BULLETIN

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A Tale of Two Costus

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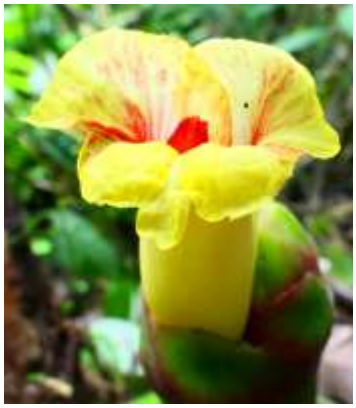
For the past few years I have been researching the type localities of *Costus* species that were first collected and described many years ago, and are now known only from their dried herbarium specimens. I have been going to those sites to see what the living plants really look like. In 2018 I was successful in locating two such species that had never before been photographed.

***Costus sepacuitensis* Rowlee**

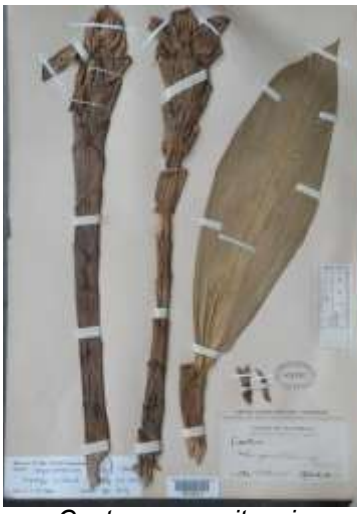
This species was originally collected in 1902 by O. F. Cook and R. F. Griggs near the Finca Sepacuité in Guatemala. The species was described and published 20 years later by W. W. Rowlee in his article **The Genus Costus in Central America** in the Bulletin of the Torrey Botanical Club, Vol. 49, No. 10 (Oct., 1922). Rowlee said it was even then known only from the type specimen at the U. S. National Herbarium. He described its vegetative parts and said that it flowers on a "diverse culm" (basal flowering), but said the flowers were not seen. He compared it against the South American species *Costus geothyrsus* and *Costus erythrocoryne*, differentiated by its "deeply parted calyx" among other things.

When Paul Maas published his 1972 Monograph of new world Costaceae, he listed this species as being "insufficiently known". No other records of the species than that 1902 type specimen were in existence, and there were no photographs of the living plants.



Costus sepacuitensis

So last summer I decided to try to find it. After some research I learned that the Finca Sepacuité is a coffee coffee plantation in the province of Alta Verapaz in eastern Guatemala. I traveled there and stayed at a hotel that is owned by Oscar Elias in the nearby village of Senahú. When I explained to Oscar what I was looking for, he told me he is a great, great grandson of the very same R. F. Griggs who had collected that plant 116 years before! His mother had worked at the Finca as a housekeeper.

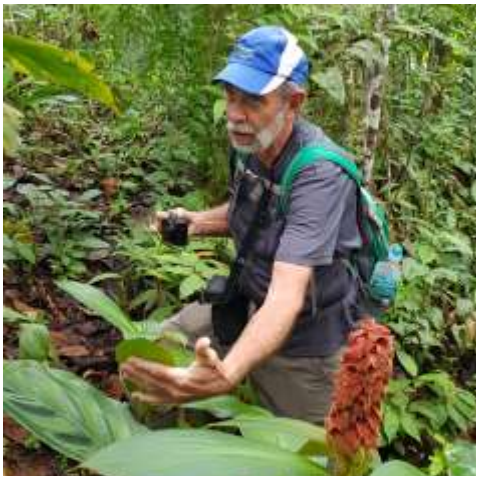
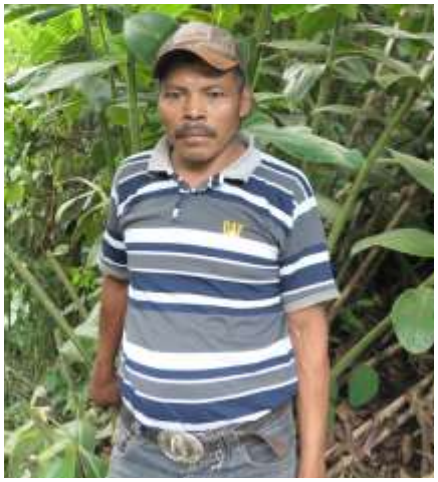
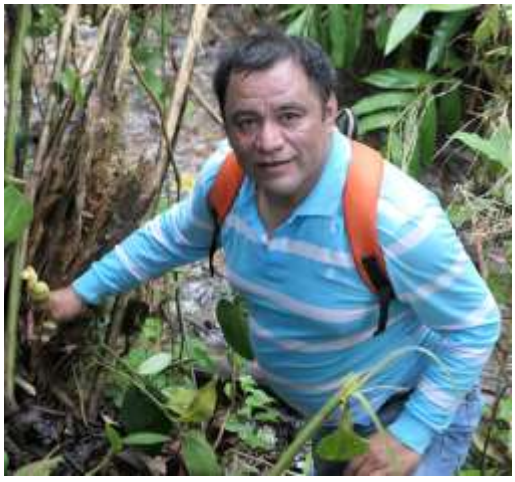


Costus sepacuitensis

So one Sunday we went to the community around the Finca and he started inquiring in the Mayan Q'eqchi language, describing as best we could the plant I was looking for. Finally, after talking with many of the people there, we found a man named Mario who thought he knew what we were looking for and agreed to take us there the next day.

The next day we walked a few kilometers up into the mountains to the *Camino Antiguo* (the old trail to Senahú) and there it was! It matched perfectly to the type specimen and description by Rowlee, including the deeply parted calyx. Mario told us that was the only spot in the region where he had ever seen that species. As it turned out, it is the same species I had found the year before in Oaxaca, Mexico, that Paul Maas had been planning to describe as a NEW species to be named *Costus oaxacus*. Since then we have found two other specimens of this species, but nevertheless it is quite rare and owing to the few locations and their vulnerable habitats, I am guessing this species would be ranked as "Critically Endangered" on the IUCN Red List.

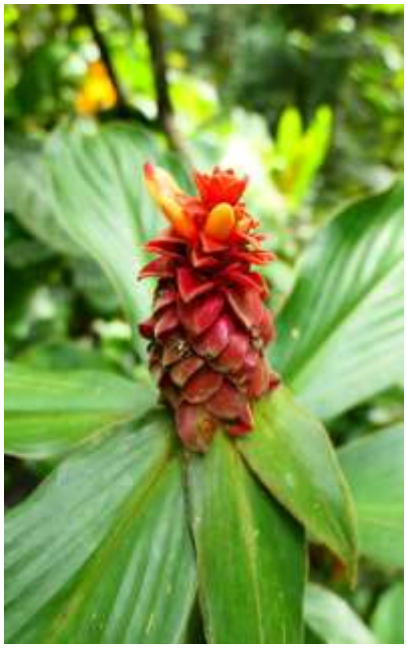
Costus sepacuitensis

Dave, left, examining *C. cupreifolius.* Mario, center, guided the search party to the only known location in Guatemala of *C. sepacuitensis*. Oscar Elias, right., is a great, great grandson of R.F. Griggs who first collected *C. sepacuitensis* in 1902.

Costus cupreifolius flower

Costus cupreifolius in habitat



Costus cupreifolius

The Purpose of HSI

The purpose of HSI is to increase the enjoyment and understanding of *Heliconia* (Heliconiaceae) and related plants (in the families Cannaceae, Costaceae, Lowiaceae, Marantaceae, Musaceae, Strelitziaceae, and Zingiberaceae) of the order Zingerberales through education, research and communication. Interest in Zingiberales and information on the cultivation and botany of these plants is rapidly increasing. HSI will centralize this information and distribute it to members.

The **HELICONIA SOCIETY INTERNATIONAL**, a nonprofit corporation, was formed in 1985 because of rapidly developing interest around the world in these plants and their close relatives. We are composed of dues-paying members. Our officers and all participants are volunteers. Everyone is welcome to join and participate. HSI conducts a Biennial Meeting and International Conference.

Membership dues are (in $US): Individual $40, Family $45, PDF $25, Student $10, Library $35, Contributing $50, Corporate $100, Sustaining $500, Lifetime Member $1000.

Membership fees constitute annual dues from 1 July through 30 June. All members receive the BULLETIN (usually published quarterly) and special announcements. Join or renew your membership at www.heliconia.org.

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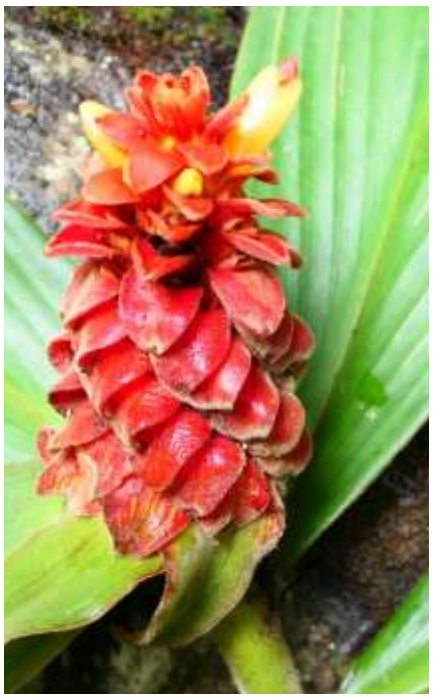
Website: www.heliconia.org

***Costus cupreifolius* Maas**

In January of 1945 Joseph A. Ewan was on an expedition in southern Colombia to explore the jungles of Putumayo, researching rubber trees in support of the allied forces during World War II. Along the way he collected many other specimens of the plants he found and they were deposited to the herbaria of the New York Botanical Garden and the United States National Museum. Among these specimens was a *Costus* species that later, in 1976, was described and published by Paul Maas as *Costus cupreifolius*. Dr. Maas did not see fresh material or open flowers, but he was able to describe the species based on the dry herbarium specimens with their dry inflorescence and flower bud, supplemented by the written description by Ewan on the specimen tag. He named the species *Costus cupreifolius* based on the coppery colored undersides of the leaves as described by Ewan. Only one other specimen of this species was known, collected at another site in 1997 and also without fresh flowers. There were no photos of the living plant to be found.



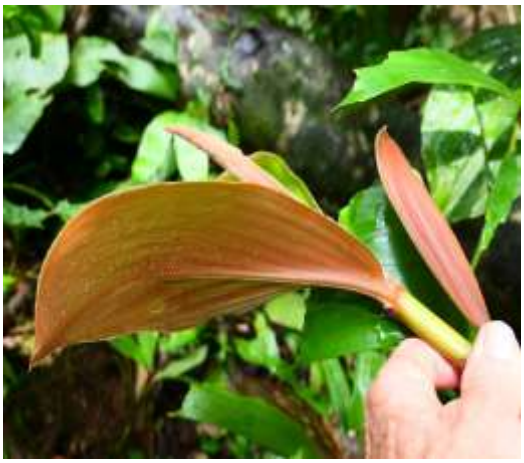
Costus cupreifolius

I had been wanting to go to Putumayo for many years, but due to the continuing conflict with the revolutionary group known as the FARC, it was simply too dangerous to go there. At last, with the peace accord signed by the Colombian government with the FARC, it is now safe to go there, and biologists have been making up for lost time.

Costus cupreifolius

The locality that Ewan named on his specimen sheet was "Near San Diego de Colorado, tributary of Rio Putumayo, above Puerto Asis, ca. 650 meters elevation." As I researched, looking for this locality, I soon realized that he was completely wrong about the elevation, and that there is no river or creek currently known "San Diego de Colorado." I traced his route from Mocoa, to Urusique, to Umbria, and on south to Puerto Asis. When I arrived at Villagarzón I was incredibly lucky to find Don Angel Luna, who has lived there all his life and is a civil engineer who had worked on the pipeline projects and knows the entire region very well. Between him and his sister we were able to figure out the locality. We drove across a dry river bed then took a canoe boat up and across the river and arrived at a community known as "San Diego". A plaque on a recently constructed building there explained that the site had been settled in 1695 when it was established as a Franciscan Mission. This had to be the place where Ewan had stayed during his expedition.

Costus cupreifolius, individual flowers



Coppery colored underside of foliage of *Costus. cupreifolius*

Angel and I started walking down a trail, going into the few remaining forest patches in the now cleared pasture land. After a few kilometers we were about to give up when I said, "let's try one more" that I could see up ahead. I went into another forest patch and there it was – *Costus cupreifolius*! The coppery red undersides of the leaves left no doubt about the species identification, and there was a large population of it in that one forest patch. However, I only found one other location during my two weeks in Putumayo, with just 3 very small plants. Based on the lack of other documented collections, I am sure this species must be very rare, and therefore endangered.