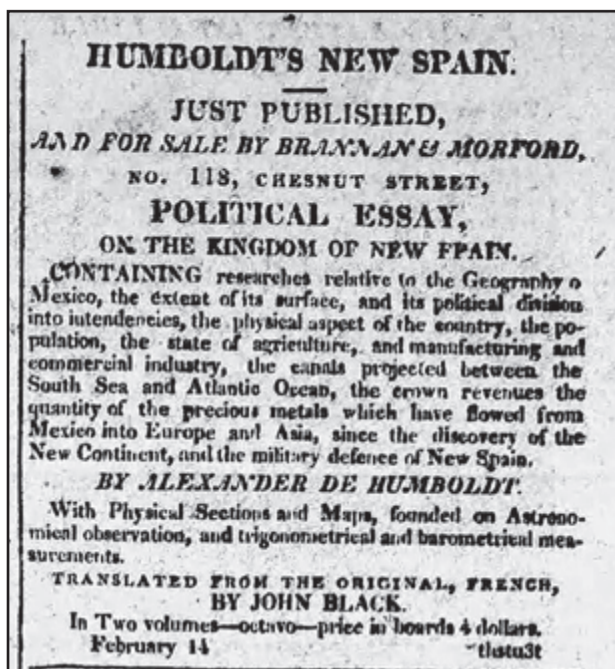




Follow the map

Humboldt helped shape American Southwest without visiting region

In 1811, a map was published as part of two-volume tome titled, "Political Essay on the Kingdom of New Spain," by Prussian scientist Alexander von Humboldt. The map showed a great deal of the United States, as well as Mexico. On the Colorado Plateau, it depicted the Colorado River and tributaries like the Dolores, Gunnison, San Juan and Las Animas rivers. It also showed the spine of the Rocky Mountains through Colorado, the La Salle Mountains in Utah and Salt Lake. And it listed territories inhabited by various Native groups, including the "Yutas — Tabegnachis," living roughly on what we now call the Uncompahgre Plateau.



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An advertisement for Alexander von Humboldt's 1811 reports and maps, as it appeared in a Philadelphia newspaper.

FIRST DRAFT

It was a remarkable piece of cartography. Some have described it as "the first modern map of the West." It influenced Thomas Jefferson, Zebulon Pike and John Fremont and helped



BOB SILBERNAGEL

received the King's permission to travel throughout the Spanish colonies in the Americas and conduct scientific observations. Without the king's approval, they could

guide explorations of the West for nearly half a century.

It was all the more remarkable because Humboldt had never set foot in the American Southwest. He had, however, spent four years on a scientific expedition of South America and Mexico. He talked with people who visited the regions of New Spain north of Mexico.

In Mexico City, he had access to official Spanish archives, including it seems likely, records and unpublished maps of the 1776 Dominguez-Escalante expedition through New Mexico, Colorado, Utah and Arizona.

Although he didn't credit Dominguez-Escalante mapmaker Bernardo de Miera y Pacheco, Humboldt's map closely resembles several that Miera produced, and most of the Spanish names he used were the same as Miera's.

Humboldt was born in Berlin in 1769. His father was a major in the Prussian Army and his older brother, Wilhelm, eventually became the Prussian prime minister.

Alexander displayed an early penchant for collecting and describing plants, shells and insects. When he was 20, he published his first scientific paper, a treatise on basalt formations of the Rhine River.

After graduating from university, Humboldt became a government mine inspector who helped find new deposits of gold even as he established schools and emergency relief funds for miners. He also studied biology and human anatomy.

He became friends with author Johann Wolfgang von Goethe and Goethe's literary friends. He traveled to England, France, Switzerland and Italy, conducting government business and his own scientific research.

The trip that changed his life and influenced so many others began in 1799, after he met Aime Bonpland, a botanist and physician. By then, Humboldt had a substantial inheritance that allowed him to self-finance his scientific journeys.

He and Bonpland met with King Carlos IV of Spain. They

have been imprisoned.

On June 5, 1799, the two men sailed from Spain to South America. They spent the next five years trekking across South and Central America and much of Mexico. They crossed the Andes, mapped some of the tallest mountains, described the magnetic equator and measured an oceanic feature that is still known as the Humboldt Current.

They spent a year in Mexico, traveling frequently but also poring over records in government archives and libraries.

By March 1804, they were ready to return to Europe. But first, Humboldt wanted to visit the United States and President Thomas Jefferson, whose political views Humboldt admired.

Humboldt and Bonpland were treated as celebrities in Philadelphia and Washington when they visited in June 1804, feted by top government officials and scientific leaders. Newspapers wrote lengthy accounts of their visit and their travels in New Spain. They visited Jefferson in Washington and at his home at Monticello.

Barely one month earlier, Meriwether Lewis, William Clark and their Corps of Discovery had set off at Jefferson's behest to explore the recently acquired Louisiana Purchase. They didn't receive the benefit of Humboldt's knowledge.

But Jefferson used information Humboldt provided to negotiate with Spain over the vague southern border of the new Louisiana Territory.

Furthermore, there is no doubt that Lt. Zebulon Pike had access to Humboldt's information when he began his expedition to the Southwest, including Colorado, in 1806.

In fact, in a letter he wrote to Jefferson, Humboldt accused Pike of plagiarizing a portion of his map and badly mangling place names, in a report Pike produced of his journey.

Humboldt's map, and the first two volumes of his report on his journey in the Americas, became available to the American public in early 1811. They were popular items, and were advertised in newspapers throughout the United States.

Eventually, two more volumes were added to Humboldt's "Political Essay on the Kingdom of New Spain," and more maps were included. The map that accompanied the first volumes was easier to read than most maps of the day, and its influence was immense. But it had its flaws. The Dolores River, listed as "Rio de Nra. Sra. de los Dolores"



Alexander von Humboldt as he appeared later in life, when he had returned to Europe.

on the map, is rendered with reasonable accuracy. So is the lower Colorado River, below the Dolores, although there is no indication that it runs through multiple deep canyons, including the Grand Canyon.

But the Upper Colorado, which Humboldt identified as the Rio de San Rafael, is shown as a nearly straight line flowing out of the Rocky Mountains until it merges with the Dolores. Then it becomes the Rio Zaguanganas, before becoming the Rio Colorado after it reaches the San Juan, called the Rio Nabajoa. And the Rio de San Xavier, today's Gunnison River, is shown running parallel to the San Rafael, a few degrees to the south.

There are other inaccuracies, such as where the Rio Grande River starts and the width of the Rockies. Salt Lake is shown lying the south of Lake Timpanogos, today's Utah Lake, where Sevier Lake lies.

But perhaps the greatest error — one that wouldn't be

corrected until John Fremont explored the West in the 1840s — is the Rio de San Buenaventura, today's Green River. Humboldt showed it flowing from Rockies southwest to Salt Lake. On his map, it doesn't connect with the Colorado River.

The San Buenaventura is not shown beyond Salt Lake. But other people, who desperately wanted a navigable east-west waterway to connect to the West Coast, were convinced the river came out the west side of Salt Lake and continued to the Pacific Ocean, until Fremont proved otherwise.

Despite such issues, Humboldt won high praise for his maps and the reports of his exploration of New Spain. They contained the most detailed information then available.

After leaving the United States, Humboldt settled for a time in Paris, writing prodigiously and holding court among Parisian intellectuals. In 1827, he returned to Berlin, where he lived until his death

in 1859.

He continued to write. He had nearly completed the fifth volume of his masterpiece, "Cosmos: A Sketch of a Physical Description of the World," when he died at age 90.

Sources: "Humboldt's Utah, 1811," by C. Gregory Crampton, Utah Historical Quarterly, July 1958; "A Map of New Spain, from 16 degrees to 38 degrees North Latitude," Library of Congress, www.loc.gov/resource/g4410.ct001485; "Alexander von Humboldt: 1769-1859," Princeton University, www.library.princeton.edu/visual_materials/maps/websites/thematic-maps/humboldt/humboldt; "Who Was Alexander Von Humboldt," by Eleanor Jones Harvey, Smithsonian, March 24, 2020, www.smithsonianmag.com/smithsonian-institution/who-was-alexander-von-humboldt-180974473; Historic newspapers at www.newspapers.com.

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Humboldt's 1811 "Map of New Spain" which included Mexico and much of the United States.



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An enlargement from Humboldt's 1811 map, showing western Colorado and most of Utah.