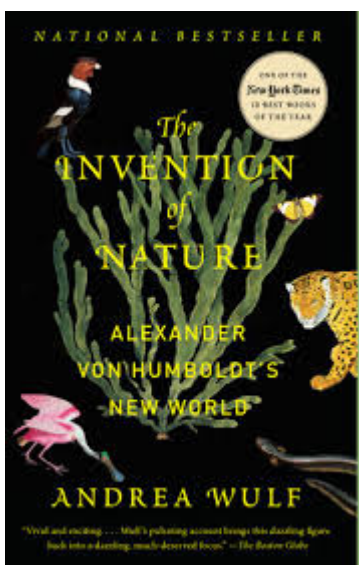


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The Invention of Nature: Alexander von Humboldt's New World – Evergreen Audubon

7-8 minutes



When the Evergreen Nature Book Club met to discuss *The Invention of Nature*, none of us could recall ever having heard of Alexander von Humboldt. Yet, our ideas about the natural world are indebted to the life's work of this great 19th-century naturalist. We do know of several items that were named after Humboldt: the Humboldt Penguin, the Humboldt Current off the west coast of South America, Humboldt California, and Humboldt Peak, a 14er in the Sangre de Cristos. There are also squid, orchids, oak trees, skunks, a willow, many flowers, and more species and places named for Humboldt, including a national park in Cuba, a

national forest in Peru, and a national forest in Nevada-California. As Wulf informs us, “more places are named after Humboldt than anyone else.”

Andrea Wulf's account of Humboldt's exploits and contributions to science is superb reading for all us of who cherish the natural world. His story is extraordinary; it informs the way we think about nature and has influenced many of the most prominent scientists of his time and ours, including Charles Darwin. Darwin brought Humboldt's books with him on the voyage of the *Beagle* and annotated them heavily.

We also learn from Wulf that Humboldt was once very well known throughout the world, especially in the western hemisphere. On the centennial of his birth, 14 September 1869, people celebrated throughout the world. In the United States, there were “street parades, sumptuous dinners and concerts.” 8,000 people marched in Cleveland, 15,000 in Syracuse, 10,000 in Pittsburgh, including President Ulysses Grant. 25,000 people met in Central Park in New York to see a bronze statue unveiled. Yet, following the anti-German sentiments during World War I, Humboldt's history was largely erased, at least in the US. He is still celebrated widely in South America, the continent that Humboldt explored and “put on the map” for Europeans.

Wulf's mission in writing *The Invention of Nature* was to rediscover Humboldt and bring his name and role back to our understanding of the natural world. She describes his early upbringing in Prussia as a close friend of the poets Johann Wolfgang von Goethe and Johann Friedrich Schiller. However, her most exciting account focuses on Humboldt's explorations in

South America. As a young man, he was desperate to visit the new world and see for himself all the amazing discoveries of new plants and animals. He finally sets off in 1799. He and his companion, Aimé Bonpland, landed in the major Spanish city of Cumaná, in what is now part of Venezuela. He and Bonpland collected, observed, studied, and measured everything. He even timed the shocks in the midst of an earthquake. They took their instruments and headed south to find the source of the Orinoco with the Amazon. It was a three-year adventure, one in which both came close to dying more than once.

The explorers crossed the Andes into Quito, Ecuador, where Humboldt became obsessed with climbing the 20,549-foot volcano, Chimborazo. With the wrong clothes and footwear, he and Bonpland got to 19,413 feet before being forced back by snow and cold. His experience on the volcano changed his view of the world. He began to create his *Naturgemälde*, or his painting of nature, in which he saw the natural world as a living whole. His drawing of Chimborazo showed plant distributions at various elevations, from the tropical rain forest to the temperate and alpine zones. His drawing of the mountain included columns of data on temperature, humidity, and other atmospheric conditions. He showed how plants lived in different zones that could be linked to climate zones throughout the world. No one before Humboldt had developed the concept of an ecosystem. He was making sense of nature as a web of life.

After three years in South America making incredible discoveries, Humboldt and friends spent a year in Mexico and Cuba, exploring and visiting the colonial archives and libraries. At the

last moment, on his way home, he decided on a stop in the United States to meet Thomas Jefferson, then President. They spent several days meeting, talking about science, Humboldt's discoveries, and Jefferson's views.

Humboldt spent the rest of his long life living between Paris and Berlin. He lectured, met with other scientists, and wrote a series of "large and beautifully illustrated volumes" on his discoveries in South America. He expounded on his view that nature had to be studied holistically and posited a vital force that connected nature and man. He completed his influential *Views of Nature* and began what would become his 34 volumes on South America.

Among so many achievements, Humboldt invented the isotherm to explain global weather phenomena. He influenced fellow scientists throughout Europe, including the geologist Charles Lyell, and, of course, Charles Darwin.

After years of trying to arrange another extended expedition, he finally was granted permission to visit Siberia. Given his training and work in geology and mining, he predicted that diamonds would be found in the Urals in the same deposits that they were found in in Brazil. Within weeks, he was proven correct. Another great adventure brought new discoveries and insights.

The depth of information and history that Wulf commands is prodigious. The book is dense but fascinating, difficult to put down. The story of Humboldt is like reading an encyclopedia of discovery in natural history. His influence on later scientists is also an astounding revelation.

At age 89, he completed the fifth and final volume of his great

work, *Cosmos*, and died on 6 May 1859. Tens of thousands of mourners followed his funeral procession in Berlin. The Prussian king, Friedrich Wilhelm IV, called him “the greatest man since the Deluge.”

I strongly urge you to consider reading *The Invention of Nature*. It provides insight into a period that we know too little about. It is Wulf's recounting of the history of modern ecology, written from its formidable beginnings and the result of the amazing work of one individual. Wulf ends her books with chapters on people who were influenced by Humboldt, writers like Henry David Thoreau who rewrote *Walden* after reading Humboldt and the naturalist John Muir, who followed Humboldt's path to the Amazon when he was 73 years old.

Here's how Wulf ends: “Environmentalists, ecologists and nature writers today remain firmly rooted in Humboldt's vision—although many have never heard of him. Nonetheless, Humboldt is their founding father.” I think you'll find that your conception of nature is rooted in Humboldt's work upon reading Wulf's account.

Andrea Wulf

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