovery and exploration throughout New Spain, an area that includes present-day Mexico.

Childhood

Friedrich Wilhelm Heinrich Alexander, Freiherr (baron) von Humboldt—or Alexander von Humboldt—was born in Berlin on September 14, 1769. While Berlin is currently part of Germany, in Humboldt's time it was in Prussia, an empire ruled by Frederick the Great. Humboldt was born into a wealthy, aristocratic family. His father, Alexander Georg von Humboldt, was an officer in the Prussian army, and he died when Humboldt was nine years old. His mother, Marie Elisabeth, came from a family of Huguenots, or French Protestants. According to biographers, she was strict and unemotional toward her children. Humboldt had a brother, Wilhelm, who was two years older than him. They spent much of their childhood at the family estate of Tegel Castle, near Berlin.

Education

The boys were educated by private tutors, with their mother hoping that they would end up with important positions in public office. However, while his brother did go on to be a diplomat, Humboldt was much more interested in the natural world. As a child he liked to roam outside, collecting insects and plants. His parents even nicknamed him, "little apothecary." In 1789, Humboldt attended the University of Göttingen in the town of Göttingen. While there he met naturalist Georg Forster, who had sailed around the world with Captain Cook on his second voyage. According to biographers, Forster's stories further inspired Humboldt's interest in being a naturalist and fostered his strong desire to have adventures of his own.

After only a year at the University of Göttingen, Humboldt left to study geology and minerals at the Freiberg School of Mines in Saxony. In 1792, he took a job as a government mine inspector. In this position Humboldt travelled to a number of different mines controlled by Prussia. During his time as a mine inspector, he also worked to improve mining conditions. For example, he invented a new safety lamp, and also used some of his own money to establish a miner's school.

Looking for Adventure

Humboldt's mother died in 1796. According to historians, not only did that free him from her disapproval of his pursuit of science, but her death left him with a very large inheritance, which gave him the money he needed to finally pursue his dreams of adventure. In 1797, he resigned from his job with the mining department, and looked for a scientific expedition to join. At first, he was unsuccessful because Europe was in the midst of the French Revolutionary Wars, and most people were not focused on exploration. However, when Humboldt was in Spain he met Spanish king Charles IV, and obtained permission to visit the Spanish colonies in the New World.

At that time, Spain controlled large areas of land in the New World, and these areas were known as New Spain. New Spain was established in 1535, and eventually included all of Mexico, the southwestern United States, Florida, Central America down to the Isthmus of Panama, and many of the islands in the Caribbean. It was governed from Mexico City, and lasted until 1821, when Mexican rebellions for independence finally ended Spanish rule.

When Humboldt visited New Spain in 1799, these colonies had been largely unexplored by scientists, since they were only open to Spanish officials and missionaries. Humboldt's permission from the king of Spain gave him rare access to the area. His royal permission included the assurance of help from local officials in New Spain, which also gave him access to valuable information about the colonies.

Humboldt's Expedition in New Spain

In June, 1799, Humboldt left Spain on a ship named *Pizarro*. He was accompanied by French botanist Aimé Bonpland. Also aboard the ship were many crates of advanced scientific equipment, with which to measure and observe everything the men found. In addition to purchasing the best scientific equipment he could find, Humboldt used his own money to finance his entire trip.

The two men originally planned to begin their expedition in Havana, Cuba, however after typhoid broke out onboard, the ship changed course and landed in Cumaná, located in what is currently Venezuela. Humboldt and Bonpland disembarked, and began their exploration there. They travelled throughout South America—in what is now Venezuela, Columbia, Ecuador, and Peru—and they visited Cuba. Their expedition included travelling up river by canoe, and walking through dense tropical forests. They also explored the Andes, and set a world record by climbing Mount Chimborazo. At that time, Chimborazo was believed to be the tallest mountain in the world. In 1803, the two men reached Acapulco, and for the next year they explored Mexico. In total, Humboldt and Bonpland spent five years in New Spain, travelling more than 6,000 miles.

Return to Europe

Humboldt left New Spain in 1804. On his way back to Europe, he visited Washington D.C., where he met with U.S. president Thomas Jefferson. According to historians, while Humboldt greatly admired America, he was also extremely critical of the fact that it allowed slavery.

After returning to Europe, Humboldt lived in Paris from 1804 until 1827. He spent his time writing and revising his findings until they were ready to publish. Humboldt spent a lot of money on publication. In addition to publishers, he hired expensive engravers and artists to create maps and illustrations. The resulting summary of his trip were put into 30 volumes, and were very popular.

In 1827, after financing his trip to New Spain, and publishing his findings, Humboldt was broke. He returned to the royal court in Berlin and served as court chamberlain, and as tutor for the crown prince. However, he did not stop sharing his research with the public. He gave a number of public lectures, which attracted large audiences. In 1829, Humboldt was invited to Russia, on a scientific visit to mines in the Urals. The observations he made on the trip were valuable to the scientific community since westerners had little knowledge of Russia at that time.

For the last part of his life, Humboldt devoted himself to writing *Cosmos*, a book about the structure of the universe, where he integrated the findings he had made in numerous scientific disciplines. *Cosmos* had five volumes, and like his earlier books, was extremely popular. The first volume was published in 1845, when Humboldt was seventy-six years old. The fifth was published after his death. Humboldt died in Berlin on May 6, 1859, at the age of 89. He was given a state funeral, and thousands of people were there to mourn him.



Humboldt's Legacy

During his five-year journey through Mexico and South America, Humboldt collected more than 60,000 scientific specimens. In addition to specimens, he amassed a huge amount of information about the places he visited, including measurements of mountains and rivers, observations about plants and animals, daily recordings of temperature and barometric pressure, measurements of the Earth's geomagnetic field, determinations of longitude and latitude, and statistical data on social and economic conditions. He made an enormous contribution to scientific knowledge and understanding of the areas he visited.

However, Humboldt's findings weren't just limited to Mexico and South America. He constantly made comparisons and connections about the things he saw, leading to many important discoveries about the world in general. For example, he was the first person to understand the existence of ecosystems, and the fact that everything on the earth is linked together in a complicated pattern of relationships. He also inspired many explorers who came after him. For example, Charles Darwin, the famous naturalist known for his theory of evolution, wrote that Humboldt was an important inspiration to him. Ironically, despite all of his important contributions to science, many people do not know who Humboldt is today. However, at the time that he lived, Humboldt was the most famous scientist in the world.

Glossary

- **Acapulco:** A city on the Pacific Coast of Mexico.
- **apothecary:** A person who prepares medicines. Humboldt's parents nicknamed him, "little apothecary," because of his interest in herbs and plants.
- **barometer:** An instrument that measures atmospheric pressure.
- **Aimé Bonpland (1773-1858):** French botanist Aimé Bonpland travelled throughout New Spain with Humboldt from 1799 to 1804.
- **botany:** Botany is the scientific study of plants.
- **Castillo de Tegel:** Also known as *Schloss Tegel*, or Tegel Palace, and located in Berlin, this is the family estate where Humboldt grew up.
- **Catholic:** A Catholic is a member of the Roman Catholic Church. King Charles IV of Spain was a Catholic.
- **Charles IV of Spain (1748-1819):** Charles IV was king of Spain from 1788 to 1808. He gave Humboldt permission to travel throughout New Spain.
- **climate:** The general weather patterns of a specific place.
- **Captain James Cook (1728-1779):** Captain Cook was a British explorer who is famous for his voyages in the Pacific Ocean.
- **Cosmos:** *Cosmos* was Humboldt's five-volume work about the structure of the universe, where he integrated the findings he had made in different scientific disciplines. The first volume was published in 1845, and the last was published in 1861, after Humboldt's death.

- **Charles Darwin (1809-1882):** Darwin was a naturalist who is famous for developing the theory of evolution after a five-year voyage around the world.
- **ecology:** The study of the relationship between organisms and their environment.
- **Benito Pablo Juárez García (1806-1872):** Juárez was president of Mexico from 1861 to 1872 and 1867 to 1872. In 1859, he declared Humboldt a Distinguished Person for his scientific work in Mexico.
- **geologist:** A person who studies the rocks and physical processes of the Earth.
- **Guanajuato:** Founded in 1554, this city in central Mexico was formerly one of the greatest silver mining areas in Mexico.
- **Huguenot:** The Huguenots were French Protestants. Humboldt's mother came from a family of Huguenots.
- **hypothesis:** A proposed explanation for something, which has not yet been scientifically tested.
- **Mexico City:** Mexico City is the capital of Mexico, and its largest city. It was established by Aztecs in 1325, and named Tenochtitlan. In 1521, the Spanish conquered the Aztecs, destroying much of the city, and building Mexico City on the ruins.
- **naturalist:** A person who studies plants, animals, and other living things. In Humboldt's time, most
- **Nevado de Toluca volcano:** This extinct volcano is located in central Mexico, and has Mexico's fourth-highest peak.
- **New Spain:** New Spain was a Spanish viceroyalty established in 1535. It eventually included all of Mexico, the southwestern United States, Florida, Central America down to the Isthmus of Panama, and many of the islands in the Caribbean. It was governed from Mexico City. In 1821, Mexican rebellions for independence finally ended New Spain and Spanish rule.
- **Pachuca:** A city located in a mining district in east-central Mexico. The Spanish founded the city in 1534, and took control of the mines in the area.
- **Protestant:** Protestants belong to a branch of the Christian Church that separated itself from the Roman Catholic Church during the sixteenth century. Humboldt was a Protestant.
- **Prussia:** A former German empire, which was abolished in 1947, following the end of World War II.
- **Real del Monte:** The Real del Monte mine is located in Mexico. It began in 1739 and still operates today.
- **sextant:** An instrument used in navigation.
- **Manuel Tolsá (1757-1816):** Tolsá was a Spanish-born architect and sculptor who lived in Mexico City and completed numerous projects there.
- **María Ignacia Rodríguez de Velasco (1778-1850):** Also known as La Güera Rodríguez, María Ignacia Rodríguez de Velasco lived in Mexico City and was known for her beauty.
- **viceroy/viceroyalty:** A viceroy rules a colony as a representative of a king or sovereign. The area governed by a viceroy is known as a viceroyalty. New Spain was a viceroyalty of Spain.

Timeline

- 1535: The Spanish establish the viceroyalty of New Spain.
- 1769: Friedrich Wilhelm Heinrich Alexander, Freiherr (baron) von Humboldt is born in Berlin.
- 1779: Humboldt's father dies.
- 1787: Humboldt takes finance classes at the University of Frankfurt.
- 1789-1790: Humboldt attends the University of Göttingen.
- 1790: Leaving the University of Göttingen, Humboldt enrolls in the School of Mines in Freiberg, Saxony in 1790.
- 1792: After two years of mining school, Humboldt leaves and takes a job as a government mine inspector.
- 1796: Humboldt's mother dies.
- 1797: Humboldt resigns from his job as mining inspector.
- 1799: After meeting Spanish king Charles IV, Humboldt receives permission to visit New Spain. He and French botanist Aimé Bonpland set sail on the *Pizarro*. They land in Cumaná (in present-day Venezuela), and travel south.
- 1800: Humboldt and Bonpland travel through the jungle, along the Orinoco River and the surrounding rivers. They then travel to Cuba.
- 1801: Humboldt and Bonpland go back to South America, and travel through the Andes Mountains, from Columbia to Peru. They climb Mt. Chimborazo, setting a new world record for climbing.
- 1803: Humboldt and Bonpland reach Acapulco, Mexico. They spend the next year exploring Mexico.
- 1804: Humboldt leaves New Spain. After visiting the United States, he returns to Europe, where he lives in Paris.
- 1805: The first of 30 volumes about Humboldt's travels in New Spain is published.
- 1821: Mexican rebellions for independence finally end New Spain and Spanish rule.
- 1827: Humboldt returns to the royal court in Berlin and serves as court chamberlain, and tutor for the crown prince.
- 1828: One of the first international scientific conferences is organized by Humboldt. It takes place in Berlin.
- 1829: Humboldt is invited to Russia, on a scientific visit to mines in the Urals.
- 1845: The first volume of *Cosmos* is published.
- 1859: Humboldt dies in Berlin, at the age of 89.
- 1861: The fifth volume of *Cosmos* is published.

Additional Resources

Books

- H. Walter Lack (2018). *Alexander von Humboldt and the Botanical Exploration of the Americas*. Munich: Prestel.
- Donald McCrory (2010). *Nature's Interpreter: The Life and Times of Alexander von Humboldt*. Cambridge, UK: Lutterworth Press.
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<https://www.newyorker.com/magazine/2015/10/26/humboldts-gift>
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Contact

For inquiries, please contact:
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(888) 570-5400; (310) 839-1500
info@epfmedia.com

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