

# Explorers Club Flag #118 Report - 2014 Meseta de Ichúm Expedition

Jeff Shea

Finding the Source of the Ichúm River

A 50-day expedition to the unexplored interior of the Meseta de Ichúm

All photos by Jeff Shea

---

In my quest to search for and visit the last remaining untainted lands on earth, with the intention of establishing candidate areas for my project, World Parks, I noticed the oval-shaped Meseta de Ichúm on the map in the middle of a vast wilderness in the southern Venezuelan Amazon.



*Fig. 1. Jaguar Falls was seen for the first time on the ground by humans on the day we established Camp 14, February 23, 2014. This photo was taken days later, as we cut through forest to try to surmount the falls and establish Camp 15 above them. Hidden Falls is behind the rock escarpment (center left), barely visible.*

## Abstract

To date, I have launched two Explorers Club Flag expeditions into the interior of the previously unexplored Meseta de Ichúm in the Venezuelan Amazon. The 2013 report<sup>1</sup> discusses the first expedition and its findings, namely, to confirm that the deep interior of this collapsed, forest-covered, bowl-like tepui had never seen human visitors. On that expedition, I photographed every specimen of flora and fauna that I could, and I attempted to document the Shirianá names for them. (The Shirianá are the indigenous people, local to the region, with whom we conducted the expedition.) In 2014, I returned carrying Flag #118 with eight other men, intent on reaching the source of the Ichúm River, which flows south to north through the center of the Meseta, outpouring at Ichúm Falls.

The exact source of the Ichúm River is not certain, but it lies somewhere west of 4° 13'N 63° 22'W, possibly near 4° 14'N 63° 27'W, based on Instituto Geográfico de Venezuela Simón Bolívar map Cerro Ichún [sic] 7528-IV. Around this point, the width of the river is probably at most a few meters wide. This area of the interior is quite flat. However, not far south, the interior rises from 660 m to 1200 m, culminating 16 km to the south in southward-facing cliffs at the edge of the Meseta with shear drops of 200 m to 400 m. In essence, the Meseta is self-contained, with dramatic rock walls surrounding its oval shape. Given its isolation, it is likely that the Meseta contains new species and undiscovered geographies. Because of the high probability of discovery and the enviable remoteness of the Meseta, I determined this to be an area to study and explore.

The aims of this paper are:

1. To relate this journey to the outside world and my fellow Explorers, both in terms of science and experience. I will not only describe our findings, including the discovery of the 7th specimen of *Bactrophora dominans* found and collected (and the only living specimen ever photographed), but also give color to the physical, mental and emotional challenges we encountered and the joys of first experience.
2. To justify the need for a third, multidisciplinary expedition to reach the source of the Ichúm with an emphasis on identifying new species.
3. To win support for an Amazon World Park. Although all Venezuelan tepuis, Yanomamö Land and national parks such as Canaima and Duida-Marahuaka are protected by legislation, for effective preservation, one vast park should be created. This could include the 700 km x 700 km region bounded by Puerto Ayacucho and Santa Helena and the entirety of the Guayana Highlands.



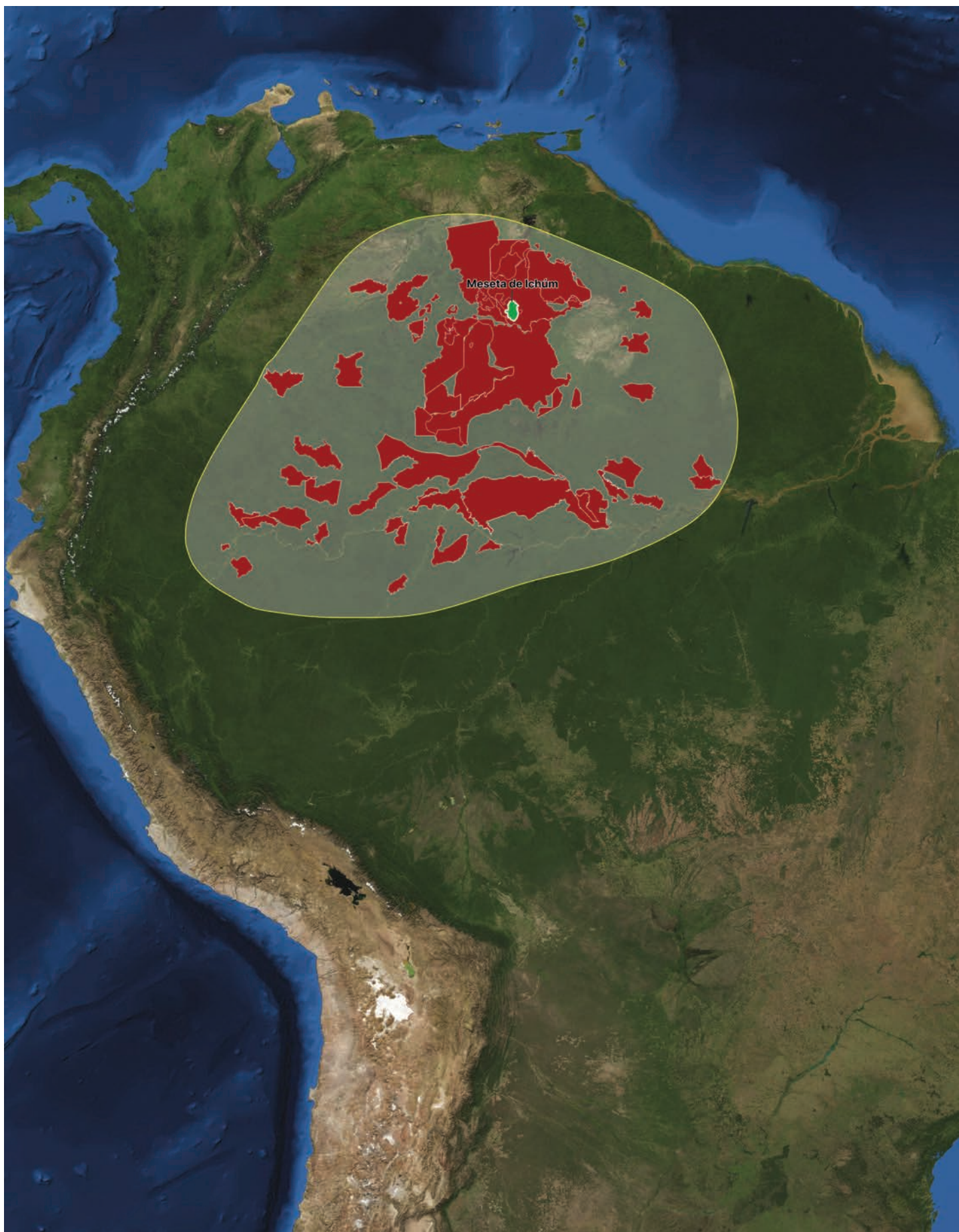


Fig. 2. This map outlines a proposed Amazon World Park in yellow. Using information from the World Database on Protected Areas, existing protected areas are highlighted in red. The Meseta de Ichú is shown in green.  
(Courtesy of World Parks, Inc.)





Fig. 3. The position of the Meseta in Venezuela near Brazil (González, Shea, Brewer-Carías, 2015 - Illustration by Brewer-Carías).

Meseta de Ichúm tepui is a hard-to-access, ancient, collapsed table mountain of quartzite and sandstone. Part of the Guiana Shield, it is located in the south of the Venezuelan Amazon near the border of Brazil. Rainfall within its oval basin collects in the Ichúm River beginning in its far south and flowing north, outpouring at Ichúm Falls (González, Shea, Brewer-Carías, 2015; Brewer-Carías and Audi, 2011). In my 2013 report, based on evidence given, I concluded that the Meseta de Ichúm had not been explored other than in the environs of a now-abandoned village just inside its rim. The deep Meseta had never seen human visitors (Shea, 2014, p. 4).

The 2013 Paragua River Expedition, carrying Explorers Club Flag #60, was my first attempt to trace the Ichúm River to its source. The 2013 report, available online at Explorers.org,<sup>2</sup> describes the expedition, which was comprised of five men, three Shirianá tribesmen (Parato, Rafael and Janeiro) and two “westerners” (Carlucho Nuñez, a Caracas man, and myself, an American).

In 2013, Carlucho and I noticed the Shirianá poling across the river to reach a *merrey* (cashew) tree<sup>3</sup> on a balsa raft that we’d made. We realized that in some places the Ichúm moved so slowly that we would be able to travel upriver in light boats using small motors. Corroborating our 2013 experience with topographic maps<sup>4</sup> we expected to find areas upriver that were flat and navigable, interspersed with rapids and waterfalls. We realized that trying both to cut through bush and carry enough food and gear was doomed to failure: Since progress was so slow, supplies would run out before the goal of the south was reached. Having lightweight boats was the answer for rapid travel, and if they could be disassembled, we could carry them through the

forest and over cliffs when necessary.

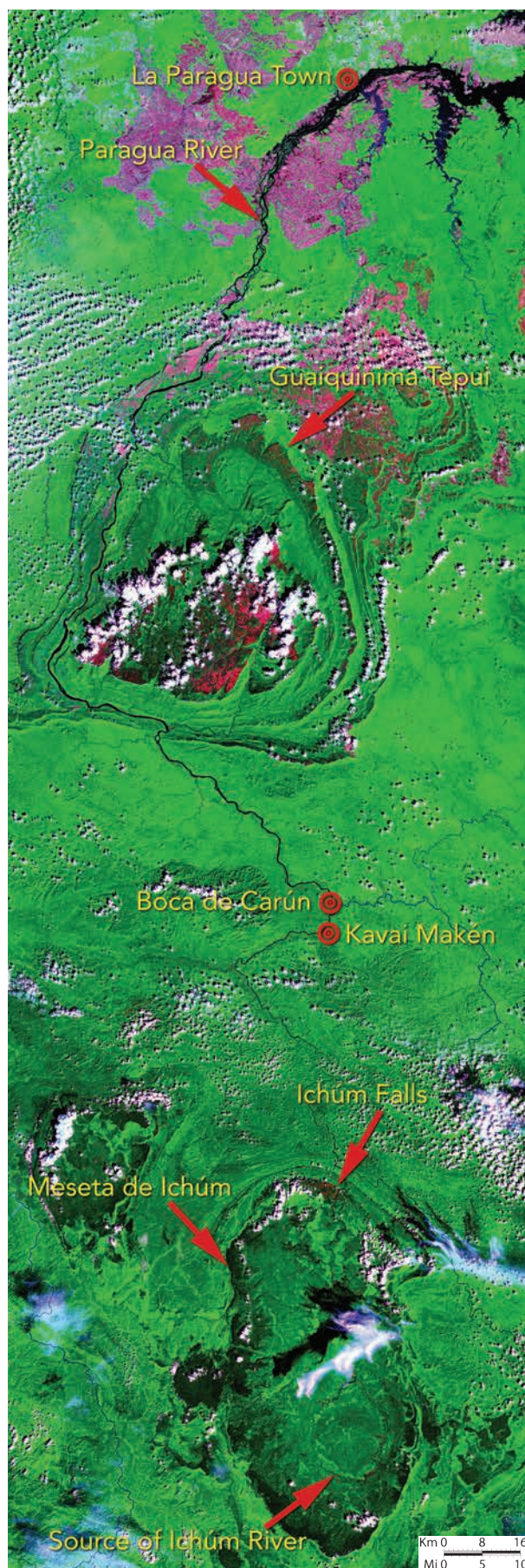
At the conclusion of our 2013 expedition, I vowed to my companions that I would return in 2014. I promised I would bring 100 kilograms of rice, as lack of food in 2013 was a major concern.

The 2014 Meseta de Ichúm Expedition was our second attempt to arrive at the source of Ichúm River. Whereas the 2013 expedition reached only about 8 km into the Meseta, in 2014 we penetrated approximately 40 km south (as the crow flies), reaching the tributary in the middle of the Meseta that forms the northernmost edge of “The Dome,” a prominent geographic feature sometimes mistaken by viewers of satellite photos to be a massive crater (Figs. 5 & 6).



Fig. 4. Rafael and Janeiro go across the slow-moving Ichúm in search of *merrey*. Meseta de Ichúm, Bolívar state, Venezuela, 2013.





*Fig. 5. Three NASA satellite tiles combined show the geographical area of our expedition, starting in the town of La Paragua in the north. To get to the Meseta, we used motorized canoes to travel south up the Paragua River, around Guaiquinima Tepui, past the Pemón settlement of Boca de Carún, then to the Ichúm River, which flows into the Paragua River just two kilometers downstream of Ichúm Falls.*



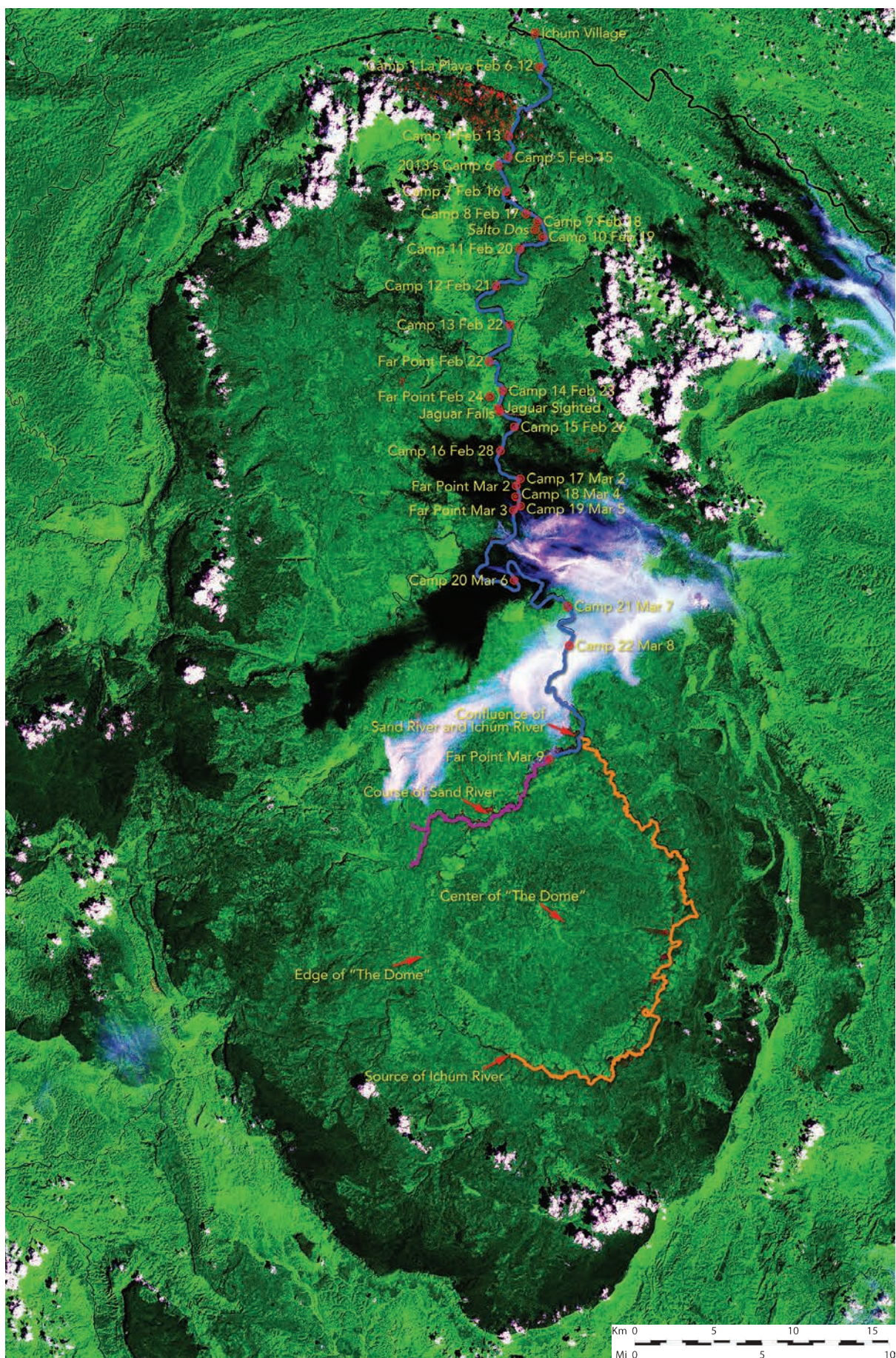


Fig. 6. The blue expedition path is marked with our successive camps up the Ichum River. The orange line shows the intended path of a proposed third expedition, which is being planned. Camp 1 goes directly to Camp 4, because we shortcut the 2013 expedition route. NASA satellite image with author's notations.



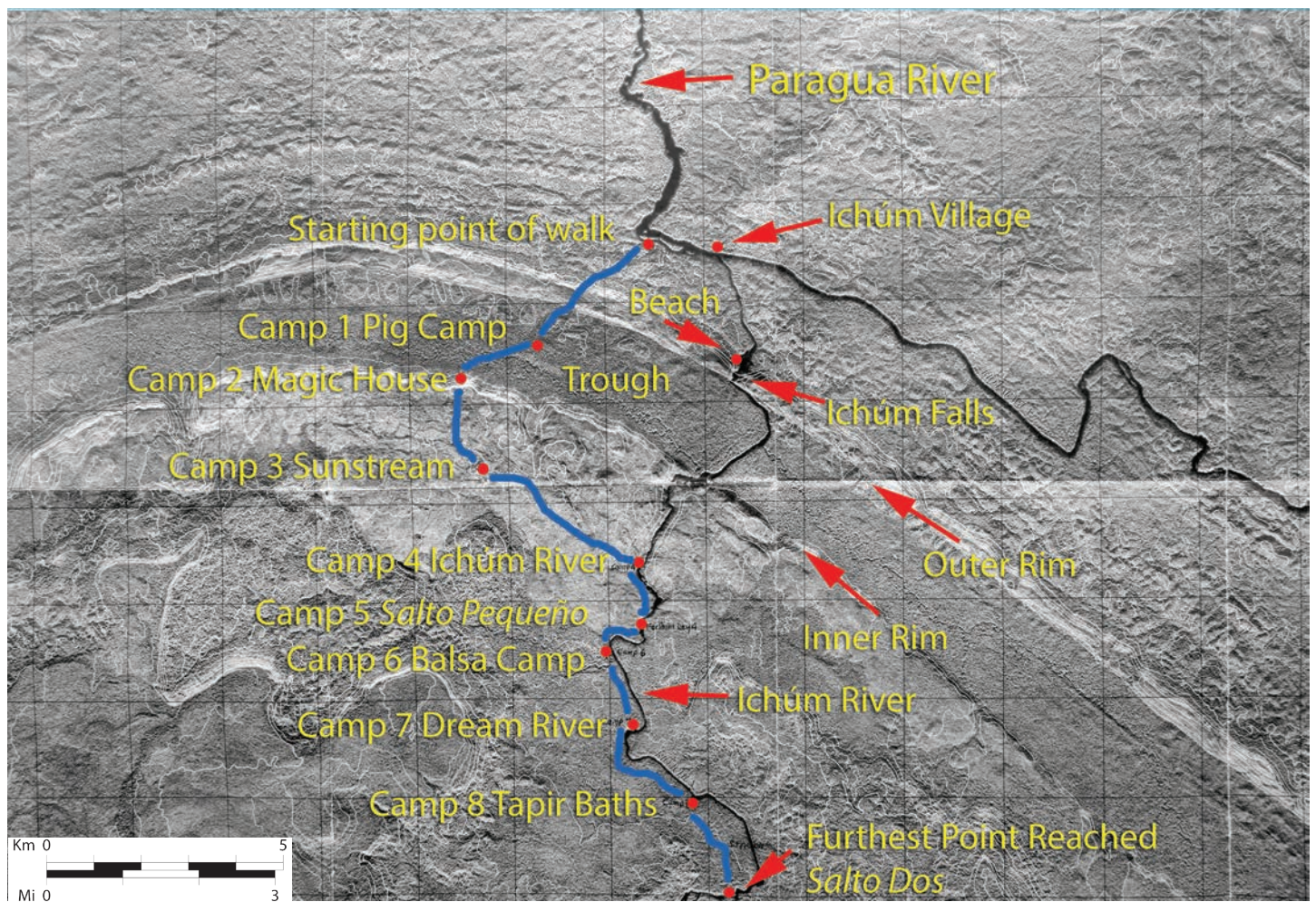


Fig. 7. The 2013 expedition path. We originally set up camp at the beach below Ichúm Falls. The Shirianá were convinced that the best strategy to access the interior was to take a canoe back to the Paragua River and walk southwest. In 2014, we established Camp 1 at the beach, then cut a route directly to Camp 4. The pronounced trough inside the rim of the Meseta is clearly visible. (Note: In 2013, although we originally set up camp at La Playa, I did not record that as Camp 1. I counted the first camp in the interior, Pig Camp, as Camp 1. In 2014, I called La Playa Camp 1, since we spent a week there preparing.)



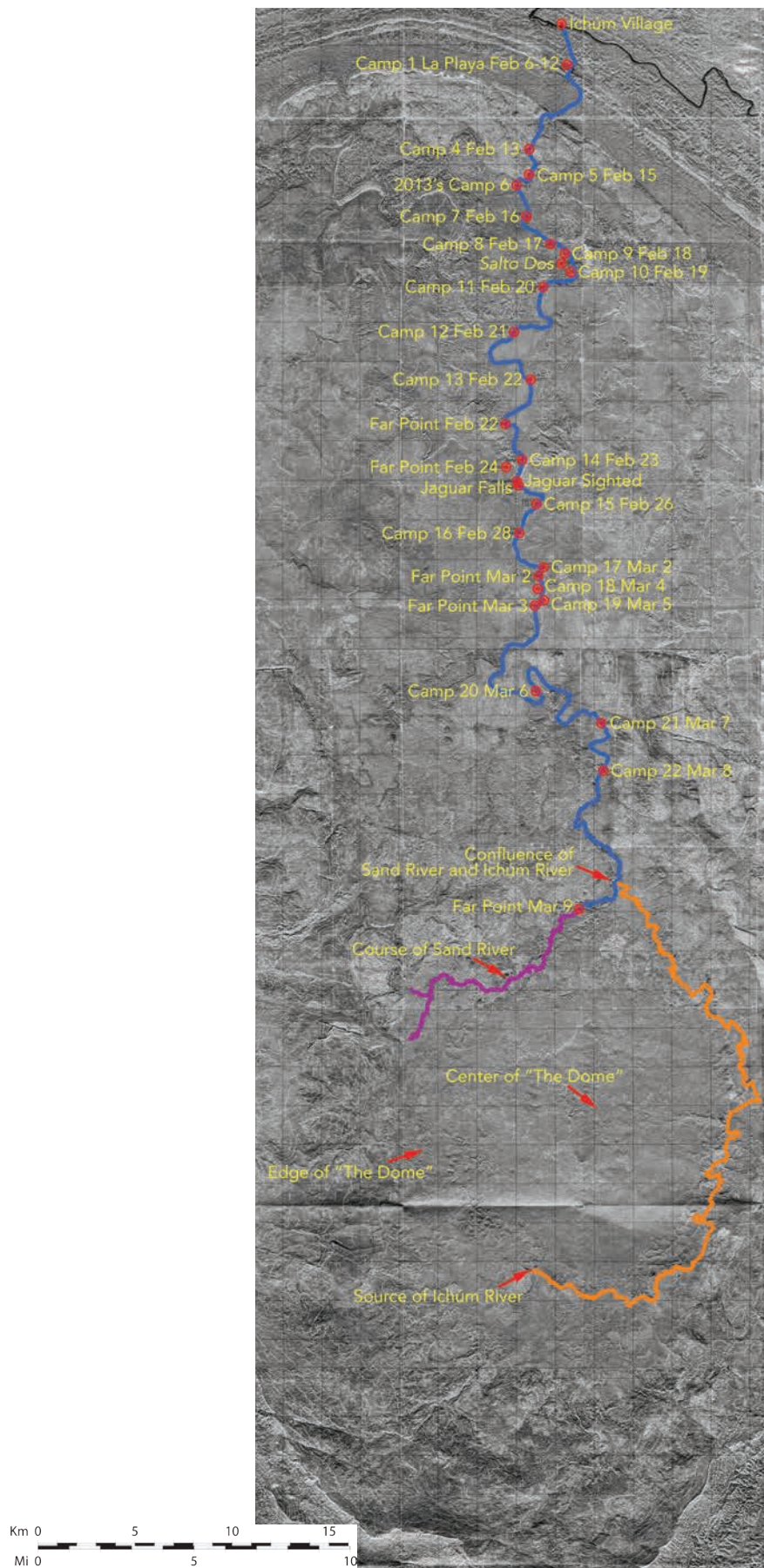


Fig. 8. Topographic view of Fig. 6. The blue line shows the path of our 2014 expedition. The orange line shows the proposed path of a third expedition, intended to follow the Ichum River to its source. The magenta line shows the course of the western tributary to the Ichum west and north of "The Dome," which I dubbed Sand River.



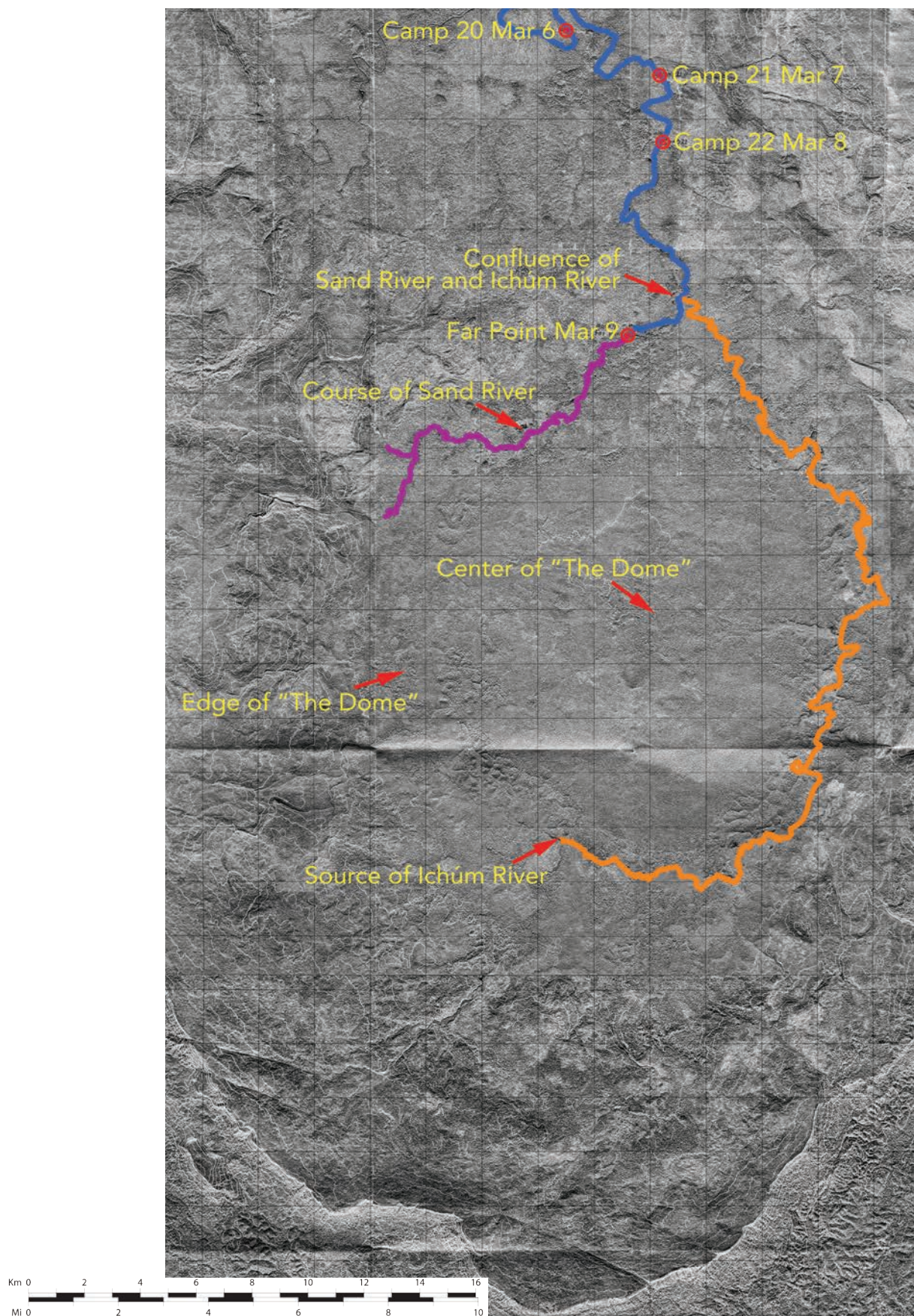


Fig. 9. Meseta Interior Detail. The orange line shows course of the Ichum River from its source to its confluence with Sand River (shown in this illustration by a magenta line). In a span of just five hours, on March 9, 2014, we traveled from Camp 22 to "Far Point Mar 9." Whereas the expedition's advance upriver averaged just 2 km per day, on March 9, we traveled 2 km per hour. This was because the river was flat and without rapids and waterfalls. The topographic map shows that the part of the river marked in orange is relatively flat. One possibility for a third expedition is to follow the Ichum River to its source, then continue on foot clockwise to the headwaters of Sand River northwest of "The Dome."



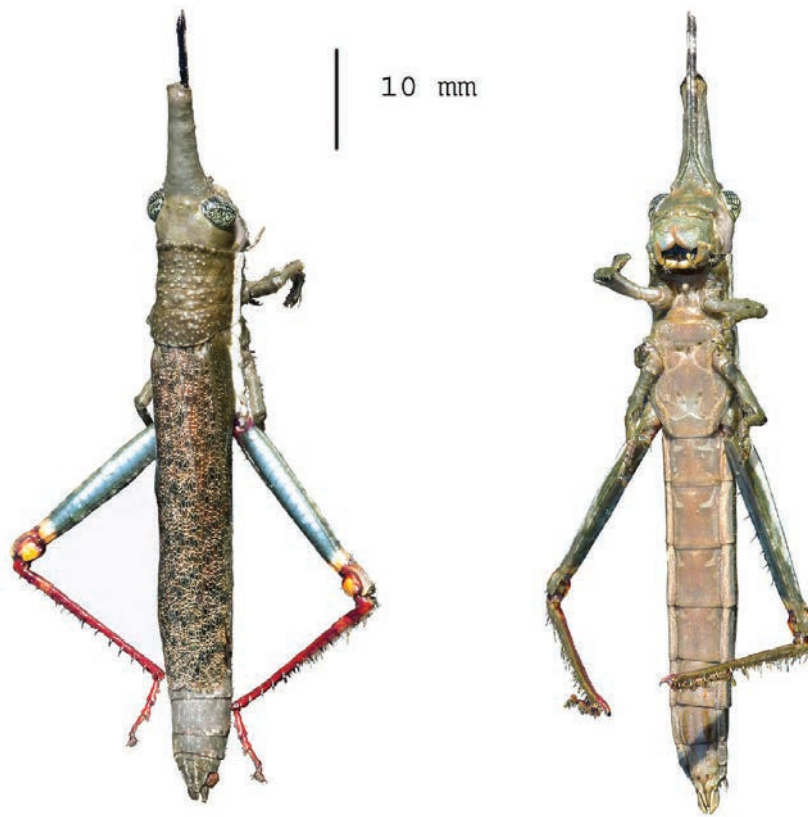


Fig. 10. *Bactrophora dominans*. Photo by author, 2014; separation from background by Brewer-Carías, 2015 (González, et al., 2015).

In addition to penetrating deeply into the Meseta, the 2014 expedition discovered the first specimen of *Bactrophora Dominans* found in Venezuela. An extraordinarily bizarre-looking member of the grasshopper family, it is the 7th specimen found worldwide and the first photographed alive (Fig. 10).

In 2014, we were nine souls in all: five Shirianá – Alfonso (Alfonso Pérez), Janeiro (Janeiro Lesama), Parato (Ramón Montarioca), Rafael (Rafael Díaz) and his son, Joel (Joel Díaz); three men from Caracas – Antonio (Antonio Castillo), Carlucho (Carlos Nuñez), and Telly (José Luis Rodríguez Castillo); and myself, Jeff Shea. The attempt nearly broke us all, with four of the crew of nine returning early.

### Project Overview The Flag Application

The “Itinerary and routing” on the application for the 2014 Flag Expedition stated:

*We will travel from the town of La Paragua in Bolívar state by motorized canoe approximately 300 km upriver to the base of Ichún Falls on the Ichún River [sic], a tributary of the Paragua River, just south of the village of Kavaí Makén. We will bring rafts made of inner tubes and PVC frames, each with a 2-hp Yamaha motor. The rafts will be able to be assembled and disassembled. We will bring a hand pump to inflate the inner tubes. We will carry the rafts up into the Meseta to the site of Camp 4 of the March 2013 expedition, above the rapids and within the Meseta. From there, we will proceed south upriver. When confronting rapids and waterfalls, we will either tow the rafts with rope or disassemble and carry them through the jungle.*

*Satellite photos and previous experience lead us to believe the river can be navigated upstream for a distance of approximately 55 km as the crow flies and 100 km on the ground, which will allow us to access the area near the source of the Ichún River [sic].*

*When travel by the river is no longer practical, if time and food permits [sic], we will proceed on foot to as near to the source of the river Ichún [sic] as possible. We will be transporting large amounts of food. We feel we need approximately 3 weeks on the outward journey to access the far southern interior of the Meseta de Ichún [sic]. For reasons of safety, we are allotting a similar length of time for the return journey to Ichún Falls [sic].*

In preparation for the journey, Carlucho drew a rough design of a boat made from lightweight PVC tubes with flotation provided by truck inner tubes, which would be held together with plastic netting (the *manga*). Telly built two boats using the concept envisioned by Carlucho. I funded two 2-horsepower Yamaha outboard motors, purchased in Caracas by Carlucho.

### Discussion Part 1 From Civilization to Camp 14 Getting to the Meseta

The non-Shirianá expedition members, Carlucho, Antonio, Telly and I, convened in Caracas on January 26, 2014. We went to the workshop where Telly showed us the boats that he had made for the trip. Telly, Carlucho and others had tested the boats on a local lake. I was assured that they were stable. (As it later turned out, they were not. I think the difference was that when first tested, they weren’t loaded with gear.)



We departed by car for Ciudad Bolívar on January 31, 2014. The following day, we drove to La Paragua, a small town on the shore of the river by the same name, where we met several of the Shirianá members of our expedition. Agustín, the chief of Kavai Makén, and Gerardo, a French beekeeper who lived along the Paragua River, each provided a canoe, by which we transported large stores of food and equipment upriver to the entrance of the Meseta at Ichúm Falls. We left La Paragua on February 2, 2014 in their canoes with a small entourage of friends and villagers.

We spent the first night on the river at Gerardo's island. Gerardo sometimes aided miners with supplies, despite the fact

that he was against their mission to find gold on the Paragua. The Shirianá were terrified of the mortar and pestle that he had on a shelf and walked around it with deference. Gerardo had traded for it with a miner, who had found it on top of Guaiquinima Tepui. It was a shaman's tool for grinding potions (Fig. 11). Its age was undetermined (Gerardo [last name unknown], personal communication, 2 February 2014).

Gerardo also told a story about how miners had made a trench six feet underground. He was walking barefoot in it when he felt a sharp pain. Looking down, he saw an arrowhead lodged in a vertical position (Fig. 12).



*Fig. 11. Shaman's mortar and pestle found on top of Guaiquinima Tepui, Venezuela.*





*Fig. 12. Ancient arrowhead (center), Paragua River region, Venezuela.*



*Fig. 13. The five-day journey from the town of La Paragua to the Meseta was long under the heat of the equatorial sun.*



It took approximately four days from Gerardo's to arrive at Ichúm Falls, the "gateway" to the Meseta. The journey was

picturesque, passing the amazing Guaiquinima Tepui.



*Fig. 14. Canoe in front of Guaiquinima Tepui, 2014.*



*Fig. 15. The team pushes canoe laden with gear past rapids, Paragua River.*



Getting past rapids was exciting. A nearby boat smashed on the rocks illustrated the price for mistakes. It sometimes took the entire team's effort to get the canoes past fast water (Fig. 15).

South of Guaiquinima lies the Pemón settlement of Boca de Carún. Two cannons allegedly retrieved from a Spanish galleon upriver are housed there (Octavio Colson, personal communication, 2013). The fabled site of El Dorado lies only 400 km to the southwest (Shea, 2014, p. 109).

Further upriver, south of Boca de Carún, is the Shirianá village of Kawai Makén, one day downriver from the Meseta. The first mistake of the 2014 expedition was that we gave 24

kg of rice to the chief of Kawai Makén. (We had started out with approximately 72 kg of rice and 24 kg of pasta.) In fact, I had to protest an attempt to give away 48 kg of our store of rice. This was reduced to a gift of "only" 24 kg, leaving us 48 kg. The shortage of rice was to play an instrumental role in the outcome of the expedition. I had to weigh the delicate balance of keeping some of the "gifted" rice with maintaining good relations – if I had insisted no rice be given, the expedition might have ended right there in Kawai Makén, even before we arrived at Ichúm Falls. In retrospect, I should have insisted we keep more of the rice.



*Fig. 16. A night balsa. In 2014, illegal gold-mining balsas could be seen on the Paragua River. They had sluices and electric pumps that dredged the bottom. At the end of the day, the gold-laden sand was mixed with mercury by hand, then burned off, vaporizing the mercury, which condensed into the forest by morning. The negative impact on the environment was negligible in comparison to the large illegal mine near Anaima.*



*Fig. 17. Not far from this capybara, the lead canoe sighted a jaguar on the bank of the Paragua River. While my companions raised their cameras, the chief of Kawai Makén launched an unsuccessful arrow at it, and the perfect photo moment (and the jaguar) disappeared.*





*Fig. 18. The team arrives at the small bay below Ichúm Falls. Ichúm derives from the Sapé word “chum” (meaning blood), due to the color of the river (Armellada and Matallana, 1942, p. 74). Armellada noted that the waterfall and the bay beneath it were called Ichúm or, alternatively, Prarará, the Sapé name for foam. The name Ichúm was recorded on the official map by Montoya’s Paragua expedition (Montoya-Lirola, 1958), and subsequently used by the Brewer-Carías expedition (Steyermark, 1962), which collected plants at the waterfall, but did not risk going into the tepui, considered one of the largest with its 2460 square km of summit (Rull, et al., 2019, p.20). Prior to Shea’s 2013 expedition, the deep interior of the Meseta de Ichúm had never been explored (Brewer-Carías, personal communication, 14 June 2020).*

From Kawai Makén, we passed a mining camp. The illegal camps were sometimes guarded by government soldiers.

Continuing one more day upriver from Kawai Makén, we reached Ichúm Village, which lies at the confluence of the Paragua and Ichúm Rivers. On the way, while I focused on taking photos of a capybara on the shore (Fig. 17), the people in the other canoe, not far upriver ahead of us, had spotted a jaguar (Raul Sojo, personal communication, 6 February 2014).

When we got to the village of Ichúm, we left the Paragua River, steering the two long canoes two kilometers up the Ichúm tributary. We reached the bay at the foot of the falls, arriving at La Playa, the beach and last refuge near civilization just below the impenetrable wall of the 70 m high falls. From there, our expedition by foot and portable rafts began.

We spent a full week on the beach below Ichúm Falls, which we dubbed Camp 1, La Playa. During that time, the following milestones were achieved:

1. We tested the rafts again and discovered they cap-sized easily.
2. We procured two more small containers to transport

fuel, the problem being that our 70-liter barrels were too large to carry through the forest. Agustín, the chief, went with the boatman all the way to their village of Kawai Makén to search for more. He returned the next day with two containers. One was 20-liter and the other, 25-liter. These proved to be instrumental not only for transport: They later served as ballast at the far sides of makeshift trimaran arms for our unstable rafts.

3. By showing them topographic maps, I convinced the crew that a direct route from Camp 1 (the beach below Ichúm Falls) to Camp 4 was possible. Several Shirianá cut a path directly to last year’s Camp 4, thus saving three days of shuttling gear.

The area surrounding Camp 1 was interesting in and of itself. The sounds of the forest included myriad insects and birds, the dominant cicada, the ever-present thundering of the falls and, in the still of the night, the otherworldly call and response of the howler monkeys.

The region was rife with peculiar plants and insects (Figs. 21-28). In 2013, Carlucho discovered a remarkable caterpillar at La Playa (Shea, 2014, p. 29). Unfortunately, it was handled poorly and was not recorded.



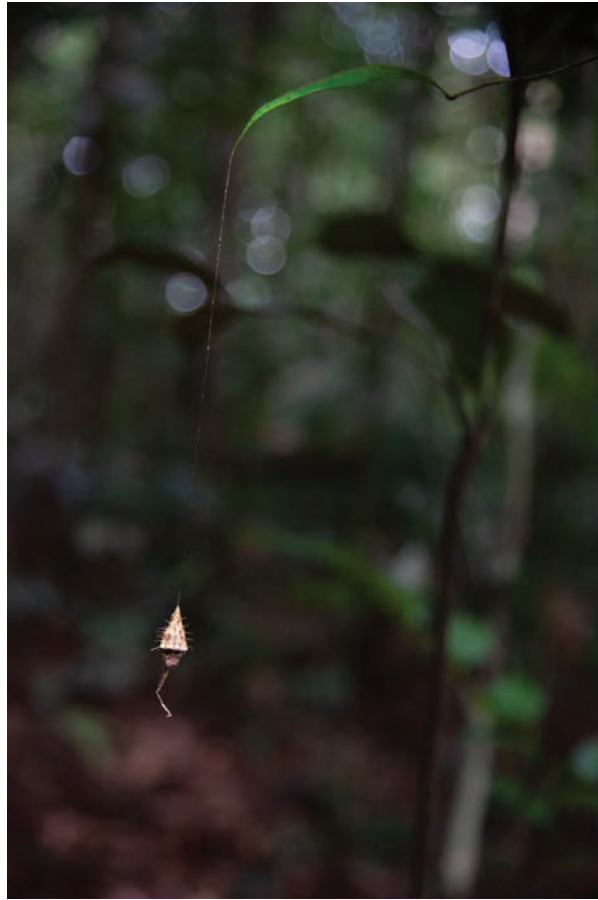


*Fig. 19. The Ichúm water, whenever turbulent, became frothy. I note that I drank from the Ichúm freely, without any negative effects. On the contrary, the water seemed to have a remarkably revitalizing effect. This photo shows the bay below the thundering Ichúm Falls, where the foam was especially thick. Camp 1, La Playa, is visible in the upper right.*



*Fig. 20. Skeleton of Ateles belzebuth and author. I lay next to the skeleton of the spider monkey in order to demonstrate its size. I am approximately 5'10" tall (1.77 m).*





*Fig. 21. Unidentified. I presumed this was an insect pod. It was ingeniously suspended in mid-air from the tip of a leaf, which I surmised was for protection against predators.*



*Fig. 22. Closeup of Fig. 21.*





Fig. 23. *Dinia mena* (Lepidoptera: Erebidae), scarlet-tipped wasp mimic moth.



Fig. 24. (Coleoptera: Cerambycidae).





*Fig. 25. (Araneae: Sparassidae).<sup>5</sup> Gerardo, the beekeeper, seemed unafraid of this large spider, but then again, he told a story of intentionally coming too close to a gigantic snake, the bushmaster (thinking it was a different species), being bitten in the web of his hand, then sitting in the river to slow his heart until help could arrive. He had a scar to prove it.*



*Fig. 26. (Araneae: Salticidae), jumping spider.*





Fig. 27. *Archaeoprepona lycomedes* (Lepidoptera: Nymphalidae).

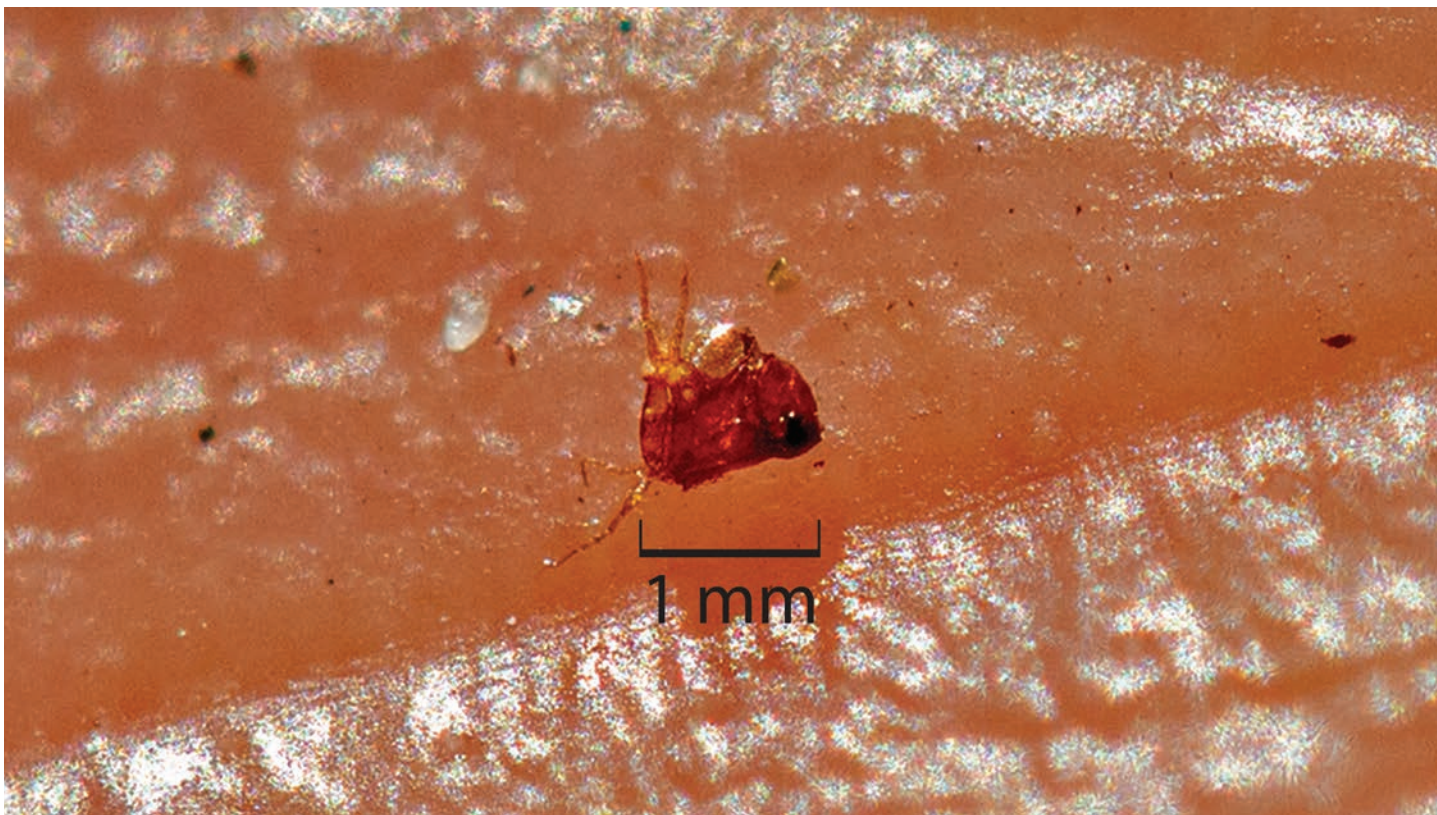


Fig. 28. The tiny nigua, *Tunga penetrans* (Siphonaptera: Hectopsyllidae), burrows a cave in the skin on the underside of your foot. You do not realize it until later. Photos on the internet show how disgusting the results can be from this nearly invisible invader. Just one more of the nuisances in the Venezuelan Amazon.



One day, the Shirianá painted their faces (Figs. 29-31).



*Fig. 29. A Shirianá (from Ichúm Village) who served as a porter during the preparations at Ichúm Falls.*



*Fig. 30. Janeiro, the only Shirianá who stayed with the expedition until the end.*





*Fig. 31. A woman at La Playa, Camp 1.*



## 2014 MESETA DE ICHÚM EXPEDITION TIMETABLE

	Day of expedition, away from civilization	Days above Ichúm Village	Days above La Playa	Date	Day	Where we spent the night	Coordinates
Feb-2014				1	SAT	La Paragua town, Bolívar state	6° 50' 24"N 63° 21' 00"W
	1			2	SUN	Gerardo's place, en route to Ichúm	
	2			3	MON	Amanaima, en route to Ichúm	
	3			4	TUE	Beach in front of Guaiquinima, en route to Ichúm Falls	
	4			5	WED	Kavai Makén	
	5	1		6	THU	Salto Ichúm Beach (La Playa)	4° 45' 56"N 63° 21' 13"W
	6	2		7	FRI	2nd night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	7	3		8	SAT	3rd night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	8	4		9	SUN	4th night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	9	5		10	MON	5th night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	10	6		11	TUE	6th night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	11	7		12	WED	7th night at La Playa, below Ichúm Falls	4° 45' 56"N 63° 21' 13"W
	12	8	1	13	THU	Camp 4, Meseta de Ichúm	4° 43' 46"N 63° 22' 23"W
	13	9	2	14	FRI	Camp 4, via Camp 7	4° 43' 46"N 63° 22' 23"W
	14	10	3	15	SAT	Camp 5	4° 43' 05"N 63° 22' 14"W
	15	11	4	16	SUN	Camp 7, Dream River Camp (named 2013)	4° 41' 55"N 63° 22' 27"W
	16	12	5	17	MON	Camp 8 (alternate)	4° 41' 12"N 63° 21' 46"W
	17	13	6	18	TUE	Camp 9, below Salto Dos	4° 40' 10"N 63° 21' 15"W
	18	14	7	19	WED	Camp 10, Salto Bonito	4° 40' 08"N 63° 21' 46"W 474 m
	19	15	8	20	THU	Camp 11, above Salto Bonito	4° 39' 51"N 63° 21' 58"W 475 m
	20	16	9	21	FRI	Camp 12, a beach	4° 38' 43"N 63° 22' 47"W 499 m
	21	17	10	22	SAT	Camp 13, Danto Beach, Meseta de Ichúm, Bolívar state, Venezuela, via falls at day's far point, 18.5 cm from top, 25.92 cm from left	4° 37' 25"N 63° 22' 21"W 487 m, via falls at day's far point 4° 36' 13"N 63° 22' 59"W 492 m
	22	18	11	23	SUN	Camp 14, Jaguar Camp, 800 m from the large waterfall (not visible from here)	4° 35' 08"N 63° 22' 32"W 500 m, via day's far point (Jaguar Falls) 4° 34' 26"N 63° 22' 38"W
	23	19	12	24	MON	Camp 14, Jaguar Camp, via a false start	4° 35' 08"N 63° 22' 32"W 500 m, via day's far point 4° 35' 01"N 63° 22' 59"W 517 m
	24	20	13	25	TUE	Camp 14, Jaguar Camp, via a point above the wall, via "Guacamayo Lookout," aka "The Grotto"	4° 35' 08"N 63° 22' 32"W 500 m, via 4° 34' 25"N 63° 22' 35"W 583 m
	25	21	14	26	WED	Camp 15, Riverside Flats, above the falls	4° 34' 01"N 63° 22' 07"W
	26	22	15	27	THU	Camp 15, Riverside Flats, above the falls	4° 34' 01"N 63° 22' 07"W, via Camp 14
	27	23	16	28	FRI	Camp 16	4° 33' 12"N 63° 22' 16"W 594 m, across from beach
Mar-2014	28	24	17	1	SAT	Camp 16, Camp Abandon	4° 33' 12"N 63° 22' 16"W 594 m, via far point about 1 km upriver
	29	25	18	2	SUN	Camp 17, Wasp Beach	4° 32' 22"N 63° 22' 02"W 597 m, via day's far point 4° 32' 04"N 63° 22' 04"W
	30	26	19	3	MON	Camp 17, via site of tomorrow's Camp 18	4° 32' 22"N 63° 22' 02"W 597 m, via day's far point 4° 31' 12"N 63° 22' 11"W
	31	27	20	4	TUE	Camp 18, Plateau Camp	4° 31' 14"N 63° 22' 08"W 607 m
	32	28	21	5	WED	Camp 19, Crux Rapids	4° 30' 05"N 63° 22' 58"W 629 m
	33	29	22	6	THU	Camp 20, Run Out of Gas Forest Camp	4° 28' 50"N 63° 22' 08"W 634 m
	34	30	23	7	FRI	Camp 21, Decision Camp	4° 27' 56"N 63° 20' 23"W 639 m
	35	31	24	8	SAT	Camp 22, Gloomy Point	4° 26' 37"N 63° 20' 21"W 661 m
	36	32	25	9	SUN	Camp 21, Decision Camp, via far point of expedition	4° 27' 56"N 63° 20' 23"W 639 m, via far point of expedition, 4° 22' 48"N 63° 20' 56"W 650 m
	37	33	26	10	MON	Camp 17, Wasp Beach	4° 32' 22"N 63° 22' 02"W 597 m
	38	34	27	11	TUE	Camp 16, Camp Abandon	4° 33' 12"N 63° 22' 16"W 594 m
	39	35	28	12	WED	Camp 14, Jaguar Camp	4° 35' 12"N 63° 22' 32"W 500 m
	40	36	29	13	THU	Camp 14, Jaguar Camp, with a side trip to Camp 15	4° 35' 12"N 63° 22' 32"W 500 m
	41	37	30	14	FRI	Camp 14, Jaguar Camp, with an attempt to access Hidden Falls	4° 35' 12"N 63° 22' 32"W 500 m
	42	38	31	15	SAT	Camp 11	4° 39' 51"N 63° 21' 58"W 475 m
	43	39	32	16	SUN	Camp Puerto Uno (alternate Camp 5)	4° 43' 05"N 63° 22' 14"W
	44	40		17	MON	La Playa	4° 45' 56"N 63° 21' 13"W
	45	41		18	TUE	La Playa	4° 45' 56"N 63° 21' 13"W
	46	42		19	WED	La Playa	4° 45' 56"N 63° 21' 13"W
	47	43		20	THU	La Playa	4° 45' 56"N 63° 21' 13"W
	48			21	FRI	Camp Petoí, a place along the Paragua River (ran out of gas)	
	49			22	SAT	Gerardo's place	
				23	SUN	Ciudad Bolívar	
				24	MON	Caracas	

Fig. 32. This is a day by day record of the camps and coordinates of our movements. As noted elsewhere in this report, the going was arduous and slow, due to frequent rapids and waterfalls, the need to transport large quantities of food and the fact that the forest hugged the shore of the river, all of which impeded our progress (Figs. 34 & 36).





*Fig. 33. On the first day out from Camp 1, the rim of the Meseta is seen in the distance (left to center) with the interior of the Meseta behind me. The entire Meseta is drained by the Ichúm River and its interior is carpeted with rainforest.*



*Fig. 34. These rapids were below Camp 4 and not far above Ichúm Falls. We walked around them, cutting through forest.*



After a week of preparation, the entourage of friends and helpers that had assisted us since La Paragua motored away from the bay below the falls in the two long canoes, leaving nine of

us to continue the expedition. The following day, February 13, 2014, we carried gear on the newly-cut path from Camp 1 to Camp 4.



*Fig. 35. This tree was felled with machetes in order to bridge a channel that was too deep to walk across. A jungle vine was suspended to give something to hold on to while crossing. Here, Antonio tried to maintain his balance on the submerged trunk. As he reached the other side, he fell in, getting his pack wet.*



*Fig. 36. These rapids were just below Camp 4. This photograph shows that the forest grows right up to the side of the river. In order to pass such sections, it was necessary to cut through the forest and carry the disassembled boats on our backs.*





*Fig. 37. We arrived at the site of last year's Camp 4 at night.*



*Fig. 38. Boana geographica. We spotted this frog hiding between river rocks in Camp 4.*





*Fig. 39. Just above Camp 4, there was a waterfall.*



*Fig. 40. Telly loads up the boat for its maiden voyage upriver from "Puerto Uno" (alternate Camp 5). Shortly after this photograph was taken, we discovered that the boat was not stable.*





Fig. 41. Poles fashioned from cut saplings were bent around the PVC frame and tied to the small plastic fuel containers, one on each side, forming a trimaran.

On February 14, 2014, we made a new Camp 5 at the first flat spot in the river. We called it Camp *Puerto Uno*. It was there that we assembled the boats.

Telly and I took the boat upriver from *Puerto Uno* to 2013's Camp 7. We tied a container of fuel to the raft intending to transport it upriver (Fig. 40). When we came to the first significant current, the raft flipped over, hurling us into the river. Fortunately, the fuel container was securely tied on top and didn't budge. I retrieved my camera before water infiltrated the river bag. Luckily, we lost nothing. We managed to get ourselves back on the raft, then descended, arriving back at Camp 5 just before dark.

It was clear that we needed to stabilize the rafts. The next day, Telly and Antonio cut and skinned two 10-foot saplings to fashion trimaran arms for each boat, using inner tubes (and later fuel containers) to provide needed stability (Fig. 41). Now con-

fident that our boats were river-worthy, we began shuttling our camp further upriver to the south. Whereas in 2013, it took two days to get from Camp 5 to Camp 7, in 2014, it took just one, including moving a heavy stockpile of provisions. For the time being, the group was in good humor. In 2013, we cut through the forest from Camp 5 to 8. In 2014, we went by river.

A thick riparian forest, topping out at about 80-100 feet, surrounds the river. Camps were made by building frames using the trunks of trees as the main support. Wood saplings, 7 cm to 14 cm in diameter, were sharpened and driven into the ground at an angle, then tied to the main beams as lateral support using tree bark or other cord made from bush material (Fig. 61). This frame was used to support a large sheet of heavy-duty plastic. Our nine hammocks were then suspended on vertical posts, also made from saplings, which were often rooted in the ground. This was a very effective shelter from the frequent rains.





Fig. 42. Camp 8 shown above was typical. Our hammocks were suspended from a frame built with saplings.

Camp 8 was one such camp. The ground was uneven. The machete, a long sword-like tool, was indispensable (Fig. 64). It was used for making shelter and for cutting trails through thick forest. When making trails, the Shirianá had a habit of hacking at saplings at an angle close to the ground, leaving a pointed spike facing upwards just inches high. On one occasion, Telly stepped on one, tearing a hole through his shoe and into his foot. He took the wound stoically and nobly.

In the mornings, dew formed heavily on the camps, and we usually made a fire. I used my stove to heat water. Breakfast was typically oatmeal (*avena*), tea (heavily sugared for the Shirianá palette), rice, and – in the early part of the trip, while supplies lasted – Carlucho's delicious homemade freeze-dried meals, including eggs and beans, always hearty and appreciated. It was easy to feel happy when the meals were good.

In 2013, we established eight camps. In 2014, moving upriver from Camp 8 required shuttling our two boats – all laden with provisions – around troublesome rocks, rapids and waterfalls that made using the motor, or even traveling in the river, impossible. We used every means necessary to circumvent impassable sections: walking in the river while pulling the fuel containers and boats, towing them from the shore, pushing them from behind, unpacking them and carrying the goods through sections of forest, and – a last resort – dismantling the boats and carrying them while cutting the bush in front of us (Figs. 44, 48, 50, 52 & 69).

Walking in the river is a skill, as the bottom often cannot be seen and is rocky, uneven and slippery. The Shirianá prefer to use loose yellow boots to walk in both the forest and the river. I

could not quite figure out how they managed this, but they did so artfully. I think they preferred the yellow boots as protection against hidden *culebra*, a deadly, patterned snake in dark tones that blended in with the scattered leaves of the jungle floor.

Camp 8 already marked 16 days from the time we'd left La Paragua, the nearest town, several hundred kilometers downriver.

From there, we battled another 19 days upriver. Two boats were used to carry team members and gear from camp to camp. We estimated that moving all 9 people and cargo would require 5 trips for each boat. The first trip would drop off one man and 60 kg of gear, then return. The second would drop another man and another 60 kg of gear and return. The final trip would bring 2 or 3 men and the rest of the gear. So, each boat usually made 2 ½ round trips per day. Accordingly, for every kilometer upriver we would need enough fuel for five. (Of course, we did not need fuel for sections where we had to carry everything through the jungle or pull the rafts by hand, but we could not predict where those sections might be.) It was not unusual for the last of our crew to arrive at dusk (Fig. 43). Sometimes the final boat would arrive in the pitch of night, due to some unforeseen circumstance.

The going was slow. The boats were, by design, light, and the motors only 2-hp. The small motors could only propel us upriver at a maximum velocity of 2 km per hour, but it was seldom that we could go for an hour before hitting an obstacle. Although I had two satellite phones, we didn't usually use these during shuttling. Reasons included preserving batteries and poor signal under the forest canopy. The crew left behind had to wait until the returning shuttle picked them up, without the convenience of communication.





*Fig. 43. (L to R) Rafael, Telly & Joel arrive at Camp 7 at dusk. The boat doing the last shuttle often arrived at the end of the day, or even at night.*



*Fig. 44. Every conceivable means was used to transport our rafts and provisions upriver. In this photo, (L to R) Joel, Alfonso and Rafael maneuvered the PVC boat through a section that was impossible to motor up.*





Fig. 45. The hue of the Ichúm water was visible when it was shallow and illuminated by sunlight.

Even small obstacles required a lot of effort to surmount. We intentionally brought the lightest weight motors we could find, each weighing about 10 kilograms. Had the motors been any heavier, it would have been very difficult to carry them through the forest. Therefore, the ideal motors were strong enough to propel our expedition upriver, yet light enough to transport on our backs when necessary. The forest terrain was anything but easy. We had to climb upward, under, over and between branches, through thick bush, and chop our way through forest to surmount the 70 m high waterfall above Camp 14 (Figs. 1 & 60). In addition to the motors, we had to carry the disassembled rafts and the fuel containers. The disassembled rafts were bulky, sometimes resulting in a pack that was about a meter high (Fig. 69).

The motors' propellers were each fitted with a *pasador*, a small piece of metal that would break when the propeller hit a rock - the idea being that the replaceable *pasador* would break, not the propeller. We carried a supply of extra *pasadores*. In sunlight, shallow waters in the Ichúm were a translucent tea color. When deeper than a half meter, the water looked black, making it difficult to see rocks just below the surface even in daylight.

Accordingly, we broke many *pasadores*, as we were often unable to see what was beneath us.

There was also the issue of finding a place to make a suitable campsite or even to go ashore. Often, there was no flat ground, nor a place to pull over, as heavy forest lined both sides of the river (Figs. 34 & 36). Accordingly, we sometimes had to travel further than we would have liked before finding campsites.

Small waterfalls, like *Salto Dos* (so named in 2013, as it was the second waterfall we encountered above Camp 4), could be surmounted by taking all the gear off the rafts and pulling them from the shore through channels between the rocks. When the going was easy, we could leave the trimaran arms on, but in more challenging situations we had to take them off in order to move the boats upriver, requiring reassembly later.

On the way from Camp 8 to Camp 9, we rounded a bend and came into a bay of foam. We could predict that there would be rapids or waterfalls upriver when we saw tea-colored foam, a sure sign that the waters of the Ichúm were stirred up. I realized that we had entered a lost world, possibly one of the last left on the planet. *I believe we are the first to see this.*





*Fig. 46. Between Camp 8 and Camp 9, the side of the river was faced by a red rock wall with a layer of white rock running through it. Green and orange mosses clung to the stratified walls and even to the leaves of the ferns.*



*Fig. 47. This photo illustrates the “checkerboard” rock pattern that we occasionally encountered. Albeit beautiful, it is another example of a section of the Ichú impossible to motor up.*

Between Camps 9 and 10, we ran into rapids. Laden with gear, the boats were pulled with ropes. The 20-, 25- and 70-liter plastic gas containers were towed separately in the water. (I had mentioned earlier that we could not haul the 70-liter barrels through the forest. That was true when they were full. We had emptied out roughly half the contents into the smaller containers

but still needed the 70-liter containers themselves.) When possible, towing was done from the shore. When this was not possible, towing had to be done while walking in the river. The water on the sides of the river was often waist-deep, and sometimes even deeper than a man’s height.





*Fig. 48. The trimaran arms were removed while we negotiated in deep water around a rock wall. In this photo, Telly swims with the raft while Joel pulls on the rope and Carlucho and Antonio assist.*



*Fig. 49. We were amazed by the beauty of some of the Meseta's features, such as this rock wall lining the river.*



Just above Camp 10, we came to the most extensive waterfall yet, which we dubbed “*Salto Bonito*” (“Beautiful Falls”)

because of the picturesque sight of tea-colored water glistening in the sunlight and jetting over cubed blocks of pink rock.



*Fig. 50. Alfonso, below Salto Bonito, pulls a fuel container through a difficult section. The fuel container is submerged underwater and not visible in this photo.*



*Fig. 51. A natural shower. We carried the rafts up and over this complex of stone and water. The rock was quartzite,<sup>6</sup> or, alternatively, gneiss or paragneiss, all derived from sandstone.*





Fig. 52. The trimaran arms were removed prior to negotiating Salto Bonito. The entire team assisted in carrying the raft over these massive rectangular blocks of rock.

Above *Salto Bonito*, we were delighted to see that the river was flat again, allowing us to continue by motor.

We established Camp 11 above *Salto Bonito*. At night, I recorded my sense of awe in my journal:

*I am in a new mysterious world. The sound of the waterfall is behind me. An orchestra of croaking frogs greets a rising half-moon that drips its way upward, saddled by clouds that vaporize at its base. ... I notice the slight smell of the earth, the same that marries every drop of water; that honeymoons its way to union with others in the celebration of rivulets, files, lines, arcs and streams, each with an infinitely complex story, running in and out, past and through cells, grasses, ferns, micro-organisms,*

*rocks, sediment, roots and sand, and with each engagement, modifying its true nature, becoming something else, collectively giving birth to itself as the goddess of the waterfall – she jets forth from an apron of checkerboard rock, some sliced new, some worn by age ... into their own miniature tepuis, over a face of rose, red or white-colored boulders, chiseled by a mighty but unseen hand, waiting there to be seen and projected on this piece of white paper with blue ink in the otherwise hush night.*

From Camp 11, the river was navigable, but rocks just underneath the surface caused an especially-challenging passage, during which we spotted at least three instances of *perros de agua* (water dogs, or giant otters, Fig. 53).



Fig. 53. *Pteronura brasiliensis* (Carnivora: Mustelidae). Our last sighting of *perros de agua* occurred north of Camp 22, only kilometers from our most southerly penetration into the Meseta. That day, Janeiro, Telly and I encountered a family of giant otters. They were as curious as we were: They had never seen humans before.





Fig. 54. Returning from a night surveillance of the river, I saw a pair of orange eyes. I reported the baba (crocodile) to the Shirianá. They immediately hunted, killed, cooked and ate it.

We found a marginally-suitable beach and made Camp 12, but its low-lying aspect was worrying. Frequent rains and the inevitable resulting increase in the height of the river was a constant concern, so we customarily made sure our camps were at least a meter above the river level. After dropping gear at Camp 12, I went back to do the last run of the day from Camp 11.

Carlucho and I made the final shuttle to Camp 12 in the dark. Just as Murphy's Law would have it, our propeller hit a submerged rock and the *pasador* broke. Without the *pasador*, the propeller did not turn. Thus, the engine had no power. Instead of going upstream, we started to go backwards. We alighted on a submerged rock in the middle of the river. The rock was high enough for us to stand on and hold the raft, preventing it from being carried away downriver.

The night was pitch-black. Several sets of orange eyes peered at us from the shallows on the side of the river: *baba*. Crocodiles. Granted, typically in the Ichúm, the crocodiles are not particularly dangerous, being only about 6 feet (less than 2 m) in length. Nevertheless, it was slightly disconcerting. In a somewhat comical scene, waist deep in water, trying to figure what to do, Carlucho and I rehashed our recent grievances against each other as the crocodiles looked on. We later joked that God was punishing us both by landing us there on that rock in the middle of a river in the middle of nowhere at night.

Carlucho ingeniously fashioned a *pasador* out of a cotter pin and we headed back upriver. Shortly after freeing ourselves from the situation, two men came by in the other boat looking for us.

The passage to Camp 13 was smooth. In the evening, Alfonso and Rafael joined me in the boat to explore further upriver for 45 minutes. Because the water was like glass, I was heartened by

the possibility of reaching a large waterfall the next day, as depicted by the contour lines in the river's path on the topographic map.

The next day, February 23, 2014 (our 11th day above Ichúm Falls and the 22nd day since leaving La Paragua), we arrived at a bay of foam. Alfonso, Joel, Janeiro and I were the members of the day's lead group. We had come to an impasse, as beyond that point, it was all rapids. Given the 70 m high relief shown on the map not far upriver, it was clear that we would have to dismantle the watercraft. Janeiro and Joel went to fetch the others. When Rafael arrived, he and Alfonso agreed to go with me to see the waterfall, approximately 800 m ahead. Soon we could hear, but still not see, waterfalls.

Rafael and Alfonso were about 25 m ahead of me. I walked among boulders, going up a small rise. As I was about to go down the other side, a healthy, young, adult jaguar walked from behind a riverside boulder on my left, moved to the right, past my line of vision, then leapt up into the steep forest slope on the right. Within about 5 to 10 seconds, the jaguar was out of sight. My impulse was to take a photo, but I was unsuccessful in removing my camera from its double bag in time. The fact that I felt no fear may be attributable to the fact that I felt no danger, since the cat looked neither right nor left. Instead it looked towards the forest, possibly intent on hunting.

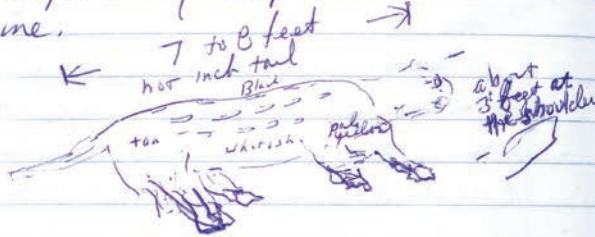
Later, I tried to analyze what had happened. I figured that the cat must have smelled humans and had possibly noticed Alfonso and Rafael and then waited for them to pass before traversing from the riverside to the forest. Given that human scent was already in the air, it might not have taken notice of me; it may have only been intent on distancing itself from the unknown creatures that had just passed by. Undoubtedly, we were the first humans ever to set foot in its habitat.



128

2/23

It was so unexpected that I didn't have time to think about anything else, my reaction of being totally unafraid is curious to me.



Within second the jaguar was passed me and then quickly became invisible in the steep forest just above adjoining the rocks on the side of the river.

It walked without looking right nor left. I felt that it had noticed Rafael and was avoiding them. I am quite sure it did not notice me. I guess that the reason I felt no fear is because I felt no danger.

2/23

129

I looked ahead. Rafael and Alfonso, two Shuar that notice most things I do not seemed to be walking without a care. It was so uncanny. They had not noticed this enormous cat just behind them. The cat cat had not noticed me.

The animal seemed to move silently. It looked young. I say that because it was so incredibly perfect and beautiful and ~~but~~ healthy-looking.

I called out to them "Rafa! Alfonso!" No han visto el tigre???

They shook their heads ~~negatively~~ negatively.

It was as if this was out of a movie. It was as if there was a director

Fig. 55. Journal entry, written in the evening after the jaguar sighting.

Shortly thereafter, I videotaped myself describing the event. That night I did a crude sketch in my journal and wrote: I note that it is a bit of a curse to see the animal and not be able to prove it. As to any question of it being my imagination, I attest to the fact that I have never "seen" something that wasn't there. I have never seen any ghosts or supernatural things, nor have I ever thought that I saw anything that wasn't there. Granted, it is quite possible that my estimates as to size and color were not accurate.

According to my notes, the jaguar was approximately 2.1 to 2.4 m long (about 7 to 8 feet), not including its tail, and stood about 0.9 m high (3 feet) at the shoulder. The coloring was whitish on the underside and tan, black and pale yellow throughout the body. Its fur was lighter than the skin hanging up in Ichú Village (Shea, 2014, p. 50).

It walked very gracefully, then – probably as I looked at my camera case – it moved upward into the steep forest and was gone. ... It seemed surprisingly beautiful. It had more white and wider black markings than what I remember the skin in Ichú having. It was not white from age. The magnificent animal seemed young and in its prime. But maybe the living cat and a

dead skin do appear different. Also, there seemed to be a pale yellow. I wrote yesterday when the image was fresh in my mind that there were black markings, tan, pale yellow and white.

Nowak states that jaguars range from 1.12 to 1.85 m (3.7 to 6.1 ft.) long. However, another source stated, "DESCRIPTION (male) South American jaguars are 7 - 8-1/2 feet in length (2.1-2.6 m), including 18-29 inches (46-74 cm) of tail, stand 27-30 inches (68-76 cm) at the shoulder and weigh 200-230 pounds (91-104 kg), with some individuals considerably larger." (<http://www.scirecordbook.org/jaguar-south-america/>, accessed 30 Sep 2018.) Nowak notes its coat "varies from pale yellow through reddish yellow to reddish brown and pales to white or light buff on the underparts" (Nowak, 1999, p. 831).

After the cat had passed, I rushed ahead and stopped Alfonso and Rafael. I called out to them. "Rafa! Alfonso! No han visto el tigre?" They shook their heads negatively. I tried to interest them in searching for it, but they said it was dangerous. We continued another half hour to the falls. They were spectacular, approximately 70 m (230 feet) high. I stalked a tiger heron in order to take a photograph of it. On the way back, we searched unsuccessfully for jaguar footprints.





Fig. 56. *Tigrisoma fasciatum*. A fasciated tiger heron at the foot of Jaguar Falls.





*Fig. 57. Even though the topographic map showed cliffs in the middle of the river, none of us were prepared for the excitement of finding the magnificent Jaguar Falls on February 23, 2014. Now the question: how to get above them? The Shirianá wanted to cut a path to the south just to the right of the falls. The topographic map suggested going west, in order to avoid cliffs. After running into this rock wall on February 24, the Shirianá agreed to backtrack. Using the contours on the map as a guide for the most sensible route, we went west, then south, gaining altitude, then returned to Camp 14 for the night. The next day, we reached a grotto above the falls. Finally, on February 26, we successfully established Camp 15 using the west-south route.*



At camp that night, I was told that on average, there is one jaguar for every one hundred square kilometers. This information added to my sense of just how remarkable my close encounter with one of the most beautiful creatures on the planet was.

In honor of this sighting, we dubbed the place “Jaguar Falls.” The Shirianá called it “*Bora Jaguar*.” Behind a rock cliff, there was another waterfall cascading from a fork in the main Ichúm. It was roughly the same height as *Bora Jaguar*. We named it “Hidden Falls.”

## Part 2

### Problems Above Camp 14

By the time we established Camp 14, we had been gone 22 days from the nearest town and 18 days from the nearest village. It was not surprising when tensions began to wear on people’s good humor.

Prior to Camp 14, there had been some problems, as can be expected when you have nine men in the forest for a month. Each man had a different background and different reason for joining the expedition. Carlucho was a professional guide. Antonio was an artist. Telly had a machine shop. I had a factory. The Shirianá were there to make a wage. Certainly, this expedition was not worth losing their lives over or even being terribly uncomfortable. The Shirianá were from different families, as well as different villages. Janeiro, for example, was from the more prosperous Kawai Makén. Alfonso was from the poorer Ichúm Village. Parato was from a different tribe, and his ancestors, as I noted

in the 2013 report, had lived in a now-abandoned village a few kilometers inside the rim of the Meseta. The Shirianá had left their families behind. I had even heard concerns about leaving their wives in the villages unchaperoned. Each man had different pressures, and we had all put our normal lives on temporary hold to participate in this expedition.

## February 24, 2014

### Slept at Camp 14

Traveling above Camp 14 required us to dismantle the rafts completely, divide them into pieces and share transporting them on our backs. It was not possible to go directly over the falls. My topographic maps, which the Shirianá initially regarded as useless, told me that the only practical route over the falls was to walk in the opposite direction first, since unsurmountable cliffs blocked the direct route. They ignored my suggestion to do so. On February 24, Rafael led a route in the direction of the waterfall. We ended up at a rock shelf that was impossible to scale (Fig. 57). Then they agreed to try the other way. We descended. At 3:30 p.m., I led the way through the forest up the more circuitous (but certain) route. By 4:30 p.m., we’d gotten above the wall. Satisfied with our progress, but still far from *Bora Jaguar*, we returned to Camp 14.

*I was a bit upset because Rafa told me that all the Shirianá want to go home. I said we might die out here without them. (He thought that was funny.) Carlucho feeling ill. I hope it is not serious ...*



Fig. 58. (Coleoptera: Curculionidae). “Antonio showed me a new insect. It was very interesting. I think it is some type of a weevil.”





Fig. 59. Beautiful guacamayos (macaws) flew from a cliff-side nest across our view.

#### February 25, 2014

The next day, we retraced our route from the previous afternoon, then cut through the forest to a point above the falls. We returned to sleep at Camp 14 for the third night in a row. We planned to move all the gear to Camp 15 the next morning.

*Today was one of the best days of my life. The main reason was that we not only cut the path to above the Falls, but we also came to “Guacamaya Lookout” [sic],<sup>7</sup> one of the most spectacular places on the planet! It is the place where the little waterfall to the right of Jaguar Falls (on the right canyon) comes out. From below, it barely looks like a trickle, but in fact the stream that flows there comes through a big grotto with cascades. ... When we got there - Rafael, Alfonso, Joel, Parato, Janeiro, Telly, Antonio and I - some of us walked down to the edge of the cliff to see the view. ... It was amazing.*

I had not taken Rafael seriously enough when he told me that the Shirianá all wanted to go home. They said they feared that Canaima, an evil spirit, lived above Jaguar Falls. I had heard the word Canaima in reference to the Venezuelan National Park to the east, but I’d never associated it with a spirit.

According to Venezuelan writer Jose Berti, the Pemón, “like most pre-Colombian tribes, don’t believe in a natural death; and in order to explain their eternal disappearance from this world, they have created a symbolic character, Canaima, who pursues them without rest and who in the end defeats and kills them.” (<http://venezuelanindian.blogspot.com/2007/08/canaima->

[pemon-spirit-of-death.html](http://pemon-spirit-of-death.html), accessed 30 September 2018.)

I had also heard that they were afraid of Guaíca. In the late 1960s, the Shirianá would hold feasts that lasted many days. One year, over one hundred canoes gathered. After four or five days of feasting, the Guaíca came in and killed the men and took the women. They had special sticks that they used to tie up the women (Douglas Pridham, personal communication, 10 December 2013).

On February 26, 2014, 21 days above Ichúm Village, we spent the night at Camp 15.

On February 27, Telly and I walked together back to Camp 14 in order to bring another load of gear to Camp 15.

*Once we left camp, it was pleasant. The walk – over dead leaves, moss, bark, roots, dead branches, fallen trees, ants, invisible microorganisms of myriad species, twigs and deep black earth, avoiding treacherous upward-pointing stakes of machete-cut saplings, past the hidden animals of the jungle – monkeys, pahwi [sic] (a big black bird), guacamaya [sic] (a red and blue parrot), past the hole of an armadillo, watching where my feet went to avoid the possibility of stepping on a sleeping culebra – two humans moving through the jungle at 600 m of altitude, under a canopy of green trees struggling for sunlight space, past, over, under, around, on rocks, trees, branches, ferns, palms, medicinal woods, and the ad infinitum complexities of high-altitude Amazonian jungle – was actually enjoyable and the time went by quickly.*





*Fig. 60. After our team's three-day effort to figure out a way over the falls, I stand with Explorers Club Flag #118 on a rock ledge above Bora Jaguar. The Shirianá were afraid that an evil spirit, Canáima, or the wild tribes, the Guaíca, lived above the impressive cataract. Strangely, it was after we surmounted the falls that problems began. Perhaps this was partly attributable to the strength of their beliefs.*

We spent two nights at Camp 15 in order to move our team over the massive *Bora Jaguar*. Then, on the last day of February, we shuttled our gear to Camp 16, a flat, expansive beach bordered by jungle.

March 1 was spent exploring upriver, sleeping again at Camp 16. During the day, I voiced concern that we should ration our food. Since this did not seem to get any response from my companions, Antonio and I did an inventory. Our count showed that we had little more than 20 kg of rice, and had gone through the pasta. We estimated that the food had to last us another 24

days. I think that the results of our inventory alarmed the Shirianá.

In my journal that night, I wrote:

*Laying sideways in hammock, 11pm ... Parato, Telly and Antonio are all sleeping. Off to my right is the ... (I doze off) ... suddenly there is shaking and Parato is babbling off something in Shirianá – at least I think it is not Spanish. The others wake. I asked what was going on. I do not get a good answer as to what happened ... Maybe the frame of the house cannot support our weights.*





Fig. 61. Parato (center) ties vine around the beams and posts at Camp 16, while Telly (right) assists.

In the early morning of March 2, 2014, four of the five Shirianá set off to return to Ichúm Village. Their departure was sudden. I tried to reason with them, but it was clear that they were intent on going. Amongst our indigenous team members, only Janeiro remained. I was glad for that, as he was the strongest and most resourceful of the group.

I was concerned that they would be unable to return without gear. While it was true that they were adept at surviving in the forest, we were 12 days upriver from Ichúm Village, the nearest place with people, shelter and food. They indicated that they would build a balsa raft. (The year before they'd built one in a matter of hours when we needed to cross a small stream.)

In the meantime, the remaining members, Antonio, Carlucho, Janeiro, Telly and myself had to decide what we would do. In the first moments after their departure, there was a sense that the expedition was over. But we'd come so far, it seemed a shame to return in defeat. We had a boat, gas, food and time.

*I went to speak with Janeiro, out of earshot of the others.*

JS: "If it was possible, would you be in agreement to continue up the river?"

Janeiro: "It depends (on the others)."

JS: "I mean, if it was possible, would you want to continue?"

Janeiro: "Yes. You, me and Telly?"

JS: "Yes."

*Telly's participation was critical ... I thought that it was best to just be upfront with Carlucho. So, I went and talked with him. Bless him, he was supportive of the idea. ...*

*"Janeiro, he is in agreement!" I announced.*

There was discussion about Antonio coming. But I really did not feel comfortable leaving Carlucho alone at Camp 16, especially with the possibility of the Shirianá returning. It seemed

to be the general sentiment.

Plus, the idea that four men would go upriver with one boat was impractical. (The second boat was still at Camp 14, below Jaguar Falls.) With only three men, we could continue, although whether the 2-hp motor could propel a fully-loaded raft was still debatable. The only practical solution was for Telly, Janeiro and me to go by ourselves. Before the mood changed, we went into action. I went through the stores of food: We took what we would need and no more.

By early afternoon, Janeiro, Telly and I, with Antonio's help, had hauled gear up to where we'd moored the boat the day before. Telly went back to get the extra fuel bottle, a plastic tarp and extra *pasadores*. Janeiro and I embarked on the boat upstream, telling Telly we'd return to get him after establishing Camp 17.

Janeiro navigated and I steered the boat. The 2-hp motor was barely strong enough to power the fully-laden boat upriver. Janeiro told me to head straight for a big rock in the river. When we tried to walk the boat up to it, the current was strong, the river was deep, and I was carried away. I struggled to fight the current and went underwater. I swam to the bank and positioned myself in deep water with my feet on submerged rocks.

Janeiro freed the *mecate* (rope) and threw it to me. I caught it and held on to prevent the boat from floating downriver. It took all our efforts to keep from losing the boat!!

I motored up to a sandy beach and Janeiro swam to the side and met me upstream.

From there, a short distance upriver, we found a beach. Janeiro went back to get Telly while I explored upriver on foot. When I returned about 5:00 pm, they had already arrived. Janeiro pointed out a remarkable small wasp nest.





Fig. 62. Trying to reach this rock in the river, Janeiro and I almost lost the boat.



Fig. 63. *Polybia* sp. (Hymenoptera: Vespidae). We made Camp 17 next to this unusual wasp nest.





Fig. 64. Machetes. On March 1, 2014, since the current above Camp 16 was strong, we hacked our way through the forest. Returning to camp, Janeiro and I noticed two machetes on the ground. The next day, after the Shirianá had gone, the machetes were no longer there. The tool in between them is a lima, or file, which was used to sharpen the blades.

The evening was peaceful. I wrote about how the departure of the Shirianá had been planned.

*Sometime between last night and early this morning, one or more of them walked back to the place upriver where the boat was and retrieved the two machetes they had left there. Janeiro and I had seen those two machetes when we had passed there in the dark last night. So, it was no accident that later in the day when we went there, the machetes were missing.*

Telly, Janeiro and I spent another week forging upriver with one raft.

### Part 3

#### Three Of Us Explore Above Camp 17

We had a restful night at Camp 17. The next day, immediately upriver, the Ichúm was unnavigable, with rapids and rocks and fast-moving water. We reached a beautiful area with cas-

cares and a massive apron of flat, pock-marked rock: We dubbed this place “Salto Adrenalino” because of its amazing energy.

#### March 3, 2014

##### Camp 17

*I woke about 5:30 a.m. We left at 7:50 a.m. ... Janeiro and Telly managed the boat upriver and I cut a forest trail. We met upriver. ... We cut trail to a remarkable series of cascades. I raced up through the forest and rocks on the side to see what was above. I could not wait to see! I have never felt such a feeling of excitement before. ... Finally, reaching the top, I saw the river – placid and flat – this meant we might be able to travel far!! ... We walked back to Camp 17, arriving at 3:50 p.m. The afternoon was fun and the evening pleasant. ... This was an amazing and important day!!*





*Fig. 65. We named this series of cascades “Salto Adrenalino” because of its exhilarating, palpable energy.*



*Fig. 66. Water fills a hole on the rock at Salto Adrenalino. Inside the hole, concentric circles are visible, the result of ages of water action.*





*Fig. 67. Water and debris from the forest fill a hole in the rock at Salto Adrenalino. The hole is etched out during the high-water season, when the river level rises several meters or more.*



*Fig. 68. A flowering plant takes root in a hole on the rock shelf at Salto Adrenalino.*



**March 4, 2014**

**Camp 18**

I woke at 5:30 a.m. We left Camp 17 at 8:29 a.m. with our entire camp on our backs. In the forest, Janeiro, who was leading, announced that a *culebra* had bitten his boot. Fortunately, its fangs had not reached his foot! ... *He took a stick about five feet long and beat it. Stillness. Then it tried to run. Smack! Janeiro killed it. I took photos and video of the dead snake. It is so dangerous here! I decided then and there not to return next year, so this year is my only opportunity.*

We continued with our packs to *Salto Adrenalino* proper. There, we took another long break, taking photographs and generally enjoying this fabulous place.

At 11 a.m., we found a site for Camp 18 in the flat calm area above *Salto Adrenalino*. After making ramen, we returned to Camp 17 for the boat, with the intent of dismantling it and carrying it upriver. We arrived at the boat by about 12:30 p.m. Low energy ...

I thought the boat would be bulky but light. But my share of the boat and the *manga* (plastic netting and plastic sheet), three tires, a *pimpina* (container) with a couple of liters of gas and some PVC duct sections was bulky and heavy! It was about 3 1/2 feet high, perhaps more, 2 feet thick (from my back) and 2 feet wide.

I went very, very slowly, thinking about not falling and also about the snake that Janeiro killed in the morning.

I balanced my load along the shore rocks up the short

slope, past Janeiro tying on the motor and black *pimpina* with 25 to 30 liters of gas in it to his pack, through soft, leafy patch to the riverside's puzzled, cracked plaza of massive rock, then finally along the Aspen-like flat leading up to *Puerto Adrenalino*, the name we'd given Camp 18 (Fig. 69).

This was a big day, marred only by the receipt in the evening of a frantic message from Carlucho saying Antonio was not well. He said they would try to go back, and he also said he would call for help. He urged us to return too. But he did not say what was wrong with Antonio.

**March 5, 2014**

**Camp 19**

*Today was productive but marked a definite change in the tone of the group. To be specific, the attitude of both Telly and Janeiro turned remarkably sour.*

The day was bright and sunny.

During the first part of the day, Telly and Janeiro reassembled the boat, while I used the satellite phone to deal with the messages concerning Antonio's health. The doctor's advice for Antonio, which I'd gotten from Caracas, was to drink 3 to 4 glasses of water that had been boiled with a pinch of sugar and a pinch of salt every hour for 2 to 3 days. I texted that information to Carlucho from the phone.

At about 1 p.m., we got on the boat with all our gear and headed upriver. At first the river was flat and placid.



Fig. 69. We hauled the disassembled boat to Camp 18. In this photo, I am carrying about a third of the boat, making my pack almost a meter high. Carrying it through the forest, over, under and around trees, rocks and sundry obstacles was challenging.





*Fig. 70. We came to a lovely area with rocks and a tree with many bird nests.*



*Fig. 71. On March 5, 2014, we reached some daunting rapids that required all of our efforts to surmount. After taking this photo, I joined my team members and, at one point, was knocked off my feet by the current.*



After we passed this section, we followed the right bank of the river. For some reason, it was about at this point that I sensed a letdown in the mood of Janeiro and Telly. There were daunting rapids ahead.

The river became very wide on the right side as it turned to the left. The water was bouncing up and down and it was obvious that it would be difficult or impossible for us to push and/or pull the boat through it.



*Fig. 72. After negotiating a set of rapids, Telly sits, wasted from the effort.*



*Fig. 73. When we reached Camp 19, Janeiro and Telly announced that they wanted to return soon. They were tired of dealing with the constant rapids and did not believe that upriver would be any different.*



A short distance from the churning rapid, we came to a small inlet of calm water on the right side. We tied the boat up. Had they been eager to continue, I would have been happy to, but it was clear that this would be a good place to camp.

I wanted to see what was ahead, so I took a machete and started cutting my way upstream.

I hacked close to the riverside (*la orilla*), then crossed a small stream with flat rocks underneath its surface. When I came to a point where I thought I'd be able to see upriver, I cut to the shore. Leaving my camera and machete, I swam upriver for maybe ten minutes and reached a point where the river made a turn to the west. It looked like the main river narrowed and showed signs of mild rapids, and there was a tributary flowing from the right.

I swam back and took a few photos in order to show my companions. When I returned to camp, Telly told me that he and Janeiro wanted to start back on Saturday. Today was Wednesday.

The topographic map showed that the area around the river in the not-too-far-distant south was flat (within a contour of 40 m). To shorten the trip when we were so close to "The Dome" seemed a shame.

**March 6, 2014**

**Camp 20**

**4° 28' 50"N 63° 22' 08"W, approximately 634 m in altitude**

*This morning Telly and Janeiro went for a walk up where I'd been yesterday, and they came back very negative. It was hard to tell what the truth was – was Janeiro – as Telly represented – really wanting to return Saturday – or was it Telly's influence? Telly said there were rapids above the rapids and that*

*these were just going to continue. They both said that Saturday we were going back.*

*Telly wanted to be alone so he could write out his thoughts. He told me very pointedly, in English, "I am afraid, man! I have never said that in my life."*

*I tried to be diplomatic and understanding. But Telly responded heatedly: "What do you want? For me to say it again!! I'm afraid!" He started to read to me what he had written in his journal (in Spanish): "Why do I feel this way ... One, because I am far away from my loved ones ..."*

I left Telly alone to write out his thoughts. As a person who has kept a journal virtually all of my adult life, I appreciated the therapeutic effects of putting feelings down on paper.

For my part, I wanted to keep going upriver. They had made it clear they wanted tomorrow afternoon to be the final push south. I felt the pinch of time.

I went down to the waterside. Janeiro was there. He wanted to explore upriver in the boat. I joined him. He drove the boat into the current. He orchestrated our ascent of the rapids. I got out on rocks in the middle of the river with the line. We worked the boat up and over towards the left bank.

At one point, I decided that it was better to plunge myself in the fast-running water between two rocks, even though I didn't know what was under the surface. I leapt into the rapids. Fortunately, I didn't hit anything and, swimming, made it to the next group of rocks. Finally, we got the boat to calm water.

Now Telly appeared on the shore. He'd brought some of the bags. I went back to get my pack at camp. After that, the three of us set out upriver.



Fig. 74. Despite the challenges, we continued upriver.



Not long afterward, we had to push/pull the boat through more rapids, but it was easy going. We soon came to a rather large, slow-moving tributary.

There was something about the maps that bothered me. I was quite perplexed. One of the key features in the southern part of the Meseta was a squiggly tributary that formed the upper left part of the “dome-like” feature so prominent on satellite images. But when I compared the coordinates of the tributary we were now passing with the satellite image, I realized “The Dome” was still far to the south.

We motored on. The river was flat. Deep, dark jungle lined both banks. I had been yearning to get around the big bend of the river, which marked the last contour line for some kilometers.

Although we had gas in the *pimpinas* that served as stabilizers at the end of the trimaran arms, the little black 4-5 liter jug was empty. As it was late in the afternoon, it was obvious that the only option was to stop for the day. We had neither motor power nor paddle, so we used a thin *palo* (a stick made from a sapling) to manipulate the boat’s direction. We floated back downriver in the slow current and headed for the most likely docking tree on the riverbank, amidst no good choices.

Just getting on the bank itself was less than convenient, as it was a slope of mud held together with roots. Janeiro chopped a couple of steps with a machete to make access easier. Janeiro and Telly built a house frame. I fired up the stove.

The camp was dark, uneven and moist. We did the best we could to set up camp and eat before retiring.

I was wavering on my wish to continue upriver. There was a slight bit of foam visible, indicating turbulence ahead, either rapids or a waterfall. I wanted to please my companions by acquiescing to their wish to start the return on Saturday, especially

in light of the fact that the elusive tributary seemed to be even further south and not on any maps I had (or so I thought). I considered agreeing with them to start the return Saturday.

**March 7, 2014**

**Camp 21**

**4° 27' 56"N 63° 20' 23"W, approximately 639 m in altitude**

*I think we were all happy to leave this forest camp (Camp 20). There was nothing redeeming about it. Access to the boat required using steps cut in the root-strewn mud on the side of the river.*

As we progressed upriver, I was happy to see that it was quite flat. I could not divine from the map what we would encounter. It appeared that we had passed the 640-meter altitude mark yesterday. The map we used did not show another altitude increase of 40 m (that is, the 680-meter contour) for some distance. The land surrounding the Ichú appeared to be flat (i.e., < 40 m difference) for a very wide swath on either side of the river.

It was my hope that we would proceed without further challenges. According to my calculations, the river south of here was most likely flat and placid, offering an opportunity for us to travel about 20 km in two or three days.

But as we proceeded, the foam got thicker, a sign that there were rapids and/or falls upriver.

The only question was, how far could we get before we were delayed once more by rocks or a waterfall? We came to a band of rapids about 3 km past Camp 20, where the river turned sharply right. After we got beyond those, the river was reasonably cooperative. We traveled a few kilometers through a series of curves.



Fig. 75. Foam in the water indicated cascades, rapids or waterfalls upriver. This photo was taken near the site where the *Bactrophora dominans* specimen was collected.





Fig. 76. I took this photograph of *Bactrophora dominans* while it was still living. It is the only specimen ever collected alive. The area of the river where the insect was found was approximately 1 km downstream from a waterfall about 3 m high in a series of cascades. The exact coordinates of the collecting site were 4° 28' 13"N 63° 20' 36"W at an altitude of 637 m<sup>8</sup> (González, et al., 2015 [Fig. 10]).

Telly called my attention to a creature at the end of 1.5 m *palo* (which we used to test the depth of the river) that had been resting half on the raft and half in the water. The insect seemed dazed and was walking sluggishly towards the end of the stick in the direction of the water. I took a photo of it (Fig. 76), then placed it in a plastic bag to hold it until we made a camp. The collecting point was at 4° 28' 13"N 63° 20' 36"W at an altitude of 637 m. The river was approximately 20–30 m wide and surrounded by thick riparian forest.

About 1 km upriver, we came to a small bay with sandy shores but strong current. Upstream from the bay was a 3 meter-high waterfall with a series of cascades. The right shore looked good for making a camp, but how to get there? It would mean fighting the current with our single boat laden with all the luggage, gasoline, and three inhabitants. We opted for the left bank. In retrospect, this was better, for it was strewn with flat riverbed strata, much of it above water, making platforms for cooking, swimming and washing. I also noted it had a sandy beach, above which a shelter was constructed in the space of a half-hour.

When we arrived, I took the unidentified creature out of the bag. It was already dead, but it was still fresh: Its original colors had not faded. It was remarkable in appearance, like nothing I'd ever seen before. I lay it on the flat rocks of the river shore and took detailed photographs.

Since I'd brought ethyl alcohol for the purpose of preserving specimens, I placed it in a collecting bottle. After the expedition ended, the dead insect was brought to the attention of the Venezuelan and US custom authorities and allowed to enter the US for study. Pictures of the insect alive and dead were shown to Charles Brewer-Carías and several Venezuelan entomologists, including Jorge M. González. It was identified as female of the species *Bactrophora dominans*. Subsequently a paper on the discovery was published in Checklist,<sup>9</sup> the journal of biodiversity data (González, Shea, Brewer-Carías, 2015).

While I photographed the insect, Telly went for a walk. When he returned, he announced that there were "big falls" upriver. We went to check them out. On the way, I photographed the remains of an iridescent green beetle. Adjacent to the falls, there was a large primate skeleton (presumably a monkey) covered in moss on the jungle floor. Telly and I returned to camp.

Convinced that this was the end of the line for our expedition, I hiked back to a point just below the falls, set my camera on a rock, with twigs to level it, and took photographs with the Explorers Club flag. In my curiosity to see the condition of the river above the falls, I cut through a bit of forest. Upstream, although the river was flat, I saw evidence of foam in the water, making me question if indeed there were more rapids ahead.

Using my headlamp, I returned to camp. In the evening, my mind engaged. If the river above the Camp 21 falls was as flat as I imagined it should be, it would be possible to reach the tributary in a day or two. I decided to mention it to Telly and Janeiro in the morning.

**March 8, 2014**

**Camp 22**

*Morning at Camp 21*

*This morning, I broke the news to Telly that I had looked at the map last night and found the stream that flows into the Ichúm from the west, which I estimated to be 6 km away. He held his hands out and, wiggling them back and forth, he said, "My hands are trembling." In broken English, he continued his message, which, roughly translated, was, "Do you know what it took – the depths I had to go to internally – to say that to you – that 'I am afraid?' I am a man. I have never said that before."*

Hearing this from Telly, one of the strongest and most resourceful teammates I have ever had the honor to expedition with, was surprising. Telly was capable and helpful to a fault. I only include this passage to emphasize the fact that isolation and fatigue can shake even the strongest of individuals.



He preferred to stay at Camp 21 by himself. He said, "I'm stopping here."

Janeiro and I left to see if we could move the boat over the falls without dismantling it. We left our packs and hammocks at Camp 21.

We rode on the boat across the river. A *baba* (crocodile) splashed into the water and disappeared. We split up, each of us trying to find a way to surmount the rapids. When Janeiro found me, he said that the right way up was via a fork with rocks and fast currents. It didn't seem possible. But with one of us pulling on the *mecate* (rope) and the other maneuvering the boat manually, we hoisted our watercraft above the rapids. At one point, he took the entire boat (without the motor and *pimpina*) and carried it over the rocks. Because of Janeiro's extraordinary efforts, we were able to get the boat above this obstacle without the need to take it apart.

Once past the rapids, we put the boat back in the water and motored a short way up to the Ichú proper. Then we descended to a place on the east bank that was close to, but not right at, the top of the falls. We tied the boat off and walked back to camp.

Telly had collected a lot of firewood, and I figured he'd be comfortable resting there for a couple of days. But he indicated that he talked with his family on the satellite phone while we were away. They'd told him that it was not good for him to be alone. His chief concern was if something happened to us, he

would be stuck here, two weeks from the nearest village. I said, "*Ven con nosotros.*" ("Come with us.") He agreed.

We gathered our belongings and walked up to the boat. Soon, we were on our way upriver again. I was hoping that it would be flat, and that there would be no more rocks. In fact, as indicated on the map, the river was placid and our progress was fast.

Since we'd gotten a late start, we didn't go as far as I'd have liked. It looked like rain. When we pulled over to the left bank, it was 4:06 p.m.

8:16 p.m.

*Sitting by the fire. In the end, I had to use my stove to burn the wet wood. Wet shoes. Wristwatch. Nike running shorts. Glasses. Headlamp. On my sitting pad, about one foot square. Just removed my wet shoes. Barefoot.*

*The lentils and beans are not softening.*

10:31 p.m.

*My mind is focused. The key is waking up early tomorrow; early means about 4:30 a.m.*

*Today is Saturday, the 8th of March. Telly, Janeiro and I, given their insistence that we now return by Monday, have a maximum of two more days to explore upriver. I hope tomorrow, once we start back after reaching the tributary, the tension will ease.*



Fig. 77. Caiman crocodilus (*Crocodylia: Alligatoridae*) and (*Araneae: Pisauridae*).<sup>10</sup> A baby crocodile with a spider on its head at Camp 22. Both creatures seemed unafraid of me.



March 9, 2014

### Return to Camp 21

I woke up, drenched, sometime after 3 a.m. I got up. Pushing on the roof of the plastic, a large quantity of water spilled out. The weight of it had pulled the other side of the roof off and my sleeping bag and hammock were wet. After rectifying the matter, I got back into my hammock at 3:50 a.m.

I never really slept again. But I enjoyed laying there resting. "I can't go to sleep again," I thought to myself. This was our last chance.

With the constellation of pressures, not to mention the reality of a dwindling food supply, I could not hold the effort south longer than this afternoon. So, the solution was: early. I got up at 4:30 a.m. exactly. It was a dismal morning. Everything was wet.

After Janeiro got up and helped me make a fire, I heated the *boyo* (dumplings).

Janeiro filled the 4+ liter black bottle for the day's gas. He said he thought the front inner tube was leaking. Then he started talking about how little fuel we had. At one point, he estimated we only had somewhere between 3.5 to 10 liters left.

At just after 6:30 a.m., we set off upriver.

For security, I brought my whole kit: hammock, sleeping bag and sleeping clothes (socks, dry shorts, fleece pants, thermal top, dry synthetic shirt, synthetic mixed wool cap), stove, pot, emergency food supply, etc. Janeiro opted to leave his hammock.

Being early morning, there was no visible sun. The current was slow, and the river like a lake, so we moved along quickly. In reality, our speed was approximately 2 km/hour. I was cold and turned my body to the side to shield myself from any loss of heat.

The sun appeared behind the tops of the trees on the east bank. Finally, it hit us directly and the glow of its warmth shot through me.

Estimating a distance of 6 km to the tributary, Janeiro and I figured it would take 3 to 4 hours to get there. Looking at the map, I approximated its latitude to be about 4° 24' 00"N. As I took photos, I looked at the GPS reading: 4° 25' 30"N. We'd already come about one nautical mile, or roughly 2 km.

Suddenly, I saw a moving object in the water. "*Yo pienso es un perro de agua!*" ("I think it's an otter!")

There was a family of five otters, all curious to see the orange and yellow contraption that was making an unheard-of racket. They swam over to look at us. I shot photos.

"About one more hour," I said as we got to about 4° 25' 00"N.

As we approached the tributary, the otherwise quiet river had more wildlife. "It seems the animals are like humans, choosing the best places to live," I said.

I got out the map and we calculated where we were, based on the curves in the river.

I continued: "I think we are here. What do you think? Just after this turn, then the next turn to the right, the tributary should be there." When we reached a little bay, I was unsure. "This might be it, if that water on the right is the tributary and the Ichúm continues to the left."

Telly and Janeiro were confident: "This is it!"

We came to the bank opposite the tributary, then circled around and made shore on the east bank of the Ichúm.



Fig. 78. We reached a bay approximately 100 m x 100 m at 4° 23' 35"N 63° 19' 52"W 648 m, at the confluence of the Ichúm and Sand Rivers. At the left of the photo is the Sand River tributary, so named because of the high incidence of sand banks along its shores. We motored up Sand River for one and a half hours. Note the difference in the vegetation's height and color from the rest of the photos in this report. Here, the forest is only about 6 m (20 feet) high and is lighter in color.



I had deep concern about how my actions would be construed. I wanted to reassure Telly that we would be returning today. I was very happy when he talked about taking a look up the unnamed tributary. I was even happier when, without any negativity being expressed by either of my companions, we ended up continuing for a full hour and a half. It was like a dream come true. And it was much different than I had envisioned.

At 10:30 a.m., after a light snack, we set off up the tributary. I think my companions were as eager as I was to see what lay beyond.

We saw a *baba* shortly after entering the tributary. Then the beaches.

Based on last year's findings on the inner rim of the Mese-ta, we expected that the red spots on the satellite image represented rocks. But here we found that they represented sandy beaches. I could not have foreseen that. Since this tributary was not named on the map, I dubbed it "Sand River."

The other very distinct discovery was that, from the moment we entered the tributary, vegetation was both shorter and different than that competing for sunlight on the banks of the Ichúm. I would estimate that the trees lining the glassy Ichúm topped out at 80 to 100 feet; here, the vegetation was more on the order of 10 to 20 feet. Was that what gave the feature on the satellite image its distinct "crater-like" appearance? (Despite the fact that it looks like a crater in satellite images, topographical maps show that the large circular feature in the south is raised, in

effect a hill higher than the Ichúm.)

The color of the vegetation in this area was a lime green, lighter than the saturated black-green we'd heretofore encountered. Mysteries were being unraveled.

I was in a sort of heaven. There was no need to say too much. I preferred just to give in to the momentum of the experience. We were going upriver, and each passing minute was progress. We could estimate our location by the turns shown on the topographic map.

Although Telly himself had suggested we explore the tributary for a half hour, when we'd gone that long, nothing was said about turning back. I added the occasional comment. "I think up there (pointing to a curve further upriver), we will find a lot of rocks."

We traveled upriver for well over an hour. We lost track as to where we were. The route of the river was no longer clear on the map.

When we reached a return to darker vegetation, I suggested we find a place on the riverbank to stop and take photos with the flag. This prolonged the ride another 5 or 10 minutes.

We found a lime-green shore on the left side and stopped. There were little tufts of pale yellow-green grasses all over the ground. We took a series of photographs and video clips with Explorers Club Flag #118.

I spoke with high regard for my two companions. "These men have done everything to make this expedition a success."



Fig. 79. (L to R) Telly (José Luis Rodríguez Castillo), Janeiro Lesama and the author stand holding Explorers Club Flag #118 at the expedition's furthest point south ( $4^{\circ} 22' 48''\text{N}$   $63^{\circ} 20' 56''\text{W}$  650 m) on day 36 of the 2014 expedition.



And so, we turned around and descended the Sand River tributary, passing narrow spots with overhanging branches of palms and white beaches that disappeared into the tea-colored stream.

We arrived back at the Ichúm about 2:30 p.m. We motored south upriver for 10 minutes. It was flat and calm. We reached 4° 23' 28"N 63° 19' 48"W. Then we reversed course and began our return to the north.

**March 11, 2014**

**Return to Camp 16**

7:25 a.m. at Camp 17

*Today I avoided death by culebra-bite ... Ironically, earlier, when I set off from the river, I picked up the beautiful white/yellow stick that Telly and Janeiro had left by the riverside. Not too far distant from the place where a culebra tried to bite Janei-*

*ro's boot, I was walking when I saw something on the ground. It blended in with the dark forest earth and leaves. I stopped.*

I noticed something "not right" in my path – and the snake noticed me. Fortunately, I stopped. I don't know if it was in striking position when I first saw it. But I distinctly remember that after I'd assessed the situation and readied my stick, its head was raised from its body, pointing at me, and looked ready to strike. So, without any further hesitation, I gave it a hard wallop. I can't say that I was successful in hitting its head on my first attempt, but I hit it many, many times.

I don't even recall now how it ended up down the forest floor to my right, whether it was attempting to flee, or whether I had hit it in that direction. (I thought it was fleeing.) I hit it many more times. I remember it looked like it raised its head, so I hit it again. I lifted it up with the stick. It certainly looked dead. I took photos and a short video of it.



*Fig. 80. Bothrops atrox. The Shirianá told me that once bitten by a culebra, a person has only about four hours to live. Parato said some time back, he was bitten by one. Fortunately, he received medical attention in time. Even though the word "culebra" generally means "snake" in Spanish, it seems the Shirianá used the word "culebra" to refer to this particular species, which is known as mapanare in Venezuelan Spanish.*





*Fig. 81. We saw a handful of culebras on this journey. On three occasions, they were dispatched. The Shirianá have no mercy for this snake. Note that this specimen of Bothrops atrox has an anomalous yellow belly (Jorge M. González, personal communication, 9 April 2020).*

I carried it with the stick to the upper side of the trail and tried to put its head in a place where there was light for a better photo. Maybe it was my imagination but I thought I saw it move, so I hit it again.

Telly finally came walking up. I showed him the snake. His reaction was in English. “F\_\_\_ ! F\_\_\_ !” The gravity and reality of how close death was struck him, and I could not help but feel it too.

He helped me take more photos. Outstretched, the snake was probably 4 to 5 feet long. Then we returned to Camp 17. It was about 1 p.m. when we arrived. Later, we negotiated the river down to Camp 16, where we spent the night.

### **March 12, 2014**

#### **Return to Camp 14**

In the morning, Janeiro suggested he bring a load to Camp 14, the camp below Jaguar Falls, so that Telly and I could take the boat down to Camp 15. We agreed to meet in Camp 15.

Telly and I floated away from Camp 16 at 1 p.m. with the boat loaded with all of our gear, including those things Antonio and Carlucho had left at Camp 16. I drove.

When we saw rapids, we pulled over to the left side of the river. We cut through forest to have a look at the conditions downstream. The churn of the water was disconcerting, especially given our knowledge of the massive falls below.

Telly thought we’d passed Camp 15, and I agreed. I took

a photo and - by comparing the camera’s GPS reading with the coordinates of Camp 16 and Camp 15 that were written in my journals – confirmed that indeed we had passed the camp.

Telly struck a riverside branch with his machete and ... slish, bang, crack, the machete flew out of his hand, banged against a rock and ended up in the water. We looked for it but could not find it. (This may seem like a small thing, but this was a special small machete. Out here in the forest, the difference between having a machete and not having one could mean the difference between life and death.) We returned to the boat.

We motored back upriver. Another GPS reading confirmed we were closer but still north of the camp. We decided to cut our way there, instead of battling upriver against the strong south current.

Then I realized I’d left the other machete at the place we’d just been, so we had no machete to cut our way through the bush. Since it was already about 3:45 p.m., it was too late to go back to get it today.

Just then, we heard a voice crying out. It was Janeiro. Soon, he arrived. He’d been nearby at Camp 15. I assumed he’d heard our motor. We secured the boat and the three of us walked together up through the jungle to reach the path (called the *pica* – “where it is cut”). By now, it was close to 4 p.m. I straggled behind. Later, I caught up to Telly. Janeiro had gone on ahead. We continued towards Camp 14. As that camp was actually on an island, we had to cross the river to get to it. When we arrived



at the crossing, Janeiro waded midstream and offered to help with my bag. We arrived at Camp 14 at about 5:45 p.m. Carlucho and Antonio, who had been waiting there for about a week, greeted us.

*Today was a long day. I am thankful, since Janeiro, Telly and I are safely in Camp 14, reunited with Carlucho and Antonio, and all of us reasonably healthy and our friendships reasonably intact.*

The next day, we returned to Camp 15 to bring the boat and all remaining gear down to Camp 14.

### **March 14, 2014**

#### **Camp 14**

##### **3rd night**

I was determined to take a photo of and explore Hidden Falls from the ground. First, I had to cross the fork. The crossing took a considerable time, and I'd already clocked 45 minutes not far past the fork. It was a miserable venture. It was raining almost from the moment I left and continued raining during the entire journey to the falls, which took two hours plus.

My plan was to get to the falls, then try to swim across the bay below it. Scrambling over slippery rocks in the water, over trees and through gaps between boulders, I got near the falls. Further on, I was blasted by sheets of spray, visibility sometimes zero. I couldn't see the water in the bay, and the river current was frightening. "I'm not going to attempt to cross that!" I said to myself.

In retrospect, I should have crossed the river adjacent to Camp 14 by having someone take me over in the boat. This occurred to me when I started, but only one boat was assembled and its trimaran arms were not yet attached. Adding them would have meant more delay, and there was already talk of hurrying off today downriver. When I finally arrived back, we decided it was too late to descend.

### **March 15, 2014**

#### **Return to Camp 11**

I got out of my hammock at 6:30 a.m. We packed up and left Camp 14 at 8:10 a.m. The river was smooth. I rode in front of the boat that Janeiro was driving. Telly drove the other boat with Antonio and Carlucho as his passengers.

Janeiro and I stopped at Camp 13 so I could check if there was any food left. (There wasn't.) We bypassed Camp 12: As the water level had risen, there was no longer a beach. Just upriver from Camp 12, there were rapids. Janeiro and I went first. We laughed watching the other group go down. We arrived at Camp

11 in under three hours.

*About 7:15 p.m.*

*There is wonder all around me. The pale, yellow moon off to my left shimmers off the black water of the night Ichú. The river's voice, her many-cascade tongue, lulls me to a never-land of dreams no less mysterious than this enchanted night.*

### **March 17, 2014**

#### **Return to La Playa**

Today we woke at about 6 a.m. at Camp *Puerto Uno* (the place where we'd originally launched the boats, a short way upriver from Camp 5). Carlucho served coffee with hot chocolate mix as a sweetener, then oatmeal. I went on to Camp 5 to collect scraps of paper and remove any artificial strings tying the house frames together, leaving only those made from jungle vine. As far as I was concerned, the only acceptable traces of our passage were bush materials that would disintegrate over time. I removed anything man-made as we descended, camp by camp.

Telly joined me at Camp 5. Soon after we departed, a brown snake slithered off to my right. It was about one meter long. It was the only snake I saw all day.

We walked at a moderate pace, deliberate in our steps, and arrived at Camp 4 in about 50 minutes. When Carlucho and Antonio arrived, they were concerned that Janeiro was nowhere to be seen.

Continuing on, we began to ascend. The jungle floor dropped off steeply on the left and almost vertically on the right. Somewhat disconcerted, I realized we were on a thin ridge.

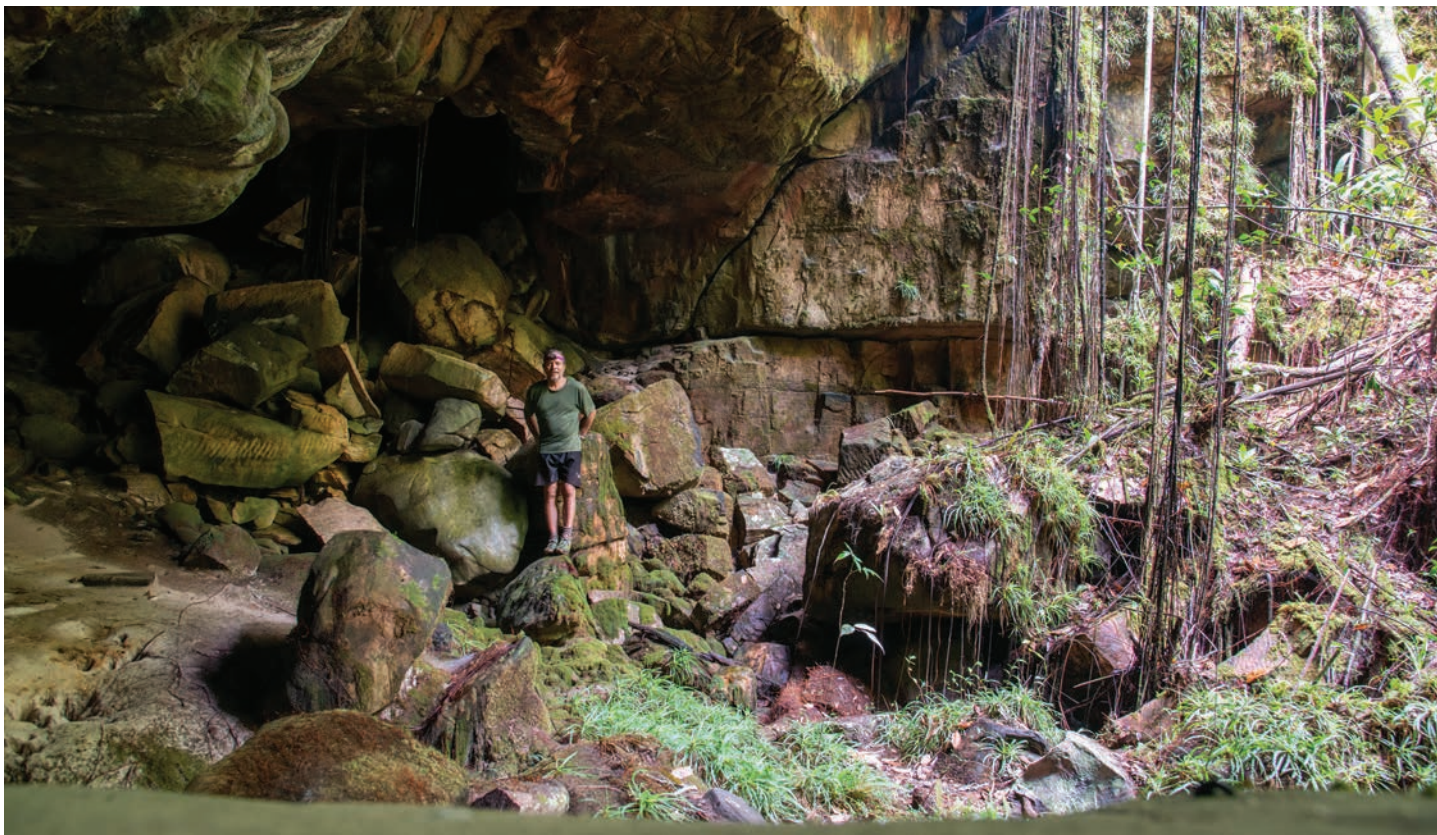
Carlucho confirmed that a cave was nearby. He removed the rope from his pack and tied one end to a tree, then used it to descend the slope to the cave. I followed. It was possible to go down without it, but the rope was helpful as an aid.

The cave was quite impressive. The forest loomed over the grotto and vines hung down vertically in front of it (Fig. 82). There were bats fluttering about.

Carlucho called me over to look at another area. He put his body in a vertical crevice in the rock. Overhead were myriad boulders large and small with daylight in the open spaces between them.

I was going to take a photo but just then my last camera battery showed empty. Carlucho and I climbed back up to the trail. He told the others that the cave did not continue underground after all, but I am not so certain, as underneath us was a large opening that we could not see into, headed in the direction of the opposite hillside.





*Fig. 82. Carlucho stands at the entrance to the cave below Camp 4.*



*Fig. 83. I look down at what might be a continuation of the cave into the ridge.*





Fig. 84. Carlucho squeezes between walls inside the cave below Camp 4, Meseta de Ichúm.

Now we passed onto the rocky floor area, sometimes taking pause to figure out which way to go. We had to search for where the trail picked up again on the other side. Vegetation was scanty on the rock itself. I feared if we did not go together, one person might straggle behind, then lose time trying to find the *pica*.

We set off. I went ahead. It didn't seem to take too long – up the rocky exposed floor with grand views of the crashing Ichúm below, across, down the other side, with views of the trough and surrounding ridges, all vegetated with savannah-like scrub; then down, down into the jungle.

When I got to the felled tree crossing the channel, the log across the water looked different. The stump they had cut looked different too. I hesitated but then realized there was only one cross-river of its size, about 20 m wide. I climbed up and over the maze of small twigs and branches. When I reached the main trunk, there was no handrail like before, so I crossed it on my hands and knees. It was partly submerged in the water. My pack

weighed in the vicinity of 50 pounds. I carefully surmounted the steep bank, then waited for the others. When we'd regrouped again, Carlucho said he would go last to make sure no one lost the trail.

I raced off, now confident that everyone would make it. On and on. I just thought about the need to push on across the inner trough of the Meseta. It took some time. I looked out for snakes but saw none.

I finally got to the "wall" marking the south side of the last hill. I climbed up roots and stones, holding onto whatever I could grip. It took me 9 minutes to get up the steepest part. I wound my way around, down, up, down and up the last slope to the top of the hill. As I took a short break, it started raining. The rain poured down in a torrent, as if to celebrate our return. Then I made the final assault downward to La Playa.

When I arrived, Janeiro was there. The others followed. We had one kilogram of rice left between the five of us.



**March 18, 2014**

**La Playa**

When we woke up this morning, we all felt relieved and expected the boat would come laden with food to take us to La Paragua – if not today, then tomorrow. At least we expected concrete news. Carlucho spent his time on the satellite phone to various people, mostly to a reputed beauty in Camarata named Hortensia, who had both a mobile phone and a radio used by the various Shirianá communities to communicate with each other. But alas, it turned out that the boat that allegedly left Kawai Makén three days ago and was supposed to be here by midday was not, and in the evening Carlucho was told not that the boat had left as a certainty, but that there had been a request that it leave.

I spent the day mainly on one activity: drying out my things. Nearly everything was moist, damp, wet or at least not as dry as I would like it to be. And dirty. It was a needed day of organization. The sun and pale blue skies with wispy clouds cooperated in this effort.

The problem was food. We used half a kilogram of rice for lunch, so only half a kilogram remained. By the time we went to sleep, there was nothing except uncertainty.

*Up at Camp Five, I am now informed, there are another 5 to 8 kilograms of rice that someone had stashed there on the way upriver for emergencies, but it is now a very long way away. We have about 7 ramen packs and I have an additional 5. My emergency food supply is dwindling. So, there was a mood in the*

*camp. When it was dark, there was a surprise. Janeiro and his newly appointed apprentice, Antonio, had caught about 30 or more small fish by walking the shore with a knife and stabbing them while they swam. They cooked them in an array suspended on bush reeds above the fire, and they shared them generously.*

**March 19, 2014**

**La Playa**

At about 9:30 a.m., while I was preparing ramen to share with Antonio and Telly, Toribio and Joel came paddling up in a small *curiara* (dugout canoe) from the village of Ichúm (about 2 ½ km downriver from us). Not only that, but they brought a plastic bag, whose contents included cakes of cassava and a side of cooked *morocoto*, a large fish from the Paragua River. The *morocoto* had ribs much like a rack of lamb, but its meat was white. It was delicious. Adding to the truly tasty flavor was the fact that we were not only very hungry (Antonio told me he was eating ants moments before), but we were also all feeling especially grateful that the coming of the villagers with food meant we were now reasonably safe and distanced from the possibility of starvation.

I enjoyed the rest of the day with the thought that, before dusk, Miguel and others would show up in the large *curiara*, or Carlucho and Janeiro, who had gone off to try to access Ichúm Village on foot, would return with more food.



Fig. 85. When we had no food left, Antonio and Janeiro hunted fish using a knife tied on a stick, then skewered and roasted them.



*About 6 p.m. ... About an hour ago, I prepared ramen and Antonio, Telly and I shared it. It felt amazingly good to eat. We were just discussing the fact that Carlucho and Janeiro did not return like Toribio and Joel had promised – and certainly they did not bring the food that we had been hoping for, and quite frankly needing, and the ... the happiest sound we could hear (and I blush to say I might regret this, because I'm trying to say there should be no motors in World Parks – and this area should be one of them) ... a motor, and there could really only be one of them here – that of Miguel.*

Before I could reach to grab the camera, they were at the shore and disembarking. This scene, well, I really could not wish for a better one, coming up to the beach ... Toribio ... (“Hello”), Alfonso ... Parato!!, Joel, Miguel!! (“*Bienvenidos!*”), Carlucho ... no hard feelings, shaking hands, “How are you?” “I am fine.”

So, the expedition finishes ... almost. ... Tomorrow, seven of them will go to Camp 5, reclaim the stashed rice and return, for we plan to leave early the following morning. Today is the 19th. The 20th, we will sleep here; the 21st, at Juan & Pio's place, Amanaima; and on the 22nd, we should arrive in La Paragua in the afternoon. As of about an hour ago, our expedition is officially over.

### Conclusion

The 2013 expedition to the Meseta (officially, the Paragua River Expedition) made 8 camps south of Ichúm Falls and established the fact that the Meseta's interior had never been explored by humans. The 2014 expedition reached the northern edge of “The Dome,” sighted 2 jaguars and collected a rare grasshopper (the seventh ever recorded, the first photographed alive, and the subject of a published paper). The 2014 expedition also employed a unique boat made of PVC pipes, inner tubes and plastic netting, powered by a 2-hp motor. From February 13 (the day we left La Playa) to March 7 (the day we established Camp 21), we experienced a seemingly never-ending series of obstacles. Up to that point, our upriver progress averaged 2 km per day. After we surmounted the cascades above Camp 21, we traveled at a speed of 2 km per hour.

On March 9, the expedition team reached the Sand River tributary at the north end of “The Dome” at a 100 m x 100 m bay at 4° 23' 35"N 63° 19' 52"W, at 648 m (Fig. 78). From there, we traveled west up the tributary for 1-1/2 hours, then stopped and

took photos with Flag #118 at 4° 22' 48"N 63° 20' 56"W, at 650 m. This was the far point of the expedition (Fig. 79). We floated down to the Ichúm. Before beginning our retreat, we ventured further south up the Ichúm River for an additional ten minutes, arriving at 4° 23' 28"N 63° 19' 48"W.

Given that food and fuel were almost depleted, prudence dictated that we return. We began our descent in the afternoon of March 9 and arrived at Ichúm Falls on March 17, hungry, with only 1 kg of rice left between us.

The 2014 expedition was successful insofar as:

1. All of the initial 9 members returned safely with relationships intact.
2. A specimen of *Bactrophora dominans* was collected, about which an entomological paper was published in Checklist.
3. Two jaguars were sighted.
4. We were the first humans to penetrate deeply into the Meseta and the first to see Jaguar and Hidden Falls from the ground.

A third multidisciplinary scientific expedition is merited because of the strong likelihood of discovery. Although the river journey from Ichúm Falls to Sand River afforded us the experience of otherworldly beauty, the route was treacherous due to the high risk of snake bite. I wouldn't recommend the walk. It would be preferable to be dropped by helicopter at the small bay at Sand River, if it still exists. (The rivers here rise 6 m in the winter.) This would allow more time to explore the deep south of the Meseta. A helicopter drop with lightweight watercraft could position a team to travel the remaining 25 km to 4° 12'N 63° 11'W. From there, it might be possible to continue west about 6 km to 4° 13'N 63° 22'W, which can be considered the Ichúm's source. Alternately, the Ichúm may flow as a brook from 4° 14'N 63° 27'W, 10 km to the west, or possibly from 4° 11'N 63° 23'W. At 4° 13'N 63° 22'W, the Ichúm is probably at most a few meters wide.

There is a compelling need to protect and explore the Meseta, the area around it and the Amazon Basin in general. On a global level, the Amazon is an obvious choice for preservation. Detailed documentation of special features in this region - e.g., the undeveloped area bordered in the north by La Paragua, in the east by Santa Helena, and in the west by Puerto Ayacucho (all settlements in Venezuela) and to the south by Manaus, Brazil - can serve to educate, inspire and generate justification for preservation.



## Acknowledgments

I would like to honor the memory of Janeiro Lesama (Shirianá village of Kawai Makén, Bolívar state, Venezuela), without whom the expedition would not have been a success. I would like express my thanks to my other teammates: José Luis Rodríguez Castillo “Telly” (Caracas, Venezuela) for first sighting and pointing out the Ichúm insect, for building the boats and for his perseverance, and Carlos Núñez “Carlucho” for his generosity in preparing the expedition and his design of the boats; Antonio Castillo, Joel Díaz, Rafael Díaz, Ramón Montarioca “Parato,” and Alfonso Pérez, for their help during the Ichúm expedition. The expedition was as much theirs as it was my own. Thanks also go to Chief Agustín Ojeda and Gerardo (last name unknown) for their help during the expedition; to the Explorers Club for their support and encouragement and for awarding Flag #118; to Sandra Carrillo Kosak for her many assistances and inspiration, and for introducing me to Charles Brewer-Carías; to the personnel of the Venezuelan consulate in San Francisco, and Guayana Páez-Acosta (AVINA), for their initial help in the early stages of the first expedition; to the Venezuelan authorities in La Paragua, Bolívar, Venezuela, the Customs personnel at Simón Bolívar International Airport, Caracas, Venezuela, and Houston International Airport, Texas, USA, for matters concerning the transportation of the preserved insect; to Charles Brewer-Carías, for identifying the relevance of the Ichúm insect, stressing the need to keep the insect at the MIZA-UCV insect collection and assembling a research team, and for his generous permission to use Figure 10; to Jorge M. González for spearheading the investigation and report on *Bactrophora dominans* and for the generous donation of his time in identifying insects; to Ole Bennike of Danish GEUS for his assistance in identifying rock types; to Marco A. Gaiani and Francisco Cerdá (Museo del Instituto de Zoología Agrícola, MIZA-UCV, Maracay, Venezuela), who first identified the insect; to Andrés Emilio Pérez Mejías for his help in developing the distribution map, and to Karen Brewer, whose skills helped us greatly improve Figure 10; to Jean Louis Giugliaris (French Guiana), who provided us with relevant information on insects. Thanks as well to Frederic Beneluz (French Guiana), Jason Weintraub (Academy of Natural Sciences of Philadelphia, USA), Hugh Rowell (Universität Basel, Switzerland), Bernardo Espinoza and Carlos Hernández (Instituto Nacional de Biodiversidad – INBio, Costa Rica), Alessandro Giusti and George Beccaloni (Natural History Museum, London, UK), and Mercedes París (Colección de Entomología, Museo Nacional de Ciencias Naturales, CSIC-MNCN, Madrid, Spain) for providing us with information and/or photographs on the *Bactrophora* insects under their care; to the Shirianá people of Kawai Makén and Ichúm Village; to David R. Markowitz, Robert Nordvik and Donna Shea for proofreading and helping to format the report; and to the honorable memories of the pilot Octavio Colson and of Santiago, the boat man in 2013. Additionally, I want to express my gratitude to Jorge M. González, Charles Brewer-Carías, Ruud van Halewijn and Arie Spaans for help in identifying fauna. Lastly, I would like to express a special thanks to Charles Brewer-Carías for correcting my spelling of Ichún to Ichúm.

## Figures, Notes

1. Page 1, Figure 1. Photograph of Jaguar and Hidden Falls, Jeff Shea, 2014.
2. Page 3, Figure 2. Outline of Amazon World Park with existing protected areas highlighted. This map was created by World Parks, Inc. ([www.worldparksinc.com](http://www.worldparksinc.com)) using data from the World Database on Protected Areas. A World Park will be a vast, protected area following natural boundaries and not social or political delineations. The Meseta de Ichúm falls squarely within the proposed area for an Amazon World Park.
3. Pages 5 and 6, Figures 5 & 6. Author’s notations over NASA satellite images 464\_MRSID, 465\_MRSID and 466\_MRSID, which were provided by Emilio Perez, Venezuelan cartographer. He wrote, “Image comes from a NASA Landsat 7 ETM+ satellite sensor provided as a mosaic by GLOBAL LANDCOVER FACILITY from Maryland University.” When I typed this phrase into Google, the first result directed me to this University of Maryland website: <http://glcf.umd.edu/data/landsat/>. This site states, “Use is free to all; effectively held by USGS & NASA; but ultimately held by US public.”

## Endnotes

1. Page 2, “The 2013 report” refers to the Flag Expedition report entitled “March 2013 Paragua River Expedition,” downloadable at [https://explorers.org/expeditions/into\\_the\\_field/flag\\_reports/category/year\\_2013](https://explorers.org/expeditions/into_the_field/flag_reports/category/year_2013), or, alternatively at <http://jeffshea.org/penetration-into-the-meseta-de-ichum-of-venezuela/>
2. Page 4, Explorers.org – same as footnote 1.
3. Page 4, “Merey” (cashew) tree – In the Meseta, the fruit of the cashew was bright red. It was often found broken apart and decaying, having fallen when ripe. Its aroma could be detected from a distance. It was a favorite not only of the Shirianá, but also of the men from Caracas and myself. It could be said that the lure of the *merey* is what gave birth to the 2014 expedition, as Carlucho and I were inspired by the gentle flow of the Ichúm when Janeiro and Rafael poled across the river to get to the tree’s fruit.
4. Page 4, Topographic maps – The topographic maps in this report were used on the expedition. They were published by Instituto Geográfico de Venezuela Simón Bolívar.
5. Page 19, Sparassidae – This identification is not certain.



6. Page 34, Quartzite – Bennike, Ole. (2020, 11 March). Danish GEUS, personal communication.
7. Page 41, “*Guacamaya* Lookout” [sic] – This was the spelling in my original journal, because at the time, the term *guacamayo* was new to me and I did not know the proper spelling.
8. Page 53, In González, et al. (2015, pg. 3), the altitude of the collecting site was recorded as 650 m. Further investigation changed my estimate of the collecting point elevation to 637 m. The accuracy of consumer grade GPS receivers can fluctuate  $\pm 23$  meters (75 feet). (<http://www.gpsinformation.net/main/altitude.htm>, accessed 1 August 2020.)
9. Page 53, Checklist – See Checklist; the paper is also available for download at <http://jeffshea.org/wp-content/uploads/2020/02/Checklist-Bactrophora-dominans-González-Shea-Brewer-Carias.pdf>. We intended to return the voucher specimen to Venezuela and deposit it with the Museo del Instituto de Zoología Agrícola (MIZA-UCV), of the Universidad Central de Venezuela’s Agronomy School, in Maracay, Aragua, Venezuela. After unsuccessful attempts to communicate with members of MIZA-UCV, and because of concern as to the well-being of that Museum (expressed in several newspapers and social media by its curators), and in the interest of safeguarding such an important specimen, the authors (González, Brewer-Carías and Shea) decided to deposit it in the Entomological Collection of the Academy of Natural Sciences of Drexel University, formerly the Academy of Natural Sciences of Philadelphia, which is the oldest natural science research institution and museum in the Americas, and which has a good collection of Romaleidae including types of phylogenetically close species.
10. Page 54, Pissauridae – This identification is not certain.

### References

1. Armellada, Fray Cesáreo and Fray Baltasar de Matallana. (1942). Exploración del Paragua. Boletín de la Sociedad Venezolana de Ciencias Naturales No. 53, pp. 61-121. Caracas.
2. Berti, Jose. (2018, 30 September). Retrieved from <http://venezuelanindian.blogspot.com/2007/08/canaima-pemon-spirit-of-death.html>.
3. Brewer-Carías, C. and M. Audy. (2011). *Entrañas del Mundo Perdido*. Caracas, Venezuela: Altholito. 291 pp.
4. González, Jorge M., Shea, J., and Brewer-Carías, Charles. (2015). First reports of *Bactrophora dominans* Westwood, 1842 (Orthoptera: Romaleidae) from Venezuela and French Guiana (South America), with comments on biology, ecology and distribution of the species.
5. Montoya-Lirola, Candido. (1958). *Expedición al Río Paragua*. Ministerio de Minas e Hidrocarburos, Caracas. 190 pp.
6. NASA. (2014). NASA Landsat 7 ETM+ satellite sensor provided as a mosaic by GLOBAL LANDCOVER FACILITY from Maryland University.
7. Rull, Valenti, Teresa Vegas-Vilarrubia, Otto Huber & Celsa Señaris, editors. (2019). *Biodiversity of Pantepui*, p. 20. Academic Press, an imprint of Elsevier.
8. Schaller, G.B. and Vasconcelos, J.M.C. (1978). Jaguar predation on capybara (PDF), 43, Z. Säugetierk.
9. Steyermark, Julian A. (1962). Botanical Novelties from Upper Paragua, Edo. Bolívar, Venezuela-1. Boletín de la Sociedad Venezolana de Ciencias Naturales N° 101, tomo XXIII, pp. 89-95. Mayo, Caracas.
10. Shea, J. (2014). 2013 Paragua River Expedition Explorers Club Flag (#60) Report, Penetration into the Meseta de Ichúm of Venezuela. <http://jeffshea.org/paragua-river-expedition/>
11. Nowak, Ronald M. (1999). *Walker’s Mammals of the World*, p. 831. Johns Hopkins University Press, Baltimore.

