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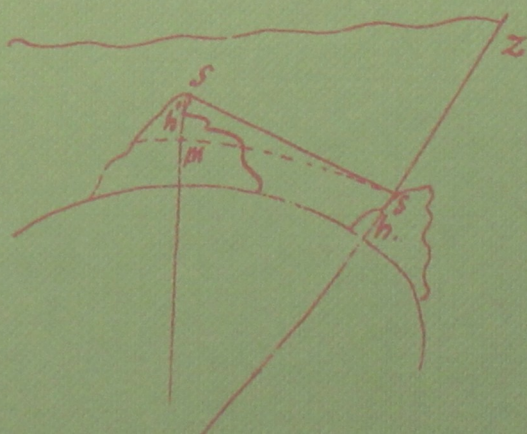
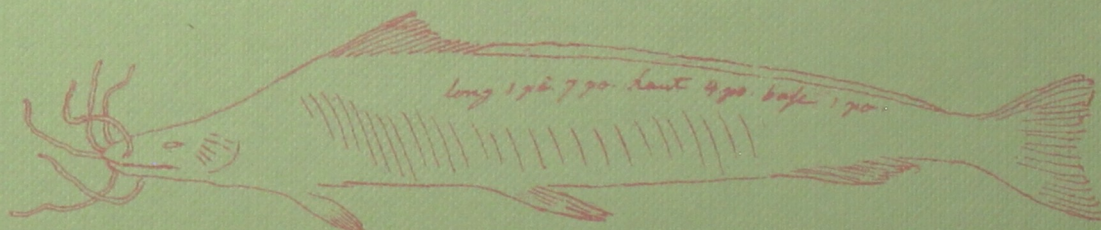


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Ottmar Ette
Julia Maier

ALEXANDER VON HUMBOLDT

THE COMPLETE DRAWINGS
FROM THE AMERICAN
TRAVEL DIARIES



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FROM THE AMERICAN
TRAVEL DIARIES

PRESTEL
Munich · London · New York

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FOREWORD

The 2013 purchase of Alexander von Humboldt's American travel diaries was one of the most spectacular acquisitions in the recent history of the Prussian Cultural Heritage Foundation. It may well be called the acquisition of the century! To have succeeded, especially here in Berlin, in securing for posterity the important diaries of this great traveler and natural scientist as part of the world's cultural heritage was truly a stroke of good luck for a city so devoted to science and scholarship. The crucial significance of retaining the diaries in Berlin is obvious. Although Alexander von Humboldt longed for Paris throughout his life, he lived and worked mainly in his native city during the second half of his life. It was here that he shaped the scholarly-scientific landscape like few others among his contemporaries, and it is here that his work continues to resonate powerfully to this day, a resonance to which the incipient Humboldt Forum at the Berlin Palace no doubt contributes. The Prussian Heritage Foundation's State Library in Berlin is where it became possible to unite the American travel diaries with the rest of the extensive archive of Alexander von Humboldt and many of his contemporaries, with whom he engaged in intense exchanges of ideas and information. The diaries are now kept in the vaults of the State Library in the best conservational setting imaginable and under the strictest of safety measures, so that they can be optimally preserved for future generations.

The Digital Center of the Berlin State Library digitalized all nine diaries immediately after the purchase in order to present their contents to the world as quickly as possible and make them accessible to international researchers. For the past three years, the diaries have been freely accessible online through the Humboldt Portal (humboldt.staatsbibliothek-berlin.de). This was possible because the State Library, through generous funding it had received from the Federal Ministry of Education and Research (BMBF) in connection with the acquisition, was able to inventory and digitalize the entire Alexander von Humboldt Archive.

The Humboldt Archive is the contextual framework in which the American travel diaries develop their special appeal. While this collection has been the property of the Berlin State Library since the nineteenth century, a third of the materials is still housed at the Biblioteka Jagiellońska in Cracow as a result of the removals during World War II. They, too, are now also available in digital form. This means that the different parts of the collection in Berlin and Cracow have been reunited at least virtually through the collaborative inventorying of all materials in the shared database Kalliope (kalliope.staatsbibliothek-berlin.de). The digitalization of all the documents kept in Berlin and Cracow was a milestone in the collaboration between the two libraries. The result of this ambitious German-Polish endeavor also enjoys global visibility through the State Library's Humboldt Portal. Both parties hope they will soon be able to continue their cooperation on new projects.

As part of the BMBF-funded joint project, the Berlin State Library has partnered with the University of Potsdam. Under the direction of Prof. Dr. Ottmar Ette, an authority on the complete works of Alexander von Humboldt, the engagement with a variety of research issues concerning the content of the American travel diaries has gained

renewed momentum. This involves the context and contextualization of the individual parts of the diaries with the goal of analyzing them from the perspective of literary studies; classifying them within the history of science and intellectual history; and examining their material aspects. Alexander von Humboldt's specific approach is being studied in depth from the vantage point of different academic disciplines, with a focus on both his texts and his numerous sketches and drawings. Beyond this, light is being shed on formal and thematic relations within the diaries themselves and between the diaries and other parts of the Alexander von Humboldt Archive and his publications.

One particularly fascinating product of this project is now before us: Alexander von Humboldt's drawings from his American travel diaries. What makes this volume special is that these are the image-worlds he drafted, sketched, and drew with his own hand. Even a fleeting glimpse at his diaries shows that Humboldt not only wrote all the time, but also drew constantly. These images are an integral part of what he intended to show future audiences about his observations and discoveries in the most powerful way possible. The present publication makes abundantly clear that there is so much to read not only in Alexander von Humboldt's texts, but also in his images.

The idea and concept for this volume originated with Ottmar Ette. It is also a product of the joint project. The intellectual exchanges within the existing scholarly-scientific networks at the Berlin State Library and the University of Potsdam and with new partners created synergies that led to new research fundamentals and fresh insights. I hope that this book will be disseminated broadly. May it be useful to Humboldt researchers and to all those who wish to gain a lasting sense of Alexander von Humboldt's "life book." My special thanks and appreciation go to the research team responsible for this volume. Under the direction of Ottmar Ette, they have made it possible for the public to delve into Alexander von Humboldt's image-worlds and to embark from there on their own voyages of exploration.

Prof. Dr. Hermann Parzinger

President of the Prussian Cultural Heritage Foundation



Eduard Ender
Alexander von Humboldt and Aimé Bonpland on the Orinoco, 1856
Oil on canvas, 110 × 143 cm
Berlin-Brandenburg Academy of Sciences

Ottmar Ette

INTRODUCTION

Alexander von Humboldt's Image-Worlds:
When Images Learned to Move

A Spectacular Journey, a Fascinating Traveler

Alexander von Humboldt's travels to the American tropics, the "Voyage aux régions équinoxiales du nouveau continent," which he undertook from 1799 to 1804 in the company of Aimé Bonpland, was a sensation not only in Prussia, France, and Europe but across the globe. Humboldt had already tried to reach as large an audience as possible during the remarkable course of this exploration, which led him through the territories of today's Venezuela, Cuba, Colombia, Ecuador, Peru, and Mexico and which he bankrolled himself: "Part of the writer's office is to ring bells."¹ Because Humboldt always concerned himself with the societal impact of his ideas, it was no coincidence that this phrase had been his motto since 1792. It is not surprising, then, that interim reports of Humboldt's journey often circulated in Europe and in the Americas and also that a very favorable reputation hurried on ahead of him from the very start of his travels.

Alexander von Humboldt knew that growing fame accompanied him. He enjoyed it and used it, especially because it opened many doors for him – in the Spanish colonies and in the USA. The young Prussian, who socialized at the viceregal court of New Spain and with the US president Thomas Jefferson, wanted to change the view of the "New World" fundamentally and globally. These changes have stood the test of time.

Humboldt quickly set to work and rang bells resoundingly, during his travels and well thereafter. He had much to do. Barely three weeks after his return to France, he began to speak about his grand voyage in several lectures at the Institut de France in Paris. As a speaker, Alexander von Humboldt was enthusiastic and inspiring. Humboldt and Bonpland's voyage soon eclipsed all prior transatlantic travelers. As always, Paris was a feast for Humboldt. But other journeys, this time in Europe, followed, especially to Italy, where he wished to visit his brother and Mount Vesuvius and where he also made contact with many artists who were to lend his voyage visibility.

In the eyes of the busy scientist and scholar who admitted in his *Confessions* that he could "only be happy" when he did not rest on his laurels but, "filled with restlessness and excitement," anticipated what was yet to be done ("namely, three things at once"²). The dimensions of the great work on the Americas he had planned grew each day, and with that vision grew the efforts, difficulties, and expenses. In contrast to his role model Georg Forster, who, together with his father, Johann Reinhold Forster, had accompanied the Briton James Cook on his second journey around the world, Humboldt was under no pressure to publish his travel narrative because of competing reports by fellow travelers. But time literally ran away from him, since he

1 Humboldt 1973, p. 170.

2 Alexander von Humboldt, "Mes confessions, à lire et à me renvoyer un jour," in *Le Globe* (Geneva), 7 (January–February 1868), p. 188; cited here after the German-language edition by Kurt-R. Biermann; see Humboldt 1987, p. 60. [Unless otherwise noted, all English translations of quotations are by Vera M. Kutzinski.]

3 See Ette 2001a, pp. 33–55.

was always traveling and writing, always spurred on by a constructive “moral restlessness.”³ Soon, Humboldt began to look for opportunities to visit Asia.

Meanwhile, Humboldt’s audience became increasingly impatient and hungry for reports, for pictures, in short, for evidence from the New World. But his American travel writings took their time to unfold within their ambitious contours. The publication of the either twenty-nine or thirty-four (depending on how one counts) extensive and large volumes would take no less than three decades. And the work remained incomplete even then. For Alexander von Humboldt had never been a man who arrived: he always seemed to be setting out, going somewhere. It was not just any one of the large volcanoes that he climbed repeatedly but Chimborazo that became his favorite topic: that Andean giant, in those days believed to be the highest mountain in the world. Humboldt never reached its peak, but he did set a new high-altitude record on his climb. Repeated often in Humboldt’s writings, Chimborazo represented a long, restless life in never-ending motion.

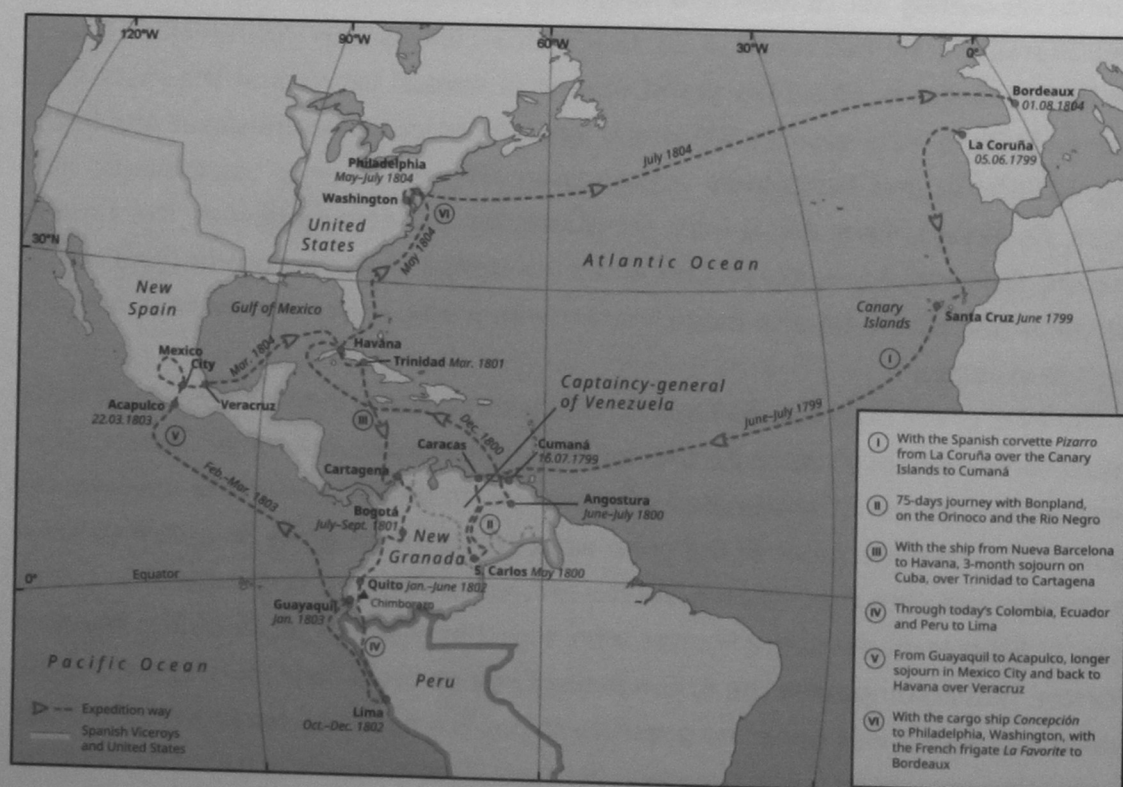
But his contemporaries’ thirst for knowledge, which Humboldt’s loud bell ringing had awakened, grew, and they demanded at least a coherent travel report. Soon, “allographic” reports of his voyage written by others began to appear, such as the *Notice*⁴ that the French Academy member Jean-Claude de Lamétherie submitted in 1804. It came out in German translation as *Reise der Herren v. Humboldt und Bonpland nach den Wendekreisen* a year later.⁵ But this was hardly enough to satisfy the public’s enormous appetite. As a result, the first volume of *Alexander von Humboldts, königl. preußischen Bergraths, Reisen um die Welt und durch das Innere von Südamerika* also appeared in 1805, authored once again not by Humboldt himself but by a certain Friedrich Wilhelm von Schütz.⁶ The title already gave it away. Unlike Forster, Humboldt, who had not been a mining inspector for quite some time by then, had not embarked on one of the “voyages around the world” that characterized the particular phase of globalization of his day. Humboldt’s voyage was a voyage of explo-

4 Lamétherie 1804.

5 For the origins and publication history, see Fiedler und Leitner 2000, pp. 28–30.

6 See *ibid.*, pp. 31–33.

Humboldt’s travel itinerary (1799–1804) led him across vast areas of present-day Venezuela, Cuba, Colombia, Ecuador, Peru, and Mexico and ended with a short visit to the USA.



ration of a new type, one that led into the interior of the continent. It generated new knowledge, new images.

Impostors and misrepresentations increased the pressure on Humboldt finally to submit his own travel report. Once again, an “allographic” representation had to “stand in” for a full representation of the American journey that did not yet exist – and that Humboldt would never complete. Only with the publication of the first edition of *Views of Nature* in 1808 (it also remained unfinished) did Humboldt grant the broader public access to a few stages of what he had planned. Some of his contemporaries might have guessed it even then: in the midst of the frantic fabrications of Humboldtian writing, the learned Prussian’s American travel diaries were to remain the sole autograph of his entire voyage in the American tropics. (The same applies to the “Italian voyage”⁷ from 1805, chronicled in volumes II and VI of the Diaries.)

7 See Bourgeut 2016, pp. 207–33.

For a long time, even up to the present day, the images Humboldt created and arranged artistically for his massive *Voyage* – his image-worlds – had been “allographic” in that they did not come from the traveler himself. Instead, painters, graphic artists, engravers, and draftsmen he had met in Rome, Paris, and in German-speaking countries, and who were friends and associates, created, often on the basis of Humboldt’s own sketches, the very images that rendered Humboldt and Bonpland’s fascinating voyage visible for their contemporaries, albeit with a certain delay. In his highly experimental and very expensive *Views of the Cordilleras and Monuments of the Indigenous Peoples of the Americas*, Humboldt artistically combined his own texts with the work of many other artists who also not infrequently relied on drafts from his travel diaries. This “iconotextual” arrangement created impressive image-worlds whose iconic aspects, though they did refer back to Humboldt, did not originate with him. When it comes to Humboldt’s innovative view of the New World, the effect that his visualizations have had well beyond his contemporaries cannot be overestimated.

The tremendously elaborate, meticulous, and costly work of numerous international artists, who had not themselves visited the tropics but had received precise instructions from Humboldt, took the place of the many drafts and sketches that Alexander von Humboldt himself produced during and after his voyage. In this way, an extensive scientific and artistic body of visual work (indebted to Humboldt’s ideas) came into being. Some have, at times, presented this body as Alexander von Humboldt’s complete visual works,⁸ while excluding precisely those works that came directly from his own hand. As in the case of the text-worlds of the Humboldtian voyage, in which, until quite recently, other authors and editors had elbowed themselves into the foreground through their textual alterations and ventriloquisms, when it comes to Alexander von Humboldt’s image-worlds, we cannot now suddenly disown the work of the artists he had commissioned. Instead, we must connect that work with Humboldt’s own broader vision. This vision unveils for us new, ever-changing landscapes and objects in motion. The American travel diaries offer a privileged window into this world.

8 See the notes in Bayerl 2015/16.

Until now, however, the textual and visual testimonies to Humboldtian art and science – or better yet, to his “art of science,” in which, following Friedrich Nietzsche, both Apollonian and Dionysian aspects are realized equally – have languished at the margins, have even been consigned to oblivion. Even partial, excerpted publications unencumbered by any philological and literary criteria could not have saved them

9 Exemplary in this regard are, among others, Humboldt 2003a; Humboldt 2003b; and Humboldt 2000. See also the editors' critical commentaries in Humboldt 2006.

10 See Bredekamp 2005.

11 See the chapter "Humboldt als Zeichner" [Humboldt as draftsman] in Werner 2013, pp. 11–85.

12 Ibid., p. 14; also Bredekamp 2015.

13 See Figure 6: "Von großem Mißtrauen erfüllt: Von Surrogaten und Extrakten des amerikanischen Reisewerks im deutschsprachigen Raum," in Ette 2009, pp. 259–318.

from this fate.⁹ As readers return to Alexander von Humboldt's original writings, an impulse that has grown noticeably stronger in the last quarter of a century, it has now become important to make accessible the images that he himself drew. Let us not forget that Alexander von Humboldt, in contrast to Charles Darwin,¹⁰ was also a trained¹¹ and talented painter and draftsman. When he was not writing during his travels, he was always drawing in his field diary. To get an idea of the young Humboldt's artistic abilities, one has only to look at his remarkable early drawing, *Mann mit Turban* [Man with turban].¹²

The power to enthrall that emanates from his work applies in equal measure to Humboldt's travels and to him as a traveler. In the German-speaking regions, Alexander von Humboldt is clearly no longer the august stranger he had been for more than a century. In 1982, at the festival "Horizons" in former West Berlin, the renowned Latin American writers Octavio Paz, Juan Rulfo, Gabriel García Márquez, and Mario Vargas Llosa could not believe their eyes and ears when they discovered that their German audiences knew only the name of Alexander von Humboldt but had not really read his writings – texts and writings that, at the time, were available only in unreliable editions and translations that had degenerated into surrogates and extracts.¹³ During times of nationalistic and authoritarian political regimes in Germany, the life and work of this European representative of a globally imagined cosmopolitics had become very uncomfortable. That in Germany, much of the work of this leading scientist and intellectual "avant la lettre" had been consigned to oblivion, was usually quite intentional. A thinking that crossed all sorts of boundaries was unwelcome. Today, Alexander von Humboldt is once again back in the limelight. He has moved (back) to the center of many discussions and debates in all corners of the world, not only in Germany and Europe, but also on the American continent. In the Spanish-speaking world, his star has always been bright. Scholars and scientists consult his writings whenever it comes to questions about geo-ecology and transculturality, climate change and anthropology. New editions of his writings, novels, and popular biographies, together with broad-based international scholarship have all helped to recognize the Prussian thinker's historical significance and his works' incredible relevance and timeliness. Perhaps the first theoretician of globalization, Humboldt became increasingly a celebrity in the present phase of accelerated globalization, which seems to be ending now. Portraits of him are everywhere. Not so his own pictures. By historical hindsight, one may say that Alexander von Humboldt's national and international fame first peaked with his American voyage. Traveling played a crucial role in his research-in-motion and in his transient, restless life. It is easy to divide the life of this scholar of nature and of culture, who was born in Berlin in 1769 and died there in 1859 at the age of almost ninety, into three roughly thirty-year segments marked in 1799 by the beginning of his American travels and in 1829 by his Russian-Siberian voyage of exploration all the way to the border with China. His long life, which reached across more than three generations of scientists and scholars, falls between the 18th and 19th centuries; between Prussia and France; between Europe and the Americas; between the north of Central Asia and between Europe and the global South in the same way that his writing is situated between German and French; between the *Encyclopédie* and Goethe; between literature and science; between natural and cultural research and thus between anthropology and zoology, history and geography, climatology and cultural philosophy, economics

and ecology, and physics and philology – which hardly even begins to cover all the fields of his knowledge from a disciplinary perspective. Humboldt's transdisciplinary knowledge is not monadic but profoundly nomadic, words that the Prussian traveler himself used.¹⁴ His knowledge cannot be disciplined, which made it a scandal for several generations of disciplinized academics. Today, we understand Humboldt better. To grasp why Alexander von Humboldt's reputation has been steadily growing worldwide since the beginning of the 1990s demands a comprehensive understanding through which we can appreciate the author of *Cosmos* as a writer and a scholar-scientist, as a researcher, traveler, and philosopher in whose life we can perceive not only the living past, but also a thinking-together of nature and culture, of world and environment, of sense and sentience, and of what can be academically disciplined and what cannot. His concept of a nomadic science, of a transdisciplinary understanding of life that crisscrosses all disciplinary boundaries, addresses the challenges of the past and also of present futures. Engaging with Alexander von Humboldt is fascinating and exciting work on the adventure of knowledge production, which Humboldt time and again shows us in all of its provisionality.

Seeing Humboldt in this way, we can comprehend why his travels and the "moral restlessness" that motivated this traveler are so meaningful. We can leisurely look over his shoulder as he writes his travel diary and, in so doing, sketches the outlines of a life devoted to knowledge. Alexander von Humboldt's American travel diaries testify to the birth of a science and, moreover, to a kind of thinking that insists on relating nature to culture, aesthetics to ethics, and diverse areas of knowledge to each other. This science attempts to record and understand all objects and phenomena dynamically, that is to say, in and through living motion. In the image-worlds of the pages that follow, we see Humboldtian science as a luminous "gay science" in Nietzsche's sense.

14 See Ette 2015b.

The Travels of the American Travel Diaries

As the birth place of Humboldtian science, his travel diaries – which are not just diaries, notebooks, memory aids, sketches of ideas, and treatises, but also sketchbooks, drawing pads, drafts of thought experiments, and reservoirs of images – demonstrate why Humboldt's science is an aesthetic science.¹⁵ Even in this other, earlier Humboldtian *Cosmos*, in which all his areas of interest are present and represented, order and beauty are the etymological, scientific, and aesthetic ground rules – even where, at first glance, chaos on paper seems to reign. At the same time, it becomes clear in the four and a half thousand pages of these diaries why this transdisciplinary and transmedial concept of science and scholarship is not evidence of the remnants of the last of the "universal geniuses." Rather, it is the prototype of an innovative understanding of science and scholarship. In this new science, this Humboldtian "scienza nuova," everything is interconnected with everything else, even if not always simultaneously. It was hardly a coincidence, especially in the American travel diaries, that the motto of Humboldtian science in German would pervade a passage about geo-ecological and climatological connections Humboldt originally wrote in French: "Everything is interrelated."¹⁶ Nothing in this work and in Humboldt's thinking remains disconnected and isolated. Whatever it is that Humboldt dissects at a given moment, it is immediately thought back together.

15 See Böhme 2001.

16 Alexander von Humboldt, *American Travel Diaries*, Diary IX, 27 r and v.

As I already suggested in the context of Humboldt's "Italian travels," the American travel diaries are much more than the logbook of a single journey. They are also, as we have them today, incomplete. Their incompleteness refers less to the fact that individual pieces are housed in the Biblioteka Jagiellońska in Cracow while other parts, such as the Mexican Diary¹⁷ or the separate *Isle de Cube. Antilles en general*,¹⁸ have already appeared in freestanding editions. Rather, the countless interior networks in Humboldt's diaries, which transform everything into a single textual weave and also interrelate everything at the level of the writing itself, call our attention to gaps in the existing materials. The artistic connections that Humboldt created, and to which he added constantly during the course of half a century, show that gaps appear within these networks of knowledge.¹⁹ These gaps demand further research,²⁰ and not just in order to make it possible to discover additional archives, as was the case in Cracow. In the register of the fifth volume, for instance, there is a reference to another part of the travel diaries, volume XIII, which refers to the Franco-German research team's voyage from Philadelphia to Bordeaux, the final leg of their travels in 1804. As yet, however, we know nothing of the whereabouts of this and other possible parts of the American travel diaries.

The sequence of the diary's volumes from I to XIII suggests that at least one other diary exists, in addition to the diaries that Humboldt had bound in pigskin in 1858, the two travel diaries (about New Spain and Cuba) that were not bound and probably kept in Humboldt's desk as loose leaves, and the Philadelphia-Bordeaux diary XIII. In the context of producing critical editions, the long-term Humboldt research project housed at the Berlin-Brandenburg Academy of Sciences will focus on searching for lost pieces of text that might still be found even in the known Humboldt archives. But all hopes for future findings cannot entirely disregard the losses, during World War II and later on, of parts of Arthur Runge's famous collection of Humboldtiana, which also included "travel diaries written in French."²¹ Still, the case of Humboldt's so-called notebook from the Runge collection, which the Berlin State Library purchased in 2013, shows that not all hope is in vain. After all, a few years ago researchers in Spain actually discovered the "Laissez-passer" – long believed lost – which the Spanish colonial administration had issued Humboldt and Bonpland, their key, so to speak, to the Hispanic Americas.²² The American archive continues to grow thanks to intensive effort.

It is untrue, as many still assume, that Humboldt created the American travel diaries exclusively during his and Bonpland's actual travels. This written record begins years before the start of the "Voyage to the Equinoctial Regions of the New Continent," and the process of creating the travel diaries continued for more than fifty years after Humboldt returned to Europe in the form of comments, corrections, commonplace books, glued inserts, and additions. The same holds true for the sketches and drawings, a smaller, carefully identified portion of which is not attributable to Humboldt himself but, once again, is "allographic" in nature.

Alexander von Humboldt treasured his travel diaries. He referred back to them when he wrote his American travel works, *Views of Nature*, and *Cosmos*, as naturally as he exported insights, results, and experiences from the latter to the former. Everything was indeed interrelated. In this way, the American travel diaries became an actual "lifebook"²³ that accompanied the natural and cultural scientist until his death. The diaries may reasonably be called the spine of Humboldt's research and scholarship

17 Humboldt 2005.

18 Humboldt 2016.

19 See Holl and Kruse 1999.

20 For the ordering of the individual diaries, see Faak 1982; also the editors' explanatory remarks in Humboldt 2006. A schematic overview can be found in Faak 2002.

21 See Nicolas 1940.

22 See Puig-Samper 1999.

23 For more details, see Ette 2015a.



The nine volumes of the
American travel diaries

during the second and third stages of his life. Their images and texts kept his experiences in the American tropics always fresh for him.

The American travel diaries, which ramified ever more as the years went by, were the globetrotting Humboldt's real travel companions – next to Aimé Bonpland, interim travel companions such as Carlos Montúfar, the countless indigenous guides, porters, and helpers, and the instruments Humboldt introduced one by one, almost as if they were persons, at the outset of his *Personal Narrative*. The diaries were always there. Humboldt wrote and drew all the time, even under the most difficult of conditions. In these papers, he recorded the results of his surveys, the evolution of his thinking, and the many changes in his own perceptions due to his experiences. Such perpetual self-reflection makes Humboldt's lifebook an unusually important monument in the history of science and, because of the many belated additions and commentaries, an autobiographical and artistic work. Not only do the diaries document Alexander von Humboldt's travels; they are themselves literally well-traveled texts that moved from England, the South of France, and Spain, across the Americas, and to Rome, Paris, and finally Berlin. Given how much and how harshly they were treated in hot and cold climes, exposed to rain, snow, dry heat, and to the humidity of the river islands at Atures and Maipures, it borders on the miraculous that they remained intact and are still in such excellent condition. The diaries even survived a shipwreck on the Orinoco, where they fell into the water and later had to be hung up to drip dry. But we know of course that Humboldt always placed special importance on his writing materials. Even when it came to mixing the different inks he used, he left nothing to chance.²⁴

24 See Thiele 2016.

The travel diaries recorded experiences and many an adventure, some of which, as in the case of the snowboard on the Rucu Pichincha, were almost fatal. In the very midst of his observations, however, Humboldt repeatedly refers to the quality of the paper and mentions that purchasing adequate writing materials was costly and involved. He proudly speaks of inks he made himself. Thanks to their high water resistance, these inks withstood the Orinoco River, even though that water left its traces on some of the sheets (Humboldt lovingly doodled around the waterstains). It is also thanks to his good ink that everything has remained legible.²⁵ He paid the utmost attention to his writing and drawing instruments. The diaries themselves carry the traces of their own physical existence – wavy pages and water stains. They are marked by their own travels and their nomadic life in all sorts of ways.

25 Alexander von Humboldt, *American Travel Diaries*, Diary IV, 31 r.

The diaries are fascinating pieces of European and global history. Even though, in the end, Alexander von Humboldt safely kept paper companions in Berlin and decreed in a will from 1838 that they should remain in Berlin and thus cease traveling, the diaries' journeys did not end even in the twentieth and twenty-first centuries. The yet-to-be written history – of the relocations during the war bombings; the transfers to the Soviet Union as looted art after the end of the war; the returns from there to the Biblioteka Jagiellońska in Cracow and to the State Library Unter den Linden in East Berlin; of the fall of the Berlin Wall and the migration from the east to the west of the now no longer divided city; the move from the Berlin State Library to Tegel Castle and to London, from where the American travel diaries finally found their way back to the Berlin State Library – all this is as gripping as the plot of a mystery novel with a focus on German and world history.

Humboldt himself provided sequential page numbers for the entirety of the manuscripts. They are incredibly well preserved given what they survived. His pagination is still very visible on the sheets. After World War II, when the travel diaries were taken to the Soviet Union, a second, different set of page numbers was added, which is in need of considerable correction, as has been pointed out in an edition of the materials about Humboldt's attempt to climb the Chimborazo.²⁶ The necessary linearity of page numbering does not do justice, however, to the relational logic of the Humboldtian travel diaries with their complex cross-referential system, their glued-in notes, cutouts, and reinsertions. The diaries also badly need to be revised, for as they stand now, they often separate and break up closely connected parts of the texts (such as the attempt to climb the Chimborazo). Because Alexander von Humboldt's American travel diaries neither follow any consistent chronological order nor one that is geographical, thematic, or disciplinary, we must develop concepts and methods to address multiconnectedness beyond linearity and, in that process, ideas of order that Humboldt himself applied on a daily basis and that we can use to advance our own scholarship.

While Humboldt's travel diaries offer complex visualization of his travels, to understand the traces they carry within themselves first requires an additional, far broader exploration. This is precisely what this volume intends to do. On the one hand, such iconographic and aesthetic visualization means decoding and transcribing Humboldt's handwriting. On the other hand, it is a matter of bringing out the relations between writing and image, and between hand-writing and hand-drawing, all the while bearing in mind an aesthetic multidimensionality that the scholarship and partial editions of the specialized "Humboldt industry" have so far largely ignored. The letters and numbers, numbers and drawings, and drawings and letters refer to each other so closely that it would be simply irresponsible to separate Humboldt's sketches and drawings from the reciprocal cross-referentiality between scripts and iconographies, that is, between the hand-writings that changed over the course of a long time and the hand-drawings. To do so would decontextualize Alexander von Humboldt's visual work by detaching it from the very specific arrangement of every single page of the diaries. Each page has its own aesthetic life, and this life is what this book allows us to begin to discover.

The full-page reproductions show the extent to which numbers, signs, and drawings mesh and intertwine like a mangrove. Time and again, Humboldt inserted words and images, circled, underlined, crossed them out. This volume offers readers and viewers everything they need to navigate the transmedial networks that proliferate in this text-image-mangrove thicket and to be able to trace the interrelated signs of diverse structures on each page. While only the originals speak to all of the senses, the high-resolution reproductions still convey the sensuousness, that is to say, aesthetic dimension, of this interrelation – and not only vividly illustrate the fascinating power of these pages, but also bring them to life.

The diaries still breathe even in Humboldt's *Cosmos*. The American travel diaries place right before our very eyes the Humboldtian ideal of "writing in view of things," which was so important to Alexander von Humboldt and which is key to understanding the epistemology of Humboldtian science. By empirically presenting the objects as he does, Humboldt, who has all too often been reduced to a mere gazer, imbued his (literary) representations with freshness and vividness. This sense also entered

26 See Humboldt 2006, pp. 183–96.

his later book publications in the form of carry-overs between his diary and his travel narratives.

The multitude of data and sketches – about astronomy, topography, and geomorphology, flora, fauna, settlements, and the infrastructure of the paths on which he traveled – permits a much more accurate reconstruction of Humboldt's precise itinerary than had been possible up to now because of missing (or inaccessible) information. Trigonometric calculations abound in the diaries. The drawings that belong to them are still important to historical climate research, for they allow us, among other things, to comprehend shifts in the snowlines Humboldt surveyed and thus understand climate changes with precision.

The almost four hundred and fifty sketches and drawings from the American travel diaries, which can be assigned to wide-ranging fields and specializations, are part of the amazing diversity of Humboldt's art of science. These drafts and drawings are at times overgrown with letters; at others, they cross over into the writing. The images simultaneously record, define, and over-draw. They visualize *and* make visible, rendering optically accessible the visible *and* the invisible.

We cannot just *read through* Humboldt's diaries from beginning to end. They resist such a reading mightily. In the diaries, Humboldt's writing in view of things, as it were, is joined by his drawing in view of things; both are closely connected across different media. As we have already seen, the structure of the itinerary is but *one* structure – and by no means the predominant one – of the American travel diaries. Humboldt's practice of breaking all manifestations of simple linearity also reaches across different media. His disjointed structure extends to the drawings that pre-date the writing as much as they do to the drawings that were later added to the text. Everything is an open, discontinuous, and undeniably relational system in which the drawings and sketches by no means relate solely to their immediate settings, that is, either a given page or a particular commentary.

The art of multiconnectedness applies also, and especially, to the image-worlds of Humboldtian science as it originated in the travel diaries. These connections make frequent jumping around and leaping back and forth, particularly among series of drawings, quite inevitable. In the final analysis, the American travel diaries enable readers and viewers to embark on many different and multiply connected journeys. Such journeys open up image-worlds in which the art of an aesthetics of science, and the aesthetics of an artistic science, unfold. The American travel diaries are an *invitation au voyage*, an invitation to travel.

Image-Worlds and Images of the World

For more than half a century, Alexander von Humboldt used the American travel diaries as a touchstone for his empirically based conception of science, within which he aimed for the "combination of a literary and a purely scientific goal," as he put it in his March 1849 preface to the second and third editions of *Views of Nature*.²⁷ Humboldt's art of science is founded on the idea that an aesthetic dimension is precisely not added *ornamentation* or *embellishment* but a compression of knowledge in which diverse forms and norms of knowledge join together and where everything, vividly and vitally, interrelates with everything else. In all of his drawings and scriptings, the aesthetic, *and aeisthetic*, dimension is always fundamental.

27 Humboldt 2014, p. 28.

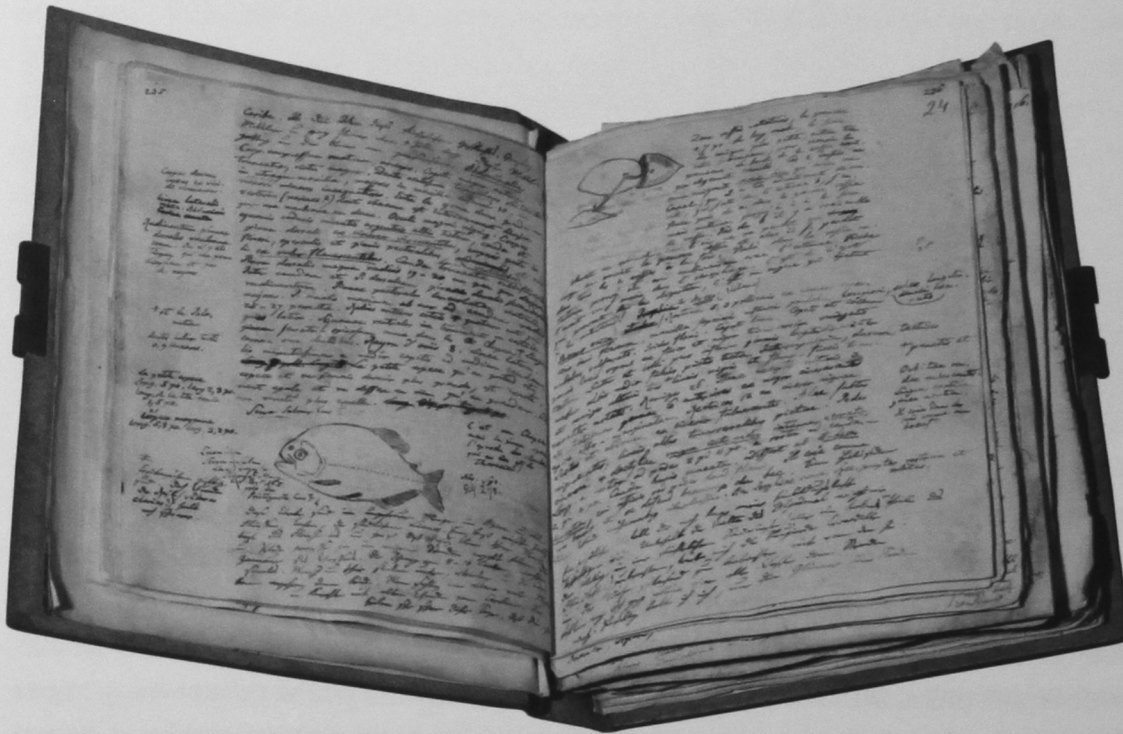
The material, medial, natural and cultural scientific, literary, and iconological complexity of the travel diaries is challenging even for readers familiar with Humboldt's works. The diaries include abundant figures and survey sequences alongside visualizations from astronomy and optics. They unfold cartographies and landscapes in the mountains and at sea. They present the flora and fauna of the regions visited. They bring into focus humans engaged in artistic pursuits and in crafts, architecture, and religion. Last but not least, they always also draw attention to their own material existence, be it through ink splotches, ink runs, and circled water stains, or through playfully artistic graphisms. When one looks at the last of these, which might be misunderstood as mere doodling, one need only think of the style of a Cy Twombly to realize that Humboldt's diaries do not just (re)present art. They *are* art, an art that visually encodes not just the materiality of paper, ink, and drawing or writing tools, but also, and above all, the physical existence of the body itself in hand movements and all sorts of positions. Whether squeezed into small boats and into kilns that offered protection against mosquitos, or whether freezing at great altitudes or during often perilous sea voyages, Humboldt wrote and drew in many different corporeal circumstances. The diaries are inscribed with these bodily situations, which are literally drawn into them.

In addition to the sketches and drawings of settlements, volcanoes, salt domes, fish, lavas, leaves, pre-Columbian buildings and hieroglyphics, plans, maps, and technical itemizations, there are insertions, codicils, corrections, treatises, literary portraits and vignettes, glued-in papers, cutout reports, supplementary notes, readings from popular books, intertextual references and paratextual inserts, countless diagrams and especially tables with precise time and place information. This is not even to mention a number of enclosed letters. All these different components show us their very own material existence in, or along with, a writing that is alive and in motion. In this microcosm of a world, nothing stands on its own. Each added, glued-in, cutout, and reinserted piece provides important hints about the local, regional, and trans-areal networks that Humboldt developed and cultivated during his travels. These pieces also permit conclusions about daily routines, meetings, readings, and the editions Humboldt used for the sources he included. Humboldt inserted brief literary vignettes with some frequency and tossed off portraits of interlocutors in a few sentences.

The reciprocal crossing of all borders that separate nature and culture self-consciously and world-consciously intensifies the key premise of Humboldtian writing – that “a book about nature [must] create an impression like nature herself.”²⁸ As a book about and of nature, the American travel diaries, to which the drawings in this volume are limited, are also, and above all, a book of art. The process of drawing and writing uses the stuff of art and science to create a spatial playing field for thinking and imagining.

In his sketches and drawings, in his letterings and graphisms, Alexander von Humboldt designs a motile image of knowledge, a living image-world of science and scholarship in which the image does not just refer to the text and vice-versa. His sketches, for example, of real and imagined volcanoes, contain everything from precise measurements to imagination and speculation. An analysis of entire pages and of the already mentioned cross-referential networks brings into view an “iconotextual” way of writing and drawing, in which script and image, numbers and numer-

28 Assing 1860, p. 23.



Diary IV, pp. 23v and 24r,
with the sketch of
a piranha and its air
bladder (see pp. 530–31)

ous *tableaux*,²⁹ are closely linked. If everything is interrelated, then this axiom of Humboldtian science also applies to the “iconotextual” registering of knowledge between image and text, between number and sign, between graph, graphism, and graphics. Everything is connected with everything else. The image-worlds of the American travel diaries form a microcosm that is intimately interwoven with the macrocosm always already included in Humboldt’s images of the world.

Humboldt’s drawings testify to this process of learning-by-being-there. The innovative but cumbersome empirical grounding of all knowledge about the non-European world in Humboldt’s writings defined a clearly marked epistemological threshold between, on the one hand, the dominant eighteenth-century Enlightenment exponents of European knowledge about extra-European subjects prior to Humboldt, such as Cornelius de Pauw and Guillaume-Thomas Raynal and, on the other hand, Alexander von Humboldt’s own science. On the established side of this threshold, it became much more difficult at the beginning of the nineteenth century – until the emergence of modern racism – to hold a worldview that, from a Eurocentric perspective, dismissed most parts of the world as “barbaric” and “uncivilized,” indeed as “uncivilizable,” without ever having been in direct contact with these regions of the world and their cultures. After Humboldt’s first Americanist publication, it was no longer unproblematically possible, as it had been in the Berlin dispute about the

29 See Kraft 2014.

30 See Bernaschina et al. 2015; also Ette 2013.

31 Rousseau 1975.

32 See Ette 2003.

New World that had ignited around 1768,³⁰ to found knowledge on the exclusive engagement with (naturally, European) books without, at the same time, including one's own experience of regions of the world that were to be visited rather than just read about. As Jean-Jacques Rousseau had already fervently demanded in his second *Discours* from 1755,³¹ the *philosophes* had to learn how to travel.³² In this dispute, which quickly assumed transatlantic dimensions, Humboldtian science marked a decisive epistemic and epistemological point in that the empirical foundation – the process of one's own first-hand "experience" – became indispensable. Humboldt's drawings are signs of a first-hand knowledge whose vitality pulses throughout the diaries.

Humboldt's drawings also show how images learned to move. It is no coincidence that Alexander von Humboldt was the one to initiate and inspire a new understanding of landscape painting. The great travel painters of the nineteenth century, such as Johann Moritz Rugendas, Ferdinand Konrad Bellermann, and Frederic Edwin Church, all followed in Humboldt's footsteps and also adopted his aesthetic ideas. Even in their rather different artistic creations, they still carried on the image of the New World that Humboldt had pioneered in his American travel diaries and in *Views of the Cordilleras and Monuments of the Indigenous Peoples of the Americas*.

First-hand empirical and experiential knowledge enters the American travel diaries in the form of images-in-motion. What characterizes Humboldt's new image of the New World is that he simultaneously presents varied "views" and contrasts his own empirical and experiential knowledge with these diverse perspectives. In the same way that the travel diaries employ different languages (French, German, Latin, and selectively a series of other languages) because the world cannot be grasped from the perspective of a single idiom, Humboldt's hand-written and hand-drawn manuscripts unfold before us a multiperspectival view of things that fundamentally depends on the traveler's, and the draftsman's, movements. Humboldt's image-world is a world of images – pictures – that have learned to move.

The Berlin dispute about the New World, which brought about an epistemic shift that altered the foundations of thinking by demanding that all knowledge be historicized, also provides a meaningful transition from collecting to the (scientifically ordered) collection. Humboldt's drawings make this transition obvious. With the example of a precise rendering of three fish, his image-worlds present a museum on paper, and made of paper, in which the "iconotextual" interplay with texts in French, German, and Latin goes well beyond the tradition of the European cabinet of curiosities. The interplay of image and text creates a visualization (of the visible) *and* a rendering-visible (of the invisible), which facilitates new insights on the basis of modern field research.

It also is clear that, for Alexander von Humboldt, natural-scientific insight is not all that matters. The field research Humboldt fostered allowed him to develop for his paper museum aesthetics that pioneer a new relationship between art and science. These aesthetics remain inspirational for us today. Once again: aesthetics are not mere accessories for Humboldt, not surface trappings but compressed forms of understanding and perception. Running crosswise to and across the disciplines, to diverse epistemological practices, these aesthetics bring together everything previously analyzed and, in the process, torn asunder. Against the background of Humboldt's travels and field research in his "most eventful life," as he wrote right



Friedrich Georg Weitsch,
*Humboldt and Bonpland at the foot
 of the Chimborazo in Ecuador, 1806*
 Oil on canvas, 163 x 226 cm
 Prussian Palaces and Gardens
 Foundation Berlin-Brandenburg

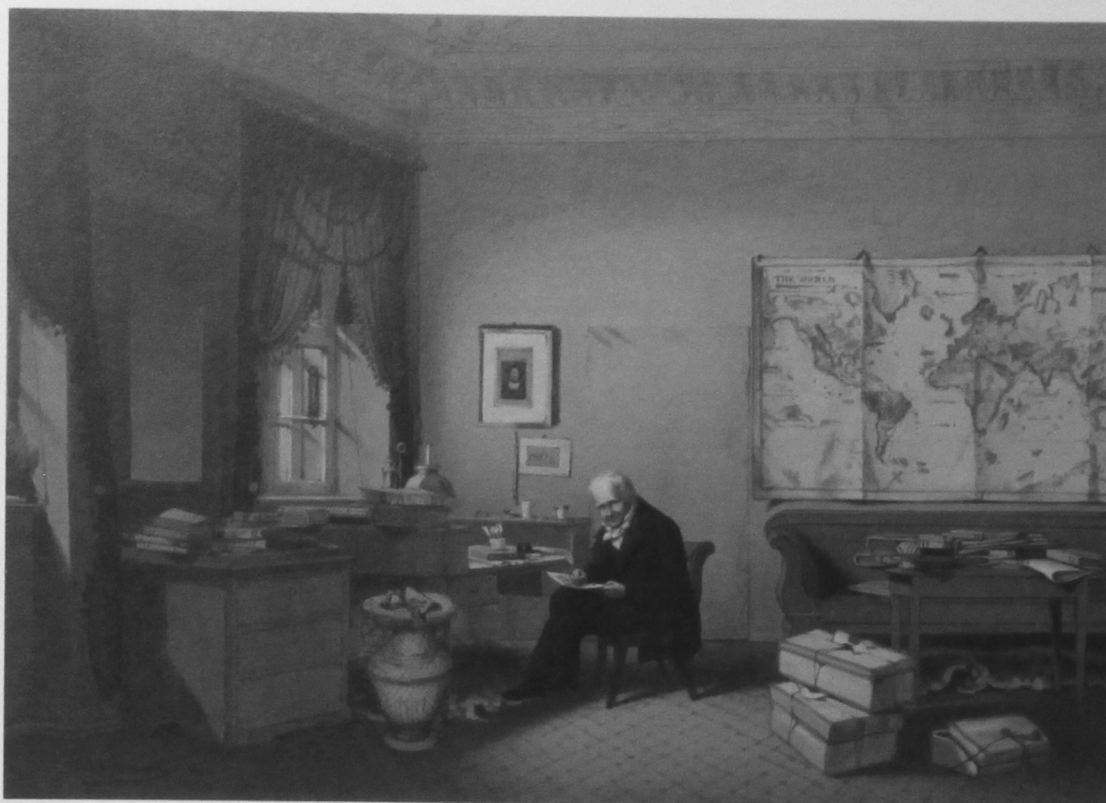
at the start of *Cosmos*, the beauty of the American travel diaries is not accidental. Rather, it is necessary, not on the surface but constitutively. Beauty is not a supplement but an epistemological state that pervades everything, including Humboldt's ethics. In this way, Alexander von Humboldt's image-worlds enjoy intimate contact and reciprocity with his images of the world. His new vision of an emerging new world on the eve of the independence revolutions in the Spanish colonies is empirically and ethically grounded.

There is a reason why Humboldt has been called the founder of Ancient American Studies. Unlike in de Pauw and Raynal, the American hemisphere does not appear as strange and radically "other." It does not become an "other" world clearly separated from "ours." In Humboldt's work, as in geology, climatology, oceanology, and botany, global contexts move into the foreground. In the same way that it would make little sense, in the geological, climatological, oceanographic, and botanical movements that Humboldt analyzed on a global scale – from the drifting of entire continents to plant migration – to distinguish between "one's own" and "the other," the construction of the "other" in a cultural context is also a porous scheme with many variations. As in his plant-geographical field research, everything moves globally and plants are not defined by their alterity, but identified and described in ever-proliferating forms. Nor are the cultures of the Americas stylized as ultimate Others. Humboldt's cultural fieldwork does not focus on the "other" but on *that which is farther and further*, on a broadening of our knowledge about many different cultures that must be related to one another. The American travel diaries point to the difficult path that Humboldt took in order to free himself from so many – even if not all – European biases and to shape his own understanding more broadly and to develop it further. His condemnation of colonialism and slavery, already quite obvious from his travel diaries, had lasting effects. There is much that we can, and must, learn about Alexander von

Humboldt's image-world and from his worldview in our times of unceasing, possibly even intensifying, Othering, a construction of interchangeable Others replete with all the requisite mechanisms of exclusion.

With this book, we stand at the beginning of a new approach to the Humboldtian image of the world. The sketches and drawings gathered in this volume are far more than preliminary studies. They are more than just preparations for visual work that, in the American travel diaries, proves to be a separate, though not self-contained, archive of images. In these pages, we encounter everywhere we look the traces of a perception, of an open process of imagining and thinking, in which drawing is a sign of movement understood not just as spatial motion, but also as *emotion*. Movement inspires broader thinking and imagining. Motion and emotion are reciprocal processes. It is not without reason that we read in Diary VII: "How small and how narrow is the real world when compared with the world that a human being creates when in the throes of profound feelings."³³ In his diary, Alexander von Humboldt – as wordsmith and visual artist, draftsman and philosopher – created just such a world in the interplay of exterior and interior movements. He did not get caught up in pure empiricism. In the microcosm of his image-worlds, we come face to face with Alexander von Humboldt as a exacting observer who used all available means and media – and for whom everything was interminably interrelated. He invites us on a journey that is not over yet, a journey during which worldviews that are too deeply ingrained never last.

33 Alexander von Humboldt, American Travel Diaries, Diary VIIbb & VIIc, 87 v.



Joseph Bardtenschlager after
Eduard Hildebrandt, *Alexander von
Humboldt in His Study*, 1847
Color lithograph, partially hand-
colored, 25.7 × 36.3 cm
Berlin State Museums, Cabinet
of Copper Etchings

Preliminary Note

The idea and concept for this volume originated with Ottmar Ette. The image titles, explanatory commentaries, the thematic organization of the images, and the translations of passages originally in foreign languages originated with Julia Maier.

Sponsored by the Federal Ministry for Education and Research, this publication is part of a joint project between the University of Potsdam and the Berlin State Library – Prussian Cultural Heritage Foundation, where Humboldt's travel diaries have (once again) been lodged since November 2013. Julia Maier was part of a trans-disciplinary research group established in connection with the project "Genealogy, Chronology, Epistemology," which Ottmar Ette had started in February 2014 and which Julian Drews subsequently coordinated. Through close collaboration with the administrative heads of the Prussian Cultural Heritage Foundation and the Berlin State Library – Prussian Cultural Heritage and in consultation Prestel Publishing, project director Ottmar Ette created the circumstances under which this book could be completed. The entire research that led to this volume was an integral part of the work of the research team at the University of Potsdam. This publication would not have been possible without this group.

Julia Maier

EDITORIAL NOTE

Organizing the Image Titles

The thematic organization of the catalogue raisonné does not follow the order in which the images appear in the American travel diaries. One can restore the original order with the help of the image inventory and the digital versions (free online at humboldt.staatsbibliothek-berlin.de). Since Alexander von Humboldt did not provide any captions for his drawings, Julia Maier used thematic criteria to create titles for them and assign each object to a topic area.

Corpus

The starting points for *The Complete Drawings* are the nine existing volumes of Alexander von Humboldt's American travel diaries. The image inventory encompasses all of Humboldt's own drawings. This book is the first effort to make his drawings accessible to a wider audience; the images are reproduced in their entirety and contextualized. Full-page reproductions enhance the visual quality of the sketches and drawings and show where on the page each item is situated. For quite a while, the American travel diaries underwent many changes. The images included in the bound diaries range from Humboldt's earliest hand-drawn sketch for measuring the Gaisberg in Salzburg, Austria, reliably dated March 4, 1798 (cat. no. 156), to the last written notes shortly before his death in May 1859. In addition to Humboldt's own drawings, the travel diaries also contain the work of other image creators who used various methods. Humboldt himself integrated these additions over time, either by binding them into the diaries or by enclosing them as cutout pages or loose sheets. In addition to the drawings and print reproductions, graphic features, marks that structure the text, and the palpable materiality of the diaries themselves all contribute to the visuality of *The Complete Drawings*. This is why cover and title pages, minuscule graphic signs, doodles, ink stains, and water spots from the Orinoco have all been taken into account and reproduced. Further drawings that are part of the context of Alexander von Humboldt's American travels but not of this particular image portfolio can be found in the Humboldt Archive at the Berlin State Library – Prussian Cultural Heritage and at the Biblioteka Jagiellońska in Cracow, Poland. In contrast to many of the drawings in the diary itself, some of these images are especially detailed. An example is Humboldt's pencil sketch of a penguin that would later be named after him, which he had drawn in November 1802 in Callao on the coast of the Viceroyalty of Peru. These images served as pre-print material, as the penguin example shows, and Humboldt either loaned the drawings to colleagues (for example to Franz Julius Ferdinand Meyen, 1804–1840) or gave them away as gifts (as in the case of Johann Jakob von Tschudi, 1818–1889). To include images on loose sheets of paper kept in folders would have far exceeded the capacity of this volume. To be sure, one cannot make reliable claims about the number of certain image groups in Humboldt's entire visual oeuvre without considering the drawings in his archive.

But to focus on the image-worlds of the bound diaries alone also has the distinct advantage of presenting a coherent universe of images linked together by cross-references, glue joints, and book bindings.

The corpus of *The Complete Drawings* can be used in two ways: first, for researching image groups that concern specific fields (through the thematic grouping of images in the catalogue raisonné), and secondly, for scholarship on the combinatorics and the transdisciplinarity of "Humboldtian Science" (through the ordering of the image titles according to each bound volume of the diaries in the image inventory). Both approaches may of course be combined with the help of the corresponding inventory numbers.

Authorship

The images Alexander von Humboldt gathered in his American travel diaries did not all originate with him. Like the authorship of the texts, the drawings and prints have diverse origins and come from various times and regions. In most cases, the authors' names appear either on the sheets themselves or nearby. One finds in the diaries pieces of applied art, such as a decorative multicolor pamphlet (cat. no. 374) with the title page of a memorandum by Joseph James Thomas Redhead (1767–1847), published in Buenos Aires in 1819 as *Memoria sobre la dilatación progresiva del ayre atmosferico* (cat. no. 375), along with sketches from Humboldt's international colleagues and correspondents embedded in letters. Examples are the astronomical drawing (cat. no. 371) by the botanist and geographer Francisco José de Caldas (1768–1816), who was born in Popayán; trigonometric sketches (cat. no. 337) by the mathematician and astronomer Jabbo Oltmanns (1783–1833); and geometric sketches (cat. no. 148) by the French mathematician Louis Mathieu (1783–1875). There are cartographic drafts (cat. nos. 313 and 338) by Humboldt's travel companion and friend Carlos Montúfar (1780–1816); a small piece of paper with a handwritten copy of hieroglyphics (cat. no. 146) that a monk gave Humboldt during his travels; and a panorama of the volcanoes of Mexico in landscape format (cat. no. 343), which Luis Martin had drawn with a nib in November 1803 and had washed with a brush and watercolors. In Diaries VIIa & VIIb, we find an excerpt from a pamphlet with a graphic reproduction of the stingray named after Humboldt (cat. no. 252), initially sketched by François Désiré Roulin (1796–1874) and etched in copper by Vittore Pedretti (1799–1868) – it was published in Paris in 1829 as Figure 3 in volume 16 of the *Annales des sciences naturelles*. Not always are authors of images and dates as clearly identified. Some drawings are entirely without text; on others, there are words written in another's hand but without any unambiguous clues as to the identity of the author or draftsman. The unknown authors of such images, whom neither context nor comparisons with the handwriting of known Humboldt correspondents can thus far help identify, are marked in the titles as "author unknown." Because this is the first complete compilation of such an extensive archive of Humboldtian drawings, the scholarship about the images' origins is quite limited. The overview that this inventory of the American travel drawings offers now makes it possible to identify, through stylistic analysis and image comparisons, the characteristics of Humboldt's own drawings and then take up unresolved questions about authorship. Among other things, this volume presents an occasion to revisit the question Sigrid Achenbach posed in 2009 about the source of the drawing of a llama from the Berlin Cabinet of

Copper Etchings (Achenbach 2009, p. 40; cat. no. 1), which had been labeled "Llama by Alexander v. Humboldt" in someone else's hand. Because of differences in technique and style, this sheet has rightly been counted among Humboldt's drawings that have yet to be unequivocally identified. Neither the shadows in the llama's face and fleece, suggested by gray washing, nor the shadows of the legs and the use of line point to Alexander von Humboldt's hand. A passage from Humboldt's *Views of the Cordilleras and Monuments of the Indigenous Peoples of the Americas* further supports this visual analysis prompted by a comparison with the freehand sketches. There, Humboldt writes about "Plate XXV. Chimborazo Viewed from the Tapia Plateau," in whose left foreground we see a llama that resembles the above drawing: "The sketch that I had made on site served no other purpose than to give an exact indication of the contours of Chimborazo. [...] To make it easier for the naked eye to perceive the gradation of the different levels and to grasp the expanse of the plateau, Mr. Thibault has enlivened the scene with figures that are grouped very intelligently" (Humboldt 2012 [1810–13], p. 227). It thus turns out that the llama drawing is by Jean-Thomas Thibault (1757–1826), who, as Humboldt put it in *Views of the Cordilleras*, "used nature as a model" to draw the animal.

Catalogue Raisonné

Humboldt's drawings and *The Complete Drawings* are grouped thematically in the inventory. Some images, however, cannot be unequivocally categorized. The sketch of a leaf (cat. no. 231), which one would assign to botany at first glance, turns out after consideration of the accompanying text to be the shingle of a leaf hut. Because of this context, which highlights functionality, the image has been assigned to the field of architecture. In all such cases, classification follows the text that accompanies the drawings. Many of the drawings are intimately connected with Humboldt's handwriting and are located in close proximity to the explanatory texts. For this reason, the corresponding texts were added to the inventory and, in the case of texts in foreign languages, translated into English, while the original quotations are reproduced in the Appendix. In the case of passages that proved indecipherable, the attempt has been made to glean the context from the words that are readable and from cross-connections. Where there are several drawings on the same sheet which may speak to different topics, the predominant thematic category has been used, that is to say, the category into which most of the thematically coherent sketches on a given page fall. The order of the thematic groupings is indebted to the general overview of a "nature painting" that Humboldt describes in *Cosmos*; chapters for the topical areas "culture" and "materiality" have been added. In his description of the nature painting, Humboldt moves from macrocosm to microcosm: "We begin with the depth of the cosmos and the regions of the most distant nebulae, then descend step by step through the layer of stars to which our solar system belongs to the spheroid of the earth surrounded by air and ocean flows, its form, temperature, and magnetic pull, to the fullness of life which, stirred by light, unfolds on its surface. In this way, a world painting in few strokes encompasses the unmeasured celestial spaces along with the microscopically small organisms of the realm of the animals and plants that inhabit our standing waters and the eroding rind of the rocks. All that can be perceived, all that the rigorous study of nature in all directions up to the present moment has yielded, is the material from which to draft the portrait [or

tableau]; it contains within itself the evidence of its truth and fidelity. But a descriptive painting of nature, such as the one we create in these prolegomena, should not just investigate the singular; for its completion, it does not need to inventory all life forms, all things and processes of nature. To resist the tendency to fragment what is perceived and gathered, the ordering thinker should strive to escape the dangers of empirical abundance" (Humboldt 2004 [1845–1862], pp. 38–39).

Because measuring, collecting, and processing data in mathematical-geometric fashion was always the starting point for Humboldt's unending research, this book begins with drawings in the topic area "Trigonometry and Surveying." With the following category, "Sky and Cosmos," which includes the fields of astronomy, climate, and earth atmosphere, as well as optics and refraction, the reader/viewer moves increasingly closer to the Earth in order to delve ever more deeply into the layers of the Earth in "Surface and Interior of the Earth" with the help of maps of oceans, lakes, mountains, and rivers drawn from an aerial perspective. After an overview of broad topic areas, our vision increasingly approaches the surface of the Earth, which is represented in views of coasts, mountains, and volcanoes. Initial insights into the interior of the Earth follow in the form of terrain and elevation profiles. These profiles lead to further details in pasigraphic diagrams and schemes of rock formations below the Earth's surface, with close-up drawings of extracted and collected rocks, minerals, and fossilized bones. Finally, the category "Living Beings" comes into focus: plants, animals, and humans are represented here and, except for humans, their innermost anatomical structures are drawn and analyzed.

Following the "nature painting" is the thematic category "Culture," whose visual motifs can be characterized by Humboldt's introductory remarks to his picturesque atlas *Views of the Cordilleras and Monuments of the Indigenous Peoples of the Americas*: "I have brought together in this work everything that relates to the origin and early technical and artistic advances of the indigenous peoples of the Americas. Two-thirds of the Plates included here depict architectural and sculptural relics, historical scenes, and hieroglyphs relating to the division of time and to the calendar system" (Humboldt 2012, p. 1). Diagrammatic drawings from the topic area "Handicraft, Engineering, and Technology" join these depictions of architecture, antiquities, art, and artifacts. Humboldt's diaries describe and illustrate cultural practices such as the collective measuring, gathering, and processing of data; the performance of musical pieces and dances; and the collaborations of seamen on a sailing vessel and of rowers on a boat. For this reason, drawings of scientific instruments, musical instruments, and means of transport also appear in the category of "Culture."

The last category concerns the "Materiality" of the American travel diaries. While Humboldt does not thematize it as such in any of his freestanding writings or in any part of his travel accounts, he scatters hints about the conditions under which he wrote and drew during his travels throughout his diaries, letters, and publications such as the *Relation historique [Personal Narrative]*, his actual travel narrative, along with comments about his drawing technique. The images that fall into this category render visible what one might call the tactile, physical existence of the diaries and their turbulent history. Ink stains and water spots mark the accidental changes to the paper; the jacket of a pamphlet that was added later; and one of the colorful marbled endpapers testify to the changes to the materials Humboldt used during the voyage. Lines that structure the text, concatenation characters, and symbols clarify the processual nature of Humboldt's recording system.

List of Images

The image inventory at the end of this volume, together with the catalogue raisonné, lists the titles and adds technical information about the images. The organization of this register follows the order in which the diaries and the loose sheets that belong to them were bound. In this way, one can see how each of the thematic groupings had originally extended across the books. Maps of the Orinoco, for instance, appear in close proximity to the fish that live in this river, to a boat, and to triangles for measuring the width of the river. This order facilitates comparisons to earlier editions of Humboldt's diaries by Margot Faak und Ulrike Leitner, which appeared in the series *Beiträge zur Alexander-von-Humboldt-Forschung* (Humboldt 2000, Humboldt 2003a–c, Humboldt 2005), and future hybrid editions of the academic project "Alexander von Humboldt on the Road – Science in and out of Motion" (avhr.bbaw.de).

It was only near the end of his life that Humboldt made the connections now evident from the image inventory. Prior to that, he had composed all of his notes and sketches on notepaper and in individual booklets, which is still noticeable, at least in part, from what the diaries look like today. Humboldt organized his booklets either thematically or color-coded them. In the diaries, he mentions, for instance, a "Journal de Navigation," a "Journal de l'Orénoque," a yellow book in quarto about missions, and a red book in octavo format. Aimé Bonpland (1773–1858) kept the "Journal Botanique" with lists and sketches of the collected plants, in which Humboldt sometimes also wrote and drew. Furthermore, Humboldt made many drawings on single sheets and cut pages and pieces of paper out of his booklets. As one can see from the painted portrait of Humboldt in his study (p. 25), he kept the papers that comprise this text-image-archive in cartons and folders.

Identification of Dates

Identifying the dates of the sketches is based on the contexts Humboldt provides. In cases where a date is not obvious, an attempt has been made to reconstruct the year of origin with the help of paratextual notes about the location or the topic. The *Chronology* prepared by the Alexander von Humboldt Research Unit in Berlin, started by Kurt-R. Biermann, Ilse Jahn, and Fritz G. Lange in 1983, became the basis for estimating the dates marked in the image inventory with "circa." Humboldt scholars at the Berlin-Brandenburg Academy of Sciences continue to update and correct the online version of the *Chronology* (avh.bbaw.de/chronologie). Sheets that did not provide any temporal or geographical clues are marked as "n.d." (no data available).

Image Quality and Size

The types of paper Humboldt used were of varying quality and hues (including gray and blue). Whenever possible, images from inside the bound diaries and on cutout loose leaves have been reproduced on full-size pages to show the context and their dimensions in relation to Humboldt's written notes. In this way, we ensure that the images are as true to the original as possible in proportion, color quality, and content. Due to space constraints, some images (marked with an \propto at the end of the reference to the relevant Diary and page number) had to be reproduced on a slightly smaller scale (from 99 percent to at most 62 percent). The measurements included in the image titles convey a sense of the original sizes.

For drawings and printed graphics, the stated dimensions – height by width in millimeters – refers to the size of the entire sheet. In the case of sheets with trimmed corners, slanted pages, or frayed edges, the longest sides of the paper were measured to offer an estimate of the former total area of the page. Bound sheets were measured from the binding to the edges. Minor deviations between the measured dimensions and the original sizes of the printed sheets are possible due to the cutting of the sheet edges, which was unavoidable for technical reasons. Since many of Humboldt's drawings are very small and at times appear in the middle of his writing, they can easily be overlooked. For this reason, positioning information in the image titles points to a given image's location on the page. Especially tiny drawings have been enlarged. Such magnification helps to render visible how Humboldt elaborated the details of his drawings.

Technique

Any information about the method of Humboldt's hand drawings refers to the drawings themselves, not to the handwriting, even though the writing itself was most often carried out with the same instruments. Unless otherwise noted, labels such as "ink on paper" refer to brown iron gall ink on handmade paper (see Bispinck-Roßbacher 2016). Other methods included in the diaries are pencil drawings, copper etchings, and multicolored prints.

Source References and Citation Method

Humboldt adorned the pigskin leather covers of the diaries with his own handwriting. The numbers of the diaries in Roman numerals are based on his practice. The count of the individual volumes, for which Arabic numerals were used, does not, however, always correspond to the diary volume number from the title. For example, while Diary I is in the first volume, the second volume includes both Diary II and Diary VI. The very extensive seventh diary was divided between two volumes labeled Volume VII a & VII b and Volume VII b & VII c. The result is nine diaries in total distributed across nine volumes. An overview of the volumes, the diary numbers, and the complete titles can be found at the beginning of the catalogue raisonné.

On many sheets, Humboldt inscribed page numbers in ink. Yet, his continuous pagination is inconsistent. At times, it is interrupted; it is also not always visible due to changes during the binding process and the edge cutting of records formerly kept as booklets and single sheets. Several bound pages and loose sheets do not have any page numbers at all.

It was not until a long time after Humboldt's death that someone recounted the diaries' pages and foliated the front sides (recto) of the sheets. The back sides (verso) remained unlabeled, and their pagination becomes clear from the systematic counting of sheets. Humboldt's cross-references can be understood through his own page numbers, while the foliation permits unambiguous correlations and source references. In cases where Humboldt's pagination is missing on related consecutive pages but can be surmised from the context, it has been added in square brackets. Sheets are not identified as either bound or loose and resected, because this is evident from the reproductions themselves. The source references of the American travel diaries are provided through short titles that follow the scheme "diary number, pagination, foliation."

Textual Construction

The quotations from the diaries are based on Alexander von Humboldt's original handwritten manuscripts and on the typographic transcriptions prepared by Gisela Lülfig and Margot Faak. These transcriptions are kept in the academic project "Alexander von Humboldt auf Reisen – Wissenschaft aus der Bewegung" at the Berlin-Brandenburg Academy of Sciences; a copy is available at the University of Potsdam. The transcriptions were checked against the digital versions and matched with the handwritten originals. Numerous image descriptions were retranscribed. The editors thank Ulrich Päßler and Ulrike Leitner from the Berlin-Brandenburg Academy of Sciences for their invaluable help in deciphering hard-to-read passages. Humboldt's quotations are reproduced without any orthographic modifications and with all of the author's idiosyncrasies and historical spellings.

The editors also consulted the parts of the American travel diaries that have already been published in the Akademie-Verlag series *Beiträge zur Alexander-von-Humboldt-Forschung* by Margot Faak in 2000 and 2003 and Ulrike Leitner in 2005. Any quotations from these editions, whose editorial guidelines called for textual interventions and the correction of Humboldt's own orthography, are identified as such at the end of each excerpt. Passages missing from the existing publications were added in brackets after cross-checking them against Humboldt's manuscripts. Explanations of field-specific terms and comments by Julia Maier also appear in brackets.







Translations

Manuscript passages in foreign languages are reproduced in the Appendix and, unless otherwise indicated, have been translated into German by Julia Maier. The English translations are by Vera M. Kutzinski. Foreign-language additions to a German-language quotation were also translated. In such cases, the entire passage has been included in the Appendix. Translations from Margot Faak's diary editions published in the series *Beiträge zur Alexander-von-Humboldt-Forschung* were revised and the spelling adapted to today's standards.

Location of the Originals

All images captured in this volume are reproductions from Humboldt's American travel diaries housed in the Manuscript Department of the Berlin State Library – Prussian Cultural Heritage and identified there as "Alexander von Humboldt Archive (Diaries)." The goal of this catalogue raisonné is to introduce readers and viewers to all of the images included in Humboldt's American travel diaries and to offer a guide to Humboldt's image-worlds. The main emphasis is on the images he himself produced. This volume seeks to provide the basis for future research connected with those images and to fill important gaps in the largely textual analysis of earlier editions of the diaries. Word and image are intimately connected within Humboldt's cognitive processes and his recording systems. They complement one another and ought not to be taken separately. Knowledge of Humboldt's drawings may well open up new print-cultural connections across all of his works and contribute to an understanding of published writings grounded in his sketches. Humboldt intellectually engaged with a number of different visually-based areas of research. The present volume offers scholars in these fields access to drawings and notes that Humboldt created during his fieldwork. We hope it will inspire future scholarship.

Abbreviations, Symbols, Units of Measure and Weight

t.l.	top left
t.m.	top middle
t.r.	top right
m.l.	middle left
m.	middle
m.r.	middle right
b.l.	bottom left
b.m.	bottom middle
b.r.	bottom right
n.d.	no data available regarding date and/or location
ca.	The approximate date when a drawing was created was inferred from comparing places mentioned in the text with the chronology of Humboldt's travels.
r	recto, the front of the page
v	verso, the back of the page
*	Humboldt bound individual pages upside down into his diaries. We follow his lead here. Such pages are marked with an asterisk after the title.
	The arrow symbol indicates that a given image is not reproduced in its original size but smaller.
	sun
	moon
	square
	cubic
angl. hor.	angle horaire, hour angle
St.	hour
t.	toise, a French unit of measure (1 t = 1.9484 m)
MSS	manuscripts
	marcas (mark), a Prussian measure of weight (1 mark = 223.8 g)
vara	also vara cast. (vara castellana: Castilian ell), a Spanish unit of measure (1 vara = 83.6 cm)

Titles and Inventory of the Diaries

The full titles of the diaries, which Humboldt himself wrote on the cover, are as follows:

Volume 1: I. "Voyage from Spain to the Canary Islands and to Cumana.

Astron[omical] obs[ervations] from June to Oct. 1799." (Signature: Alexander von Humboldt Archive (Diaries) I; June to October 1799.)

Volume 2: "II and VI. – 1) Voy[age] to Caripe 1799 pp. 1–62. 2) Astr[onomical] obs[ervations] Apure – Orinoco pp. 86–98. 3) Batabano (Cuba) to Sinu Carthagena and Turbaco 1801. 4) Quito 1802 Meteor. 5) From Paris to Toulon Oct. 1798. 6) Voy[age] to Italy with Gay Lussac. Magn[etic] obs[ervations] 1805." (Signature: Alexander von Humboldt Archive (Diaries) II and VI; 1798–1805 [Diary II: 1798–1802; Diary VI: 1805; additions up to 1859].)

Volume 3: "III. Voyage from Cumana to Caracas, Calabozo, and S. Fernando de Apure from Nov. 1799 to March 1799" (Signature: Alexander von Humboldt Archive (Diaries) III; 1799–1800.)

Volume 4: "IV. Navigation log about the Apure, the Orinoco, the Cassiquiare, and the Rio Negro. (Voy[age] across the Llanos de Caracas to S. Fernando de Apure). Statistics of Cumana's P[un]ta Araya" (Signature: Alexander von Humboldt Archive (Diaries) IV; 1800 [additions up to 1859].)

Volume 5: "V. Voyage from Cumana to Havana (Old material from the voyage [to] Dresden, Vienna, Salzburg.)" (Signature: Alexander von Humboldt Archive (Diaries) V; 1797–1800 [1797, 1799–1800; additions up to 1859].)

Volume 6: "VII a and VII b. Río de la Magdalena – Bogota – Quindí – Popayan – Quito (Antisana, Pichincha) Pasto Volcano, p. 190, Tolima p. 164." (Signature: Alexander von Humboldt Archive (Diaries) VII a/b; 1801–1802 [additions up to 1859].)

Volume 7: "VII bb and VII c. Quito (Pichincha, Cotopaxi, Tungurahua, p. 40. Chimborazo, Altar) – Alausi Cuenca – Loxa – Amazone – Caxamarca – Lima – (Ibagué to Carthago p. 42 [?]) Popayan to Almaguer. Pasto – Quito (Los Pastos, Cumbal) Rocks sent to Madrid, pp. 5–8. Voyage from Popayan to Almaguer. (Quinquina Malacates Loxa pp. 68–72) Truxillo p. 16! Lima–61. Potosi p. 16 [P? unreadable] 27.56. [... unreadable]." (Signature: Alexander von Humboldt Archive (Diaries) VII bb/c; 1801–1802 [additions up to 1859].)

Volume 8: "VIII. Voyage from Lima to Guayaquil p. 9. Voyage from Guayaquil to Acapulco p. 34. Astronomical observations of Mexico pp. 300–315. Chronology of my travels. The 2 volcanoes of Puebla p. 153. Voyage from Acapulco to Mexico City p. 103. Pachuca, Real del Monte pp. 133–148, 179–182 [... unreadable]." (Signature: Alexander von Humboldt Archive (Diaries) VIII; 1802–1804 [additions up to 1859].)

Volume 9: "IX. Various: Astron[omical] obs[ervations] from Mexico City to Guanajuato, Jorullo, Toluca, Veracruz, Cuba, Voy[age] from Havana to Philadelphia. Geology of Guanajuato, volcanoes of Jorullo and Toluca. Voyage from Veracruz to Havana and from Havana to Philadelphia. Jorullo pp. 95–106." (Signature: Alexander von Humboldt Archive (Diaries) IX; 1803–1804 [additions up to 1859].)