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Back To Caraça

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It had been only 8 months since I had gone to Caraça, but I was already dying to go back! In fact, I had already attempted to go back a few times with other people I heard were going. Since it didn't work, I decided that if I was to go back soon, I had to organize a trip myself, and not depend on others. I wanted to return as soon as possible and also try and see Caraça during a different season, so the time was January, 1991. Organizing this trip ended up being much more complicated than I expected. Also, I was really busy with exams at the end of the high school senior year and for university applications. But I finally got it all together, including reservations, bus tickets, and people interested in going. A group of 8 people (all of whom had already been to Caraça at least once) left São Paulo city on the night of the 27th, Sunday, on a bus to the city of Belo Horizonte, a 9 hour trip. After waiting for 2 hours in B.Horizonte, we got a bus to a city close to Caraça, (another 2 hours) and then 2 taxis for a 30 minute drive to the Caraça sanctuary, the final step of my sleepless ride. I guess the lack of sleep was in part due to the uncomfortable bus. but mainly because of my excitement (the rest of the group slept like rocks).

After we arrived, I gave my companions 2 hours to arrange their stuff around the room where we were staying (in a small cottage which used to be the slave's quarters and has not gotten any better, but it's cheap!) while I took a short hike nearby to look at some native orchids. I then herded them all out to start our hikes around the Caraça valley (and start my CP hunts!). I knew that summer was the rainy season, but I didn't know what we were in for. It rained 5 out of the 6 days we were there. All the rivers,

streams, lakes, and waterfalls had doubled in volume since I had last gone in May of 1990. Our pairs of old sneakers stayed dry for a very short time. We were always being forced to cross small streams which before were nonexistent, or having to swim in places where we had walked ankle high in water during our previous visit to Caraça. Another surprise was the flies, mosquitoes, and large horse flies which were always buzzing around our faces and other exposed body parts. Luckily, I had taken an insect net which I started wearing over my head when it got unbearable. In the end, though, we all donated lots of our juice to the pests.

Fortunately, CPs were no trouble. I turned every place we went and passed upside-down in search of the little jewels we were all interested in. I had expected to see many of them flowering but most were hidden, with occasional flowers present. I had seen more on my previous trip. I guess most of them prefer to flower during the dry season, even though that is during winter. This rule seems to apply mainly to the CPs found in the valley (between 1200 and 1400 m). I only climbed one of the many surrounding mountains (Mt. Carapuça: 1955 m), but I noticed that most of the CPs of this higher altitude prefer to flower during the summer. I had not seen any of them with flowers when I last climbed that mountain. This must be a result of the colder temperatures near the summit, and I imagine that on other nearby mountains the same probably happens.

I guess I'll talk about the valley plants first, and leave the dessert for later.

I found a few more *D. montana* "pink flower" sites this time. The plants were a deeper red color but much smaller than before. It was hard to find a nice patch to photograph. I found a small number of *D. communis* plants growing next to *D. montana* on a stream bank. The spoon-shaped leaves reached 1.5 cm in length and most were purple-red in color, like *D. montana*. I was not able to locate a *Drosera* species which had been seen by a friend in November growing near a waterfall. I searched all around, but had no luck. This sundew was said to have thin leaves, so it might be *D. graminifolia*. It would be interesting to find this species growing in the valley, since I've only found it on top of Mt. Carapuça (but it would be even better to find a new species!)

I found out that the aquatic Utric I saw on the previous trip, growing in shallow mountain streams, is *U. neottioides*. It must have been dormant this time, since it was not found in the streams where it had been seen. It depends directly on the water levels in streams to flower, so it probably only flowers when they are lowest during winter. The stolons were not found due to their small size and the algae which covered the rocks (and the stolons). The *U. sp.* "yellow flower" with the long, climbing peduncle was not seen either, but I suspect it's only a larger *U. subulata*. Some of the *U. subulata* I collected last year in the same place are producing flower stalks up to 20 cm long. *U. pubescens* turned out to be more common than I expected! It had only been seen in one place by my friend Mauricio in July, 1990. I not only saw this *U. pubescens* site, but I found *U. pubescens* growing in 4 other places! It was always found growing along shaded, moss-covered stream banks, sometimes even underwater due to the high water levels. I only found one flower which was a dark, pinkish-purple color. The plants Mauricio collected last year produced light, violet-purple flowers in cultivation. I wonder if there are more color variations in the plants from the other locations? I do not know how I did not see this plant when I last went! Either they were dormant or my eyes just were not very good at locating Utrics. The species we thought was *U. tricolor* turned out to be the same as the *U. sp.* "purple flower" we had found. The difference in leaf size was due to the amount of sunlight received. I found 3 new locations of this unknown species. It also seems to prefer growing in shaded stream banks, sometimes mixed with *U. pubescens*. I did find 3 places in which it was growing with no covering from other plants and lots of flowers were present. One place was on a little moss island on rocks in the middle of a waterfall down in the valley. Another was halfway up Mt. Carapuça where it was growing in pure sphagnum. The last was

on top of the mountain, growing in sandy soil and sphagnum near *D. graminifolia*. It bears various purplish-blue flowers up to 1.2 cm long and 8 mm wide on peduncles up to 15 cm long. The other *U. sp.* I talked about in the previous Caraça article (the one with leaves like *U. subulata* but growing in a shadier area with drier soil) turned out to be another one of the many variations of *U. subulata* found at Caraça. By the way, *U. subulata* continued to be found all over. I found lots more places where it grows, many in humid areas far from streams. I even found the yellow weed on the mountain top together with *D. graminifolia*! Most flowers seen were cleistogamous, while only a minority were normal.

I found 2 new species of *Utricularia* on this trip. One was found growing in almost pure sand with a thin layer of peat on top. The sloping ground in which it grew was constantly wet because of a nearby rocky mountain side which was always dripping with water. I had already observed this last year, but had not been able to find any CP there. I only found this *U. sp.* because of one, whitish-yellow flower I saw hidden between grasses when I stopped to wait for the rest of the group to catch up. The leaves are thin like those of *U. praelonga*, up to 10 cm long and 2 mm wide. I found a couple of flower stalks up to 20 cm tall. All had between 2 and 4 ripe seed pods (except for the one with the flower which was a little behind schedule). This Utric has already been found by Mauricio growing near the city of S. Paulo. The other new species I found has leaves up to 2 cm long and around 1 mm wide. The flower stalks reach a length of 7 cm and each possesses a single flower around 8 mm high and wide. The flowers are different shades of a light purple-violet and shaped like those of *U. dichotoma*. It was found growing in 3 locations, all on Mt. Carapuça. One was at the base of the mountain, in a mossy stream bank close to a waterfall. Another was halfway up the mountain on the sides of a shaded, moss-covered stream. It was then found near the summit growing in sandy soil together with *D. graminifolia*.

The species I said was probably *U. nephrophylla* is really *U. reniformis*. There seems to be quite a mixup between these 2 species. I've seen 2 books which show photos of *U. reniformis*, but they call it *U. nephrophylla*. The true *U. nephrophylla* has leaves up to 2 cm in length and 1 cm wide and has small, white flowers while *U. reniformis* has flowers which are blue-violet and its leaves may be up to 14 cm wide and 65 cm long! *U. nephrophylla* is mainly restricted to the state of Rio de Janeiro, while *U. reniformis* has a much wider range in Brasil. Of the three *U. reniformis* sites we knew of at Caraça, two were in the valley and one on the Carapuça mountain. The smallest plants I found in one of the lowland locations turned out to be *U. pubescens* which had also been found on the same streambank. We only noticed this when they started flowering in cultivation in late 1990. They have the same flowers but the leaves are still different. The one we initially thought to be *U. reniformis* still produces only small, kidney-shaped leaves even though it is growing in the same conditions as the *U. pubescens* collected at the same site. Anyway, I found more *U. reniformis* at the other valley location near the waterfall. They were plentiful on the opposite side of the stream from where I had seen them on the previous trip. At the shaded base of the waterfall, getting a constant cloud of spray, the ground plus the lower branches and trunks of bushes were carpeted with moss and small leaves of *U. reniformis*. They were even smaller this time with leaves only around 1 cm wide.

But as I said before, the mountain top reserved the best surprises of the trip. This time, I spent 3 hours calmly exploring the summit and discovered that *U. reniformis* is more than common up there. The constant moisture from the clouds and the many water springs allow sphagnum to thrive in abundance. *U. reniformis* seems to prefer growing in these sphagnum mounds, both in full sunlight and in the shade of taller plants. The leaves were larger than they had been in the winter with petioles around 15 cm long and lamina around 6 cm wide. Few flower stalks were found. The shortest one was 60 cm long and the longest reached 1 meter in length! The length of the leaves

and peduncles depended on the amount of sunlight in the place where they were growing. The more sunlight, the shorter the leaves and flower stalks (and vice-versa). Each flower was around 5 cm long and 4 cm wide and their colors also depended on sunlight. Then in the shade, they were a light purple-blue with 2 light-yellow vertical marks. When in the sun, they were a darker pinkish-purple with brighter yellow streaks surrounded by a bold pink-purple ring.

Not only were *U. reniformis* flowering on top of the mountain, but *D. graminifolia* was too! Almost every plant had a peduncle up to 35 cm in length, and they were only halfway through flowering! Each flower stalk had up to 2 light-pink flowers up to 2 cm in diameter. Some branching stalks had 4, 5, or 6 flowers opened at the same time! I noticed that the flowers open independently of sunlight. Then I reached the top of the mountain at 10 AM. It was really foggy but the flowers were all open. Later on it cleared up and we could see a beautiful view of Caraça and other surrounding areas. I guess if *D. graminifolia*'s flowers did not open on cloudy days, the species would die out since that summit is constantly covered with clouds, especially now during the rainy season when it is flowering. Since I was exploring with more calm and did not have the "keep moving" pressure of a large group, I found out something unfortunate which I had not seen last time. *D. graminifolia* is not as plentiful as I had imagined. Where I thought there were lots of plants growing in sandy soil on the terrace like area, I now saw that the plants are only found on the sides of the trail through the thick vegetation and do not extend any farther into it. Since the trail was man-made, I guess *D. graminifolia* previously grew only in the sphagnum areas. But the species is safe from man on the rock walls, where most grow far from reach. Fortunately, I discovered another rock wall with sphagnum and *D. graminifolia* which is inaccessible (I could only see it from a distance of 30 meters) and safe from overcollecting. Another good thing was that one of the priests at the Caraça sanctuary told me he has seen *D. graminifolia* growing on top of another one of the peaks of the Caraça mountains.

The mountain had one more surprise for us. The most important discovery of the trip was made near the summit on one of the various rock walls dripping constantly with water, where I had already found *D. graminifolia* and *U. reniformis* growing with sphagnum and other mosses. On my way up, close to the top, I came upon the first of the falls and saw some small, purple-violet flowers with a yellow center surrounded by a darker violet-purple ring. I immediately thought it was a new *Utricularia*, but when I pulled a plant out, I saw its roots and noticed it was a *Genlisea*! Both Mauricio and I had passed by this place last year, but had not seen this species which is most likely *G. violacea*. Either it was dormant or we were just too excited looking at *D. graminifolia* and didn't notice the small leaves. It was very common in this small area, but unfortunately I did not find it in any of the other similar walls. The leaves are around 1 cm long and club-shaped. The flower stalks were up to 10 cm in length and each carried 1 or 2 flowers around 1 cm long and wide. I noticed that this species propagates naturally by its traps. I saw a couple of roots with leaves growing from them. Mauricio had already noticed this happening with the *Genlisea* he had found last year in the valley. They both seem to be the same species, the only difference being that the ones I found have flowers which are a bit darker in color. I am now trying to reproduce the plants I collected by taking leaves, traps, plus flower stalks and placing them in live sphagnum.

We left Caraça on Saturday afternoon, the 2nd of February, and arrived in S. Paulo early Sunday morning. We were all exhausted from the long walks and mountain climbing at Caraça mostly because of my "CP fever" which turned the trip into a marathon to see as many places as possible during our 6 days there. But we were all willing to go back and do it all over again right away, if we could. I hope to go back another time before the end of 1991 and explore the other mountain tops at Caraça, where most of the CP "jackpots" seem to be.