"It Is Impossible to Make a Step without the Indians": Nineteenth-Century Geographical Exploration and the Amerindians of British Guiana

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Abstract. An effort is made to reveal the multiple functions of early nineteenth-century geographic expeditions into the interior of lowland South America, with an emphasis on the subtle and pervasive ways that "scientific" knowledge (natural historical, gregraphic, ethnographic) was consistently entangled with colonial reconnaissance and administration. The work of Robert H. Schomburgk and William Hilhouse in British Guiana receives close scrutiny. Particular efforts are made to show the ways that their hybrid expeditions—hybrid in the composition of the exploring party itself, as well as hybrid in purpose—shaped European conceptions of the Amerindians of the region, and were in turn shaped by their presence. Also considered: the impact of abolition on conceptions of Amerindian character.

Let me begin with an incident. In late 1835 Robert H. Schomburgk, an anglicized Prussian explorer in the service of the Royal Geographical Society of London, took a hammer to a strange rock formation on the middle reaches of the Rupununi River. Weakened by fever, he nonetheless broke off two pieces to add to the specimens he had collected on his first expedition into the interior of the British colony of Guiana. The twenty-four Amerindians who made up his expedition party called the site Karinampo, and they refused to help him chip the stones, even though they had provided all of the physical labor needed to push the expedition this far upriver, to land that Schomburgk called "terra incognita."[1]

The swing of Schomburgk's hammer had several meanings. In part, it was a swing for geography, broadly understood, part of the geographical explorer's assignment to examine the "particulars regarding the soil" of the colony.[2] Schomburgk intended his specimens, carted downriver in duffle sacks to the port at Georgetown and then across the Atlantic to vari-

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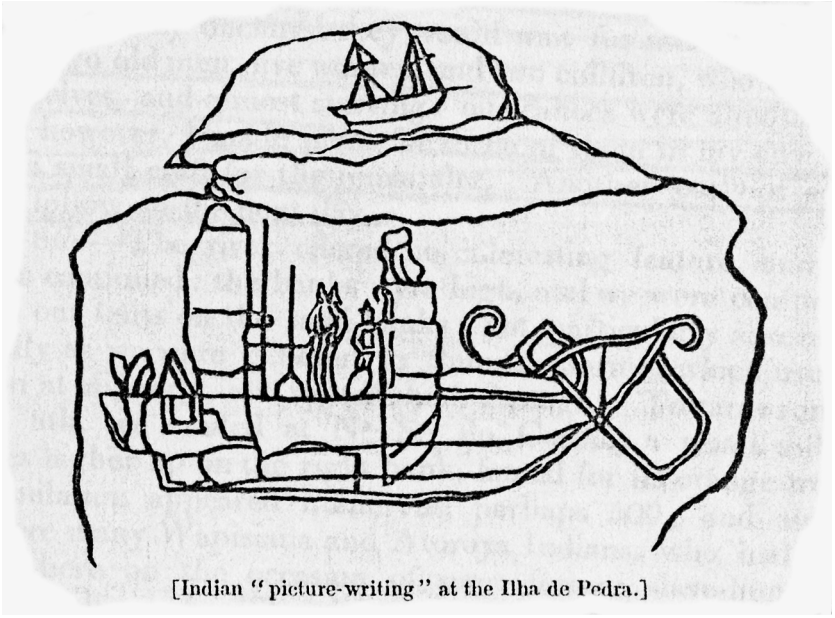


Figure 1. Shiplike rock carving copied by Robert H. Schomburgk (see note 3).

ous learned societies of London, to become stones of significance in a number of metropolitan debates. Those of his rocks inscribed with petroglyphs might help sort out several questions: Were the Caribs of the West Indian archipelago descended from forebears on the continent of South America? Schomburgk thought so, having seen similar carvings in St. Johns. Had the tribes watching the arrival of Spanish caravels at the coast (and on the Amazon) some three hundred years earlier left pictorial records of that fateful encounter? Schomburgk, who copied several shiplike rock carvings in the region (Figure 1), believed it likely.[3] Other samples were to become part of the debate about the existence and location of the long-sought gilt city of El Dorado. Just how similar was the Sierra Accarai range in Guiana to the rich Serrado Espinhaosia in Brazil?

On his return Schomburgk gave a presentation to the Geological Society in London on exactly that question, but he also presented a paper to the Antiquarian Society of London, which cast his geologizing in a very different light.[4] There Schomburgk described the myths and fables of the Amerindians with and among whom he would travel with few interruptions from 1835 until 1844, and he related what he had understood of the

Carib and Akawaio account of how *Makunaima*, the "good spirit," tried to repopulate the postdiluvian world.[5] As Makunaima broke up a great primordial rock to provide the raw material for the Carib tribe, he did not notice that the evil principle, *Kanaima*, had insinuated himself into the substance of the stone. Makunaima recognized the deception too late and realized that "instead of men, spirits of a similar cast to Kanaima had sprung from the rock." Unable to force the demons back into the being of Kanaima, Makunaima exiled them to reside forever in rocks to keep mankind from their mischief. Schomburgk did not miss the significance of this story and wrote, "To this typical fable of the reproduction of mankind must be ascribed the veneration which the Caribee peoples hold for rocks in general."

This fragment of an Amerindian cosmogony possesses striking power: it can now, as it could then, transform those fragments of gneiss that found their way into the bottom of Schomburgk's (borrowed) corial. When I first came upon this passage, in the manuscript holdings of the Bodleian Library, I experienced a curious kind of vertigo, as if the opaque page had suddenly opened a dim window onto a different world, a glass dark enough to reflect back on the reader, sitting alone in the library. For a moment the familiar became foreign, the reader turned strange, a crystalline history melted into a murky puddle. What *was* Schomburgk doing when he hammered at the rocks of Karinampo? Geology? Geography? Conquest? Shamanism? Was he an explorer sampling the prospects of a tract of colonial territory or a *piai* (medicine man) tickling powerful evil? The answer depends, must depend, on where one stands.

This is, perhaps, a truism. Nevertheless, I think we might do worse than to commence this essay on geographical exploration and the Amerindians of lowland South America by invoking the specter of those histories we will not be able to tell, the lost stories—to name just one of them, a history of Schomburgk's work on the Rupununi composed by someone who conceived of Makunaima as a veritable agent in the unfolding of events. Gneiss is, for us, *real*; petrified devils are not. This means there are certain histories that cannot be related here; they are histories you would not believe.

It may be my training in the history of science that leaves me particularly preoccupied by the way that certain things come to be considered parts of the really-real of the natural world (gneiss, hardness, silica, protons) while other things (Kanaima, Makunaima, phlogiston, the Virgin Mary) hold that status for a time, among some groups of people, but cannot retain it or are not accorded it by others. How does this happen? And, possibly still more important, how is it that some individuals, some prac-

tices, and some communities are able to ascend to the (enviable?) position of speaking "on behalf of" the really-real and of being believed when they do so? Few situations cast these sorts of problems into higher relief than scenes in which European science encounters, and is in turn encountered by, the more or less integral world views of others, who are infrequently disposed to abandon their own ways of seeing things, or at least seldom do so as promptly as missionaries of science (both as method, and as an account of reality) often expect. Different theories of knowledge, and ontologies too, do much of their work of self-definition through rhetorical contrasts and pedagogical oppositions, and these kinds of cross-cultural encounters provide opportunities for both in abundance. It is for these reasons that the history of science at the colonial "periphery" can not only shed much light on the histories of imperialism and European expansion but also can shine some bright beams back into the sanctuaries of science in the distant metropolis.[6]

By beginning with the Karinampo incident and my reaction to it, I may be committing, to some degree, that distasteful faux pas of conducting one's education in public. After all, holding forth among ethnohistorians on the suggestive power of unrecoverable histories is something of a sermon to the choir. Yet, there is, I think, a logic to beginning with a meditative nod at what we do not know: there are many lacunae—doors, windows—without which we could see much less than we do. We can make good use of strategic absences—as porticos, means of access, as the frames of what we think we see. We should also, whenever possible, remain both open to and shocked by all that remains beyond our ken.

In this article, I examine the written accounts of a series of expeditions made separately by Robert Schomburgk and William Hilhouse into the interior of British Guiana, in an effort to reveal the multiple functions of early nineteenth-century geographical expeditions into the interior of lowland South America. My general point is simply this: In these explorers' writings it is demonstrably difficult to separate "scientific" exploration from colonial reconnaissance and colonial administration. The expeditions had an array of aims, and these encompassed both natural and social orders. This is not a novel observation, stated generally, but I shall explicate its significance in Guiana in some detail. I am particularly interested in showing the ways that these hybrid expeditions—hybrid in the composition of the exploring party itself, as well as hybrid in purpose—shaped European conceptions of the Amerindians of these regions and were in turn shaped by their presence. As my opening suggests, the interior expeditions into Guiana brought European explorers like Schomburgk and Hilhouse into

increasingly complex relations with indigenous people at a moment when Amerindians were of considerable importance to colonial prospects and metropolitan science. We shall seek to understand the results.

This essay is divided into three sections. First I sketch the workings of interior expeditions and characterize the writings that came out of them; these will serve as our sources. Second, I focus on how these writings depicted Amerindians and show how those depictions served colonial agendas in quite specific ways (emphasizing the shifts precipitated by abolition in 1834).[7] Finally, I conclude by showing the degree to which interior expeditions depended on Amerindians, a dependency that sat awkwardly in the midst of explorers' efforts to narrate these communities as themselves dependent, for various reasons, on their colonial interlopers. We will have to work to recover this aspect of the story. Without native testimonies, it will be necessary to make the writings of Schomburgk and Hilhouse yield more than they appear to offer. This I will attempt to do by searching out textual omissions, prying open narrative elisions, and restoring a certain number of manuscript deletions (bits of the explorers' writings excised before the publication of their accounts). While these critical efforts will never allow us to see the expedition from the point of view of a Macushi boatman looking on at Karinampo, we will at least identify some places where Amerindians have been effaced from European narratives of heroic scientific exploration.[8] The result will show some of the ways that scientific expeditions functioned in the contact zone and participated in the work of appropriating not only foreign lands but foreign peoples as well.

Guiana Expeditions: Corials and Ink

10 lbs beads
6 papers pins
hinges and locks
plant press
fishhooks
flints and ammunition
blank books
—Robert Schomburgk's equipment list, 1835

Between 1820 and 1845 Robert Schomburgk and William Hilhouse undertook, separately, expeditions into the interior of British Guiana.[9] Schomburgk was among the first explorers subsidized by the Royal Geographical Society (RGS), and his river expeditions on the Essequibo, Corentyn, Berbice, Takutu, Parima, and Rio Negro (and additional regions adjoining

these rivers) between 1835 and 1839 represented one of the largest single expenditures of the society in its early years. His assignment, outlined in an open letter in May 1836 at the society's annual general meeting, was to "thoroughly investigate the physical and astronomical geography of the interior of British Guiana."[10] By following the major rivers to their sources and establishing their geographical positions, he was expected to submit the terra incognita of the interior to cartographic scrutiny and connect his maps with those of Alexander von Humboldt to the west.[11] On reaching the interior he was to examine, sample, and record "the general character of its mineral composition, with detailed accounts of plants, animals and inhabitants . . . the soil and the climate . . . and whatever may tend to give an exact idea of both the actual state and future capabilities of this tract of country."

Schomburgk, an amateur botanist, self-taught surveyor, and more or less failed merchant, had found his way from Prussia to Richmond, Virginia, on business under pressure from his father.[12] A job as a clerk had brought him to the Caribbean, where he first gained the attention of the RGS with a careful map of Anegada, one of the British Virgin Islands. In 1832 he offered his services to the RGS as an assistant, surveyor, or naturalist on any expedition. In September 1835 he was bargaining for a corial and a crew to take an expedition up the Essequibo.

William Hilhouse was also a surveyor, as well as a plantation owner and colonial farmer in the Demerara region of Guiana.[13] In 1831, he informed the RGS by letter that he had made several trips up the Orinoco and into the terra incognita of the interior and desired the society to help him publish an account of his expedition into areas "which no European has seen."[14] The society did publish part of his account of a voyage up the Mazaruni and Essequibo rivers in the second volume of its journal in 1832 and subsequently published other reports of Hilhouse's expeditions and local knowledge. He remained in correspondence with the society at least until 1839 and provided progress reports and critiques of the work of the younger "professional" explorer, Schomburgk. Hilhouse paid for his researches and expeditions out of pocket and wrote, "I have always been anxious to devote what little means or talent I possessed to the promulgation of such facts as I might become possessed of in voluntary trips at my own expense and for my own pleasure."[15] His pleasure included the gentlemanly interests that fueled his amateur natural history. He wrote in an account of an expedition into "Warrow land" for the RGS that "hunting, shooting and fishing open the museum of nature, and a discriminating palate will visit that museum often."[16] He was a competent amateur botanist, geologist, and ichthyologist.

What did an interior expedition look like and just how did it manage to get into terra incognita in the first place? In his account of his Mazaruni expedition, Hilhouse, the "old hand," included a paragraph for prospective explorers like Schomburgk:

> It may be interesting to know the equipment necessary for a two months' excursion up one of the mountain torrents of Guiana. Ours cost about £120 sterling, in the following articles: a canoe, five feet broad and forty long, with washboards and a quarter deck; ten dozen knives, one dozen cutlasses, six axes, ten pieces of salempore, ten pieces of calico; fish hooks, of all sizes, about five pounds; beads, thirty pounds; needles and pins; razors and looking glasses, two dozen of each; twenty pounds of gun-powder, ten bags of shot, and flints; scissors, one dozen; and four guns. Our crew consisted of an Accaway captain and twenty two of his followers—nineteen in the canoe, and three in a small hunting craft.[17]

Schomburgk's first expense account reads similarly: fishhooks, guns, ammunition, flints, ten pounds of glass beads, two dozen combs, six cards of pins, scissors, razors, looking glasses, and fifty-three gallons of rum, in addition to his plant press, thermometers, sextant, and handbook of Linnaean taxonomy.[18] Before setting foot in Guiana, Schomburgk wrote to the secretary of the RGS and explained how fishhooks, pins, and beads were the key to geographical enlightenment. In a letter from 1835, he promised to reach the sources of the Orinoco by means of "gaining over the Guaicas and the Guacharibos Indians by presents of hatchets, knives, fishing utensils, etc."[19]

Schomburgk drew a watercolor sketch of himself departing from the post station on the river Cuyuni for his first expedition.[20] The three long corials are loaded with trading provisions, the Union Jack hangs behind, the native crew members brandish their paddles, and Schomburgk sits under a canopy. In both Hilhouse's and Schomburgk's accounts, the penetration into the interior for the purpose of measuring and collecting is, in fact, an account of moving from Amerindian settlement to settlement, trading for fruit, cassava bread, or sweet potatoes. The crew hunted and fished. The push into the interior demanded a series of alliances with native guides and transactions with native communities.

In his account of one of his expeditions, Hilhouse offered some clues as to what, beyond "pleasure," impelled him to take on the journey into the interior. He wrote that above the falls of the Rupununi and the other rivers of Guiana lay "a virgin tract for the discoveries of future travelers," where explorers could "erase a terra incognita from the maps of geographers and

unravel the mysteries of the unknown interior of Guiana."[21] The allure of this type of expedition connected the would-be explorer/adventurer/hero back to the great names of European exploration—Humboldt, Ralegh, Columbus—whose shadows haunt Schomburgk's and Hilhouse's accounts of their expeditions. The mysteries of the interior meant something specific in Guiana: El Dorado, the promised golden city of riches, which had provided the allure for Sir Walter Ralegh's two ill-fated expeditions to Guiana.[22] In outlining "reasons to explore British Guiana" to the RGS in 1834, while still seeking funding for his expedition, Schomburgk wrote that, given the similarity of the mountain range of Guiana with those of Brazil, "if it contain[s] no valuable mineral deposits it will stand alone among the primitive ranges of South America."[23] Schomburgk's other proposed reasons, like his subsequent instructions, reveal the multiple functions of an interior expedition. Playing on national pride, Schomburgk drew attention to the mapping of Venezuela by Humboldt and the Spanish and of the southern areas by the Portuguese. A recent French expedition would probably complete the geography of *la Guianne*, and only the British section of the Guianas remained blank. The interior also promised a botanical treasury where an explorer could probably treble the extant catalog of native flora.[24] In making this a "reason" for the RGS, Schomburgk did not neglect to add that this botanical paradise was "almost certain to contain dyes and drugs, useful species of timber and valuable vegetable products." As he put it, the expedition promised to be of much interest both to British Guiana and to "the mother country." Schomburgk was responsible both to the colonial governor at Georgetown and to the president of the RGS throughout his expeditions, a division of leadership that made his task as an explorer politically complicated.[25]

Hilhouse, as an independent explorer, did not face the complexities of having many masters. As a colonial farmer, the land and its products provided a focus for his expeditions. His voyage up the Mazaruni began as a trip to explore the different varieties of native cotton, in the hopes of finding more suitable species for coastal plantations, and in explaining why he undertook expeditions, Hilhouse played down El Dorado and claimed he "was anxious to find, not gold or emeralds, but spots where men, driven by circumstances from their native country might find shelter and a home."[26] New strains of cotton promised greater plantation profit. For Hilhouse, exploring before the abolition of colonial slavery in 1834, the expedition into the interior had even more important implications for plantation profit. In the sugar-producing slave colony of Guiana before 1834, about eighty thousand African slaves shared the littoral with only about four thousand European settlers.[27] After the revolt of the Surinam Maroons

(which nearly toppled the neighboring Dutch colonial government) and abolition in Venezuela (leaving a large free population abuzz with revolutionary ideology on the disputed western border), control of a discontented slave population became a central concern of British Guiana's plantation owners and colonial administrators. For Hilhouse, maintaining a relationship with the Amerindians of the interior was vital to controlling plantation slaves. The colony had inherited (and to a degree maintained) a Dutch policy of distributing triennial "presents" of rum, salt fish, textiles, tools, and guns to the Amerindians who approached the "posts" stationed on the colony's riverine frontiers. These gifts were to ensure friendly relations with the tribes of the interior, who could then be called on to help hunt runaway slaves. Arrangements were even made to call the Amerindians into the coastal colonies in the event of an insurrection.

For Hilhouse, therefore, expeditions into the interior before 1834 served as opportunities to build and maintain the personal alliances that earned him some influence with the coastal tribes, by whom he was later made an "honorary chief." Through these associations he promised that colonial plantation owners could increase their security and tighten their hold on their human chattel. These arguments, and Hilhouse's expeditionary skill and familiarity with the interior, earned him the colonial authority of a government appointment as "quartermaster general of the Indians."

Schomburgk, by contrast, was an avowed abolitionist who had developed a loathing for slavery when he witnessed the Spanish *Restauradora* run aground off the coast of Anegada and watched its shackled prisoners drown in the clear, shallow water.[28] Performing his first scientific expedition and colonial reconnaissance in 1835, one year after abolition, he faced a very different colonial question from that which had faced Hilhouse in the previous decade. Gone was the preoccupation with slave control that had compelled Hilhouse to lead the "bush service" of Amerindian mercenaries against runaway slaves in coastal creeks.[29] Hilhouse's abolition nightmare had come true, and the result was proving as disastrous for plantation owners as he had warned. The pseudobondage of "apprenticeship" could not last forever, and as legal compulsions lost force, freed slaves ceased to toil in the cane fields to produce a cash crop and began to plant subsistence fields, to fish, and to hunt. Sugar production in the colony began to slide precipitously. The financial crisis of planters by the late 1830s led to a search for new sources of cheap labor and lower-labor cash crops.[30] While Hilhouse's expeditions had worked to shore up the plantation system and slavery, Schomburgk needed to defend the virtue and prudence of manumission and to show how the colony could be saved from economic ruin.

As a result, Schomburgk reported on the suitability of the interior for other kinds of cultivation and, in describing the Amerindian tribes, focused on their suitability for low-wage labor.

Just as Hilhouse's expeditions positioned him for colonial authority and linked him to metropolitan scientific gentlemen (though he never attained any particular renown for his work, which looked decidedly amateurish by the middle of the century), young Schomburgk, somewhat itinerant in the West Indies in the 1830s, saw the interior expedition as an entrée into colonial service and metropolitan scientific prestige. The discovery of the sensational *Victoria regia* lily helped him win the gold medal of the RGS in 1840, and subsequent work on the boundary expeditions earned Schomburgk a knighthood in 1844. He finished his career with respectable colonial appointments, as a British consul in Santo Domingo and later in Siam.

The real work of geographical exploration involved more quills than paddles, more ink than mud. When Schomburgk wrote to the secretary of the RGS from the Virgin Islands with a list of supplies for his first expedition, he listed guns, medicine, a chronometer, a sextant, a theodolite, an azimuth compass, thermometers, and, finally, books: a nautical almanac, a copy of Humboldt's journeys and his *Equinoctial Plants*, and plenty of blank registers.[31] Hilhouse too filled blank books. In one of a small number of depictions of Schomburgk in Guiana, drawn by an illustrator who accompanied him on his final expedition, he is seated on a fallen log in camp, a gun by his side, the Amerindian crew gathered around the fire in the lower corner, the canopy of the forest vaulting overhead.[32] He is small and pale and writing in a blank book. Writing defined the explorer in the field (he wrote, the crew did not) and in the metropolis (where he existed as a stream of narratives). What was Schomburgk writing?

The textual production of the interior expeditions into Guiana, aside from personal correspondence, may be divided into three somewhat overlapping categories. First, the *Journal* of the RGS published accounts of the expeditions, often organized in the form of diaries. These journey narratives described the striking features of the land, encounters with native tribes, and the quotidian affairs of interior expeditions: hunting, storms, portages, and the like. The accounts were all printed with maps, which represented the plumpest fruit of geographical exploration. Schomburgk's expedition accounts included temperature readings, star positions, and calculations of longitude and latitude, and Hilhouse too brought along instruments, a sextant and a thermometer (which, like Schomburgk, he used to measure the boiling temperature of water for the purpose of extrapolating the elevations of different points along his route). Schomburgk published five such accounts, Hilhouse three.

The second type of textual production included books and articles specifically directed at the readerships of particular scientific communities. This category includes Schomburgk's articles in *Transactions of the Linnaean Society of New York*, the *London Journal of Botany,* and the *Annals of Natural History*. Some of this work reached wider audiences. Schomburgk authored the two-volume *Natural History of the Fishes of Guiana,* published by the Naturalist's Library in 1843, which featured more than fifty hand-colored engravings and descriptions of some eighty Guyanese freshwater fish. A book like this found its way into the libraries of amateur naturalists. Hilhouse also produced an "Ichthyology of the fresh waters of the interior," which described some twenty-six specimens that the author had procured on a private expedition.[33]

The third type of textual material might be called colonial handbooks, documents intended for the scrutiny of the Colonial and Foreign offices and of metropolitan officials who were involved with colonial affairs. These served to inform traders, merchants, and investors of the conditions in the colony and were also consulted by better-educated colonists and prospective settlers, particularly on local governance and policy issues. The best example of this type of publication is Schomburgk's *A Description of British Guiana, Geographical and Statistical, exhibiting its resources and capabilities together with the present and future condition and prospects of the colony*, published in London in 1840, which contained chapters on the animal kingdom, inhabitants, and natural resources of British Guiana, as well as proposals for how to make the colony more productive.

Another example would be the more lavish *Twelve Views in the Interior of Guiana*, which was published in a large format with elegant color lithographs. Hilhouse too produced a colonial handbook, entitled "An Account of British Guiana," which circulated in the Colonial Office as a manuscript but never found a publisher.[34] It similarly incorporated sections on geography, geology, agriculture, produce, and cultivation. Hilhouse's 1825 book, *Indian Notices*, published in Georgetown, was a specialized version of the colonial handbook in which agriculture, settlement, geography, and trade in the colony were discussed in connection with the interior tribes. The purely ethnological parts of the book were excerpted for publication in the *Journal* of the RGS in 1834.

The republication of sections of Hilhouse's pamphlet on colonial policy in the *Journal* as ethnological data reveals how tangled the different textual productions of expeditions proved to be. James C. Prichard's primary source for a description of the aboriginal inhabitants of the Guianas in his pioneering 1847 ethnological treatise, *Researches into the Physical History of Mankind*, was the RGS's 1834 excerpts from Hilhouse's 1825 *Indian*

Notices.[35] What started out in 1825 as an outline of the native tribes in a colonial handbook on Amerindian colonial policy, slave control, and agriculture (where Amerindian foot speed was considered in connection with a native's ability to recover runaway "bush negroes") became the source material for the emerging metropolitan science of man. Hilhouse's colonial handbook, "An Account of British Guiana," contained more than thirty pages of diary accounts of a river expedition nestled between chapters on the geography of the rivers and the agriculture of the colony, and he concluded with a call to "the botanist, the mineralogist, the geographer and the natural historian" to come and discover "uncommon specimens" in this "wide field laid open to their researches."[36] A particularly confusing passage from Schomburgk's own colonial handbook shows clearly how hard it was to distinguish between the aims of pure knowledge and colonial utility: "The result of my personal examinations in the course of my expeditions of discovery during successive years from 1835 to 1839 is offered in a spirit of strict impartiality. The pursuit of science alone led me to Guiana and if by my statements of fact, the interest of the province, as a British Colony, is advanced, my object is achieved."[37]

The scientific expedition as practiced by Schomburgk and Hilhouse was also a colonial reconnaissance preoccupied with establishing colonial boundaries, determining the fertility of land tracts in the interior, and searching out new cash crops or new native strains that could be profitably cultivated on the coast. Botanical discoveries could be listed beside a plea that "free labour and capital alone are wanting to restore the former scene of beauty arising from high cultivation" in the colony.[38] When Schomburgk's 1836 expedition up the Corentyn was thwarted by seemingly insurmountable falls, he returned to the coast and occupied himself in surveying the mouth of the river, and he included sailing instructions in his RGS *Journal* article. The survey was undertaken so that Corentyn plantations could avoid transshipping sugar to the Berbice docks.

Even the more narrowly scientific writings that emerged from interior explorations were enmeshed in the issues of colonial administration and profitability. Hilhouse's primary contribution to natural history, his "Ichthyology of the fresh waters of the interior," was originally published as a lengthy appendix to *Indian Notices*. While it might seem that ichthyology, as a contribution to metropolitan taxonomy, stood outside of the issues of colonial profitability and slave control, a closer reading reveals the contrary. In the introduction Hilhouse wrote: "Conceive of a man of colour lying asleep in his corial with a bottle of rum by his side and a hook and a line in the water on each side of the corial tied fast to the toes of each foot. . . . here you have a fair picture of free labour in the colonies."[39] Not

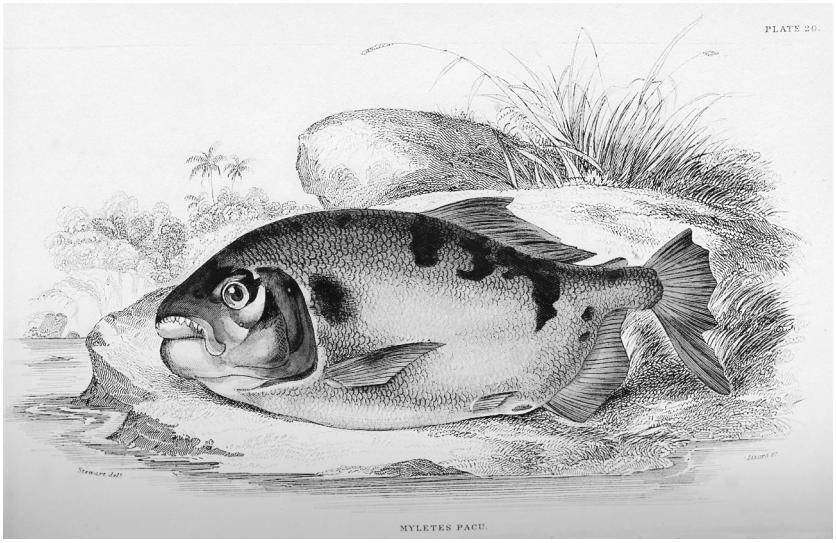


Figure 2. Delectable *pacu* fish (see note 40).

only was the ichthyology of the interior an occasion for raising the specters of postabolition indolence and the collapse of the plantation economy, but the ichthyological productivity of Guiana's rivers and creeks, a ready food source, posed a real problem for the control of runaway slaves.

Inseparable from plantation administration, ichthyology was also directly involved in interior exploration. In his colonial handbook, Hilhouse made use of his knowledge of freshwater fish to establish the geography of the colony and to propose certain rivers for further exploration. In the course of his expeditions Hilhouse learned that a particularly delectable fish called the *pacu* (Figure 2) fed exclusively on the berries of a water plant called *weera*, which, he asserted, grew only on rocks on the cataracts of Guiana's rivers.[40] All of this led Hilhouse to a "curious chain of deductions." If a river contained pacu, it had to contain weera, and weera meant there had to be waterfalls somewhere along its length. Waterfalls meant the river originated above the shelf that separated the low, alluvial flats from the mountains of the interior. "Id est," he wrote, "rivers in which the pacu is found originate in El Dorado! A fact highly illustrative of the communication of different sciences—embracing in itself the labour of the botanist, zoologist and geological geographer."[41] When the RGS threatened to terminate Schomburgk's association with the society in 1836, it was in part on the evidence provided by Hilhouse concerning the pacu: Having taken the

advice of the lieutenant governor, Schomburgk had made arrangements for his second major expedition to go up the Corentyn, the river that made up the eastern boundary of the colony. Hilhouse wrote to the society that Schomburgk had been duped by a colonial governor more interested in using the expedition to settle the boundary with Surinam than in erasing terra incognita. Hilhouse wrote that "the Indians say there are no pacu in the Corentyn," which provided, in his view, incontrovertible evidence that the river was alluvial, did not penetrate into the interior, and therefore was useless as a highway to the terra incognita.[42]

Schomburgk published his own ichthyology of Guiana in 1843. In the introduction to this two-volume collection, Schomburgk not only took advantage of the opportunity when discussing rivers and fish to discuss the prospects and profitability of inland waterway transportation in the colony, but he also linked the taxonomic inquiry of natural history to the productivity of the colony.[43] "Such of the freshwater fishes of Guiana as might prove of economical use to mankind are exceedingly numerous," he wrote, noting that the fish of the interior constituted "another resource of the colony which at present lies entirely neglected." He outlined specific proposals for how the oil of the *laolau* could become a high-yielding export commodity and returned to the contested pacu, suggesting that it would do well smoked, salted, or dried and could be brought to market on the coast.[44]

Schomburgk's *The Natural History of the Fishes of Guiana* also featured an introduction by the editors of the Naturalist's Library series, which included compressed versions of the journey narratives that had been printed in the RGS *Journal*. Here, in an ichthyological handbook, we find specific proposals for colonial mercantile ventures, heroic accounts of exploration, and detailed Latin taxonomic characterizations complete with sections, fin configurations, descriptions of habitats and behaviors, and references that situate the material with respect to the related works of Georges Cuvier, M. Valenciennes, Alexander von Humboldt, Louis Agasssiz, and others. As the editors claimed in their preface, a fish book could be about more than fish: "Extensive circulation of our volume may tend to further the cause of geographical science so ably supported by the periodical alluded to [the RGS *Journal*] and may enlist some strangers to take a deeper interest in the improvement of the productions of the colony, and above all, in that of the moral and religious condition of the Indian tribes, who seem so capable of cultivation and of being most usefully employed in assisting to spread still further the higher blessings of civilization."[45]

Indians: Who Were They? What Were They Good For?

> *To sum up the character of the Indian generally and to demonstrate the practicability of his being rendered useful.*
> —William Hilhouse

The written productions of the interior expedition—journey narratives, scientific articles, colonial handbooks, and their hybrid forms—made British Guiana a place in the imaginations of European readers.[46] Let us turn to the written production of these explorations in an effort to understand how the Amerindians made their way into a colonial and metropolitan discourse. Hilhouse and Schomburgk both made one broad division among the indigenous inhabitants of British Guiana: there were "pure Indians" of the interior, uncontaminated by contact with the colonial settlements, and "sluttish Indians" of the coast,[47] where the bad influences of plantation life corrupted the "natural openness" and "strong moral virtue" of the "authentic" native.[48] Schomburgk wrote in one of his expedition accounts: "During my intercourse with the Indians in the interior, and I do not allude to those miserable beings near the coast who are contaminated by our vices and lowered to the brute creation by the influence of that bane to the Indian races—rum, I have never witnessed a quarrel between man and wife."[49] And Hilhouse, while less romantic about Amerindian virtues, concluded his account of a voyage up the Mazaruni on a similar note: "We found, however, an Accaway, of Coorobung, with all his superstition and stupidity, infinitely superior to an Arrawaak of the coast with his pretensions to cultivation; and it was not until we returned to the post that we again entered the atmosphere of vice and crime, Indian misery and depravity."[50]

According to Schomburgk and Hilhouse, the post, where the spotty distribution of "presents" collected semipermanent enclaves of Amerindians, represented the theater of corruption for the indigenous tribes. Abuse of the local people by the resident postholder and the dangers of miscegenation and access to alcohol were recurring themes of both explorers.[51] Hilhouse warned prospective explorers to beware of letting the crew become drunk, because they quickly became "quarrelsome," though the expedition provided them with a "ration" of rum.[52] The expedition could thus serve, despite itself, as a mobile post of corruption. Schomburgk, on arriving in the Amerindian settlement of Macoosie James, noted that he was "a good looking man, but through his connection to trade and his visits to Georgetown he had lost his natural openness and acquired subtlety in return; indeed we discovered soon his political views in locating us near to his residence, where the approach to our rum bottle was connected with less

bodily exertion."[53] This portrayal of the indigenous people as constantly in danger of moral corruption through liquor and vice formed a critical element in the representation of Amerindians as fragile, childlike, and in need of European "protection." The presence of Schomburgk's rum bottle and its proximity to Macoosie James confirmed that the Amerindian could not survive without the philanthropic attention of European civilization.

Schomburgk and Hilhouse established the fragility of the Amerindians by alluding to them as immature, a rhetoric with deep roots in the European history of cross-cultural encounters. They were indolent,[54] sought a life of pleasure,[55] behaved irresponsibly,[56] and liked to tease.[57] In the written accounts of expeditions, the Amerindian emerged as fascinated by curiosities: a compass, a fork, or the music box that Schomburgk played for them at a marionette show he mounted on the shore of the Corentyn.[58] They played flutes that recalled toy quill whistles to "those who allow their imagination to carry them back to their childhood."[59] Their willingness to accept in trade what Schomburgk and Hilhouse considered "trifles" reinforced their apparent lack of any sense of value.[60] Liberality with trinkets like glass beads and looking glasses "won their hearts," and a bag of baubles could buy months' worth of provisions.[61] The labor of five or six days on a cassava grater might be exchanged "for a common knife," because the American Indians appeared to possess no concept of the value of time. The Amerindian was capricious and lacked the notions of value and exchange which were to be expected of an adult. Like a child who demands prodding to be happy, the native had been "spoiled" by the distribution of "gifts," gifts like those provided by the explorers.

The exploration writings of Hilhouse and Schomburgk represented Amerindians as anxious, despite a capricious and indolent character, to emulate European behaviors and styles. Impressionable, in Schomburgk's characterization, they would be easily converted and won over to a civilized lifestyle. Schomburgk wrote to a London philanthropist that "the example of the new settlers exerts the greatest influence over the Indian; he loses his original manners and language and this step gained toward civilization, agricultural pursuits soon follow and thus civilization advances from the coast toward the limits of the colony."[62] Amerindian imitations of European manners like handshaking were represented in narratives of expeditions as a pantomime: entire settlements would clamor, in Schomburgk's account, to shake his hand.[63]

Anecdotes like this, which made a comic masque of Amerindian mimicry, reinforced the image of a childlike nature. When the captain of the Wapishana settlement at Watu Ticaba emerged to greet the expedition in a pastiche of European dress, Schomburgk "burst out into a loud laugh." The

Wapishana elder wore a "red woolen cap ornamented with a large yellow tassel," a naked sword, sailor's trousers, which fit him "a la Oliver twist," and in his hand he carried a "blue cotton umbrella upon which he seemed greatly to pride himself."[64] Indigenous headdresses also amused Schomburgk, with their reed crowns that reminded him of "may-bug antennae,"[65] and even Amerindian behavior under the scientific scrutiny of his anthropometric observations elicited a chuckle, as when the men insisted on drawing in their stomachs when he went to measure their waists.[66] More seriously "ridiculous" were Amerindian "superstitions," which Hilhouse dismissed as "nearly as absurd and obscene as the mythology of the Hindus."[67]

Mythology and inappropriate religiosity were more important to Schomburgk as an element of Amerindian identity than they were to Hilhouse. Hilhouse's proslavery position left him content with the racial hierarchy that he presented in his published account of the tribes of British Guiana, whose "physiognomy may be supposed indicative of inferiority of intellect; but the cranium is incomparably superior to the Negro, whose powers of mind are as much inferior to those of the Indian as are those of the latter to the European."[68] In maintaining his commitment to a hierarchy of humanity corresponding with skin color, Hilhouse could dismiss the cosmology of this inferior people as, simply, "stupid." By contrast, Schomburgk, who played a role in encouraging missionary work in the interior and whose sympathetic attachments to the Amerindians grew markedly over the course of his explorations, did not dismiss Amerindian accounts of the world so quickly. For him they could serve an important purpose by providing evidence for his doctrine of monogenesis, the notion that all human races could be traced back to a single ancestor. Monogenesis formed the theoretical rallying point for early nineteenth-century ethnological inquiry of the sort that Schomburgk conducted.[69] As an attempt to defend a certain literalness in the biblical account of human creation and to insist upon the common "brotherhood of man," monogenesis was associated with philanthropic societies like the Anti-Slavery Society and the Aboriginal Protection Society, with which Schomburgk corresponded. Schomburgk's monogenetic doctrine did not occupy a strident position in his expedition writings, but he did use accounts of Amerindian myths to back up the interconnectedness of New World and Old World peoples in his presentation to the Antiquarian Society. Working within the tradition of Prichard's *An Analysis of the Egyptian Mythology* and, more distantly, out of the German philological and mythological work of Humboldt and others, Schomburgk noted the parallels between different Amerindian creation stories and those of Genesis, and he considered the similarity of certain myths to those of the Greeks and Romans. He

even connected Amerindian snake imagery in the Guianas to that of the Hindus via a reference to Humboldt's analysis of the links between Hindu and Mexican mythology.[70]

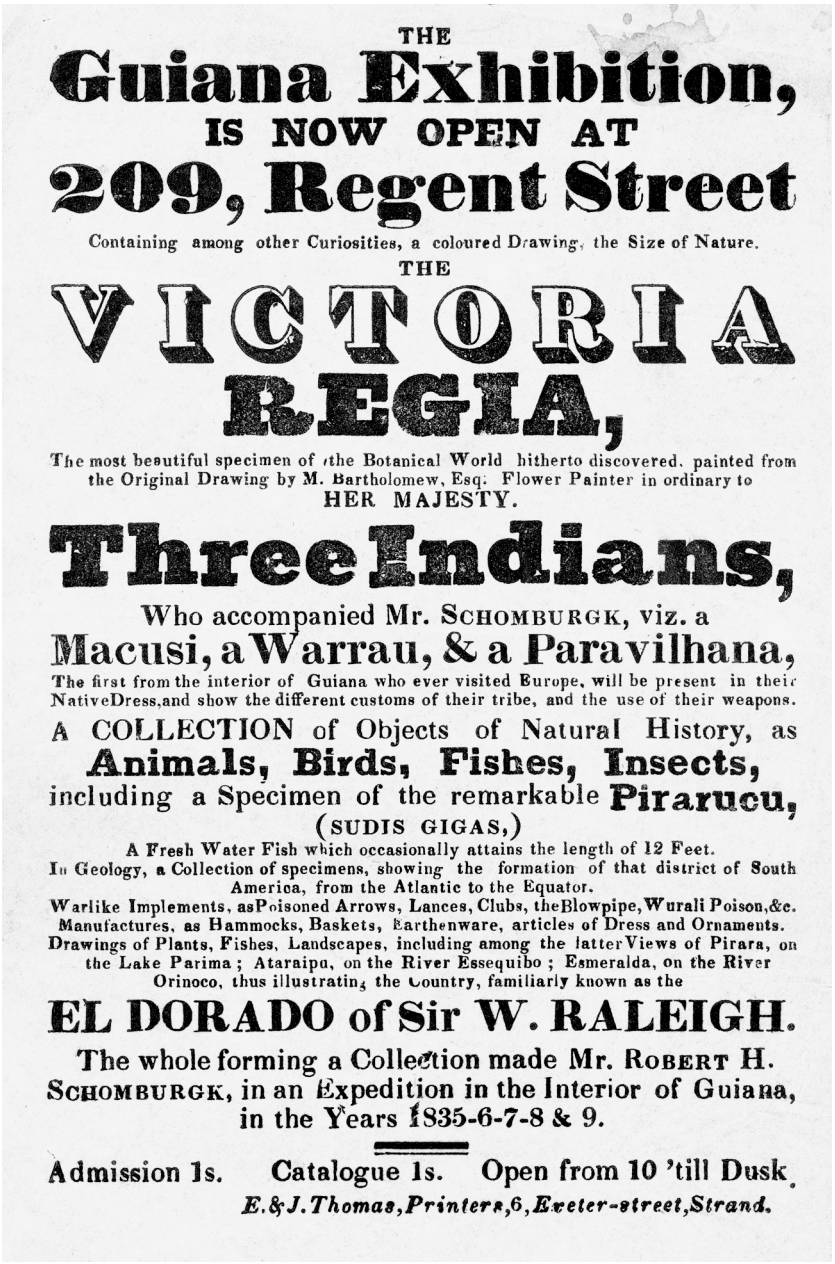
Ethnology and a weak-program monogenesis helped Schomburgk represent the Amerindian as kin to the European and, as such, sympathetic and capable of civilization. Amerindians might be "primitive" but they were familiar, needing only of an "enlightened government" and the attentions of industry and piety to contribute to colonial productivity. He wrote in his colonial handbook that "like the African, [the Indians] are descendants of our common parent and have the same claim upon our pity and protection."[71] Monogenesis in expedition writing served the same function as other instances of the "rhetoric of familiarization," which worked to represent the Amerindian as sufficiently like the European to be civilized.[72] Schomburgk exemplified this affinity from both directions, emphasizing how close under European skin the savage lay. Describing an encounter with the young daughter of a European postholder on the Corentyn: "She was as skilled with her bow and arrow as an Indian hunter and disdaining the customary viands of a civilized people, preferred the fruits of the woods and the provision fields. We have here an example of how readily nature recalls man from adopted habits and the constraints custom has laid him under."[73] Perhaps the most elaborate familiarization of Amerindian identity in the written accounts of these expeditions is Schomburgk's extended and recurring likening of the Amerindian to the primitive Germanic peasant, a trope with its own progressive implications. He wrote: "I speak from experience if I assert that the Indian is as capable of progressive improvement and the establishment among his tribe of social order, European arts, and Christian morals as were the Teutonic races in their infancy, who emerged progressively from the greatest barbarism to the bright station which they at present occupy among the most civilized nations."[74]

Evocations of crisis nevertheless prevailed. Amerindians were said to be poised between civilization and moral and physical ruin. Schomburgk described the native tribes as put upon and exploited by the colonists near the coast and pursued in the interior by the slaving expeditions of the Dutch and the Portuguese. "Diseases and vices introduced by the settlers" had wiped out many and left those who remained in a state of moral decay wherever they were in proximity to Europeans.[75] Both writers raised the specter of annihilation. The "aboriginal races" of Guiana seemed to be "fearfully hastening, as by a divine decree, to complete extinction."[76] Local lore seemed to reinforce the decree, and among the Pianoghottos, the interpreter told Schomburgk, "a tradition prevailed among them that the arrival of the first white man betokened the extinction of their race."[77] Schomburgk remarked on his hospitable reception among them.

Amerindian fragility made native bodies and customs urgent objects of scientific inquiry. Schomburgk tried to preserve the vocabularies of dying tribal languages, which could be used to establish the interconnections among the races and further the work of monogenetic ethnology. Hilhouse too submitted vocabularies and word lists to the RGS.[78] Specimens of rock carvings, blowpipes, and other artifacts needed to be collected for the British Museum from the "few remains of the aboriginal races, thinly dispersed over many hundred thousand square miles." On his final expedition Schomburgk performed anthropometric measurements on people he lamented were on the brink of extinction. The Royal College of Surgeons was to be presented with plaster casts and several skulls—one that Schomburgk spirited into his collection bag from the remains of a Macusi encountered near Curassawaka and three others for which he "paid handsomely" a Taruma widower, who disinterred two former wives and a deceased mother-in-law.[79] So far did the notion of the Amerindian specimen go that Schomburgk actually brought three of his guides in 1839 back to London, where they formed part of his Guiana Exhibition and "displayed their skill in shooting with the bow" when they were not huddling around the fire in the chilly gallery of the "Cosmorama Room."[80] Imminent extinction helped make the Amerindian into a metropolitan sensation (Figure 3).[81]

Amerindian mortality and cultural disruption were not figments of these explorers' imaginations. Here, however, we are concerned less with these facts than we are with what writers like Schomburgk and Hilhouse asserted were their causes and solutions, and with what use they made of Amerindian mortality in their writings. One answer to these questions comes immediately to the fore: The portrayal of vice and moral failure as primary causes of Amerindian mortality made the Amerindian character responsible for the crisis. It also meant that the solution to the crisis lay not in leaving the indigenous people to themselves but in undertaking the moral elevation of the Amerindians to better assure their survival. While it might seem that European civilization was the cause of the crisis, in fact, it was to be the remedy. Only "civilization" could save Amerindians from the "finale of a tragic drama":

> The Indian, uncontaminated by European vices and that bane, rum, is strictly moral. The European colonists owe to these poor neglected races a large and long debt. They dispossessed them of their land; employed them at their first arrival in the cultivation of those fertile tracts and when the African slave was substituted for the Indian labourer, and the necessity for the further services of the aborigines ceased, they were driven into the wilds of the interior and neglected. It is therefore



THE

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VICTORIA REGIA,

The most beautiful specimen of the Botanical World hitherto discovered, painted from the Original Drawing by M. Bartholomew, Esq. Flower Painter in ordinary to HER MAJESTY.

Three Indians,

Who accompanied Mr. SCHOMBURGK, viz. a

Macusi, a Warrau, & a Paravilhana,

The first from the interior of Guiana who ever visited Europe, will be present in their Native Dress, and show the different customs of their tribe, and the use of their weapons.

A COLLECTION of Objects of Natural History, as

Animals, Birds, Fishes, Insects,

including a Specimen of the remarkable **Pirarucu,**

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A Fresh Water Fish which occasionally attains the length of 12 Feet.

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Warlike Implements, as Poisoned Arrows, Lances, Clubs, the Blowpipe, Wurali Poison, &c.

Manufactures, as Hammocks, Baskets, Earthenware, articles of Dress and Ornaments.

Drawings of Plants, Fishes, Landscapes, including among the latter Views of Pirara, on the Lake Parima; Ataraipu, on the River Essequibo; Esmeralda, on the River Orinoco, thus illustrating the Country, familiarly known as the

EL DORADO of Sir W. RALEIGH.

The whole forming a Collection made Mr. ROBERT H. SCHOMBURGK, in an Expedition in the Interior of Guiana, in the Years 1835-6-7-8 & 9.

Admission 1s. Catalogue 1s. Open from 10 'till Dusk.

E. & J. Thomas, Printers, 6, Exeter-street, Strand.

Figure 3. Broadsheet advertisement of Schomburgk's Guiana Exhibition (see note 81).

> a slight retribution for wrongs committed in former days by Europeans to spread religious principles among the remnants of those once powerful tribes and to convert them to that state of civilization that is within their reach.[82]

The "tragic" condition of the native tribes made philanthropic attention to them the duty of an enlightened government. That attention promised benefits for the colony as well, as Schomburgk pointed out in winding up his philanthropic plea for the Amerindians on a considerably different note:

> Such philanthropic measures ought to be disinterested and merely to be considered in light of repaying an old debt. But setting this aside, it offers advantages to the colony. The numerous tribes, the Macusis, Wapisianas and Arecunas who inhabit the tributaries of the upper Essequibo are powerful and if these poor beings are once converted—and we know that with religion, civilization and industrious habits go hand in hand—if not the present then the future generation may be induced when thus qualified to come and settle among the colonists to assist by the labour of their hands to the prosperity of the colony.[83]

Having represented the Amerindian as human and familiar, but also fragile, childlike, unsettled, and underdeveloped, Schomburgk was able to advocate "civilization" for them out of the pure motives of philanthropy. But at the same time civilization meant a settled life of agricultural labor. In the name of philanthropy, then, Schomburgk could advocate bringing an estimated twenty thousand individuals into the agricultural laboring population at precisely the time when the manumission of the African slave labor force had shaken the economic foundation of the colony. In the course of his expedition writings he even created a puzzling apocryphal history of the Amerindians, in which Europeans "drove" the natives into the "wilds" of the interior after initially allowing them to partake in the civilized fruits of agricultural labor. According to this ethnological narrative the Amerindians were, in fact, disenfranchised plantation hands, courting extinction precisely because they had been pushed off the farm. By 1840, when Schomburgk wrote the paragraphs quoted above, the labor shortage in the colony had become acute, with proposals afoot to import free labor from India and even to try to entice free blacks from the United States to settle in the colony.[84] For Schomburgk and others, the Amerindians represented a docile, accessible, and acclimatized agricultural labor force available for the easy work of a few missionaries, who at the same time would be part of a philanthropic project to save the Amerindian from slavery, moral decay, and possible extermination.

Establishing the potential of the Amerindian as a wage laborer in the wake of manumission had been a part of Schomburgk's expedition writing from very early on. In his account of the expedition up the Berbice in 1836, Schomburgk recorded a testimonial on the "invaluable Indian labourer" from a timber foreman who declared that "the Indian sets to work at once with good heart and remains at it until the task is finished, which is generally two or three hours earlier than the Negroes; but not satisfied with this he continues to work in his own hours."[85] However, if not treated well, the "wandering" and "unsettled" Amerindian would emigrate, even to "another colony," which meant that "if steps are not taken to cultivate the Indian's good will the colony risks the loss of many valuable individuals."[86] Hilhouse had said the same thing a decade earlier, warning that many tribes had "retreated so far into the interior that their services are no longer useful to us."[87] He meant, it should be noted, a very different sort of service, primarily the defense of colonial property, both its slaves and its territory.

Later, in 1839, conveying that same lumberjack's report on Amerindian labor to the vice president of the Anti-Slavery Society in London, Schomburgk drew attention to the spiritual and economic benefits of sending missionaries to the interior of Guiana. He wrote: "It would be an easy task to convert the numerous nations of the Macusis, Wapishanas and the Atoroyas who inhabit these regions to the Christian religion and to form them into a useful community."[88] Schomburgk actually embarked on just such a project when he became involved in the mission at Pirara, an outpost at the southernmost reach of the Rupununi River, in territory disputed with the Portuguese. It was there that a missionary named Thomas Youd worked in a community of Macusi and Wapishana in the area between the "Courocou" (Kanuku) and Pakaraima mountains, where he had early success, according to Schomburgk, teaching reading, writing, and religion.[89]

The events around the founding and defense of the Pirara mission establish another important colonial function that Schomburgk perceived for the Amerindian: the role of demarcating colonial territory. We have already seen Schomburgk describe how the civilization of the Amerindian proceeded "from the coast to the limits of the colony," but the incidents at Pirara between 1839 and 1844 demonstrate how Amerindians were needed to *define* those limits. Schomburgk documented vicious slave raids by the Brazilians around the Pirara mission and protested that the Brazilian government "would never venture" a slave raid on Pirara or the other settlements of the interior "if the limits were properly determined and stipulated between the two governments."[90] By drawing attention to the condition of the native tribes and enlisting support from London societies like the RGS and the Anti-Slavery Society, Schomburgk not only linked Amerindian

settlements to British colonial possession, he also secured for himself a Crown commission to undertake a survey of the colony's boundaries. The "Schomburgk line" lay at the heart of the long border dispute between British Guiana and Venezuela, a dispute that eventually led to a confrontation over the gold deposits of a new El Dorado.[91] In these controversies the Amerindians and their early nineteenth-century colonial loyalties became exactly the crucial factor that Schomburgk had maintained they would be. In the 1890s, international arbitrators reviewed evidence of relations between tribes of the interior and the British and Venezuelan governments, respectively, in order to establish the extent of landholdings in the early part of the century.[92]

Hilhouse also realized the vital colonial function to be served by the Amerindians in maintaining colonial possession of the interior. In the interior, he argued, the loyalty of the migratory Amerindians and territorial possession were effectively synonymous: "We must draw around us and attach to us all those migratory nations of Indians that are ever moving in the direction of their immediate interest, by making that interest permanent in our favour, and attaching them permanently to our territory. In that future war, which is not far distant, we shall then have an army of Indians in the interior ready to subjugate the French possessions, instead of being put on the defensive to defend ourselves from a similar force employed against us."[93] Armed Amerindian allies in the interior were not only the way to maintain colonial territory and defend against external aggression, armed Amerindians were the only hope of controlling the slave population of the coast and maintaining the plantation economy of the colony. "It is morally certain," he wrote "that [Indian] neutrality, or consequent union with the blacks in the event of a revolt . . . would ensure the instantaneous ruin of the colony."[94] Until by "naturalizing, civilizing and arming the Indians,"[95] the colony gained a military ally in the interior capable of offensive and defensive operations, British Guiana remained, in Hilhouse's eyes, perched precariously on an unfriendly coast. The Amerindian represented the bulwark between colonial prosperity and ruin: "No European, however strong of body or swift of foot has any chance in pursuit of a naked Negro, without encumbrance, who flies into the bush, none but an Indian can keep pace with him and none but an Indian can discover his footsteps. He must however be immediately hunted out by any means, for one Negro in the bush soon prepares quarters for twenty others who join him from the plantations the moment he has a rice field ready for them."[96]

The durability of the plantation economy was inextricable from Amerindians' fleetness, tracking ability, and enmity toward Africans, including a willingness to pursue them into the jungle and shoot them. Hilhouse, in

his official capacity as quartermaster general to the Indians, actually advised the colony on the rewards to be offered to Amerindians for killed and captured Africans.[97] As an honorary "Accaway chief" he solicited the colonial government on their behalf to ensure that they got their rewards.[98] He commented on the difficulty of getting Amerindians to take runaways alive. When surprised, he noted, the "Negro never surrenders" but always flees, "so the Indian immediately fires."[99] It is not surprising that Hilhouse was interested in maintaining good relations with the Akawaio, "the most warlike of the tribes," for the function of slave control.

The Amerindians were not only a vital colonial fighting force for Hilhouse, they were also, in his eyes, the potential progenitors of a proper colonial militia. He pointed out that it was impossible to maintain an effective colonial militia in a slave colony where the vast majority of the population had to be seen as potential enemies in the event of a disturbance. Referring to the neighboring Hispanic colonies, Hilhouse drew attention to that "invaluable class of society, the *Mestizes*" who "possess all the mildness and docility of the Indian united with much of the energy and industry of their European parents."[100] A free mestizo militia seemed the long-term solution to the problems of colonial defense, certainly to be preferred, in Hilhouse's racialist civil program, to the proliferation of "mulattos." Hilhouse proposed that colonial funds should be earmarked for "the promotion of intermarriages of the colonists with the Indians," in view of the defense of the colony. There is evidence that he practiced what he preached and that much of his authority over the coastal tribes derived from family connections made through his Akawaio wife.[101]

Hilhouse also focused on the need to integrate the Amerindian of the interior into the colonial agricultural enterprise, but this "civilized" agrarian role for the native was mitigated by the different colonial context of the decade that preceded manumission. For Hilhouse, topographical examination of British Guiana revealed a natural geographical hierarchy of labor in the colony. He wrote that "from a topographical review it is plain that the coast lands are as much the province of slave labour as are the hills of the interior for the cultivation by free colonists."[102] The problem was that these interior lands were already inhabited by the Arawak and Akawaio tribes, and, as he put it blithely, "we cannot exterminate them." The only alternative was to "extend the benefit of colonization to the Indians, in return for occupation of their lands," a gnomic synopsis of colonial logic. In practice, this meant establishing free colonies in the interior that would be half Amerindian and half European, in which natives and free settlers would coexist, labor, and provide mutual instruction. Sexual unions of white men with Amerindian women could thus be more easily en-

couraged. Unlike Schomburgk, Hilhouse did not see missionary activity as the route to settlement and then civilized agricultural life, perhaps because the humanitarian sentiment of missionaries might diminish the effectiveness of his critical and necessarily brutal fighting force. Hilhouse reversed Schomburgk's account of the stages of Amerindian elevation, arguing that settled farming had to precede religion and the finer aspects of civilized life. Perhaps with some irony he wrote: "The life of the hunter gives him neither the time nor the inclination to study divinity himself, and he has not the means of purchasing it from others. He is therefore destitute of religious instruction, nor can he be made capable of receiving it until he becomes a cultivator, and a young man of property. It is our duty to make him thus, and till we do so there can be no greater reproach to us than to say that Indians have no religion."[103]

Transforming the scantily clad wandering hunter into a settled developer of property would be the key not only to saving souls but also to the productivity of the colony. "We cannot hope," Hilhouse wrote, "to make either the free Indian or the mulatto or the Negro more immediately industrious, as long as their wants are so simple and so easily satisfied; but we can increase their wants and consequently increase their obligation to labour."[104] Only by manufacturing poverty could Europeans create a market for their manufactured goods while ensuring a steady supply of labor for the colony. Schomburgk echoed the same theme when he wrote that "it would be advisable for his [the Indian's] advancement in civilization to awaken in him a demand for decent apparel and other comforts of civilized nations, and by exalting him in his own opinion and increasing his self respect, his industry would be called forth to keep up the standing he had acquired."[105] In these ways the written production of interior expeditions engaged the Amerindian as part of a complex of potential colonial resources, and represented the native inhabitants of Guiana as potential defenders, consumers, and cash-crop agriculturists, all of this in close correlation with dominant colonial needs.

Amerindians and the Interior Expedition

> *It is impossible to make a step without the Indians.*
> —William Hilhouse

Constructing Amerindian need took work. Presenting a highly mobile and self-sufficient people, culturally adapted to survive in a difficult but extremely fertile environment, as "needy" or dependent on the attention of a few thousand colonists wasting from fever on an alien coast—this took a

particular vision of the world and particular textual practices. Previous sections have examined that vision and those texts in some detail. In shaping an "Indian" well correlated to colonial agendas,[106] Hilhouse and Schomburgk both stressed Amerindians' moral and physical fragility, reinforcing the dependency of the native people on European agency. Constructing Amerindian need, general and specific, was necessary to enabling the circular logic that let European civilization constitute itself as Amerindians' only salvation from the onslaught of European civilization.

A close look at the role played by Amerindians in geographical exploration itself casts the incongruities of this depiction into high relief. In this section I examine how Amerindians participated in these geographical explorations in the interior in order to demonstrate that the written accounts of the expeditions largely obscured the real fragility and dependence of the European explorer. Not only did Amerindians provide the physical labor needed to paddle, portage, and hoist expedition corials up the stiff currents and stony rapids of Guyanese rivers, they also provisioned the expeditions with their knowledge of hunting and fishing and by their hospitality in providing staple foods from interior settlements. Native expertise, leadership, and geographical knowledge not only shaped the direction of particular incursions and parted the veil of a seemingly impenetrable wilderness but also provided the special knowledge later appropriated by interior explorers and transferred into scientific and colonial enterprises.

The much-mythologized foray into the terra incognita of the Guianas depended entirely on the unglamorous, oversized pancake called cassava bread, the staple diet of explorer and crew alike. The narratives of interior expeditions sometimes read as journeys from cassava transaction to cassava transaction. In a part of one of his accounts (edited before publication by the RGS), Schomburgk pointed out his dependence on the ability and willingness of the native inhabitants to provide cassava. The difficulty of travel in the interior of British Guiana, he wrote, was that "weeks, nay, months may elapse sometimes before a human habitation is met with where the stock of provisions may be replenished."[107] Hilhouse warned prospective travelers that "it is absolutely necessary to start with at least one *cwt* (hundredweight) of cassada bread, well dried, as it is a chance if any more can be procured for a week afterwards."[108] Encounter with an Amerindian settlement meant that the expedition could replenish its stock of provisions, and this meant that several days would be spent in the settlement while the inhabitants made trips to their provision fields and the women began the laborious process of grating and pressing the cassava root and preparing the rounds of bread.[109] The scene is repeated regularly in the journey

narratives: a greeting, a negotiation through an interpreter, and then the expedition pitches camp near the settlement to await the preparation of provisions, using the stop to collect botanical specimens, observe local activities, or take astronomical positions. A typical scene took place at the Taruma village on the Essequibo where Schomburgk and his party arrived on 20 February 1838: "We arrived in the afternoon at two Taruma settlements, one on the left bank and one on the right of the river Essequibo. We had there to replenish our provisions as the small size of our boats did not allow us to provide for more than 4 or 5 days. We were very friendly received and they gladly entered into barter for knives, salimpores, calicoes, combs, etc. giving us cassada bread, plantains and yams in return."[110] This account of the critical trade for cassava bread, the lifeline of the expedition, was also cut from the published account of Schomburgk's expedition, although several references to the need for cassava did appear in print. Often in describing the transactions for provisions, however, the explorer focused on the "delight" of the native inhabitants with the receipt of the various "trifles" offered for trade. Only when the Amerindians refused to trade their provisions, or abandoned settlements caused supplies to run dry, did the drama of the expedition account describe the peril and reveal (indirectly) the dependence on the native inhabitants. When the Amerindians provided the bread, fish, and game that fed the expedition, they remained largely invisible.

Whom did all the hundredweight of cassava bread feed? For the most part, it fed the fifteen to sixty Amerindians of the expedition crew: the pilot, who steered the craft down the precarious rapids; the bowman, who read the surface of the water; the paddlers, who drove the boat against the current; and in many cases, the wives of all of these, who also made up part of the expedition. What were women, and in some cases children, doing along on the heroic exploits of the explorers? For the Amerindians who made up the bulk of what Schomburgk or Hilhouse called their "crews," the expeditions were often conducted in the same way, and with the same equipment and provisions, as their seasonal migrations or hunting trips, with the addition of several white passengers. When the Amerindians traveled in the interior they frequently did so in family groups, so that the women could prepare camp while the men hunted and so as not to leave women and children behind and vulnerable. Schomburgk may have called the Amerindians his crew, but it is difficult to imagine that they did not consider him their temporary passenger. The tenuousness of Schomburgk's pretended mastery is clearly revealed in another unpublished interaction: "We left on the 11th of October, many of the Indians accompanied by

their women and children which swelled the number of individuals to fifty eight—all opposition from my side was rendered useless by their observation that if they shall not go, we won't go either."[111]

Schomburgk's "leadership" of the expedition was further undermined by his near-total dependence on indigenous guides. The Amerindians were the memory and map of the land. The only way that Schomburgk and Hilhouse could be sure that they were in true terra incognita was to be assured by the local people that no white person had ever been where they were. The only way to do geography was to link place names with locations, and the only way to learn place names was to ask. As a rule, Schomburgk only indulged in onomastic coinages when he understood a site to have no local name.[112] More important, the only way Schomburgk could find his way to the sources of the Essequibo was to keep asking at every fork, branch, and creek, "Which way is the Essequibo?"[113] Neither Schomburgk nor Hilhouse ever actually recorded himself asking questions like these, but they did both record the necessity and (complexities) of depending on local guides. In 1835 the lieutenant governor wrote to the RGS to explain that Schomburgk would need to work with the natives if he were to have any success as a geographical explorer, writing, "The more remote tribes will expect and demand presents; without these, he is unable to deal harmoniously with them and I am afraid he will never be able to get on."[114]

Not "getting on" with the local guides stymied Schomburgk's expensive expedition up the Corentyn, a journey that he desperately wanted to succeed in order to appease his RGS sponsors, who were becoming impatient for him to find some terra that was actually incognita. When his guides told him that the cataracts they encountered could not be rounded until the rainy season, Schomburgk was forced to pack up for the coast. Only later did he discover that his guides had fibbed in order to keep him from disturbing their slaving territory. Again and again in his journey narratives Schomburgk dismissed his guides as "stupid" or "sullen" and unhelpful, but this merely distracts the reader from the fact that they had gotten him to where he was and were his only hope of getting where he thought he was going, knowing that he was there when he arrived, and getting back again.[115] In addition, Amerindians connected the expedition to the coast and provided the only way for Schomburgk to send progress reports to London during the course of his explorations, some of which lasted for more than a year. This vital Amerindian service is again obscured by a language of triviality: "Our people bartered for several of their commodities and [illegible] in exchange for knives and scissors, and after I soothed him and his wife with some trifling presents, he promised to take care of some letters to the colony."[116]

Irregularly, in marginal or unpublished passages, we catch glimpses of the critical role played by the guide. "We met two Wapisanas," Schomburgk wrote in a passage deleted from a published account, "who had been sent out by our advance party to show us the way, which became rather intricate." "Only Indians could have guided us" on the path.[117] "If it had not been for the chieftain, who walked before us and searched out the shallowest places to ford the torrent, we might have met with serious accident."[118] On the paths of the numerous portages, through the jungle to the sites where Schomburgk and Hilhouse collected their botanical specimens, we must suppose that Amerindians walked ahead and the explorer followed.

The guide and his special geographical knowledge were just one aspect of the "geographical gift" that formed part of the exchange of the contact zone.[119] Hilhouse's guide and pilot received a flintlock gun in addition to other payments for his work conducting the expedition up the Mazaruni. When Schomburgk sat down among the "Pianoghottos" (Farakoto) on his way overland back to the Corentyn in 1843, the exchange involved food and information. After they had presented "sugar cane, pine-apples and cashews (*Anacardium occidentale*)" and some new-made bread, for which Schomburgk exchanged glass beads and fishhooks, the explorer quickly "directed inquiries towards the continuation of our route."[120] The expedition made its way by constant recourse to local knowledge, including the direction of routes, the character of inhabitants, and the possibilities of supply. Schomburgk would "halt, and collect every information with regard to the south eastern course of the Essequibo," as he made his first expedition, but this allusion to the dependence on local knowledge was edited out of the published journal account.[121] In another passage that does not appear in the published accounts of the journeys, an Amerindian elder traced on the ground a map, "remarkable in many respects," which Schomburgk copied and sent back to the RGS.[122] Not only did local knowledge physically shape the interior expedition, it also delimited the temporal boundaries of the penetration. The Amerindians could predict the rainy season with great accuracy from the behavior of turtles and winged ants, and the arrival of the rainy season coincided with the end of the season of expedition.[123]

Both Hilhouse and Schomburgk relied on the Amerindians' geographical knowledge not simply to figure out where to go and how to get there, but also to make determinations concerning colonial reconnaissance. The fertility of Amerindian provision fields indicated the suitability of the land for colonization and offered evidence concerning the appropriateness of particular crops.[124] Hilhouse began his explorations of the interior because of his realization that native cultivars of various crops might usefully be transferred to coastal plantations. He also drew on local

knowledge of freshwater sources to determine the suitability of areas for settlement.[125] The portages that Amerindians showed Schomburgk shaped his later (shelved) proposals for a system of canals to connect the rivers of the interior. Schomburgk even traded for fruit seeds to take back and transplant on the colonial coast, and beyond, at the Royal Botanical Gardens at Kew.[126]

Those aspects of the exploration that most explicitly sought to participate in the discourse of metropolitan science relied to a significant degree on native knowledge as well. Amerindians led Schomburgk to the *Ourali* plant and gave him information on the preparation of the poison, information Schomburgk eventually submitted in a paper to the Linnaean Society. Ourali and its uses became a topic of metropolitan chemical, medicinal, and botanical interest. When Schomburgk touted the virtues of medicinal plants in the interior among the resources of the colony in his colonial handbook, it is impossible to conclude that he discovered these uses independently of the native inhabitants. Similarly, the characteristics and the uses of the numerous species of trees to be found in the colony, which made up the subject of another of Schomburgk's papers for the Linnaean Society, represented knowledge he had acquired among the Amerindians.

Schomburgk and Hilhouse appropriated more than knowledge from the indigenous people: they appropriated specimens of natural history as well. In another section edited out of a published expedition account, Schomburgk recorded that "the [Indians] have observed that we collect plants, insects and birds and they come frequently with such objects to us."[127] In the published reference to the Amerindians' collecting natural objects for Schomburgk, the indigenous people see that Schomburgk is "collecting objects in natural history," but their contribution consisted primarily of little presents of food to the naturalist.[128] Even in the unpublished account, Schomburgk minimized the Amerindian contribution to the specialized task of collecting, dismissing their offerings as "seldom in a state fit for preserving." This dismissal does not seem well substantiated, because elsewhere in the unpublished accounts of the expedition Amerindians are credited with bringing Schomburgk a rare species of rodent as well as "the gem of the ornithological collection," a pair of "rock manikins" in mountable condition.[129] A boy who could shoot hummingbirds with his blowgun proved a boon. Amerindian witnesses also substantiated an explorer's natural history: Hilhouse assured the readers of his ichthyology that no illustration of a fish in his book had not "been immediately recognized and named by all the natives to whom the species was familiar."[130]

Perhaps the best examples of investigations that were entirely dependent on the participation of the Amerindians were the two explorers'

ichthyologies. Not only did "an old Indian chief" provide Hilhouse with the life cycle of the pacu (which enabled him to make the fish an instrument of colonial geography and expedition navigation), but the entire process of catching and collecting the specimens relied on the Amerindians, who used the extract of a toxic root (*Hai-arry*) to poison pools of water and bring all of the fish to the surface. This technique allowed the naturalist to examine the distribution of particular species along the river, information, as we have seen, with broader geographical implications. Hai-arry root not only provided ichthyologists with detailed accounts of the river fish of Guiana, it also provided information to the colony concerning the resources of its fisheries and contributed to an understanding of its broader geographical contours. Hilhouse recommended that the explorer always carry some in order to be able to provision his expedition if the need arose.[131] Entangled in a bundle of muddy roots were colonial reconnaissance, scientific investigation, and expedition survival. A Hai-arry fishing expedition featured prominently on the title page of Schomburgk's book for the Naturalist's Library (Figure 4).

Conclusion

Amerindians were by no means passive or childlike witnesses of geographical exploration in the interior of British Guiana. Close attention to the written production of those expeditions (and its omissions) reveals that the depiction of the Amerindian as fragile and dependent on European agency misrepresented the relationship that emerged in the contact zone. Amerindian identity may have been constructed for European readers by the written production of the interior exploration, but the Amerindian substantially constructed the expedition itself. This article has shown how geographical explorations alloyed science and colonialism in a project to extend metropolitan territory and enmesh foreign people in metropolitan commerce. I have tried to explain how geographical explorers actually made their way into the forbidding interior of a tropical region in order to chart, name, and appropriate. I have also shown how those same men emerged to write the expedition, the land, and the people for colonial and metropolitan consumption. Examining how Hilhouse and Schomburgk represented the Amerindian has demonstrated how expedition writing did a certain kind of colonial work, narrowly shaping the histories and characters of indigenous people to conform to the needs of the colony. Still closer examination of that writing provided dramatic evidence that this work involved minimizing Amerindian knowledge and power in an effort to reflect the superiority of the European and

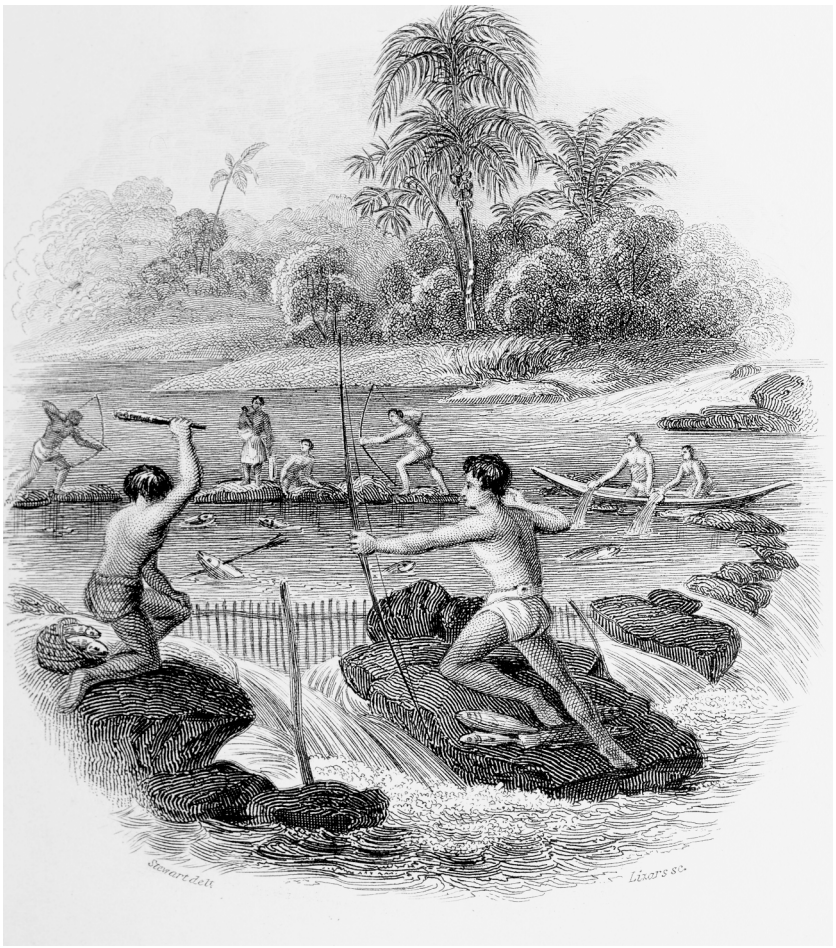

Figure 4. Amerindian fishing expedition featured on title page of Schomburgk's *Natural History of the Fishes of Guiana.*

to validate the virtue of the colonial project. Reconstructing the role of the Amerindian in the practice of expedition, in the acquisition of geographical knowledge, and in the "discoveries" of natural history not only points to patterns in the work of the explorer/authors who worked in the colonial context in the mid–nineteenth century, it also gives us a better understanding of the relationship between science and imperialism in the period.

Epilogue: A View through Karinampo

> *How frequently I was obliged to use every persuasion to induce the Indian to carry the geological specimens collected during our pedestrian tours! I might have loaded him with provisions, wearing apparel, etc., and he would not have objected to it; but to increase his burden by adding rocks, he thought, could only be done out of mischief.*
> —Robert Schomburgk

Robert H. Schomburgk did not succeed in bringing a single geological specimen back to Georgetown from his journey to Karinampo and the upper Essequibo.[132] On 17 March 1836 one of the three corials of the expedition capsized at the Etabally Falls, the last set of rapids on the river before the coast. The craft "struck against a rock and split right in two." While all eleven Amerindians who had been piloting it saved themselves, the "whole of the geological collection" went directly to the bottom of the river. The Carib crew, who had not forgotten the incident at Karinampo, reproached Schomburgk for "the loss of the corial, and for having put them in imminent danger of drowning in the cataract."[133]

Notes

I wish to acknowledge the gracious attentions of the following: Richard Drayton, Michael Bravo, James Secord, Sister M. N. Menezes, Francis Herbert, Paula Lucas, Simon Schaffer, Christopher Bayly, Terry and Rupert Roopnaraine, Bijan Nabavi, Ian Purves, Emilia DaCosta, Neil Whitehead, Christina Burnett, and particularly Peter Rivière. Both he and an anonymous referee helped me avoid a number of gaffes. I am, of course, responsible for those that remain. This work originally received support from the Marshall Aid Commemoration Commission and saw some revisions while I was a fellow at the Center for Scholars and Writers at the New York Public Library.

1 This incident is narrated in Robert H. Schomburgk, "Fragments of Indo-American traditions and a description of the painted rocks at Warapoota," MS.Pigott.c.3, Bodleian Library, Oxford. Schomburgk narrates a similar scene (near Warapoota, also on his first expedition) in "Report of an Expedition into the Interior of British Guayana," *Journal of the Royal Geographical Society* 6 (1836): 224–84 (hereafter, references to this publication will be cited as JRGS volume: page). These incidents are not the same. In the latter it is clear that the samples Schomburgk sought bore petroglyphs. There is no such suggestion in the former, where the sense is given that rocks themselves have anthropomorphic forms. In this article I will use the term *Amerindian* to denote collectively the diverse communities of indigenous peoples living in these regions, which correspond to an area encompassed by parts of modern Guyana, Venezuela, Brazil, and Surinam. Use of this collective denomination (for the most part,

the sources we will be examining here do not allow finer ethnohistorical investigations of individual clans or lineages) should not be taken to imply any sweeping cultural homogeneity.

2 JRGS 6: 9.

3 Figure 1 appears in JRGS 10: 261.

4 Schomburgk, "Fragments of Indo-American Traditions."

5 In citations I have left various spellings of Amerindian tribal names as they appear. For modern usages, consult D. Graham Burnett, *Masters of All They Surveyed: Exploration, Geography, and a British El Dorado* (Chicago, 2000).

6 For an introduction to this project in the context of geography see Morag Bell, R. A. Butlin, and Michael J. Heffernan, eds., *Geography and Imperialism 1820–1940* (Manchester, England, 1995); and Anne Godlewska and Neil Smith, eds., *Geography and Empire* (Oxford, 1994).

7 Slavery was abolished in the British Empire by an act that became effective in 1834. Former slaves in Guiana, and to a greater or lesser degree throughout the Caribbean, were retained in the transitional role of "apprenticeship" until 1838. Note that for those years, then, forced labor continued in Guiana, where the apprentice system was stricter than in many other Caribbean colonies. For a full discussion see Alan Adamson, *Sugar without Slaves* (New Haven, CT, 1972).

8 Consider Pratt's reflections of Humboldt as a "transculturator, transporting to Europe knowledges American in origin, producing European knowledges infiltrated by non-European ones." Mary Louise Pratt, *Imperial Eyes* (London, 1992), 135.

9 Much material in this article derives from the manuscript collection of the Royal Geographical Society (RGS), which holds files on both Schomburgk and Hilhouse. No system of uniform pagination existed in these files when I used them, so I have made my citations to the files themselves and have specified, in the case of Schomburgk, one of three subfolders, which correspond roughly to his first three expeditions (see, respectively, JRGS 6: 224–84, JRGS 7: 285–301, and JRGS 7: 301–50). The list in this epigraph comes from RGS Schomburgk File, subfolder 1 (hereafter cited as RGS.Jour.MS.1).

10 JRGS 6: 14–15.

11 This and the following from ibid., 9.

12 Peter Rivière is at work on a full biography of Schomburgk as well as an edited Hakluyt volume of exploration writings. Schomburgk also features in Burnett, *Masters of All They Surveyed*.

13 A brief biography of Hilhouse is offered in Mary Noel Menezes, ed., *The Amerindians in Guiana 1803–1873* (London, 1979), 41n. Note that Menezes also edited and introduced a new edition of Hilhouse's *Indian Notices* (see n. 38): William Hilhouse, *Indian Notices*, edited by M. N. Menezes (Georgetown, Guyana, 1978).

14 References to correspondence in the manuscript collection of the RGS will be given as RGS.Corr.name, year. This citation comes from RGS.Corr.Hilhouse, 1831.

15 RGS.Corr.Hilhouse, 1838.

16 JRGS 4: 327.

17 Ibid., 27.

18 RGS.Jour.MS.1. For a discussion of the (similar) equipment of the "Humbol-

tian" traveler, see Susan Faye Cannon, *Science and Culture: The Early Victorian Period* (New York, 1978), 76. I have treated Schomburgk's relationship to Humboldt in more detail in Burnett, *Masters of All They Surveyed*, chap. 3.

19 RGS.Corr.Schomburgk, 1835.

20 A photograph of this image appears in the Schomburgk file at the RGS.

21 JRGS 4: 26.

22 Note that Schomburgk edited and introduced Raleigh's *Discoverie of Guiana* for the Hakluyt Society in 1848.

23 RGS.Corr.Schomburgk, 1834.

24 RGS.Corr.Schomburgk, 1833.

25 Schomburgk submitted a separate set of "reasons to explore British Guiana" to the lieutenant governor in 1835, which focused on the value of the "tour" to "British enterprise and industry" in the colony. The colony contributed £150. RGS.Corr.Schomburgk, 1835.

26 JRGS 4: 26.

27 Cited in the statistical section of Schomburgk, *A Description of British Guiana* (London, 1840).

28 A reference to this incident is in "Memoir of Schomburgk," which appears as the introduction to Schomburgk, *The Natural History of the Fishes of Guiana*, 2 vols. (Edinburgh, 1841–3), 1:22. See also the discussion in Peter Rivière, "From Science to Imperialism: Robert Schomburgk's Humanitarianism," *Archives of Natural History* 25, no. 1 (1998): 1–8.

29 Hilhouse's work in this area can be gleaned from Vincent Roth, "Hilhouse's Book of Reconnaissances and Indian Miscellany," *Timehri*, 4th ser., no. 25 (Dec. 1934): 1–52. For a fuller discussion of the attitudes of the plantocracy toward the interior during these years, see Alan Lancaster, "An Unconquered Wilderness: A Historical Analysis of the Failure to Open Up the Interior of British Guiana, 1838–1919," M.A. thesis, University of Guyana, 1977.

30 Adamson, *Sugar without Slaves*, chap. 2.

31 RGS.Corr.Schomburgk, 1833.

32 The British Library holds several volumes of watercolors by Edward Alfred Goodall from Schomburgk's boundary expeditions. The one mentioned here appears in Add.MSS 16937. The sketch bears a certain resemblance to Keller's image of Humboldt and Bonpland on the banks of the Orinoco, in which an open book figures prominently.

33 Private publication meant that money ran out for the plates, which are now lost, last known to have been in the possession of the Bristol Museum.

34 The British Library holds this manuscript, an "Account of British Guiana," as Add.MSS 37057.

35 James Cowles Prichard, *Researches into the Physical History of Mankind,* ed. George W. Stocking (Chicago, 1973), vol. 5.

36 Hilhouse, "Account of British Guiana."

37 Schomburgk, *A Description,* introduction.

38 JRGS 7: 302.

39 William Hilhouse, *Indian Notices* (Georgetown, Guiana, 1825), introduction to the "Ichthyology."

40 Figure 2 is the plate opposite p. 236 in Schomburgk, *The Natural History of the Fishes of Guiana.*

41 Hilhouse, "Account of British Guiana."

42 RGS.Corr.Hilhouse, 1836. As it turned out, there were apparently no pacu in the Corentyn, but it did penetrate into the interior.
43 Schomburgk, *Natural History of the Fishes of Guiana,* 1: 83.
44 Ibid., 123.
45 Ibid.
46 The epigraph is from Hilhouse, *Indian Notices,* 18.
47 RGS.Jour.MS.3.
48 RGS.Jour.MS.2.
49 Ibid.
50 JRGS 4: 40. See also Roth, "Hilhouse's Book of Reconnaisances and Indian Miscellany."
51 There is evidence that in the early nineteenth century postholders did indulge in slave trade, embezzlement of Amerindian "presents," and other forms of abuse of their positions. For a full discussion see Mary Noel Menezes, *British Policy towards the Amerindians in British Guiana, 1803–1873* (Oxford, 1977), 90–95.
52 JRGS 4: 29.
53 RGS.Jour.MS.1. Macoosie James's approach to the rum bottle might better be understood in terms of the Amerindian "piwarrie feasts," which feature the liberal consumption of a fermented cassava beverage. For a discussion of these celebrations, see Menezes, *British Policy,* 39.
54 RGS.Jour.MS.2, final bundle, 14. See also Hilhouse, *Indian Notices,* chap. 7.
55 JRGS 2: 231–2.
56 Ibid., 238–9.
57 Ibid., 235.
58 RGS.Jour.MS.2, final bundle.
59 Ibid., 53.
60 For a discussion of the notion of a "trifle" in contact zone exchange, see Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World* (Oxford, 1988), 110.
61 JRGS 15: 87.
62 The Rhodes House Library, Oxford, holds Schomburgk's letter to Thomas Fowell Buxton, vice president of the Anti-Slavery Society. MSS.Brit.Emp. S18C106/34.
63 JRGS 15.
64 Ibid., 20. For a discussion of the mockery of Amerindians "crossed over" and decked in European clothing, see Anthony Pagden, *European Encounters with the New World* (New Haven, CT, 1993), 44.
65 JRGS 15: 49–54.
66 Ibid., 83.
67 JRGS 2: 244.
68 Ibid., 229.
69 George W. Stocking, *Victorian Anthropology* (New York, 1987). See also "From Chronology to Ethnology," Stocking's introduction to Prichard, *Researches into the Physical History of Mankind*. Prichard mentioned in the third edition of that work that he was awaiting work on the Macusi by Schomburgk.
70 Schomburgk, "Fragments of Indo-American Traditions."
71 Schomburgk, *A Description,* end of section 1.
72 Greenblatt evokes the important ambivalence of simultaneously "alienating"

and "familiarizing" rhetoric in the context of "first encounters" in *Marvelous Possessions*, 109.
73 RGS.Jour.MS.2.
74 Schomburgk, *A Description*, 53.
75 Schomburgk, *A Description*, "Inhabitants."
76 JRGS 15: 104.
77 Ibid., 87.
78 JRGS 2: 247.
79 JRGS 15: 103; RGS.Jour.MS.3; JRGS 15: 46.
80 There is an account of the exhibition in John Timbs, *The Curiosities of London: Exhibiting the most rare and remarkable objects of interest in the metropolis, with nearly sixty years' personal recollections* (London, 1868), 596. See also the *Athenaeum*, 25 January 1840.
81 Figure 3, the broadsheet of the exhibition, comes from the collection of the Lilly Library, Indiana University.
82 Schomburgk, *A Description*, 144.
83 Ibid.
84 Ibid., section 2.
85 JRGS 7: 305.
86 Ibid.
87 JRGS 2: 236.
88 Schomburgk's letter to Buxton; see note 62.
89 The events at Pirara have received meticulous treatment in Peter Rivière, *Absent-minded Imperialism: Britain and the Expansion of Empire in Nineteenth-century Brazil* (London, 1995).
90 JRGS 10: 190.
91 For a discussion of the "Schomburgk line," see Pablo Ojer, *Robert H. Schomburgk: Explorador de Guyana y sus líneas de frontera* (Caracas, Venezuela, 1969).
92 Menezes, *British Policy*, chaps. 6 and 7.
93 Hilhouse, *Indian Notices*, chap. 8.
94 Roth, "Hilhouse's Book of Reconnaisances."
95 Hilhouse, *Indian Notices*, 94.
96 Ibid., 38.
97 Roth, "Hilhouse's Book of Reconnaisances."
98 Menezes, *Amerindians*, 41.
99 Roth, "Hilhouse's Book of Reconnaisances."
100 Hilhouse, *Indian Notices*; see chap. 8.
101 Menezes, *Amerindians*, 41.
102 Hilhouse, *Indian Notices*, 47.
103 Ibid., 55.
104 Ibid., 102.
105 Schomburgk, *A Description*, 144.
106 The epigraph is from Hilhouse, "Account of British Guiana," 36.
107 RGS.Jour.MS.2.
108 JRGS 4: 27.
109 For an account of this process, see Menezes, *British Policy*, chap. 1.
110 RGS.Jour.MS.3.
111 RGS.Jour.MS.2, final bundle, 25.
112 JRGS 4: 166 and 267.

113 He sometimes made decisions about what branch constituted the main body of a river by comparing water color or estimating relative volume at a confluence, but these techniques were subject to error. Schomburgk also, at times, disagreed with his guides about which part of a drainage system ought to bear the name of the main river channel.
114 RGS.Corr.Smyth, 1835.
115 JRGS 15: 59. As I show in Burnett, *Masters of All They Surveyed*, Schomburgk's own exploring techniques evolved, and he was much more mobile and self-sufficient in 1843 than in 1836.
116 RGS.Jour.MS.1.
117 JRGS 6: 251.
118 JRGS 15: 21.
119 All of the recorded guides were men. I borrow the idea of the "geographical gift" from Michael T. Bravo. See his "Ethnological Encounters," in *Cultures of Natural History,* ed. N. Jardine, J. A. Secord, and E. C. Spary (Cambridge, 1996) p. 338–57. See also Bravo, "The Accuracy of Ethnoscience: A Study of Inuit Cartography and Cross-Cultural Commensurability," *Manchester Papers in Social Anthropology* 2 (1996): 1–36, and "Ethnographic Navigation and the Geographical Gift," in *Geography and Enlightenment,* ed. David N. Livingstone and Charles W. J. Withers (Chicago, 1999), 199–235.
120 JRGS 15: 78.
121 RGS.Jour.MS.1.
122 RGS.Jour.MS.3.
123 JRGS 4: 30, 6: 261.
124 JRGS 15: 7 and 42.
125 JRGS 4: 39.
126 JRGS 10: 255. Schomburgk was in correspondence with William and Joseph Hooker at Kew.
127 RGS.Jour.MS.3.
128 JRGS 10: 173.
129 RGS.Jour.MS.2, final bundle, 44.
130 Hilhouse, "Ichthyology of the fresh waters of the interior," 106.
131 JRGS 4: 31.
132 The epigraph is from JRGS 6: 280.
133 Schomburgk, "Fragments of Indo-American Traditions." The loss of the craft is also narrated in JRGS 6: 280.