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NATURALIST NARRATIVES: THE LITERARY TRADITION AMONG VICTORIAN EXPLORERS OF THE AMAZON

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Abstract: Victorian explorers of the Amazon are remembered the world over for their vast and varied contributions to science: from Henry Walter Bates's observations of mimicry in animals to Alfred Russell Wallace's co-discovery of natural selection. Yet an under-examined and essential element of the lives of these explorer-naturalists was their ethic of writing, how they catalogued their adventures in narratives that not only captivated the world, but influenced the development of scientific exploration in the region and led to the birth of a unique subgenre of environmental writing. In the study, I will show how the natural narratives, principally Henry Walter Bates's *The Naturalist on the River Amazons* and Alfred Russell Wallace's *A Narrative of Travels on the Amazon and Rio Negro: With an Account of the Native Tribes* influenced the decisions future naturalists would make about their own journeys, thereby shaping the advancement of scientific understanding of the Amazon as well as the course of its exploration by the western world.

Keywords: Amazon. Naturalist. Edwards. Bates. Wallace.

Resumo: Exploradores vitorianos da Amazônia são lembrados em todo o mundo por suas vastas e variadas contribuições para a Ciência, a partir de observações sobre o mimetismo animal, desde Henry Walter Bates até a seleção natural de Alfred Russell Wallace. Um dos elementos essenciais ainda não completamente examinados até hoje são seus escritos éticos e como eles catalogaram suas aventuras em narrativas que não só cativaram o mundo, como também influenciaram o desenvolvimento da exploração científica na região que levou ao nascimento de um subgênero da escrita ambiental. Como classificar suas aventuras em narrativas que não só cativaram o mundo, como também influenciam o desenvolvimento da exploração científica na região? Neste estudo, demonstrarei como as narrativas, principalmente a de Henry Walter Bates's, *The Naturalist on the River Amazons* e *A Narrative of Travels on the Amazon and Rio Negro: With an Account of the Native Tribes*, de Alfred Russell Wallace' influenciaram as decisões de futuros naturalistas a realizarem suas jornadas. Desse modo, eles deram forma ao avanço do entendimento científico da Amazônia e o curso de sua exploração pelo mundo ocidental.

Palavras-chaves: Amazônia. Naturalista.Edwards.Bates.Wallace

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The scientific achievements of the Victorian explorers of the Amazon are well documented and remembered, but only infrequently are their literary exploits remarked upon. When they are referenced, it is usually as a record of when they made their world-changing discoveries, rather than as distinct form of environmental writing which strove to capture the essence of a biologically interesting place at a unique moment in time.

In Charlotte Rogers's recent *Jungle Fever: Exploring Medicine and Madness in Twentieth-Century Tropical Narratives*, she looks at how insanity is depicted in novels that take place in the rainforest like José Eustasio River's *The Vortex* and Alejo Carpentier's *The Lost Steps*. These early works of rainforest literature established and fed into the trope of the rainforest as a place where civilized people intellectually devolve and eventually, inevitably lose their minds. The works that Rogers examines in her study are, appropriately, all fiction; she doesn't include nonfiction works in her survey.

Indeed, few literary scholars have examined Amazonian explorers and the writing they produced, one notable exception being Laura Dassow Walls and her *The Passage to Cosmos: Alexander von Humboldt and the Shaping of America*, in which she looks at Humboldt's magnum opus, *Cosmos*, and its impact on the development of scientific study and the ideas of various noteworthy thinkers that would follow him like Charles Darwin, Henry Thoreau, and various others.

A larger body of literature exists examining Victorians through a historical lens, like Peter Raby's *Bridge Paradise: Victorian Scientific Travellers* and John Hemming's *Naturalists in Paradise: Wallace, Bates and Spruce in the Amazon*. Susan E. Place's interesting anthology *Tropical Rainforests: Latin American Nature and Society in Transition* has a section where she excerpts different written descriptions of the rainforest, one of which is taken from Henry Walter Bates's *The Naturalist on the River Amazons*, which she cites as a snapshot of the rainforest at that particular place and time, without offering much more commentary.

So, although the contributions of these explorers to scientific knowledge is sealed as legacy, the Victorian naturalists also importantly used their writing to spur other naturalists to explore the region in their wake. Not only did the emergence of the naturalist narratives result in the formation of a distinct subgenre of environmental literature unique to that region and time, it had a profound impact on the development of scientific exploration and discovery in a time period known for its explosion of interest in the accumulation of scientific knowledge and understanding.

Although many of the great naturalist narratives written about the Amazon eventually came from Victorian pens, the tradition began with an American, William Henry Edwards. Edwards was born in a small town in the state of New York, and moved to West Virginia as an adult, where he made a fortune in the coal industry. Edwards became quite fond of butterflies, and he used his amassed fortune to study them. He was the first person to complete a serious study of the immature stages and host plants of American butterflies, and in 1868 published *Butterflies of North America*, three illustrated volumes filled with original observations and detailed illustrations which established a new standard of Lepidoptera study even among Europeans[i] (*The Butterflies of North America*). He was the Audubon of butterflies.

In 1846, Edwards launched an expedition to the Amazon to indulge his fascination with Lepidoptera and other elements of natural history study. He explored the lower Amazon as far as Manaus for nine months, making collections and observations. In 1847, he published an account of his journey entitled *A Voyage up the River Amazon: Including a Residence at Para in 1846*. This was the first of the naturalist narratives.

Aside from being the first, *Voyage* is noteworthy for a number of reasons. Edwards's prose is hyper-descriptive, superlative-laden, sensorial, full of punchy syntax, and even employs verb tense changes, all deliberate authorial choices designed to convey to other naturalists what he considered to be the beauty, intrigue, and potential of the Neotropical rainforest as an excellent place for natural history study. Perhaps most importantly, it is almost beyond a doubt that Edwards wrote *A Voyage up the River Amazon* as an invitation and a challenge to other naturalists to continue the work he started.

To get a firm sense of Edwards's prose style, it might make sense to begin by examining the way he wrote about his greatest interest and primary motivation for undertaking his journey to the Amazon: butterflies. One of his more extensive butterfly-life descriptions occurs in Chapter VII: "About the flowers in wood and field, was a profusion of butterflies, almost all gaudy beyond anything we have at the North. The most showy of all, was a large variety, of a sky-blue color, and brilliant metallic lustre. We observed but one species seen also in the Northern States, the common red butterfly of our meadows, in August" (p.62). In this passage we see many of the hallmarks of Edwards's style at work. Edwards emphasizes that the butterflies of the region are "beyond anything we have at the North" and that all minus one were unique to the area, stating in no uncertain terms that there are many species awaiting discovery and study. It's as if Edwards is deliberately writing for

an audience of eager naturalists seeking to make a name for themselves through scientific discovery.

The lines that immediately follow the above passage further reveal Edwards's intentions. He writes, "In this clime, the insects of all kinds are nimble, beyond comparison with those elsewhere. And often, the collector is disappointed in his chase. He has a more embarrassing difficulty than that, however, for without the most unceasing care, the ever-present ants will, in a few moments, destroy the labor of a month" (p.62). Edwards first mentions that the insects are faster than any other insects anywhere, indeed "beyond comparison," a rather bold claim which might be interpreted as a sort of challenge, an appeal to the competitive spirit of any potential readers. The mention of the ants as an inconvenience might be taken as a sportsmanship-like tip for future collectors.

Another interesting element of Edwards's prose is his use of verb tenses. The majority of the travelogue is written in past tense, as one might imagine a travelogue should be written. However, on some occasions, especially when he describes the wildlife of the rainforest, he transitions into present tense. For example:

> Birds of gaudiest plumage, flit through the trees. The trogon, lonely sitting in leaf-encircled home, calls plaintively to her long absent mate. The motmot utters his name in rapid tones. Tucáno, tucáno, comes loudly from some fruit-covered tree, where the great toucans are rioting. 'Noiseless chatterers' flash through the branches. The loud rattling of the woodpecker comes from some topmost limb; and tiny creepers, in livery the gayest of the gay, are running up the tree trunks, stopping, now and then, their busy search, to gaze inquisitively at the stranger. Pairs of chiming-thrushes are ringing their alternate notes, like the voice of a single bird. Parrots are chattering; paroquets screaming. Manakins are piping in every low tree, restless, never still. Wood-pigeons, the 'birds of the painted breasts,' fly startled; and pheasants, of a dozen varieties, go whirring off. But, most beautiful of all, humming birds, living gems, and surpassing aught that's brilliant save the diamond, are constantly darting by; now, stopping an instant, to kiss the gentle flower, and now, furiously battling some rival bumble-bee. Beijar flor, kiss-flower, 'tis the Brazilian name for the humming bird, beautifully appropriate. Large butterflies float past, the bigness of a hand, and of the richest metallic blue; and from the flowers above, comes the distant hum of myriads of gayly coated insects. From his hole in the sandy road, the harmless lizard, in his gorgeous covering of green and gold, starts nimbly forth, stopping, every instant, with raised head and quick eye. For the appearance of danger; and armies of ants, in their busy toil, are incessantly marching. (p.32)

Edwards's deliberate shift in tense from past to present deserves some consideration. He typically makes the change to present when he is describing wildlife, but only if in an extended scene, such as this one. If it's only a single encounter with a wild animal, he leaves it in past tense. The present tense phrasing is as if to suggest this scene of endless natural beauty and furious animal activity repeats itself in perpetuity, only waiting for those with the means and will to arrive and behold it.

It's also worth noting Edwards's syntax, which is quite stop-and-go, resulting in the reader being forced to frequently halt mid-sentence before continuing to another description. It might be surmised that this style is used to emulate the experience of observing the profusion of wildlife in the rainforest Edwards is trying to describe. Just as one creature is encountered, another comes into view, constantly distracting the observer and causing one to perpetually shift focus and attention.

The heavily sensorial nature of Edwards's prose is also noteworthy. There are strong appeals to the sense of sight, certainly, with the invocation of various superlatively described colors such as "richest metallic blue" and "gorgeous covering of green and gold" for the Morpho butterflies and a lizard, respectively, and there are no less than eight references to sound. In other sections, Edwards is quick to describe the taste of food, especially if it was game captured during their travels, and he references the tactility of objects as well. Edwards's intention is make every effort to depict the Amazon as a place filled with natural history wonders of the greatest possible interest and beauty.

By contrast to the scene above, it is interesting to look at Edwards's extremely casual discussion of actually dangerous animals that might frighten and perhaps even hurt or kill visiting naturalists, like the electric eel and anaconda. The eels, which are quite dangerous and can kill people, are described rather nonchalantly, while the anaconda is given this treatment: "Near by, was disclosed to us a young anaconda, nicely coiled up in the bottom of a barrel, and looking as innocent as a dove" (p.10). Given the audacious nature of Edwards's journey, it may simply be surmised the he simply was not scared of these wild and dangerous and, for him, exotic animals, even anacondas, but perhaps an equally compelling explanation for his casual descriptions of dangerous animals is to avoid undermining his own goal of portraying the region as a premier destination for serious naturalists. In *Voyage*, the Amazon is a place of the most extreme beauty and interest, and the best place in the world for young naturalists to make a name for themselves. Compared to those things, the dangers are nothing.

In other ways, Edwards's depictions of Amazonian wildlife is misleading, and perhaps even manipulative. For example, when describing Amazonian avifauna, which is without question the most diverse in the world, it is not as if the moment one steps into the forest one is at all times surrounded by birds in every imaginable corner of the ecosystem. It is in fact quite the opposite. As John Kricher, noted biologist and author of *A Neotropical Companion: An Introduction to the Animals, Plants, and Ecosystems of the New World Tropics*, explains, "One minute birds seem absent. Then suddenly they are everywhere." This

is because of the phenomenon of the mixed flock, where "Birds often seem to appear suddenly, because a dozen or more species may be moving together in a mixed species foraging flock, and thus the birdwatcher may face a feast-or-famine situation" (p.252). So indeed, birdseekers in the Amazon should be prepared to spend long hours without seeing nearly any birds until they are lucky enough to meet with a mixed flock. In light of this ecological truth, it becomes ever more conceivable that Edwards's goal in depicting the bounty of tropical nature was not to convey the sincerest scientific accuracy, but rather to present the Amazon as so alluring and filled with wonder and promise, other naturalists would emulate his journey.

Yet perhaps the most revealing moment in *Voyage* occurs when Edwards describes a scene in his journey when his boatmen was not able to safely navigate a part of the great river, rendering an area of immense potential for biological discovery inaccessible. He writes, "The region thence above, is a rich mineral region, and rare birds, animals, and flowers are calling loudly for some adventurous naturalist, who shall give them immortality." Here Edwards dispenses with his indirect invitation and directly challenges any eager reader to repeat the journey and give "immortality" to not just the animals that await discovery to the western World, but to himself. He succeeded.

When Alfred Russell Wallace and Henry Walter Bates met as teens in Leicester, England, they already had much in common. Both came from humble origins, both were already developing an interest in natural history, and perhaps most importantly, both were looking for a way to escape from their lives and devote themselves to scientific study in faraway places. They read a lot of the same books, including Malthus's *Essay on the Principle of Population*, Lyell's *Principles of Geology*, and Chambers's anonymously published *Vestiges on the Natural History of Creation*.

Those works certainly fueled Wallace and Bates nascent interest in the topics of scientific debate of the time, but it was another trio of books that would ultimately result in the solidification of the literary tradition among Victorian naturalists in the Amazon. The first that bears mention is none other than Charles Darwin's *Voyage of the Beagle*, published in 1839, where Darwin chronicles his five year trip around South America, an experience which would eventually result in his co-discovery of the theory of evolution. Although Darwin's travelogue didn't include any time in the Amazon, it did expose the two impressionable readers to the South American continent. The second book was Alexander von Humboldt's *Personal Narrative of Travels to the Equinoctial Regions of the New Continent*, originally

published in 1814, which covered some explorations into the Amazon Basin but did not explore the Amazon River itself.

Wallace and Bates read these travelogues with great interest, but the means to undertake any such journeys seemed for them, at least at that time, out of reach. That changed once they were exposed to yet another South American travelogue, W. H. Edwards's *Voyage Up the River Amazon* in 1847. Because of Edwards's book, the duo came to believe that there was an apparently limitless bounty of biodiversity in the Amazon, which meant that they could perhaps finance their own journeys by spending specimens back to England while they traveled. They inquired at the British Museum about its practicality and were assured that anything they might collect in the almost unexplored region of northern Brazil—insects, land shells, birds, mammals—could easily be sold to museums or private collectors in Europe (Beddall 21). In his memoir, *My Life*, Wallace writes quite clearly:

> What decided our going to Para and the Amazon rather than to any other part of the tropics was the publication in 1847 of 'A Voyage up the Amazon,' by Mr. W. H. Edwards. His little book was so clearly and brightly written, described so well the beauty and the grandeur of tropical vegetation, and gave such a pleasing account of the people, while showing that expenses of living and of travelling were bother very moderate, that Bates and myself at once agreed that this was the very place for us to go to if there was any chance of paying our expenses by the sale of our duplicate collections. (p.145)

And so it was that on April 20, 1848, after completing arrangements with an agent at the British Museum to whom they would send their prepared specimens, the duo embarked on a steamship bound for the Amazon.

On May 26, 1848, Wallace and Bates arrived at the mouth of the great river, and both men began two parallel projects. On the one hand, they began their collections, cataloguing the animal life of the region and gathering facts toward solving the problem of the origin of species. At the same time, they were taking prolific notes on their experiences and observations, which each would eventually publish as a book, solidifying the naturalist narratives as a literary tradition within the scientific world of the Victorian era.

Although their travels began together, after about a year and a half of mostly working in tandem, Wallace and Bates separated to cover more ground and explore more of the region, Wallace concentrating on the Rio Negro region and Bates covering the Upper Amazon. Wallace would spend a total of four years in the Amazon before leaving and returning to England in 1852. In 1853, Wallace published his own naturalist narrative under the title *A Narrative of Travels on the Amazon and Rio Negro: with an Account of the Native Tribes*.

The title's similar construction to *Voyage* is immediately evident, but the similar structure continues throughout the book. Beginning in Pará, the chapters take on an almost identical layout. Each chapter begins with a series of key phrases that essentially compresses the content of the entire chapter into a brief chronological summary. For example, Chapter V of *Voyage* begins like this:

> Leave Pará for the Rice Mills—Boatmen—Night Scene upon the River—Arrival—Vicinity of the Mills—A Brazilian Forest—Sporting—Toucans—Chatterers—Motmots—Manikins—Illumming-birds—Snake Stories—Absence of Flies—Ants—Saubas—Cupims—Little Ant-eater—Lakes—Nest of Troopials—Sloth—Armadillo—Beetles—Puma—Monkeys—Indian Boy—Description of the Mills—Blacks—Sleeping in Hammocks—Vampire Bats—Wasps' Nests—Visit Corentiores—Sporting There—Reception—Bread Fruit—Larangeira—Cotton Tree—Maseranduba or Cow Tree—Walk through the Forest to the City—Spider—Flowers (p.29)

One can easily track the content of the chapter through these condensed synopses-type chapter headings. In *Travels*, Wallace precisely mimics this style. His own Chapter V begins:

> Natterer's Hunter, Luiz—Birds and Insects—Prepare for a Journey—First Sight of the Piroróco—St. Oomingo—Senhor Calistro—Slaves and Slavery—Anecdote—Cane-field—Journey into the Forest—Game—Explanation of the Piroróco—Return to Pará—Bell-birds and Yellow Parrots (p.112)

The style of the chapter headings is obviously the same, and the prose also maintains the hyper-descriptive style of Edwards. Some differences are, however, evident. For example, Wallace seems to write about his encounters with wildlife in a less fantastic manner, such as how he comments that "insects were not very plentiful at this season," indicating that the Amazon was not at absolutely every instance filled with a profusion of life (p.77).

Another distinction between Wallace's writing style and Edwards's is that in *Travels*, Wallace's prose occasionally blends into pure and drawn-out natural history writing, as opposed to the rather brief glimpses of animal life Edwards provides in his own descriptions. That is, Wallace not only lingers in his careful descriptions of animals, he also describes them in the more tempered and specialized vocabulary of a scientist. Although Wallace notes the beauty and interest of animals, he rarely lapses into exultation the way Edwards does. He sometimes begins his descriptions in a narrative style, but by the end has transitioned into what might easily pass as a life history. For instance:

> We had the good fortune one day to fall in with a small flock of the rare and curious bell-bird (*Chasmorhynchus carunculatus*), but they were on a very thick lofty tree, and took flight before we could get a shot at them. Though it was about four miles off in the forest, we went again the next day, and found them feeding on the same

> tree, but had no better success. On the third day we went to the same spot, but from that time saw them no more. The bird is of a pure white colour, the size of a blackbird, has a broad bill, and feeds on fruits. From the base of the bill above grows a fleshy tubercle, two to three inches long, and as thick as a quill, sparingly clothed with minute feathers: it is quite lax, and hangs down on one side of the bird's head, not stuck up like a horn, as we see it placed in some stuffed specimens. This bird is remarkable for its loud clear ringing note, like a bill, which it utters at midday, when most other birds are silent. (p.91)

By the end of this passage, one feels as if reading a monograph of this particular bird species. Here the tradition of the naturalist narratives begins to diverge from the early work of Edwards, because this more level and thorough style of natural history writing was to become a hallmark of the way naturalists wrote about the Amazon.

This transition continues in the work of Bates, who spent a total of eleven years exploring and studying the Amazon before returning to England in 1859. In 1863, after extensive revisions, Bates published his own naturalist narrative with the title *The Naturalist on the River Amazons: A Record of Adventures, Habits of Animals, Sketches of Brazilian and Indian Life, and Aspects of Nature under the Equator, during Eleven Years of Travels*. Even from the title, the hyper-descriptive nature of the prose remains evident, and the chapter headings retain the same template of Edwards and Wallace with their brief summary of encounters and other content.

Yet despite the currents of common content and style running through Bates's work, *Naturalist* continues the evolution of the genre in a few ways. Despite the profundity of Wallace's scientific reflection and observation in *Travels*, it does not approach the level of scientific inquiry present in Bates's *Naturalist*. The level of detail and reflection significantly surpasses that of Wallace, and completely eclipses Edwards. There is even an emotional depth not present in the other works. This is nowhere more evident than in Bates's final chapter, where he writes:

> On the second of June, I left Pará, probably for ever… The saddest hours I ever recollect to have spent were those of the succeeding night, when, the mameluco pilot having left us free of the shoals and out of sight of land, though within the mouth of the river, at ancho, waiting for the wind, I felt that the last link which connected me with the land of so many pleasing recollections was broken. (p.376)

Even in his melancholy, Bates, just a few lines later, is sure to give homage to *Voyage* and the other naturalist narratives that preceded his with his final description of the Amazon: "a region which may be fittingly called a Naturalist's Paradise" (p.377). Bates passes on the invitation he received sixteen years earlier to his readers, ensuring the continuation of the naturalist narrative tradition.

Not to be overlooked, and certainly a result of the aforementioned distinctions, one of the key elements separating *Naturalist* from *Voyage* and *Travels* is that a lot of people read it. As Bates's biographer, George Woodcock, explains:

> There were certain features of Bates's experience and his telling of them that distinguish him from his contemporaries. He published *The Naturalist on the River Amazons* a decade later than the books of the other men… This gave him the advantage of looking back at a distance over the discoveries—territorial, sociological and biological—which distinguished the period… He was in fact the first Englishman to write of the life of a dweller on the Amazons in a way that struck the imagination of his contemporaries… *The Naturalist on the River Amazons* was, among scientists and laymen alike, one of the most popular travel books of its time. Darwin praised it widely. (p.12-13)

The subject of Darwin is particular pertinent when considering the legacy of the naturalist narratives. Wallace, Bates, and Darwin were friends and frequently corresponded with each other. Wallace and Darwin both independently came up with the theory of natural selection, Wallace while journeying in the Malay Archipelago, another natural history trip which resulted in its own narrative of the same title,[ii] and Darwin during his famous journey on the HMS Beagle. When Wallace wrote to Darwin expressing some of these thoughts, Darwin was prompted to publish his own work under the title *The Origin of Species*, changing not just the scientific but indeed the entire world forever. If Edwards had never written about his journey to the Amazon, Wallace and Bates probably would never have traveled there. Wallace would then probably not have independently conceived of the theory of natural selection, and hence would not have written to Darwin, prompting the publication of one of the biggest ideas of the Victorian era, the theory of natural selection.

Considering the immense impact of the naturalist narratives, one might be inclined to wonder: what was the identity of the butterfly that started it all by catching Edwards's eye in West Virginia or elsewhere? Was it the small and striking pearl crescent? Perhaps something a bit more spectacular, like the eastern tiger swallowtail? Maybe it was a butterfly with a particularly noteworthy natural history, like the sturdy monarch, by its very nature bound inevitably for exotic destinations far to the south.

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[i] This was no small achievement, as Europe was still regarded as the epicenter of competent natural history study at the time.

[ii] During Wallace's time in the Malay Archipelago, he also developed various principles which would eventually come to be known as the important field of biogeography.

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