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## Amazon and cordillera: Humboldt's tropical American quest

Gordon Brotherston\*

In his day, Alexander von Humboldt was hugely famed for the journey he made between 1799 and 1804 with the botanist Bonpland through the mainland tropics of America and the Caribbean. The account he gave of it, the 30-volume *Voyages aux régions équinoxiale du Nouveau Continent*, published over as many years, is interestingly shaped by the *Atlas pittoresque* of 1810, which comprises volumes XV and XVI. Better known under the title *Vues des Cordillères et monuments indigènes de l'Amérique*, this latter text consists of 69 engraved plates, several in colour, balanced between the terms of the title, on which the author offers commentaries. Contrasted, the two statements (*Voyages* and *Vues*) reveal much about Humboldt's ambitions and strategies as a travel writer, about his changing sense of the continent's cultural geography and even the general direction of his own five-year journey.

**Keywords:** Alexander von Humboldt; America; Amazon; Casiquiare; Chimborazo; Cholula; Muisca; Orinoco; Sunstone

Upon landing in Cumaná (Venezuela) on July 16, 1799, Alexander von Humboldt set off on his celebrated journey through mainland tropical America and the Caribbean. His travels in the tropics took up the best part of five years and ended when he sailed to Philadelphia from Veracruz (Mexico) on March 17, 1804. Humboldt's boldness as an itinerant child of the European Enlightenment who wanted to go and see for himself, and the thoroughness of the reports of what he saw and learned, have received abundant recognition.<sup>1</sup> His prose inspired Darwin and Bolívar alike; it also prompted the first attempts to write a verse epic of the continent from within, in both Spanish – the fragments of Andrés Bello's 'América' (1823) – and Portuguese – the dozen cantos of Sousândrade's *O Guesa* (1858–1866). What has perhaps excited less curiosity is the philosophical understanding of the continent's history that underpins the log of his travels, the cultural map of the five-year narrative, and the extent it has had to be modified today, not least thanks to the revolution in knowledge that Humboldt himself initiated.

East to west, the tropics in America extend for more than 70 degrees of longitude, a fifth or so (35°W–106°W) of the globe's equatorial circumference. This reach includes more continuous landmass than the tropics in Asia or Africa. It also encompasses the world's largest river system, and an ice-capped cordillera that features the world's highest mountain (when measured from the earth's middle). It has long been recognised that in America the tropics are distinctively the cradle of culture, in the literal sense of soils and plant cultivation and knowledge of poisons, time measurement (especially the difference between synodic and sidereal time), and in techniques of weaving and metallurgy.

More recent is the realisation that the continent's oldest pottery is to be found in Amazonia, as is its food.<sup>2</sup> The cultivated plants carved more than three millennia ago on

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the Caiman Obelisk at Chavin on the uppermost Amazon – manioc, squash, chilli, peanut – are still revered in Carib memory as ‘gifts of the Caiman’ by Caribs living towards the river’s mouth.<sup>3</sup> Vindicated archaeologically, the early movement west of the Olmec, the ‘people of rubber’ (an Amazonian product) in the isthmus bridge between South and Middle America, accords with the story told in native classics, above all the *Popol vuh* of the highland Maya in Guatemala, known as the ‘Bible of America’.<sup>4</sup>

The principal reference for Humboldt’s travels is the monumental edition of 30 volumes in quarto and folio published in Paris jointly by him and his botanist companion Aimé Bonpland over nearly as many years from the time they got back: *Voyage aux régions équinoxiales du Nouveau Continent, fait en 1799, 1800, 1802, 1803 et 1804*. Appearing in Paris in 1810 under the title *Atlas pittoresque du voyage*, volumes XV and XVI have a coherence of their own and are better known as *Vues des Cordillères et monumens des peuples indigènes de l’Amérique*.<sup>5</sup> As travel writing, *Vues* stands out above all because of its format. Unlike most of the other volumes of *Voyages* replete with barometric tables, population statistics and lists of geological and botanical types, each of the 69 engraved *Vues* focuses on a particular place or monument, and has its own commentary. Nearly a third of the lithographs are in colour. Readers may see for themselves as Humboldt did, and may read the page in more than one sense. The series of dated observations that form the itinerary has been usefully edited by Charles Minguet and here serves as a first reference for what Humboldt saw and thought he was doing.<sup>6</sup>

Shortly after landing in Cumaná on Venezuela’s Caribbean coast, afloat on the Orinoco on 9 April 1800 with his instruments and Bonpland, true to character Humboldt yearns as ever to move on, past the frontier with Brazil towards the Rio Negro. His goal is the Casiquiare passage that joins the two rivers. From his position, the Rio Negro forests constitute a ‘delicious country’ (Minguet I: 100), with fresher, healthier air. The river has fewer crocodiles (caimans) and night and day the insects bite less. His cleric friend Father Zea has the same enthusiasm for the Rio Negro missions, enabling Humboldt to comment wryly on human interest in things always a little ahead.

On 6 May 1800, in the watery maze that conjoins the upper Orinoco and the Amazon, he and Bonpland rose with the sun and set off in their pirogue, a dug-out broad compared with the narrow canoe they had been confined to for the previous 36 days. Scarcely able to move because of the risk of capsizing, they had been bitten cruelly by insects in the steamy heat. Humboldt’s pleasure in regaining the pirogue is increased by openly expressed pride at his and Bonpland’s having survived all they had been through so far. This leads to his allowing himself (*il me sera permis, je pense*) the satisfaction of noting the greater achievement, that of having fulfilled the most important aim of their journey (Minguet I: 133). He could now give exact co-ordinates of the Casiquiare, the arm of the Orinoco which flows into the Negro and hence the Amazon, settling long-standing debates about the improbable hydrography that links these two great South American rivers.

Just because he had long been haunted by the Casiquiare mystery, its banks – ‘uninhabited, covered with forest and with no memory of time past’ – acquire for him the aura that in the saga of civilisation (*fastes des peuples civilisés*) attaches to the banks of the Euphrates and the Oxus (Minguet I: 145–6). In the heart of this new continent he gets used to the idea that man is unessential to the order of nature. The earth is surcharged with vegetation and nothing hinders its free development; caiman, boas, jaguars, peccary and monkeys go through the forest as if established in an ancient heritage, and this aspect of living nature where man is nothing, he says, has something strange and sad about it. In short, he has come home to what his twentieth-century editor, Minguet, calls his ‘*tristes tropiques*’, no doubt with Lévi-Strauss in mind, and prompted by Humboldt’s

thought: 'This aspect of living nature in which man is nothing has something strange and sad about it' (Minguet I: 134).

A fortnight later (21 May), their pirogue rejoins the Orinoco proper, and they keep to midstream to escape the mosquito clouds. Humboldt notes how the famous Casiquiare bifurcation is marked by an imposing view of high mountains of granite to the north, among them Marahuaca and Duida.<sup>7</sup> Precisely these mountains served to guide Theodor Koch-Grünberg a century or so later (1903–5, 1911–13) as a member of the Berlin school of anthropology for which Humboldt's example was paramount. Koch-Grünberg's *Vom Roroima zum Orinoko* (1928) focuses on the Pemon Caribs, neighbours of the Maquiritare or Soto Carib, who celebrate Marahuaca and the Casiquiare canal in their creation narrative *Watunna*, detailing its course and role at early stages of their culture, when they brought seedlings from Roraima to Marahuaca.<sup>8</sup> Having access to this 'memory of time past' might well have consoled Humboldt and refined his admiration of the Carib.

Indications of a fundamental problem for Humboldt in this regard come in the account he gives of the petroglyphs seen along these same stretches of the Orinoco, high above the cataracts and rapids of Atures and Maypures. To explain how the petroglyph artists could have reached so high, he supposes the water level of the river itself to have been higher in times gone by and adduces as evidence levels of the manganese stain in the rocky bank. He honestly concedes that the rough Indians (*indigènes grossiers de la Guyane*) had their own explanations and in fact had pointed out precisely this order of evidence (Minguet I: 112). But given their origins, these sadly tropical people could hardly be expected to compete in terms of scientific proof. His tone shifts to imply more respect when reporting what they had further to say on the subject, that it was done in the age of the great waters when their forefathers inscribed and read the signs, reaching those heights in their canoes.

Recorded in *Watunna* and in the Pemon saga of Makunaima, such a flood indeed ends the first in the series of world-ages that characterises cosmogony indigenous to America, as Humboldt came increasingly to appreciate in his travels. Here in the steamy rapids he views the petroglyphs as hieroglyphic characters (*caractères hiéroglyphiques*) that represent sun, moon and animals, above all caimans and boas, and is even swept along by the idea of looking back deeper in time, into the distant past of the earth's crust (Minguet I: 113). Allowing ancient American intelligence to impinge so on his own is something he brought under stricter control by the time he came to contemplate the Mexica Sunstone four years later, in 1804. By then, native genesis is more clearly distinguished from his own revolutionary theory of Andean rock, its volcanic and metamorphic origins rather than the simple sedimentary formations authorised in Europe by the Bible, until Humboldt came along. For this occasion he contents himself by rounding off the commentary on the Orinoco inscriptions by remarking on a curious pair of rocks locally said to be of the sun and moon, the name of the former (Camosi) evoking for him a Phoenician term for Apollo (Camosch).

Possible enthusiasm for native New World intelligence is also severely curtailed by Humboldt's shocking suspicion a few days earlier that the Indians around him, when impassive and silent as they were wont to be, represented not so much the infancy of our species as its dotage. Slumped around the fire, they are a degenerate race, feeble remnants of peoples who long dispersed in the forest have sunk back into barbarism.

Later in the day they rejoin the Orinoco, and in Esmeralda Humboldt is shown by Indians the techniques of making curare, the poison which made the town famous. Deadly when it enters the bloodstream yet beneficial gastrically, curare has high market value, which leads Humboldt to compare it favourably, as a tropical American product, with poisons from other parts of the world (Minguet I: 146–8). He also notes how its

effectiveness in hunting depends on the mechanics of the blowpipe, a weapon diagnostic of the tropics and articulated in considerable lengths. In this context, he muses on the importance of poisons and narcotics throughout tropical American culture and custom, identifying the passage from south to north of the tobacco Raleigh brought to Britain. Imposing as Duida may have seemed in Humboldt's eyes at the time, nothing is seen in *Vues* of this mountain or the Carib world around it. The excision has the effect in this work of silencing the eastern beginnings of his journey and, with that, the eastern dimensions of Amazonian culture.

Sailing from Cuba, Humboldt and Bonpland landed a second time on the Caribbean coast of South America, further west at Cartagena (March 30, 1801) and from there travelled up to Bogotá on the river Magdalena. Noting the cool climate of the city, the capital of Nueva Granada, they were received in triumph by the Viceroy, the archbishop, and the celebrated botanist Mutis. The warm reception encouraged Humboldt to remember the Viceroyalty in its past glory, and more significantly, as it was before Spain invaded: the polity Cundinamarca, whose capital was Bacatá (Bogotá), the land of the Muisca, midway between Mexico and Peru. While Bonpland recovered from a fever, he visited Lake Guatavita (source of the El Dorado legend), the salt mines of Zipaquirá, and the waterfall Tequendama. The lake and the waterfall are each depicted in *Vues* (Plates LXVII; VI).

At the edge of the Bogotá plateau, this last seemed to him extremely beautiful because of the volume of water hurtling into a narrow depth. Correcting the exaggerations of others, to describe it he resorted to the technical language of liquid quantities and force on the one hand and, on the other, Muisca myth. In *Voyage* and more extensively in *Vues*, he appeals to the Muisca tradition of the moon, the woman Bachue or Huitica, whose behaviour caused a flood and gave birth to Lake Funzhe. Witnessing Bachue's deed, the solar god Bochica smashed the rock of Tequendama to release the water, so that people could return from their refuge in the hills. The fertile dry bed of the lake is now the Bogotá plateau (*los llanos de Bogotá*). In these terms, Bachue is evil (*le principe du mal*), just as Bochica is good, a culture hero (*Kulturträger*) who establishes laws and the bases of society, and who is to be compared with counterparts Humboldt detected throughout the continent, like the first Inca Manco Capac, and Quetzalcoatl (Minguet I: 180–1).

This simplistic (and sexist) reading of Muisca tradition is remarkable, though it proved unproblematic for Bolívar's secretary Andrés Bello, who began the epic poem 'America' that inaugurated the 1823 Biblioteca Americana with a near-quotation of Humboldt's account of Huitica and the Tequendama event.<sup>9</sup> It is the more remarkable for the great attention Humboldt nevertheless pays to the lunar calendar of the Muisca, a monument in *Vues* (Plate XLIV), that is inscribed in a greenstone duly coloured green in detail highly reminiscent of the greenstone *muriaquitã* of the lower Amazon midwife.

For all its challengingly complex arithmetical detail, the attached astronomical account of the moon curiously ignores Muisca attention to the slippage between its synodic and sidereal cycles (of 29.54 and 27.23 nights respectively), so important in Muisca and in Amazonian narrative. In the Carib *Watunna* the two moons or lunar cycles attach to sister and brother respectively, an endlessly repeated primordial incest directly reflected in Muisca texts.

In the case of the greenstone Muisca monument highlighted in *Vues*, Humboldt's oversight means that he fails to mention the logic of indiction, whereby every fifteen years the annual 15-night gap between synodic and sidereal moon grows to fifteen moons. A transparent alter ego of the author, the Guesa who came to entitle Sousândrade's American epic was guarded in strict chastity to the age of 15 by the Muisca priesthood.

Alluded to in the lunar based mathematics and figures incised on the greenstone, this male practice is powerfully outmatched later in the poem by the Amazonian midwives' Taturema dance led by the *tatu* [armadillo], which celebrates a correspondingly pagan genesis.<sup>10</sup>

From the moment he landed in Cartagena, Humboldt had his eyes set on the Andean cordillera, and how he would approach it from Bogotá. Calculating the best routes there and the supplies he and Bonpland would need, he rehearsed the names of the mountains they planned and got to know at close quarters. At Turbaco in early April 1801, 'on the eve of a journey that would take us to the highest peaks of the Andes, to view fiery volcanos, in a landscape perpetually shaken by earth tremors, we felt happier than at any other period of our distant expedition', he reported (Minguet I: 174–5).

The allure concentrated in the superb avenue of eight pairs of mountains, most snow-capped, that runs south from the equator: Casitagua, Pichincha, Atacazo, Corazón, Iliniza, Carguairazo, Chimborazo and Cunambay to the west, and Guamani, Antisana, Pasuchoa, Rumiñavi, Cotopaxi, Quelendana, Tungurahua and Capa-Urcu to the east. Several are illustrated in *Vues*, while Chimborazo appears twice (Plates XVI, XXV), the second time on a two-page spread and in colour. Humboldt gave an account of their ascent of this giant on June 22–23, 1802, updating details of La Condamine's account of his ascent and his calculations of the mountain's height from the centre of the Earth, and from sea level. Humboldt's greater estimate of Chimborazo's height he put down to the fact that the mountain had continued to move, most violently in the catastrophic earthquake of 1797. Their Indian guides having decamped en route in the belief they would be killed, Humboldt and Bonpland were prevented from reaching the now slightly higher summit by altitude sickness, a monstrous crevasse, a blizzard and Humboldt's foot that had turned septic.

Of the many tributes inspired by Humboldt's engagement with Chimborazo, the most striking is one attributed to Bolívar a few years before his death in 1830, '*Mi delirio sobre Chimborazo*'.<sup>11</sup> For Humboldt himself, it marked a literal high point that affirmed faith in his vision of the cordillera. For Bolívar, it reflected rather his own experience as a child of newly independent Venezuela who strove to liberate and unite Spanish America. Following Humboldt's lead, Bolívar first imagines himself in the east swathed in rainbow iris, at the great falls of the Orinoco, and at the enchanted springs of Amazonia, preparing to ascend the Andes to the west. This opening is remarkable on more than one count. It is grandiose yet does not flout autobiography. It conjoins the great rivers of the east, Orinoco and Amazon, as in the extraordinary hydrography Humboldt was the first non-Indian to trace accurately, and, quite unexpectedly in his case, as in the Casiquiare canal of Carib cosmogony, where moreover the rainbow falls are a prime motif of genesis. Ascending the rock wall of the Andes from the east to take Nueva Granada by surprise (an astounding military feat in itself), he then makes of the rainbow a banner, carried through hell, ploughed rivers and seas, and up to Chimborazo on the shoulders of the Andes, its brilliance blinding the gods of war.

On the journey on to Lima, Humboldt found himself treading the roads of the Inca, which famously linked northern Quito with the Tahuantinsuyu capital Cuzco and which he whole-heartedly admires. On the way he considers at length the 'American architecture' so abundantly exemplified in the Inca domain. He wonders at the tools they used and the metallurgy that made their fine carving possible, like a recently discovered chisel made of tin and copper. These are hallmarks of the mountain peoples (*peuples montagnards*) whose monumental workmanship fills many plates of *Vues* (Minguet I: 198).

With a fine irony used not for the first time to correct assertions made in William Robertson's *History of America* (1777), which Humboldt knew in the following year's



French translation, on the road to Quito he observes that had that author been able to see just one example of Inca stonework he would no doubt have had a less disparaging opinion of it. As for the tools used to shape the stone, Humboldt's chisel would prove to be an item of a metallurgy unrivalled in the continent, whose general spread, however, in moving always from south to north, contradicted his geographical preferences. After Lima, Humboldt sailed back up the coast to Guayaquil in the current of Antarctic waters he came to name, and he heard again, now high above him, the roar of equatorial volcanoes. From there, he sailed north and yet further west to Mexico, which he crossed overland from Acapulco to Veracruz, where his time in the tropics ended.

In Mexico, he discovered the screenfold books known as codices, and brought fragments back to Berlin. He published the pages of some in *Vues*, along with copies of others he subsequently made in Rome, Vienna, Dresden and other European cities. Most critically he was helped by Mexican scholars to fathom the calendrical system of these pre-Cortesian and later texts, and to apply it to his reading of the Sunstone unearthed in the Plaza Mayor of Mexico City not long before his arrival. His extensive commentaries on the Sunstone (Plate XXIII), and on codices which similarly deal in the same native script with the American genesis of world ages, came to occupy a good proportion of *Vues*. Those he brought back to Berlin are dealt with at length by Eduard Seler, a key member of the Berlin school of archaeology and anthropology for which Humboldt's work and example were fundamental.<sup>12</sup> Of comparable importance were his visits to the ancient cities of Mexico, notably Cholula with its huge pyramid (*Vues* Plates VII, VIII), known to its European invaders as the 'Rome' of the New World. At this point (January 1804), Humboldt learns of the Olmec ('Hulmèques') of Cholula, the predecessors of the Maya and the founders of the Mesoamerican calendar (Minguet II: 106). He mentions Olmec presence in Nicaragua and the isthmus, though all the while assuming the migrations were from west to east towards South America rather than the opposite direction.

As a distillation of the many volumes of *Voyages*, *Vues* fundamentally shapes the message of Humboldt's travels in tropical America. In the process, it even restructures his actual itinerary. From east to west, the dominant direction becomes north to south, in accordance with paradigms of world culture that his experience in America ultimately came to reinforce rather than dispel. Rich in legible monuments, Mexico is placed as the start rather than the end. The actual start in Cumaná and the Orinoco is suppressed, as we have seen.

In travelling north to south along the avenue of the Andean volcanoes in 1802, he mentions ideas he has been having about the origins of American people that he hopes to develop as soon as he has the time. These ideas had been prompted by a cluster of evidence, which included the manuscripts of a native history of pre-Inca Quito set into cosmic events that had been shown to him by a royal descendant, Zapla; traditions he had gathered in Parima and Guayana; the hieroglyphs he saw carved in the Casiquiare rock face; and Clavijero's *Historia antigua de México* (1780), which follows the *Idea de una nueva historia de la América septentrional* (1746) of Lorenzo Boturini (a disciple of Vico) in drawing on the corpus of Chichimec codices to date the invasions of Cholula and Anahuac from Chicomoztoc, north of the tropics.<sup>13</sup> In the same vein, in turning at some length to the Caribs in his *Essai historique* he rehearses three main traditions concerning the origin of these people, of which he prefers the one he claims to be most general and the most probable, in making them arrive from the north, via Florida. This was of course also the direction taken by Europe's invading armies in establishing the vice-royalties of Mexico and Peru.

The clinching explanation of why Humboldt should have been so keen on the ‘mountain peoples’ of the cordillera, and why in concentrating *Voyages* into *Vues* he effectively turned the direction of his American quest through 90 degrees from east–west to north–south, is to be found in the commentary he makes on the world-age genesis depicted in *Codex Vaticanus A*, reproduced in colour in *Vues* Plate XXVI. Here, he is at his best in attempting to correlate the Rios account of the world ages with the version carved on the Sunstone disk (*Vues* Plate XXIII). He ably detects in both texts common reference to the catastrophes, of flood, prolonged eclipse, volcanic rain, and hurricane, that ended the four world-ages said to have preceded the fifth age in which we live, predicted in its turn to end in terrible earthquakes and mass hunger.

Discrepancies in the order of the catastrophes in his texts, and between them and those in alphabetical accounts he has learned of, he acutely attributes to differences in reading direction (left to right or vice versa, top to bottom or vice versa) in European and native texts. He also freely cites geological and fossil evidence found in America, and native awareness of it, that support this understanding of the continent’s deeper cultural past, and duly notes the time spans of each age.

This would appear to constitute the highest prize for his American quest, to have discovered local knowledge and prior understanding of just the revolutions in geology and zoology he himself was setting in motion. Yet no. He is not ready to go so far so fast. Rather, he falls back on the Old World notions of world ages and multiple creations, citing Zend-Avesta, million-year Hindu cycles and the even greater gyres imagined by the *peuples montagnards* of mountainous Tibet. He prefers to imagine how this legacy might culturally have passed from Asia and permeated America from the north, ignoring local indications of other possibilities.

He finds remarkable the fact that the Mesoamerican calendar is capable of measuring, in the same system, both the years of world-ages and those of the recent history of invasion. Yet he cannot avoid a certain condescension in noting the relatively reduced world-age spans found in *Vaticanus A*, which amount to mere thousands of years. In short, daring and consequential as they were, Humboldt’s travels did not convince him to shake off a deeply ingrained diffusionism, which makes of Bochica ‘*le Bouddha des Muiscas*’ (Minguet II: 106). Beside such antecedents, America would ever be the ‘new and infantine’ world Montaigne at first perceived it as. Hints of Amazonian origins now better understood and documented, like the dawn of the continent that suffused the initial stages of his journey, yielded to the high road of a cordillera that incessantly reminded him of Asia. Moreover, at just the moment Humboldt might have glimpsed forgotten or overlooked signs of American antiquity and native awareness of it, proof was being found, under the Sanskrit pedigree, of a deeper past for the Indo-European languages and cultures of the Old World.

## Notes

1. Part II of Mary Louise Pratt’s *Imperial Eyes: Travel Writing and Transculturation* (New York: Routledge, 1992) is dedicated to highly informed discussion of Humboldt and his work. As well as the sources referred to here, it takes account of the *Ansichten der Natur*, his favourite work (*Views of Nature* [1806]), and the three volumes of the *Relation historique du voyage* (1814–25). He destroyed the manuscript of a fourth volume and abandoned the project out of distaste for ego-centred narrative. Chosen for the cover, illustration 28 of Pratt’s work shows the explorer as exploiter encapsulated in the Andean *cargero* who earns his keep carrying travellers in a chair strapped to his back. This practice appalled Humboldt when he witnessed it in the Quindio pass, as Ottmar Ette notes in his careful and fine edition of the original plates for Enzensberger’s



- Die Andere Bibliothek: *Alexander von Humboldt, Ansichten der Kordilleren und Monumente der eingeborenen Völker Amerikas* (Frankfurt: Eichborn, 2004).
2. See Eduardo Góes Neves, *Arqueologia da Amazônia* (Rio de Janeiro: Azahar, 2006).
  3. In his *Chavin and the Origins of Andean Civilization* (New York: Thames and Hudson, 1992), Richard L. Burger draws on Carib stories of the food-bearing caiman heard today by Peter Rivière and published in his *Marriage among the Trio* (Oxford: Clarendon Press, 1969). At the same time Burger traces the high pass that links Chavin to the ocean and to the spondylus seen on the Tello obelisk.
  4. See Peter G. Roe, *The Cosmic Zygote. Cosmology in the Amazon Basin* (New Brunswick, NJ: Rutgers University Press, 1982). In Munro S. Edmonson, *The Book of the Counsel: The Popol Vuh of the Quiché Maya of Guatemala* (New Orleans, LA: Tulane University Press, 1971), the English translation accompanies the Quiche text, which is not the case in Dennis Tedlock's more generally known *Popol Vuh. The Definitive Edition of the Mayan Book of the Dawn of Life and the Glories of Gods and Kings* (New York: Simon and Schuster, 1996).
  5. Alexander von Humboldt and Aimé Bonpland, *Vues des Cordillères et monumens des peuples indigènes de l'Amérique* (Paris: F. Schoell, 1810).
  6. Charles Minguet, *Alexandre de Humboldt. Voyages dans l'Amérique équinoxiale: I Itinéraire; II Tableaux de la nature et des hommes* (Paris: Maspero, 1980). Translations from this text are mine and are included in the text in parentheses.
  7. In sighting these granite massifs (Minguet I: 102), which with Roraima are the highest mountains east of the Andes, and in acknowledging their indigenous names, Humboldt put to rest cartographical incompetence that still in the high Enlightenment would assign to this area the city El Dorado with its lake and its streets of gold. At the same time, with his mapping of the Casiquiare, like his intuitions of the Pacaraima ridge, Humboldt paved the way, as they recognised, for such successors as the Schomburgks in the 1840s, Koch-Grünberg before the First World War, and the Franco-Venezuelan expedition of 1950.
  8. On the whole question of the provenance and authority of Carib and related South American texts, see Lúcia Sá, *Rainforest Literature: Amazonian Texts and Latin American Culture* (Minneapolis: University of Minnesota Press, 2004).
  9. Rafael Caldera, *Biblioteca Americana 1823* (Caracas: Presidencia de la República, 1972, facsimile edition). Tequendama (Minguet I: 182) went on to reappear at the start of Pablo Neruda's epic poem, *Canto general* (1950). In many details, the Virgilian Americanism of Bello's diction owes a great deal to clerical predecessors in New Spain, like Fray José Gil.
  10. Celebrated in Tupi songs collected in nineteenth-century Manaus, depicted in late Classic Yojoa ceramics, and emulated by the Twins in the *Popol vuh*, the *tatu* leads to safety deep in the forest a chorus of Amazonian midwives proclaiming practices and principles of birth that explicitly refute the biblical genesis, as Augusto and Haroldo de Campos argue in their *Revisão de Sousândrade* (São Paulo: Perspectiva, 2002), which reproduces this and other key passages of the epic. When he arrived in Cunamá on July 13, 1799, seeing 'la cuirasse écaillée d'un tatou' on his pirogue held a special charm for Humboldt because it assured him that they had arrived in the torrid zone they had struggled to reach for so long (Minguet I: 40).
  11. In his excellent *Bolívar: A Life* (New Haven, CT: Yale University Press, 2006), John Lynch notes reasons (320) for doubting the authenticity of this document, first known in 1822 but published posthumously in 1833.
  12. Eduard Seler began his career as Americanist ethnographer and decipherer of codices with perceptive readings, inspired in part by comments made by Humboldt in *Vues*, on the fragments he had brought back from Mexico, which appeared in *Historische Hieroglyphen der Azteken* (Berlin: Königl. Bibliothek, 1893).
  13. Scion of the royal family deposed by the Inca, Leandro Zapla showed Humboldt this manuscript, which had been translated by an ancestor into Spanish. After his experience of seismic activity in the Andes, Humboldt finds himself less readily sceptical of how long this history said the earth was darkened by volcanic ash, and sums up: 'This manuscript, the traditions I gathered in the Parime, and the hieroglyphs that I have seen in the Cassiquiare desert where today there remains no human vestige, all that added to the notions of Clavijero about the emigration of the Mexicans towards the middle of America has given me ideas about the origin of these peoples, which I propose to develop as soon as I have the time' (Minguet I: 204).