The Cactus Trip Diaries

Brazil - Minas Gerais & Bahia 2018

By Paul Klaassen



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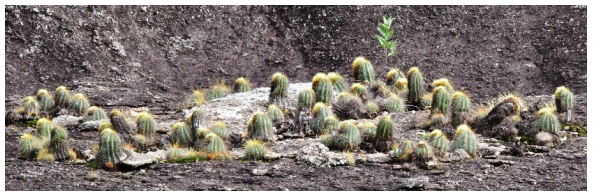

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A Tale of Two Dusters





Not entirely without incident!



INTRODUCTION

In November 2018 I embarked once again on a cactus trip in the New World, this time another visit to the States of Minas Gerais and Bahia in the North West of Brazil.

I was here in May 1999, with the late Keith Grantham and with Brian Bates who had just moved to Sucre, Bolivia. The next visit was in November and December 2009 with Cliff Thompson. This time I'm slightly ahead of the 'every ten years' pattern, but then I'm likely to want to return again and I'm not getting any younger.

I was accompanied by Alain Buffel, Chris Hayes, Jared Marguiles and John Child. As on all these trips we were joined by Marlon Machado to guide us to the cacti and other sights of this wonderful country.

This volume derives its title from the fact that we took the pictures included here during the 6,201 km drive in two Renault Dusters.

Unlike other volumes in the Cactus Trip Diaries, this book is more than just an illustrated travelogue. Marlon's route enabled us to focus on four specific genera in the Family *Cactaceae*:

* *Uebelmannia*
* *Arrojadoa*
* *Micranthocereus*
* *Coleocephalocereus*

and as our cameras met a different genus I will include a daily summary of each and images of anything interesting.

The raining season had started and the landscape looked very green and lush, more so than on previous visits and with herbs and grasses already up, it was more difficult to spot some of the smaller globular cacti such as *Uebelmannia*.

My camera bag for this trip contained:
Nikon D850 with a
Nikon AF-S 28-300 mm f3.5-5.6 G lens and a

Nikon D750 with a
Nikon 18-35mm f/3.5-4.5 AF-D (77mm filters, 13.1 oz/370 g) lens

Images taken by fellow travelers have been credited to the photographer.

There was another soft carrier bag for a range of chargers and cables and yet I still managed to misplace some of these, e.g. for the dashcam which at least provided one day's entertainment.

Saturday 10 November **Sunday 11 November 2018**

London Heathrow T4 to Belo Horizonte

It seemed perfectly sensible when I booked the flights from Europe to go for a flight with an early arrival and time (06:40 and 22:00) until, as the day of departure drew closer, the realisation that we needed to report in at LHR was 04:40. Alain started his journey with a flight from Brussels to LHR the day before and had booked himself into at the Hotel at T4. So it seemed sensible to meet up for a pint and some rest at the same hotel on Friday night.

Nothing else to report other than that we flew into Paris - Charles de Gaulle and out again to Brazil, Sao Paulo (GRU).

Belo Horizonte to Diamantina Hotel

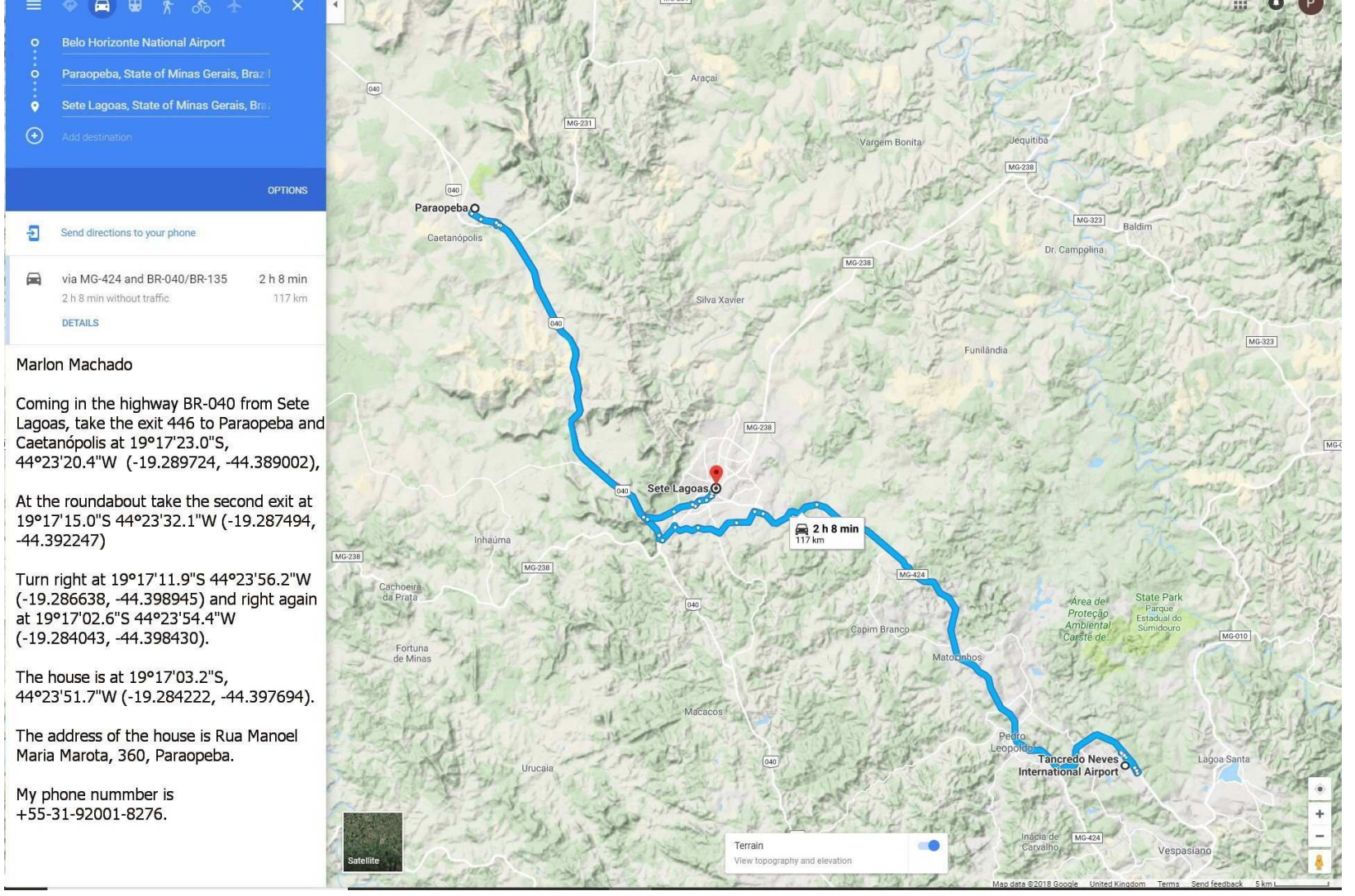
We approached GRU excited that everything had gone so smoothly, all according to plan. They say ignorance is bliss. We knew that we were on a tight schedule to transfer to our final flight to Belo Horizonte and were slightly concerned at finding a huge queue of arrivals snaking through immigration.

We suspect that the staff on the four gates through which we were guided at a crawl were as unaware that some four mega planes of motor racing fans had arrived to witness Lewis Hamilton and Max Verstappen battle it out in the Brazilian F1 Grand Prix on Sunday. At the same time, it transpired that it was this weekend that the clocks changed - more to stay in step with economically important trading partners than to reap the benefits of daylight saving hours.

I soon discovered that as well as being the oldest member of our group I was also the slowest and despite my best efforts, I soon lost contact. When I arrived at our departure gate, the staff informed me that my flight had left.

They told me to go to the Gol offices as they were responsible for this last leg on behalf of Air France as the lead partner responsible for the total flight.

As I queued at the Gol office with people with a similar predicament I was more than surprised to see Alain walk in with a Brazilian police officer – they had reported me as a missing person! They too had missed our flight, which at least made me feel a bit better. As soon as the Gol offices opened we booked and paid for tickets for Belo Horizonte, then slept



on seats in the Departure lounge where even I, known as the Martini sleeper, only managed short cat naps.

Finally, we sat on the plane, bound for Belo Horizonte, where we met up with Jared and Marlon. We had booked hotel rooms at the Hotel at the Airport. We were dead on our feet. When we signed in - our booking was valid until 14:00 - I could hardly remember my name!

I had been surprised to find how few people in Brazil speak English - quite different from our previous visits. In 1999, in Salvador 10-year-old kids, hearing us speak English proudly announced in English, that they learned languages at school.

With Marlon's translating we had soon picked up our rental cars. For the coming month, we would be driving around Brazil in two Dusters, sold here under the Renault mark.

After two hours drive, we arrived at Marlon & Ariane's' home and met his mother-in-law to be plus the cats and dogs and family.

Just the drive from Marlon's to Hotel Estilo de Minas to go. Cliff and I had stayed here in 2009.

Diamantina is a wonderful picturesque town, but it's a nightmare to drive in. Steep hills, slippery in rain and drizzle on the smooth slave's trail with pedestrians and motorbikes weaving in and out from behind parked cars. But this is where the cafe's, bars and restaurants were and where the nightlife happens.



The Genus *Uebelmannia*

A genus of globular to short elongate solitary plants, day time flowering, self-fertile, apical to subapical, bee-pollinated. Elongated berry-like fruits, red to yellowish brown, dry and dehiscent when ripe. Few seeds (c. 5) per fruit, distributed by ants. Distinct juvenile and adult growth forms.

Endemic to Minas Gerais, Brazil. Plants grow on acid soils (down to pH 3.5!) on rocky granite slopes or in gently sloping snow white quartz sand. They can tolerate light frosts in habitat, but only for short periods.

Lode recognises three species and four subspecies.

* *Uebelmannia buiningii*

* *U. gummifera*
* *U. gummifera* subsp. *meninensis*

* *U. pectinifera*
* *U. pectinifera* subsp. *eriocactoides*
* *U. pectinifera* subsp. *flavispina*
* *U. pectinifera* subsp. *horrida*

PK comments & opinion:

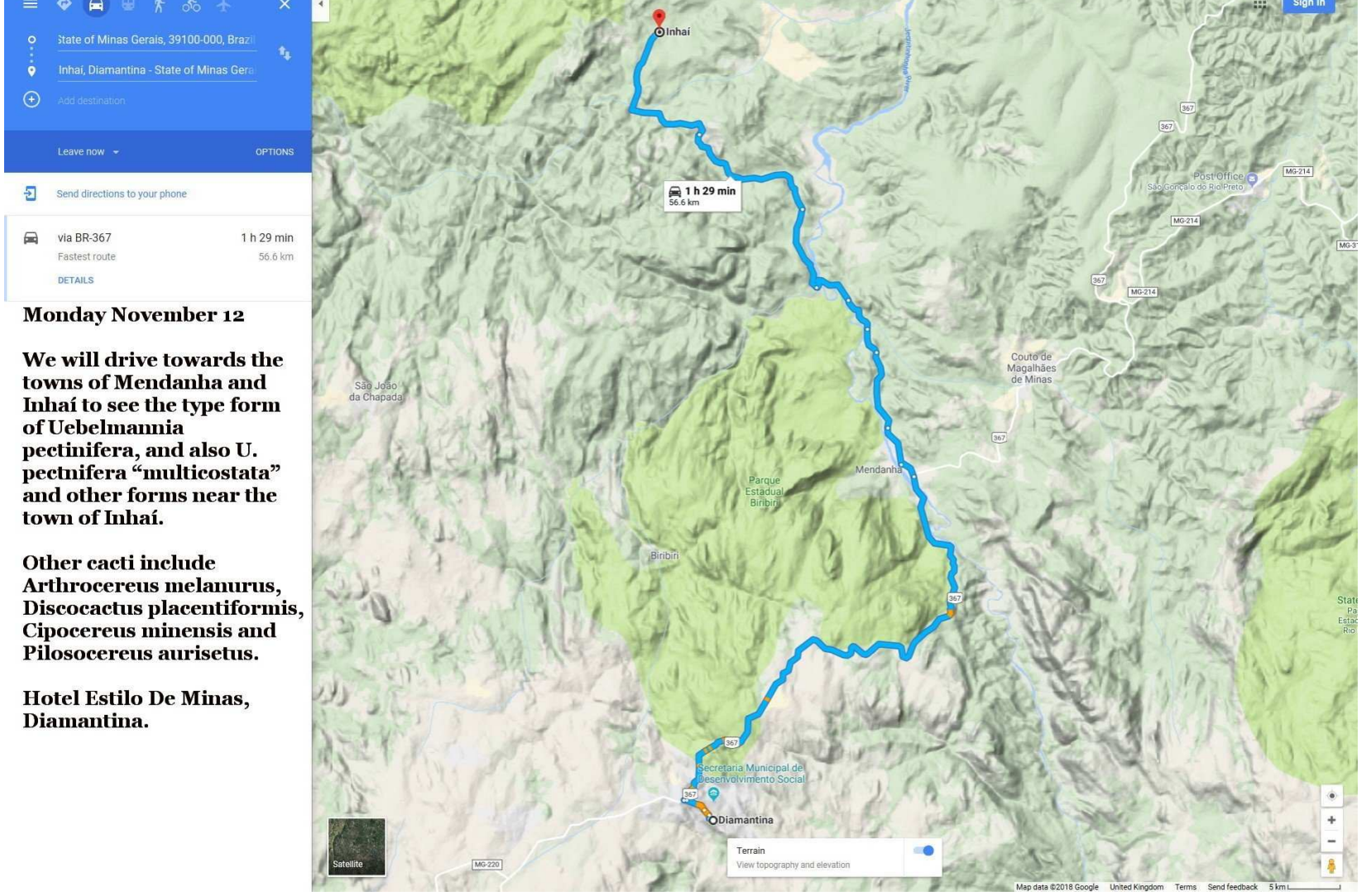
subsp. eriocactoides is nothing more than a juvenile form of subsp. *flavispina*.

Adult plants are reported to be identical to that taxon. It is remarkable that the spination of juveniles can vary in colour between different locations, while adult forms are the same in appearance.

Towards the end of this trip, Marlon took us to a different location for subsp. *horrida* which we failed to reach in 1999. The next day we revisited the plants near Inhai with similar long spination. Marlon believes that the two populations are quite close together and continuous with each other so perhaps not justified as a separate subspecies.

From a hobby perspective I would like to keep the name *horrida* as a species name as the impressive spination is certainly distinct.

What we had been calling the *'Uebelmannia pectinifera* Inhai form' in 1999 should probably be included under the name *U. horrida*.



Monday November 12

We will drive towards the towns of Mendanha and Inhaí to see the type form of Uebelmannia pectinifera, and also U. pectnifera "multicostata" and other forms near the town of Inhaí.

Other cacti include Arthrocereus melanurus, Discocactus placentiformis, Cipocereus minensis and Pilosocereus aurisetus.

Hotel Estilo De Minas, Diamantina.

Monday 12 November

Diamantina to Inhai and back

We were all excited to get out on the road. Diamantina is the ideal location for an 'Uebelmanniathon' as the stops during this and the next few days are all aimed at members of the Genus Uebelmannia. But the first stop today was the Supermarket, just as in 2009, where we stocked up on water and snacks for the day. By choosing our hotel, first in 2009, we were already out of town along the MG-367 and so soon turned towards Mendanha. It could take quite some time in the rush hour to get out and back into the Posada, where we stayed in 1999.

However, in 2018, while we stayed in the 'out of town' hotel, we were paying taxi fares of RS$ 100 for two taxis each way to drink in the lively centre of town. The 3,5 liter Beer Tower (split six ways) and up to three Caipirinha, each. Caipirinha is Brazil's national cocktail, made with cachaça (sugar cane rum), sugar, and lime.

But let's focus on photographing cacti, the real reason that we were here. So we drove to the type location for *Uebelmannia pectinifera*. It had rained during the night, and the rocks of the hillside that we had to conquer was steep an slippery. I let the group go first, knowing that I would be last up to the hill. I had become used to my clumsiness on such occasions so was extra slow and careful, but still managed to tumble down the hillside, only a meter or two, but enough to scrape my head, both arms and cut my knee. Nothing disabling, but the light drizzle made the bleeding look a lot worse than it really was. Another huge dent to my self-confidence was a lot worse! I shouted to the party that I had a tumble, was OK, but would stay at the bottom of the hill and wait for their return.

We found ourselves at the start of the wet season that was a lot more active in 2018 than it had been in 2009. An array of lichen covered the rocks and tree trunks. This became stop **S3653.** My camera saw *Cipocereus menensis*, *Cipocereus crassisepalus* and a *Velozia* sp. in flower.

Next, just outside Mendanah, there was an outdoor gymnasium next to a large tree with epiphytic cacti growing from the branches. (*Epiphyllum* and *Rhipsalis* sp.) (**S3654**). **S3655** (was **S1523** in 2009) was for *Discocactus placentiformis*, still







looking in good shape as on previous occasions.

S3656 had been named 'The Bridge' by us in 2009, HU850 by Horst & Uebelmann. In the Schulz and Machado book, the *Uebelmannia pectinifera* here were identified as var. *multicostata*. In 2009 we found the best plants by parking about 1 km before the bridge and clambering over some large rocks it is possible to find plants that grow in the dabbled shade of trees so that their body colour is as dark as plants found at Dutch nurseries. After yesterday's tumble and with temperatures close to 40C, I decided to sit this stop out and did a bridge inspection instead, finding a comfortable rock on the other side.

We drove past the Inhai site, just a few kilometers south of the village and went on to take some liquid refreshments at the small bar at the end of the village.

Back at 2009's Inhai stop, (S15__) I was sorry to see the party cross the river and disappear up the hill. The cut over my right kneecap, sustained in my fall hurt too much to join them, especially as I had been several times to the top before. Rest seemed the best option.














Posto Vista da Serra

Monday 12 November

Diamantina to Inhai and back

As we'll see in days to come, taxa in the *U. gummifera* complex all have distinctly larger flowers and when their epidermis is damaged, it oozes a kind of gum. When the plants were first brought into cultivation, this confused growers, whose first instinct was to graft the plants, but the gum made this very difficult.

At one of the locations, Marlon was helping with a population study that involved tagging and making observations about each plant. Sadly, it seems that each tagged plant had died or was dying. At this time we could only speculate about the cause, but clearly, we want to learn from this - learning about plants in habitat should not involve killing them.

I had almost forgotten how difficult it is to select just a few images for the Cactus Trip Diaries. I've just gone with those images that show the diversity within a single group of plants and some of the environmental features. Then I'll go through my 1999 and 2009 images, maybe remove a few here that tell the same story and maybe add a few more.

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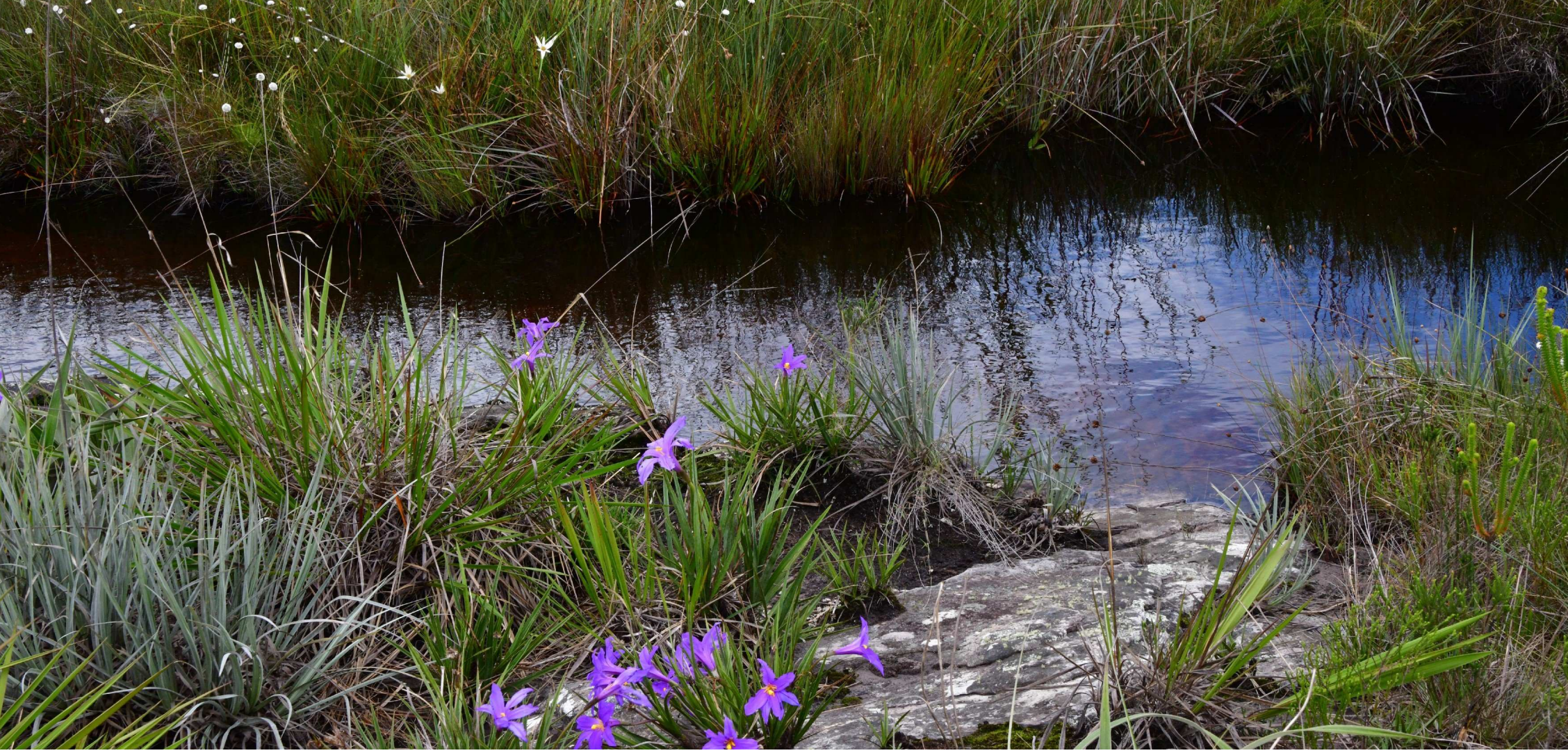

Typical *Uebelmannia* country can look like a marsh with streams, tall grasses, *Veloziaceae* and orchids

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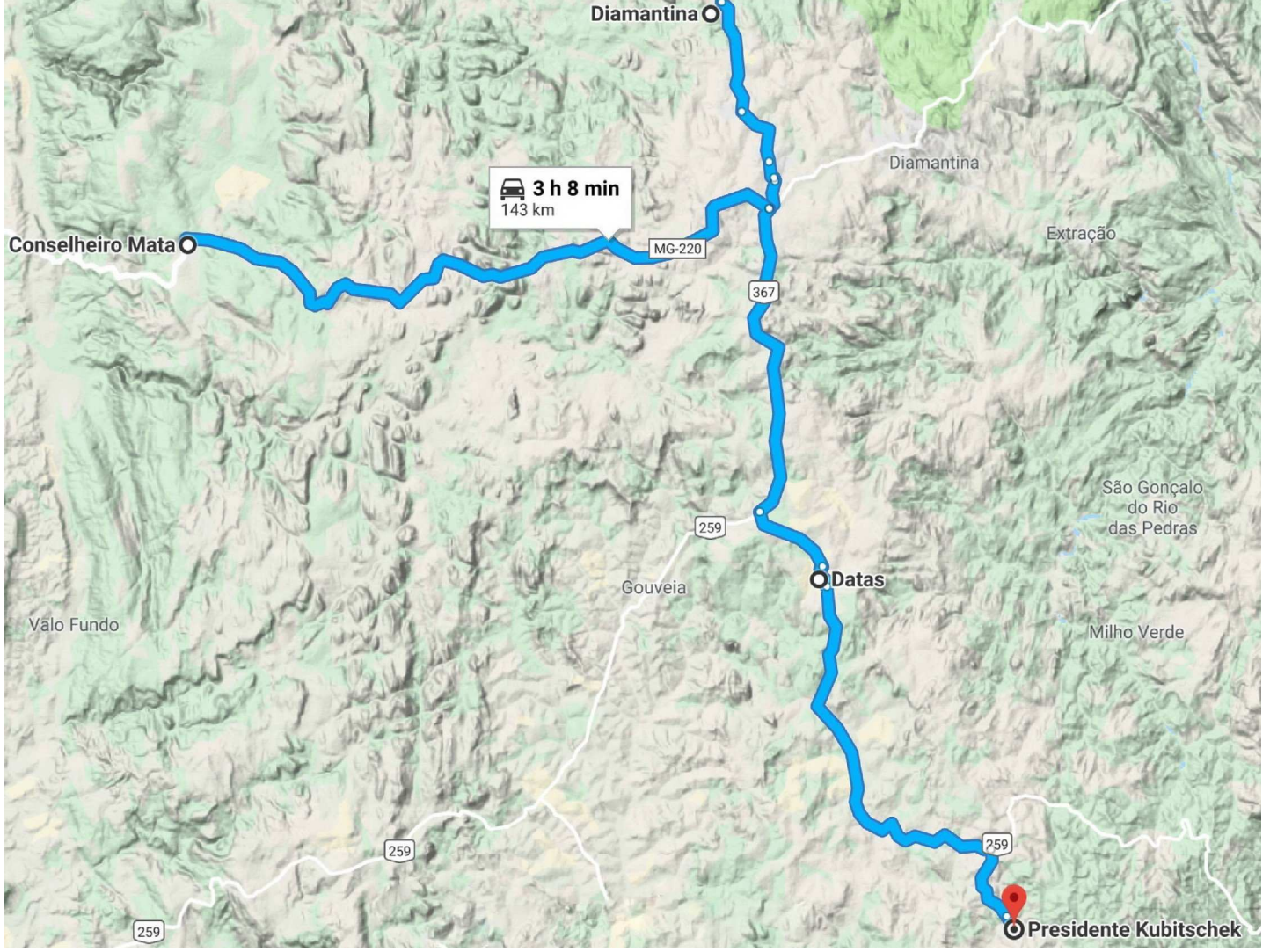

Tuesday 13 November

Diamantina to Datas and back

If the Inhai population is one end of the U. pectinifera complex than here, around Datas, is the other end. The rib count can vary from population to population as can the colour of the epidermis but this could be due to environmental factors, They all have small flowers and fruits that contain only some 5-6 seeds. They tend to share their habitat with a range of orchids and the usual *Veloziaceae*. Each time I saw them they were growing on rocky islands in a few inches of water.

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Diamantina - Itamirandaba

The *U. gummifera* group

Our target plants today are all members of the *Uebelmannia gummifera* group and could all be regarded as regional forms of *U. gummifera*. The road (often no more than a slippery wet dirt track) took us past Pedra Menina (*U. gummifera subsp. meninensis),* Penha de Franca (*U. gummifera subsp. gummifera)*, and Sao Domingos. As in 2009 we found a hotel in Itamirandiba.



S3660 - *Uebelmannia pectinifera* subsp. *flavispina*



S3659 - Orchids in flower











S36 : Uebelmannia pectinifera flavispina
Mature plant with clear ribs and two seedlings with juvenile spination.



Wednesday 14 November

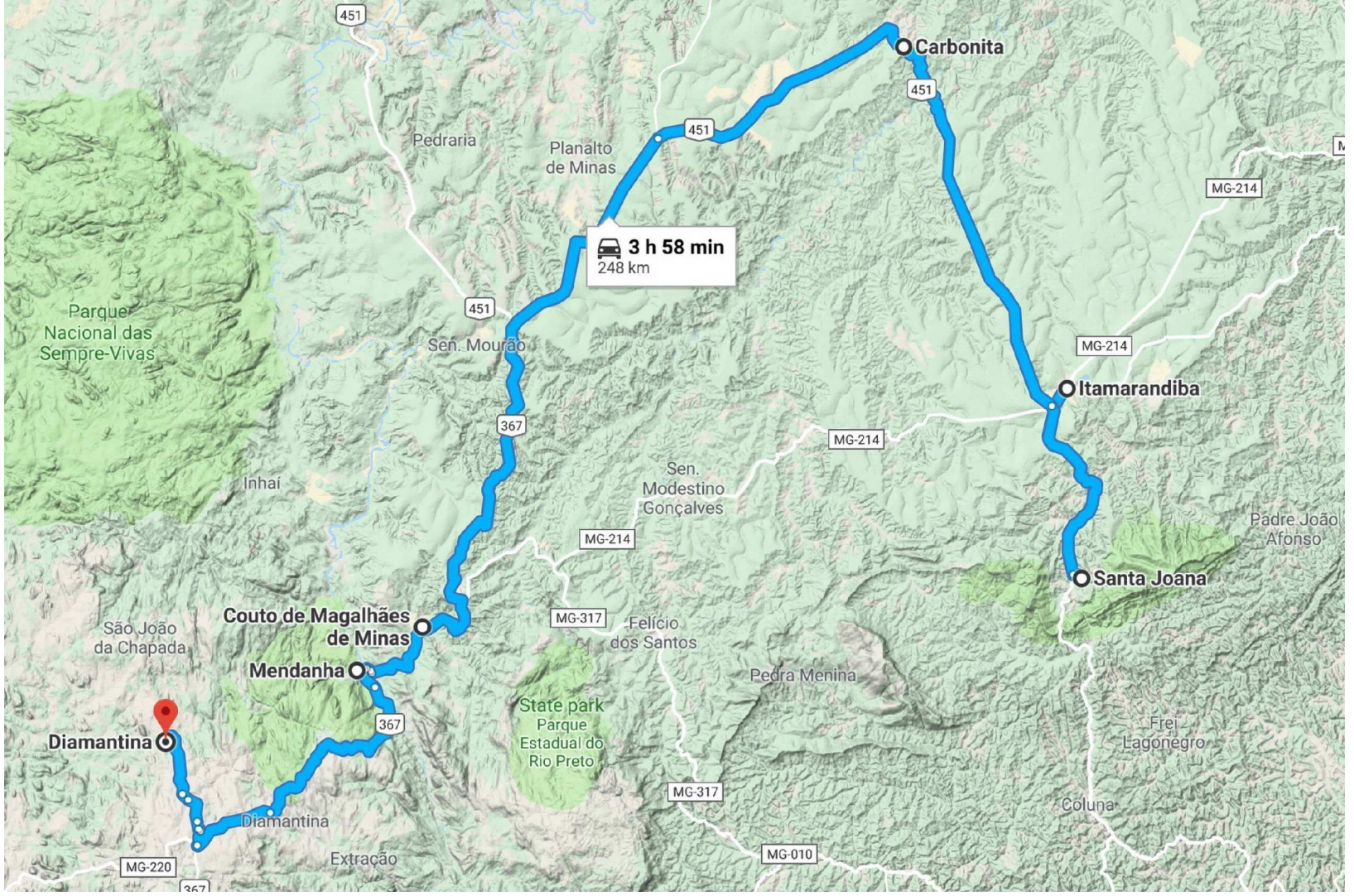


Uebelmannia gummifera subsp. *meninensis*

Uebelmannia gummifera subsp. *meninensis fa. rubra*



Ski-ing in the snow? At 36 C?
Not on snow white quartz sand!



Friday 15 November

Itamirandiba to Diamantina

We managed to visit *Uebelmannia gummifera* subsp. *meninensis* in 1999, after a brief reception by the mayor and a second member of the city council, dressed in suits on a day that was much too hot for looking smart. In 2009, without Marlon, but working from his very detailed notes, Cliff and I managed to make our way to the 'drive through' site of *U. gummifera*. However, *U. buiningii* had always eluded me. It is the most remote, from Diamantina, if you want to see the other members of the group as well. But here it is!! Found by Jared, found by looking over my shoulder (I was sitting on a rock!) and asking:'Is that one?' You bet!

I understand that three more were found at the other end of the site. We just need to find *Uebelmannia horrida* to complete the set, planned for the end of the trip.



Uebelmannia buiningii

Fire! But a controlled one: Charcoal production, burning *Eucalyptus* wood.

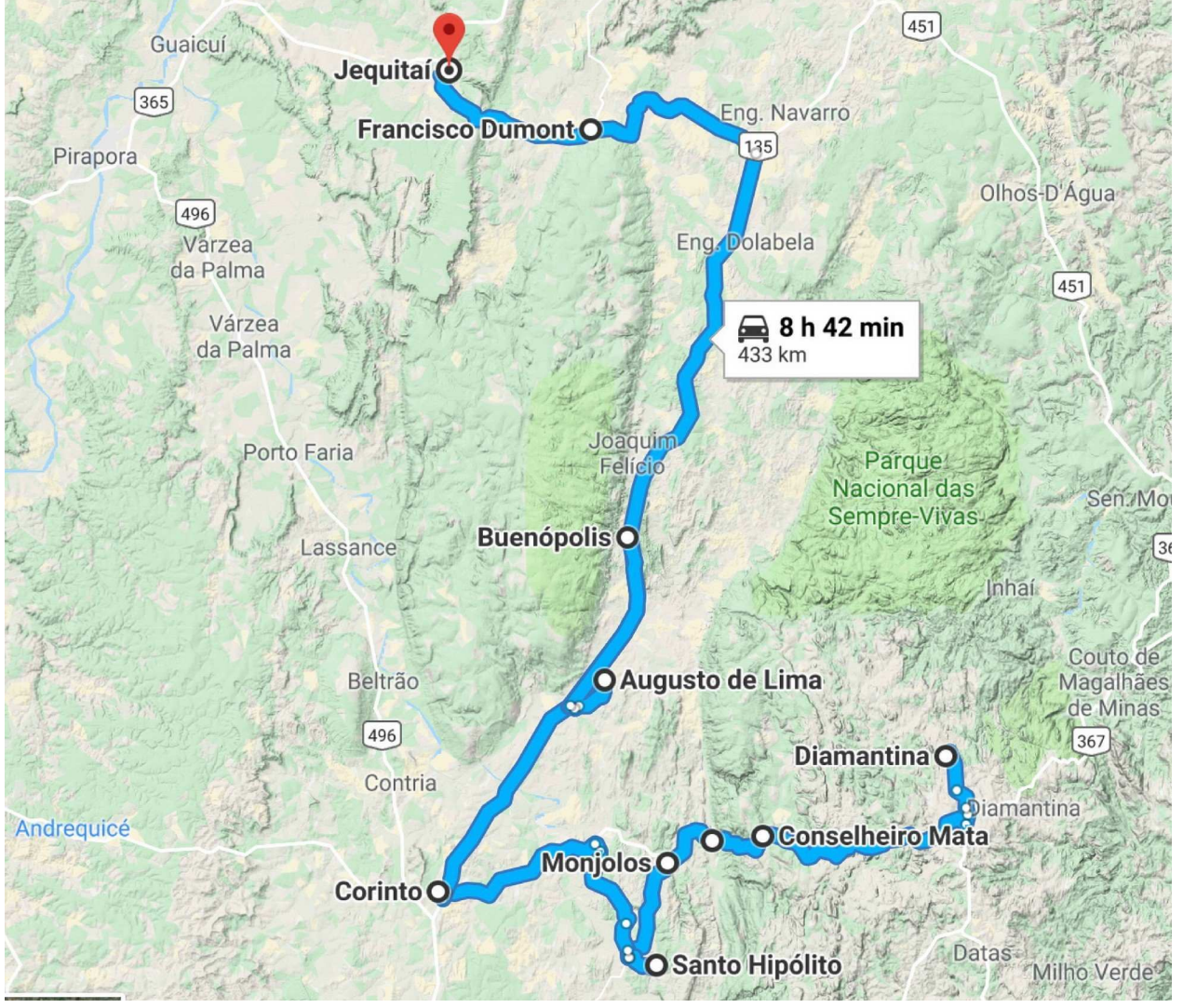
Uebelmannia gummifera: damage by borer beetle?



Uebelmannia gummifera subsp. *gummifera*



Uebelmannia gummifera subsp. *gummifera*



Friday 16 November

Diamantina to Jequitai

Today we leave *Uebelmannia* country but will come back at the end of our journey to see the final taxon for a full house: *Uebelmannia horrida*.

Before we left for Itamirandiba, we left our washing at the hotel in Diamantina for pick up today. However, the washing was delayed and so was our departure for today's cactus adventure.

Our first stop was for a *Discocactus* population that had survived a flash fire that had damaged the epidermis but had not killed the plants. In fact the plant was in bud, ready to flower tonight.

We now switch our focus to cacti in the genus *Arrojadoa*.



Discocactus sp with fire damage to the epidermis

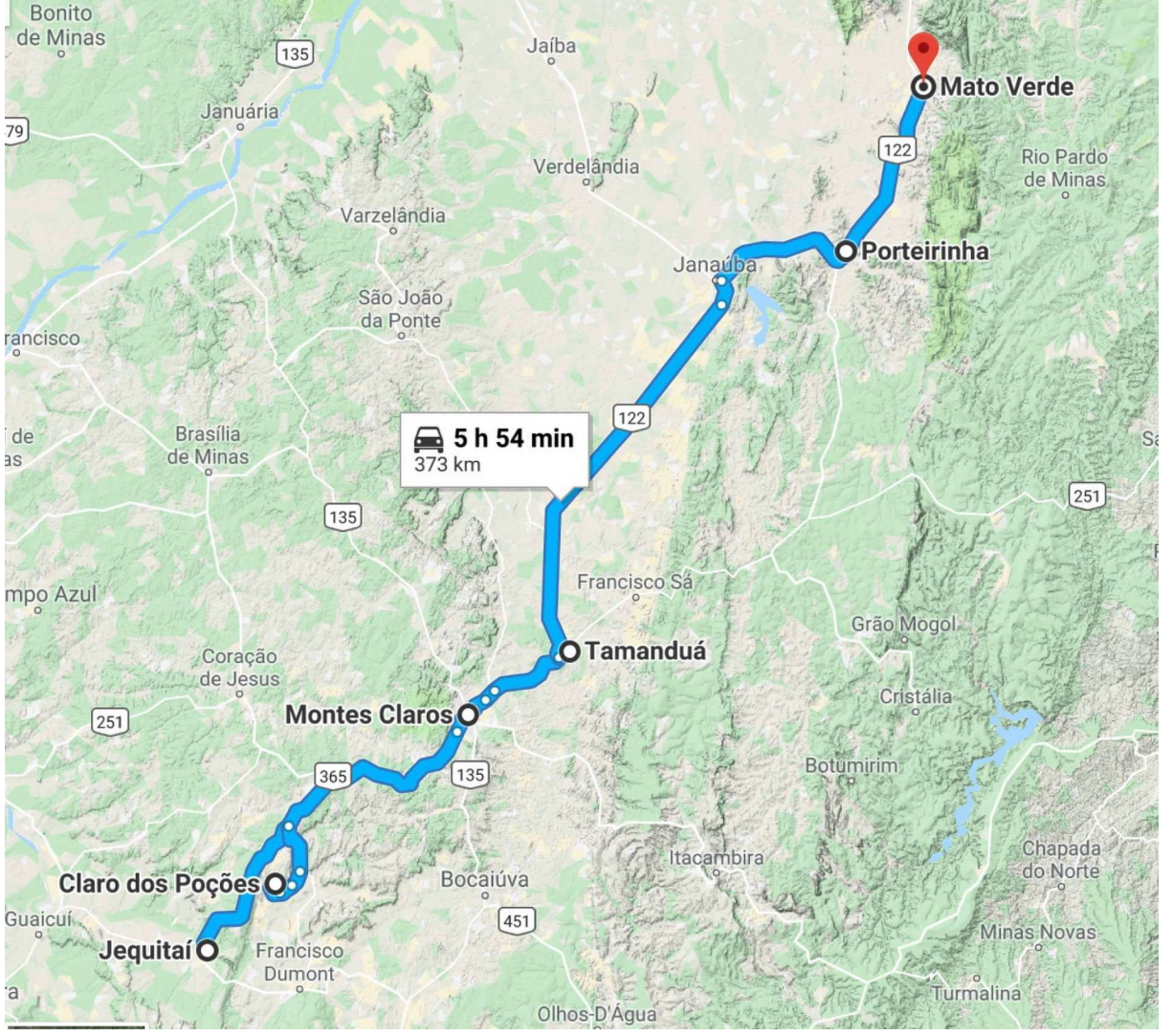


Young stems of *Cipocereus bradei.*



Discocactus placentiformis





17 November 2018

Jequitai to Mato Verde





Quiabentia zehntneri











The Genus *Arrojadoa* Britton & Rose, 1920

Arrojadoa is a genus of cacti, comprising six species and several varieties. It is named after the Brazilian botanist Miguel Arrojado Lisboa (1872–1932) who was superintendent of the Brazilian Railways at the time that Britton and Rose described the genus in 1920.

The genus is endemic in northern Brazil and is found at rocky places, under shrubs, which support their frail stalk. They are subtropical plants, with very little frost tolerance.

The species often have frail stalks that can be upright or procumbent, reaching 2 m high and about 2 to 5 cm thick. Stems have 10 to 15 ribs, branching is rare, and usually occur from the base.

The flowers are nocturnal and tube-like, measuring 1 to 3 cm in length and 0.5 to 1 cm in diameter. Flowers emerge from a ring cephalium and can be pink or carmine in colour. The fruit is berry-like, spherical with a maximal diameter of 1.5 cm, and pink or red when ripe.

These tropical cacti are not very easy to grow. With their snake-like growth, they are ideal cactus for hanging baskets. They are growing relatively rapidly in good conditions. It multiplies more by seeds than by cuttings. It grows best on slightly humid soil and with plenty of watering from spring to autumn. Keep dry during winter with a minimum temperature of 10 °C.



Arrojadoa albiflora

Arrojadoa bahiensis

Arrojadoa dinae
subsp. *eriocaulis* (syn. *A. beateae*)

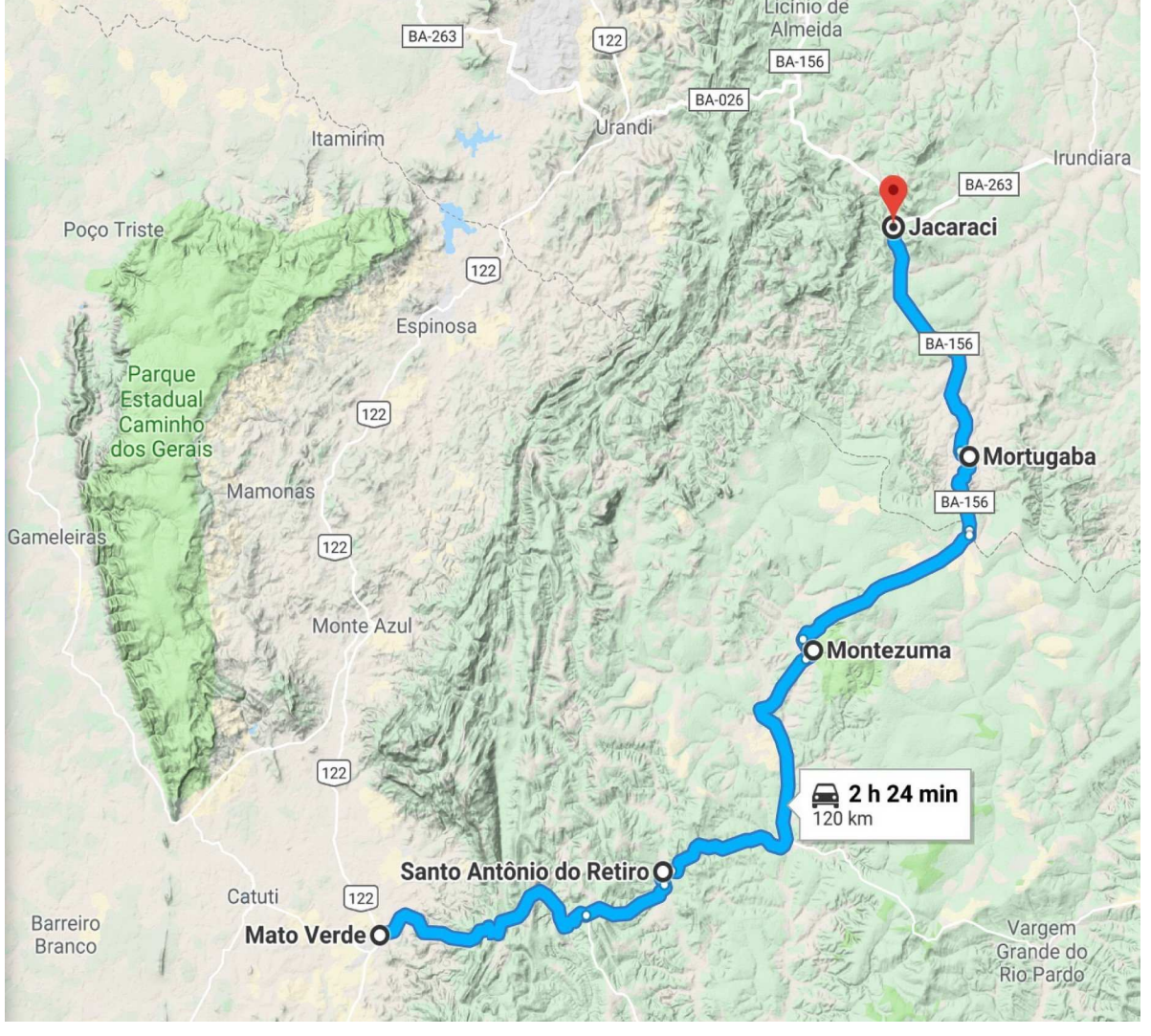
Arrojadoa marylanae

Arrojadoa penicillata

Arrojadoa rhodantha
subsp. *aureispina*
subsp. *rhodantha* (syn. *A. canudosensis*)







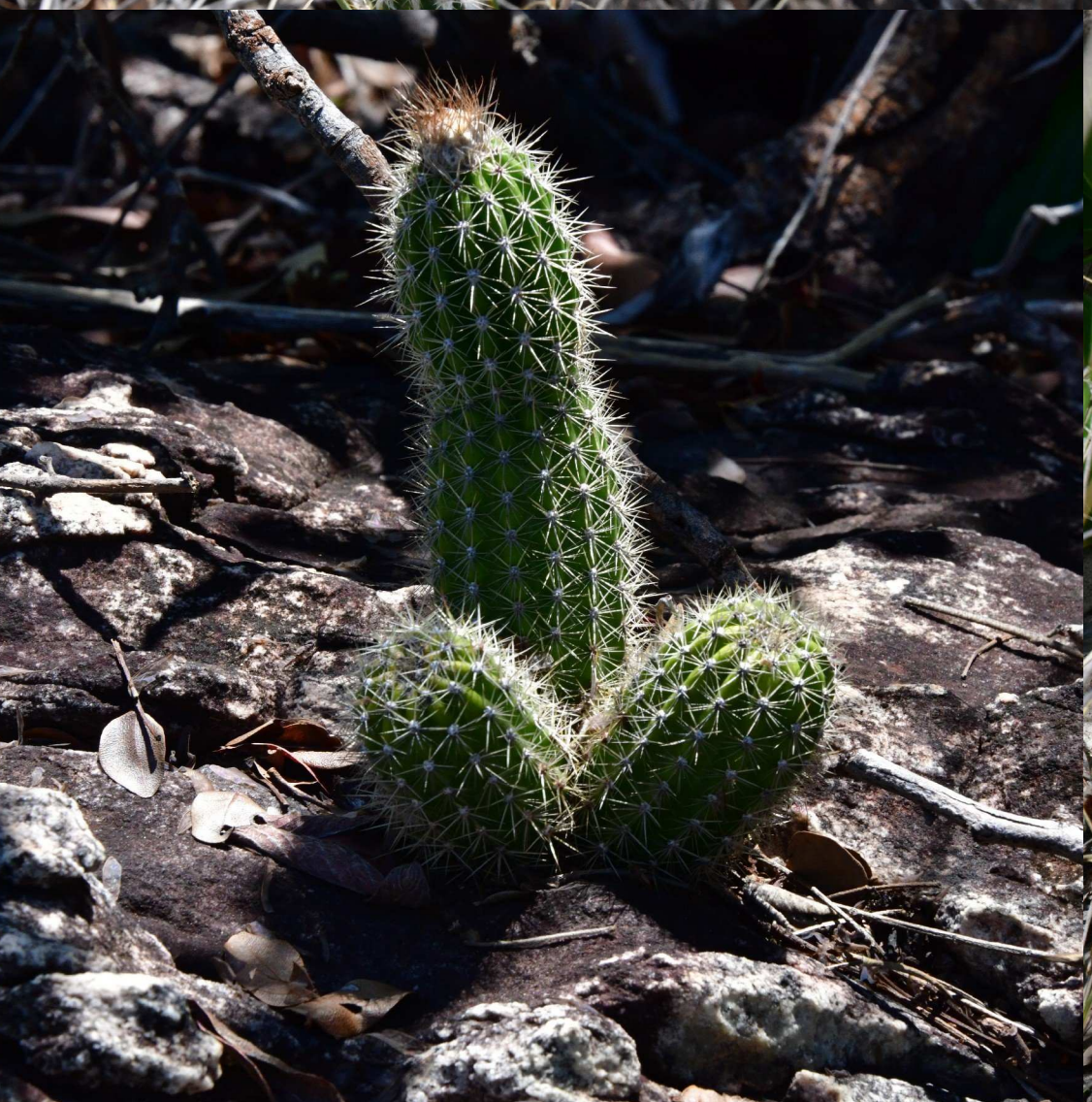
18 November 2018

Mato Verde to Jacaraci



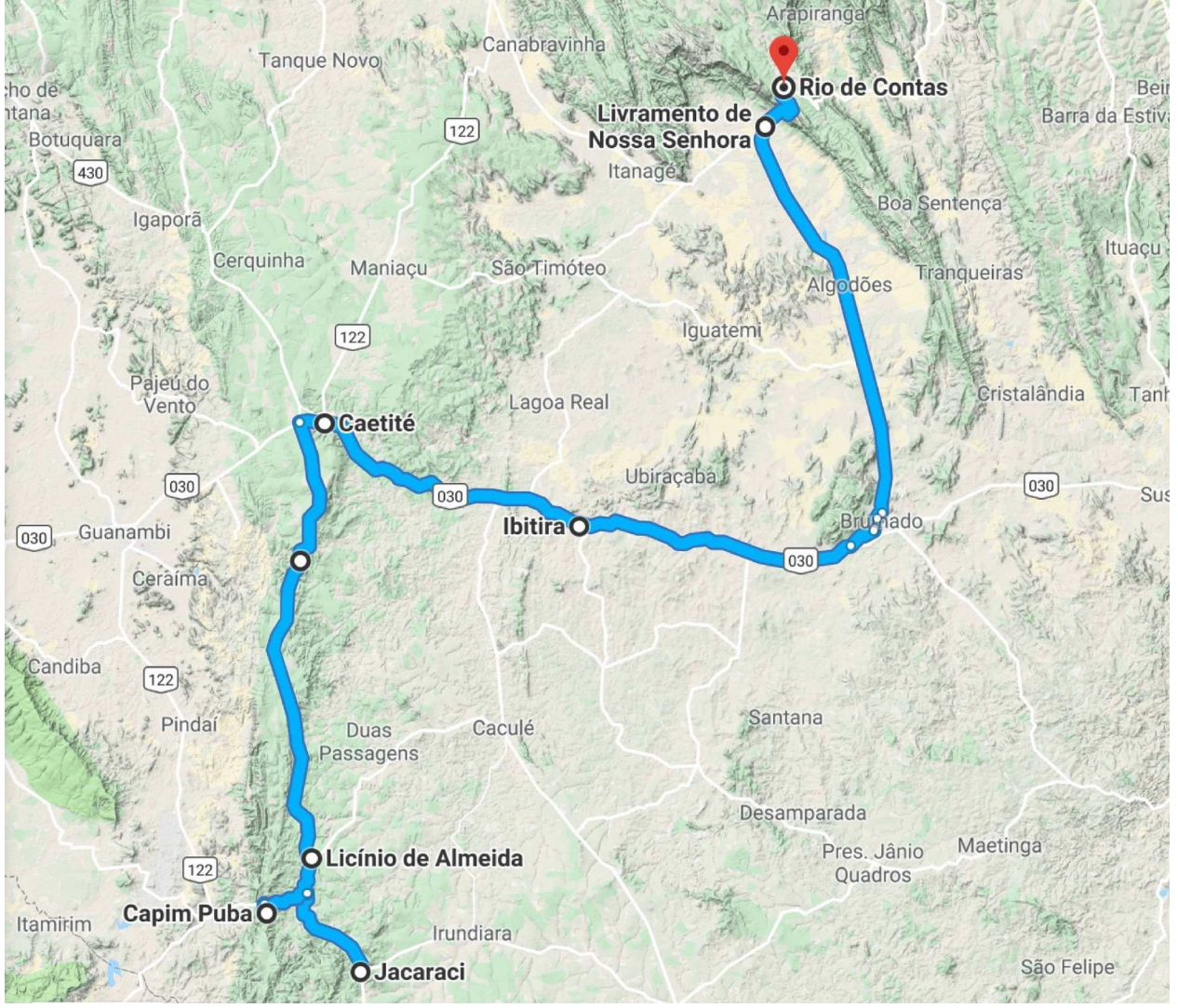


Arrojadoa eriocaulis









19 November 2018

Jacaraci to Rio de Contas

I've already mentioned how green and lush the NE of Brazil looked compared to previous visits. However, there was another difference in the landscape: the appearance of wind turbines to create clean renewable energy. As you would expect in the fifth largest country in the world, the wind farms are some of the largest in number that I have seen on land - the seas around the English coast are rapidly approaching similar numbers. Fingers crossed that this positive development does not turn out to have some long term negative effects on nature. For now, I have to admit that they can be quite photogenic.


neoenergia

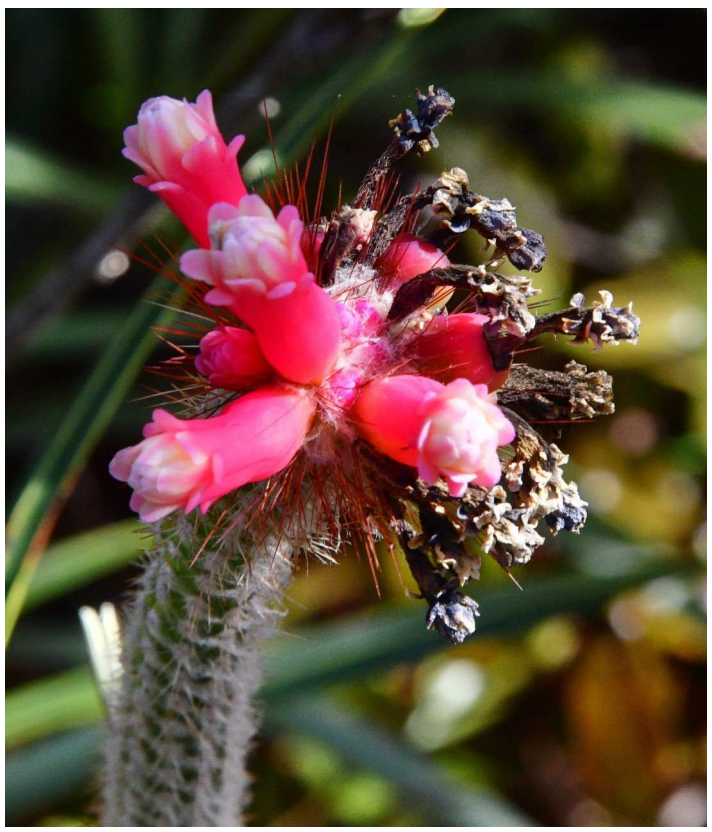
Top left:
Arrojadoa

Top right: *Arrojadoa eriocaulis*

Bottom left:







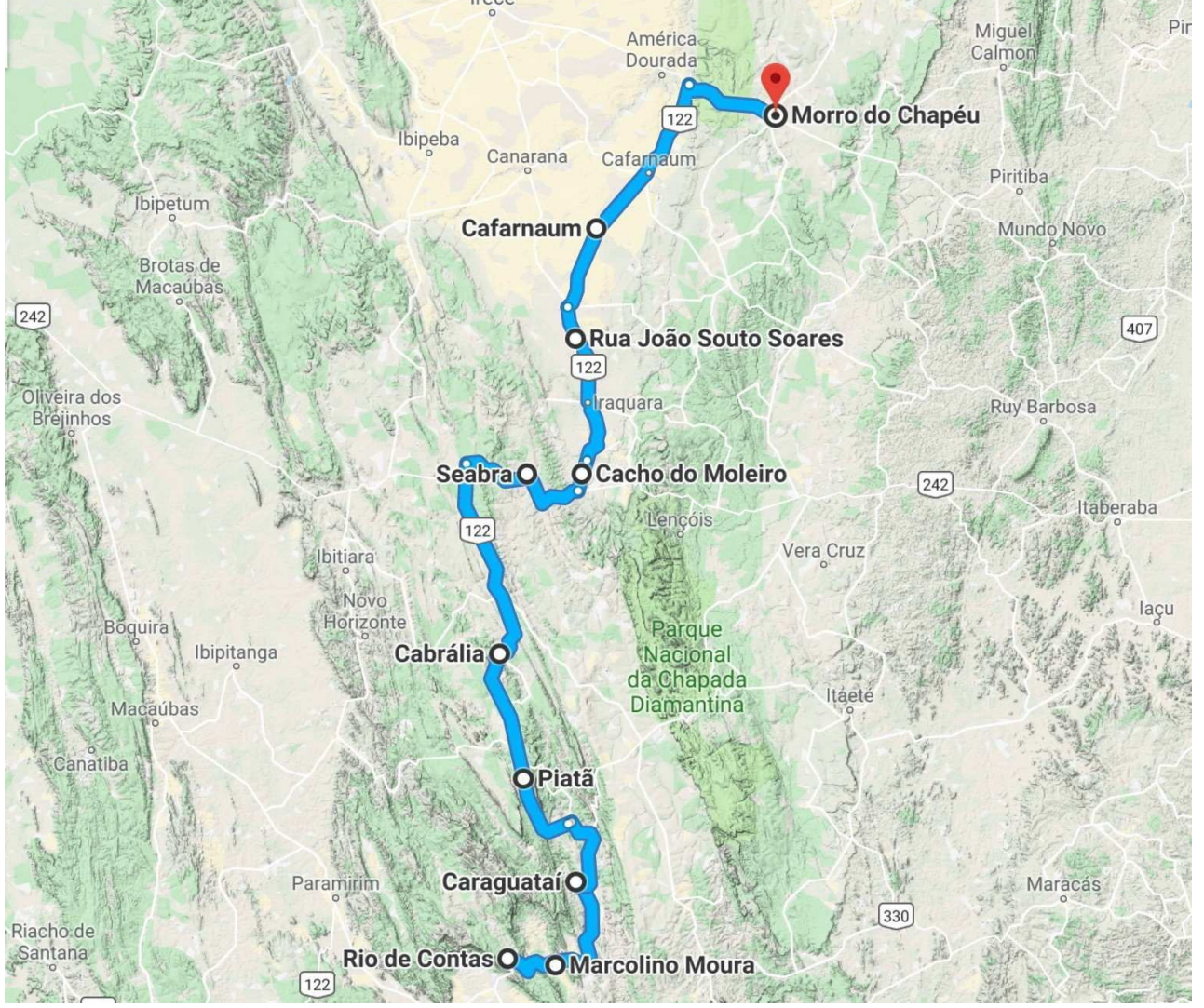




Coleocephalocereus (*simplex*) *goebelianus*



Micranthocereus violaciflorus



20 November 2018

Rio de Contas to Morro do Chapéu

During our previous two visits to north eastern Brazil, Morro do Chapéu had become a firm favourite of mine.

We stopped some 20 km west of town on BA-052, at the same stop that we visited several times in 1999 and 2009. Originally, we christened this 'the *boomianus* site', because of the presence of a dense population of *Discocactus zehntneri* subsp. *boomianus*.

Since then, it has also been referred to as '*Succulentum Maximus*' as I've photographed 17 different taxa of cacti and other succulent plants here. I'll have to compare this to a spot along MEX1 in Baja California Norte where we found a similar number.

On this occasion, the sun had past its 'best by' moment for photography so we did not stay as long as on past occasions, but for the record, here are the taxa recorded from here over the past twenty years:

Arrojadoa rhodantha
Cereus albicaulis
Cereus jamacaru
Discocactus zehntneri subsp *boomianus*
Dyckia sp.
Euphorbia phosphorea
Euphorbia sarcodes
Leocereus bahiensis
Melocactus albicephalus
(*M. erythracanthus* x *M. glaucescens*)
Melocactus concinnus
Melocactus ernestii fa *erythracanthus*
Melocactus glaucescens
Micranthocereus flaviflorus
subsp. *densiflorus*
Pereskia bahiensis
Pilosocereus gounellei subsp. *zehntneri*
Pilosocereus pachycladus
Tacinga inamoena

In addition, another 20 taxa can be found around the town:

Arrojadoa penicillata
Discocactus bahiensis subsp. *gracilis*
Harrisia adsendens
Melocactus ferreophilus
M. pachyacanthus
+ subsp. *viridis*
M. paucispinus
M. zehntneri 'douradoensis'
Micranthocereus polyanthus
subsp. *alvinii*
M. purpureus
Pilosocereus caatingicola
P. glaucochrous
P. pachycladus
P. pentaedrophorus
P. tuberculatus
Pseudoacanthocereus brasiliensis
Stephanocereus leucostele
S. leutzelburgii
Tacinga funalis
Tacinga palmadora and *T. werneri*

It is no surprise that many of these plants are now protected. The Parque Estadual do Morro do Chapéu (Morro do Chapéu State Park) covers an area of 46,000 hectares and was established in 1973, but no action was taken to implement the park.

A team from the State University of Feira de Santana concluded a study for a new polygon to define the area of the park. As of 2011 problems had been caused by opening a road inside the park, hunting, deforestation, logging and complete lack of surveillance, particularly in the west of the park. Land owners had still not been compensated. In addition to the cacti, there is a wealth of orchids and bromeliads and big cats (cougars) also benefit from the protection offered in the park

In 2009 we stayed in the comfortable ecohotel Pousada Ecologica das Bromelias and hoped to stay there again this time but they had increased their prices greatly. We had seen much more basic accommodation along the BA-052 so that , once again, we enjoyed a room each.

Marlon contacted Father Delmar and invited him to join us at the excellent Italian restaurant in town where, in 2009, Cliff and I took Father Delmar for our Christmas meal. Great memories came flooding back.



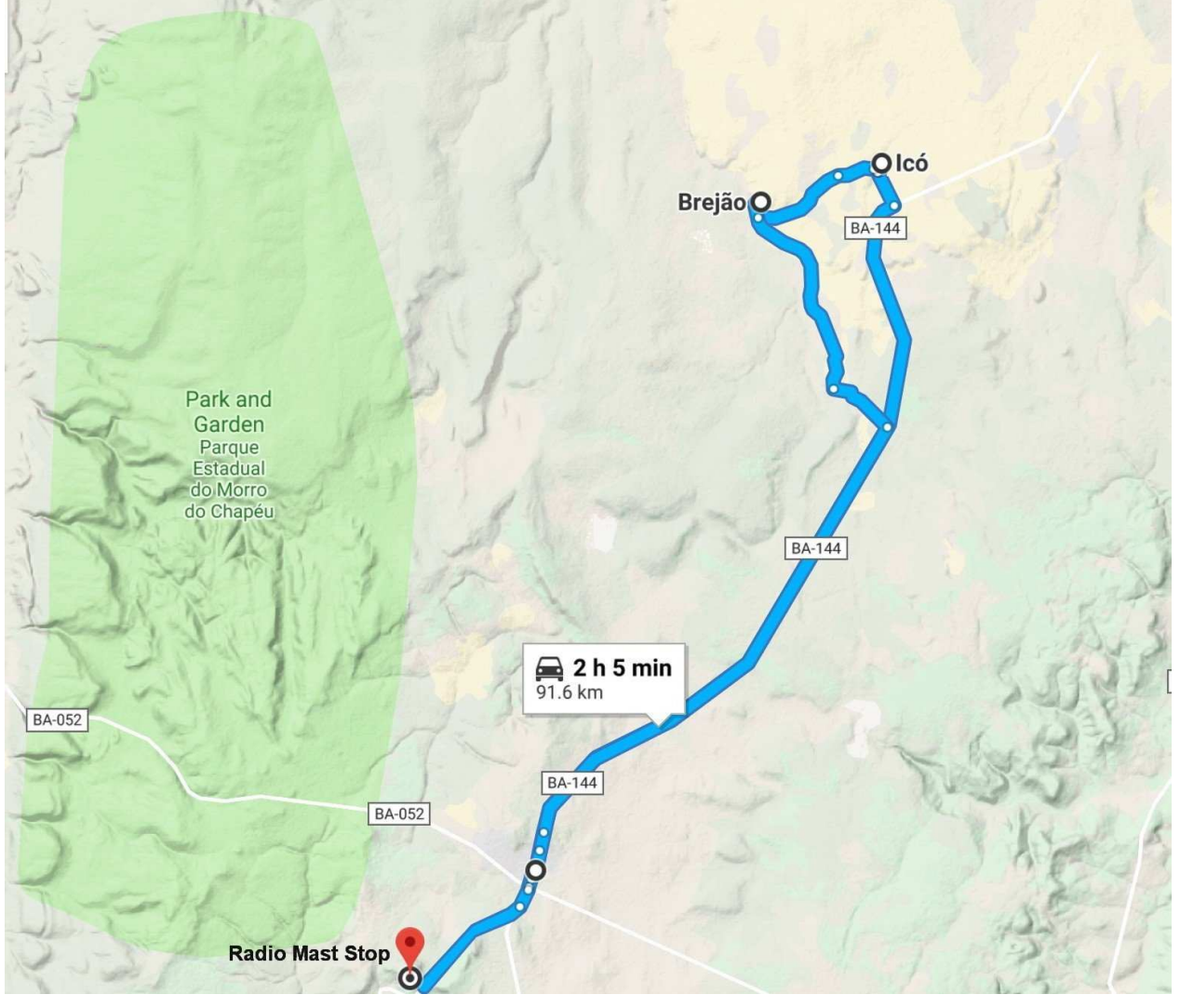
Pereskia bahiensis
Seabra



Discocactus zehntneri subsp. *boomianus*



Pilosocereus gounellei subsp. *zehntneri*



21 November 2018

Around Morro do Chapéu

As soon as breakfast was over , we left to pick up Father Delmar, a senior citizen who for many years had run an orphanage in town with a keen interest in nature with orchids in particular.

In 1999 we had first met him with a group of students staying in the same hotel where we were given a frosty welcome over breakfast. Marlon asked him if we had upset him or his students. 'I don't like Americans' he said. Wrong! we are British and Dutch. 'You've come to steal our Orchids!' Wrong! We've come to steal your cacti, but only their pictures, we support conversation! He began to warm to us and told his students to be nice to us.
In 2009 Marlon excused himself to spend Christmas with his family. Could we have contact information to meet Father Delmar? Sure. We were both fluent, in different languages, but, using Google Translate and a lot of waving of hands, arms and legs, we managed fine. For our days together, he acted as our guide and we took him to the best (Italian) restaurant in town for dinner on Christmas Day, where he knew everyone.

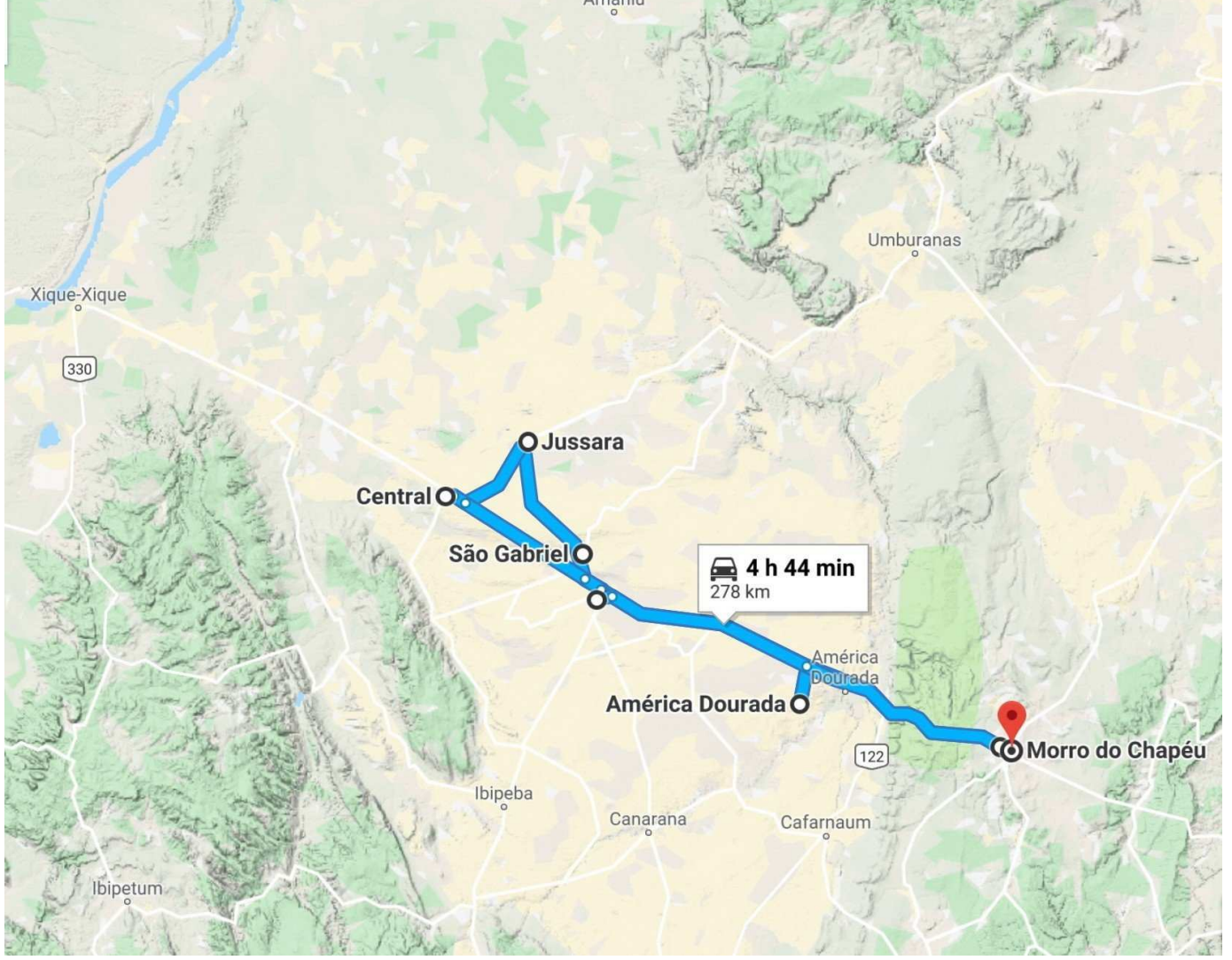

João Pessoa-PB



Micranthocereus polyacanthus subsp. *alvinii*



Micranthocereus purpureus



22 November 2018

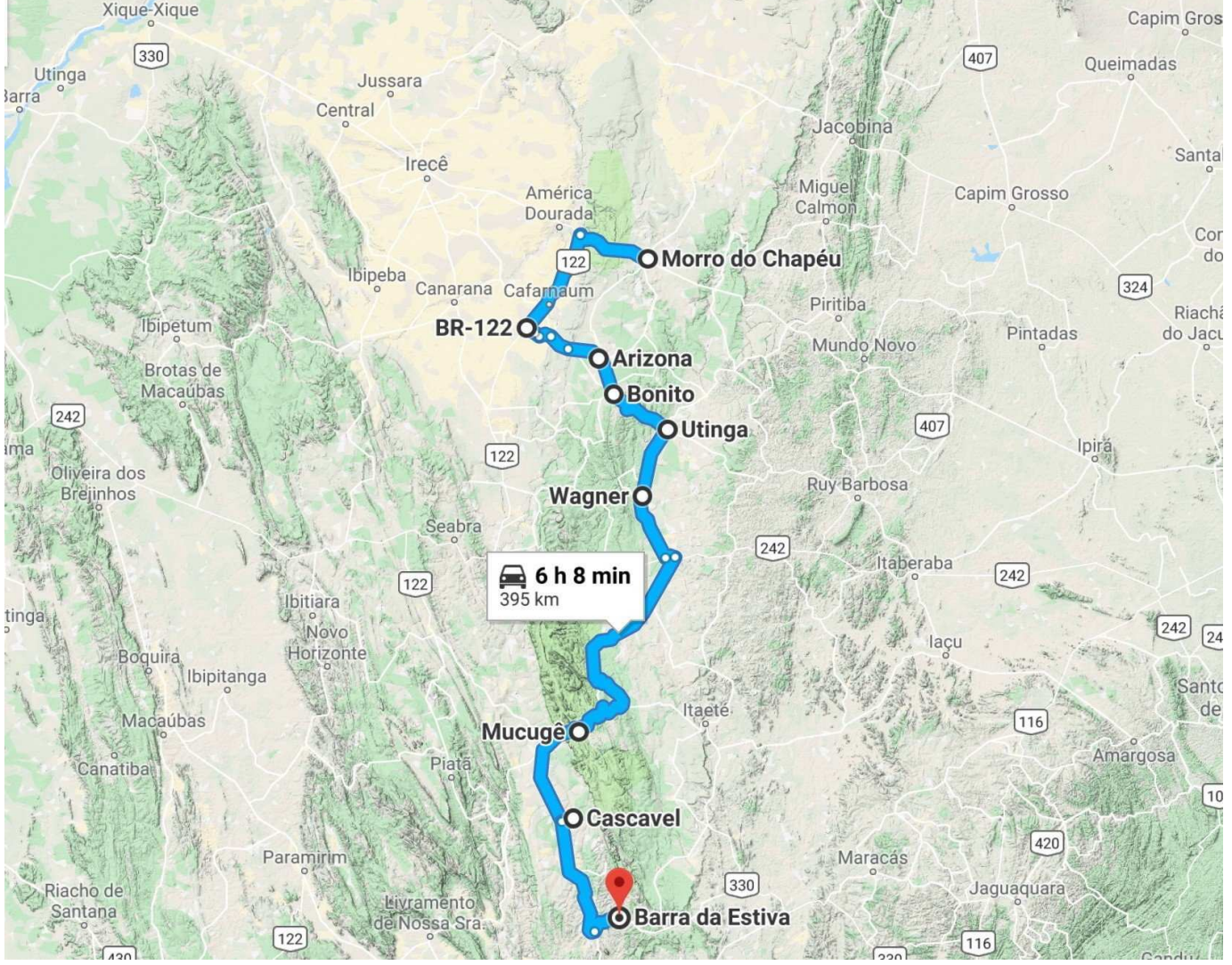
Morro do Chapéu - Irece

Melocactus azureus
Young plants are azure blue in colour. After the cephalium begins to form, the azure blue colour fades.









23 November 2018

Morro do Chapéu to Contendas do Sincora

We were ready in good time for today's 395 km journey south. All were in good spirit, until I spotted the puncture in Alain's Duster. As usual there were more people than needed to change the tyre. Dusters appear to pack only an emergency tyre, a polo mint sized tyre with a maximum speed of 86 kmph. Fortunately there was a tyre repair stop just a few km up the road, where the tyre was soon fixed.

In 2002 Marlon took a picture of a *Cereus jamacaru* that he called 'Giant'. In 2006, he showed the plant to Nigel Taylor and Daniela Zappi, who also took its picture for the inside cover of their book Cacti of North East Brazil, suggesting that this was probably the biggest individual of *Cereus jamacaru*. In 2009, Cliff and I took its picture again and today, probably even larger than on previous occasions, we took its picture again.

Next stop was again for the cactus stop where we had found most cactus and succulent plant taxa in one spot, to show us the *Pilosocereus gounellei* with the longest spines that he had seen.


A Tale of Two Dusters
and a nail
Consul
DUSTER
DUSTER





Pilosocereus gounellei

Melocactus zehntneri
(blue form; syn. *Melocactus douradoensis)*



Discocactus bahiensis



Brazilian Burrowing owl
(*Athene cunicularia grallaria*)

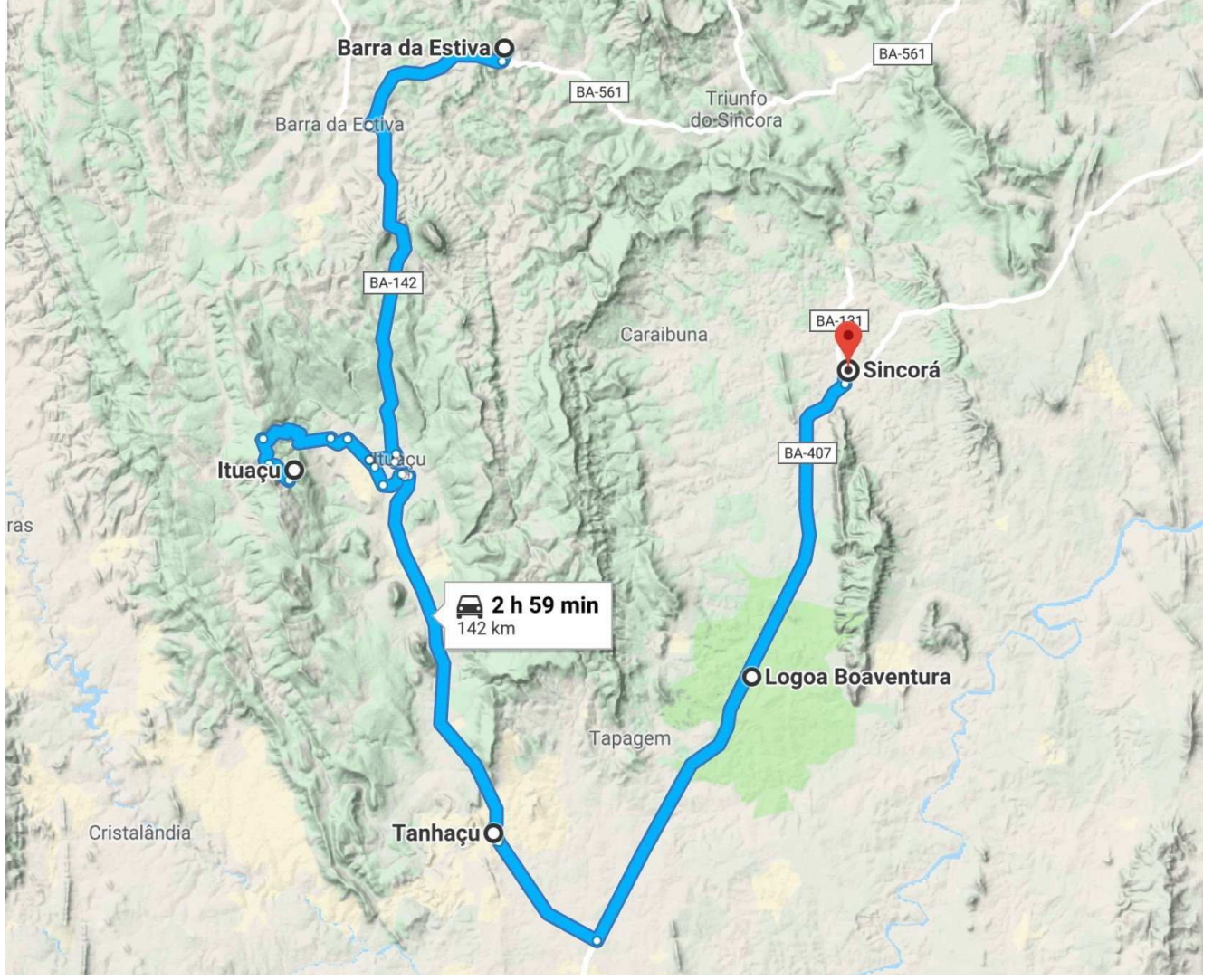




Cemiterio Santa Izadel, Mucuge
Pierebraunia bahiensis can still be found growing in the rocks behind the highest monument.



Pierebraunia bahiensis



24 November 2018

Contendas do Sincora to Sincora

Our first port of call was the protected area of the Floresta Nacional Contendas do Sincora where Marylan Coelho was involved in projects that teaches people from the local community about the plants with which they share their environment.

There are basic facilities that allow guests to stay overnight and to enjoy local food. Marylan and the project manager took us along a nature trail, together with the project photographer who had displayed an exhibition of plants and animals that had been spotted along the trail and that where neatly labelled, making our task of identifying them that much easier. It included animals in the cat family that are only seen at night, which due to their size, might be just as well.

A new Arrojadoa sp!



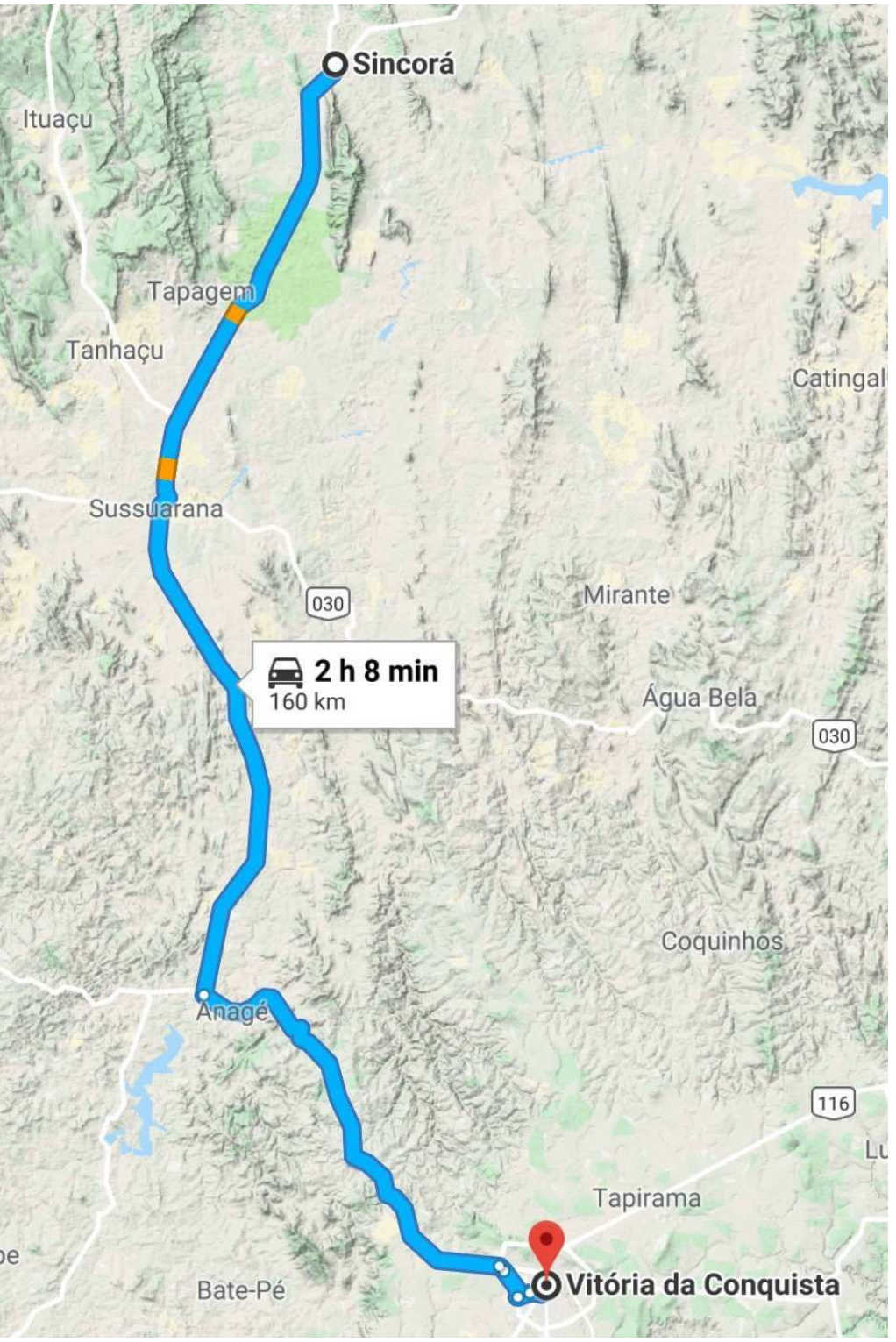


Arrojadoa sp. nova





Espostoopsis dybowskii



25 November 2018
Sincora to Vitoria da Conquista

Today is entirely dedicated to visit the site in the Serra Escura (the Dark Mountains) which is the only place on earth where the unique *Arrojadora marylaniae* is found in nature - for now.

Work has started to ensure that this plant will be extinct within the following six years and that one of three reported locations of *Espostoopsis dybowskii* will also have disappeared.

The full story of the of the *Arrojadoa* has been fully covered elsewhere, so I will limit myself to reporting events of the day.



FAZENDA
SERRA ESC

FAZENDA

SERRA ESCURA

SELEÇÃO NELORE




MINAS STONES
MINERAÇÃO
AUTORIZAÇÃO DE SUPRESSÃO DA VEGETAÇÃO NATIVA
Ciclos
O INSTITUTO DO MEIO AMBIENTE E RECURSOS HÍDRICOS - INEMA
Processo nº 2015.001.000155/INEMA/LIC-00155
Requerido por: MINAS STONES MINERAÇÃO LTDA / CNPJ 09.095.817.0001-65
RESOLVE:
Art. 1.º - Conceder: § 1º - AUTORIZAÇÃO DE SUPRESSÃO DA VEGETAÇÃO NATIVA, válida pelo prazo de 2 (dois) anos, para implantação do Projeto Serra Escura, em uma área de 36,09 ha, sendo 8,18 ha de APP de Topo de Morro e 0,03 ha de APP de Mata Ciliar, inserida no imóvel rural denominado Fazenda Serra Escura II, no município de Tanhaçu;BA, delimitada conforme poligonal formada pelos pontos sob coordenadas UTM (24L) 271962/8427576; 272583/8427635; 273207/8426365; 273000/8426365; 272799/8426850; 272585/8426853; 273206/8425633; 273047/8425633; 272498/8426868; 271438/8427216; 271435/8427689; 271877/8427433; 271877/8427322; e 271960/8427322, com rendimento de material lenhoso estimado em 6,25 m³ ou 9,38 st;
§2.º - LICENÇA DE INSTALAÇÃO, válida pelo prazo de 03 (três) anos, para implantação do Projeto Serra Escura, visando futura lavra de quartzo destinada ao uso industrial, com produção anual de 480.000 t/ano, em área relativa ao processo DNPM N.º 870.218/2004, contemplando toda infraestrutura operacional, localizado na Fazenda Serra Escura II, no município de Tanhaçu.









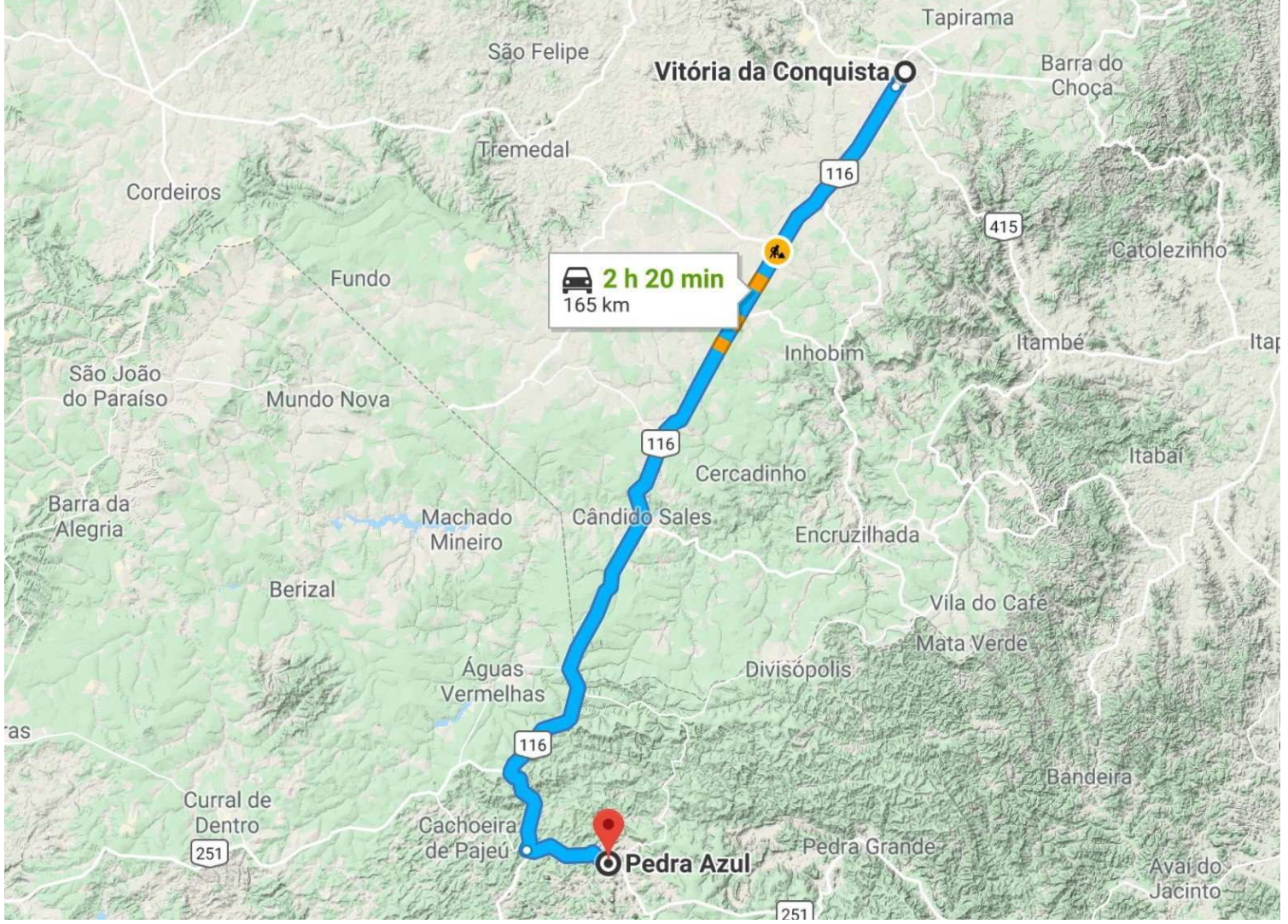






Marylan, Crazy Woman!





26 November 2018

Vitoria da Conquista to Pedra Azul

This morning Ciao had organised a visit for us to the *Melocactus conoideus* project. This is described in detail on the next page, in an article for the Portsmouth Newsletter .

Portsmouth Branch and the BCSS Conservation Fund

Update to a 2002 donation

When Ken Etheridge, then President of BCSS Portsmouth, died in 2002, the auction of his cacti & succulent plants and his library raised £5,000+, which was donated to the BCSS Conservation Fund that soon after made a similar donation to a conservation project in Vitoria da Conquista, Bahia, Minas Gerais in Brazil to protect *Melocactus conoideus*.

I first visited the project in 1999. A local action group had negotiated the formation of a nature reserve that covered half the area on the Serra do Periperi north of Vitoria da Conquista, where the *Melocactus* grows. The action group had built a fence around the protected area using barbed wire and wooden fence posts to prevent habitat destruction by private individuals collecting materials used for their DIY projects. The area experiences a high number of lightning strikes that cause flash fires that burn the vegetation and the wooden posts. One of our party, the late Keith Grantham, suggested that the wooden posts could be replaced by concrete posts. The gravel substrate is ideal for this purpose. The BCSS donation paid for two local Brazilians to replace the wooden posts with concrete ones and also for a small building, initially used as a workshop for the project.

Cliff Thompson and I returned in 2009 to be amazed by the difference in *Melocactus conoideus* numbers. In 1999, the site was used as a training site for conservation classes that is a part of the curriculum at secondary schools in Vitoria da Conquista. The students also worked in an attempt to eradicate the aggressive non-endemic invader succulent *Bryophyllum daigremontianum* (a.k.a. Mother of thousands). There were now thousands of *Melocactus conoideus* plants, ranging from tiny seedlings to mature cephalium bearing plants. A young member of the local action group, Caio Coêlho, wrote an excellent article about the project and BCSS members still remember the image of girls dressed as *Melocactus* in fancy dress outfits on the front cover of CactusWorld nine years ago.

Last December I revisited the project with an international group of cactus travellers and was delighted to see the population had continued to flourish. In places, we had to be careful not to step on the tiny seedlings, and many of the adult plants had formed large cephalia. The town of Vitoria da Conquista continues to expand and seems to have crept closer to the reserve. We were accompanied by two armed military police officers who are based by the large cross that overlooks the town, near the project. Botany students at the University now use the site for more advanced research. It seems that mature plants become infected by a fungus and ultimately die.

It could be that this is a natural process at the end of the plants' normal lifecycle. It may be that borer beetles are involved. In other cacti in the USA, it seems that borer beetles and the cacti that they feed are balanced by nature in a way that needs more investigation.

During his active years of presenting slides at Branch and Convention talks, Keith always encouraged members to make provisions for their plants once they are no longer able to care for them. I still have a large *Uebelmannia pectinifera* on my kitchen window sill that Keith had bought at the auction of Ken's plants. The plant has some marks that make it not suitable for showing but it still rewards me with flowers each year. I have a smaller plant of flowering size, but although they stand next to each other, the plants have never been able to arrange a date for their flowering to coincide.

So while a landfill site near Portsmouth missed out on Ken's cacti, a critically endangered species of *Melocactus* is still going strong, having benefitted from the donation made nearly 20 years ago!



Left to right: Alain Buffel, Chris Hayes, PK, Officer ??????. Cio Coelho, Officer ?????, John Child and the Project Manager



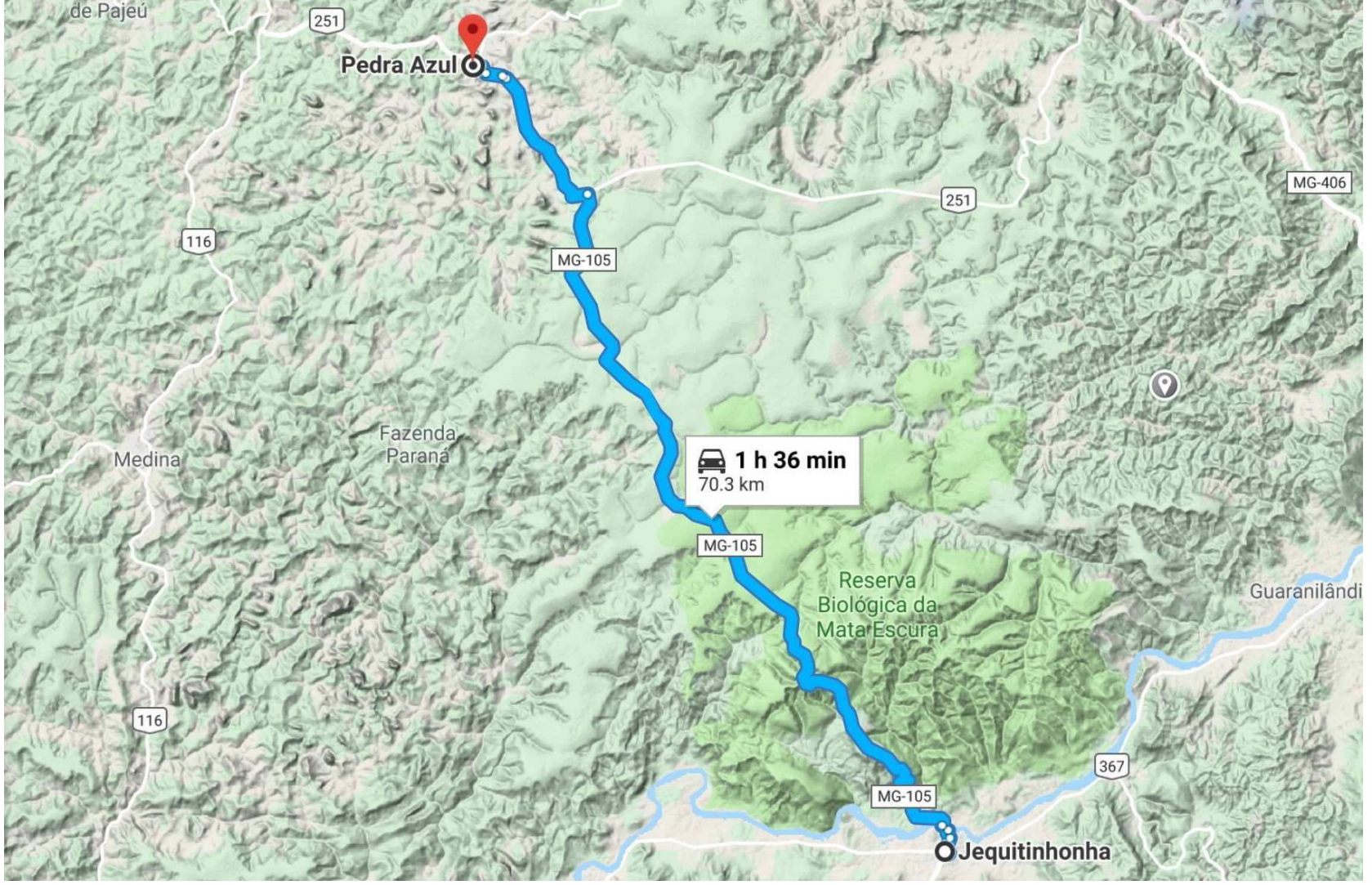




Jared's farewell at Vitoria da Conquista bus station.



Farewell at Marylan's school in Vitoria da Conquista
Left to right: Alvado Soares, Chris Hayes, Marylan & Ciao Coelho, Alain Buffel, John Child, PK, Marlon Machado



27 November 2018

Pedra Azul to Jequitinonha

The map (above) shows the main route for today, a mere 70.3 km between the two main towns. Alain made similar maps from data produced by his 'Polar Watch' that shows the actual km. that his watched traveled: 181.5 km. So we travelled up and down quite a few tracks not marked on the Google Maps used throughout this book, between GPS Coordinates that Marlon had collected from various sources.

As we left Pedra Azul we saw the first of the many Inselbergs that we would see in the next few days. This one had special memories as in 1999 we stayed with a farmer and his family who lived right at the foot of this one. We took some pictures that confirmed that nothing much had changed. Marlon & I remembered a population of *Coleocephalocereus aureus* var *brevicylindrica* and sure enough, they were still there. on the typical granite rock slope.

Overig outdoor
Dinsdag, Nov 27, 2018

Pedra Azul > (RESERVA BIOLOGICA DA MATA ESCURA) > Jequitinhonha = 12h20 = 181.50 km



The Genus *Coleocephalocereus*

Backeberg 1938

The name of the genus means ‘wrapped candle wax with cephalium’. The genus is endemic to Brazil where they are common to the granitic inselbergs of the Brazilian Atlantic rain forest. They are not common in European collections.

The NCL recognises six species divided over three subgenera:

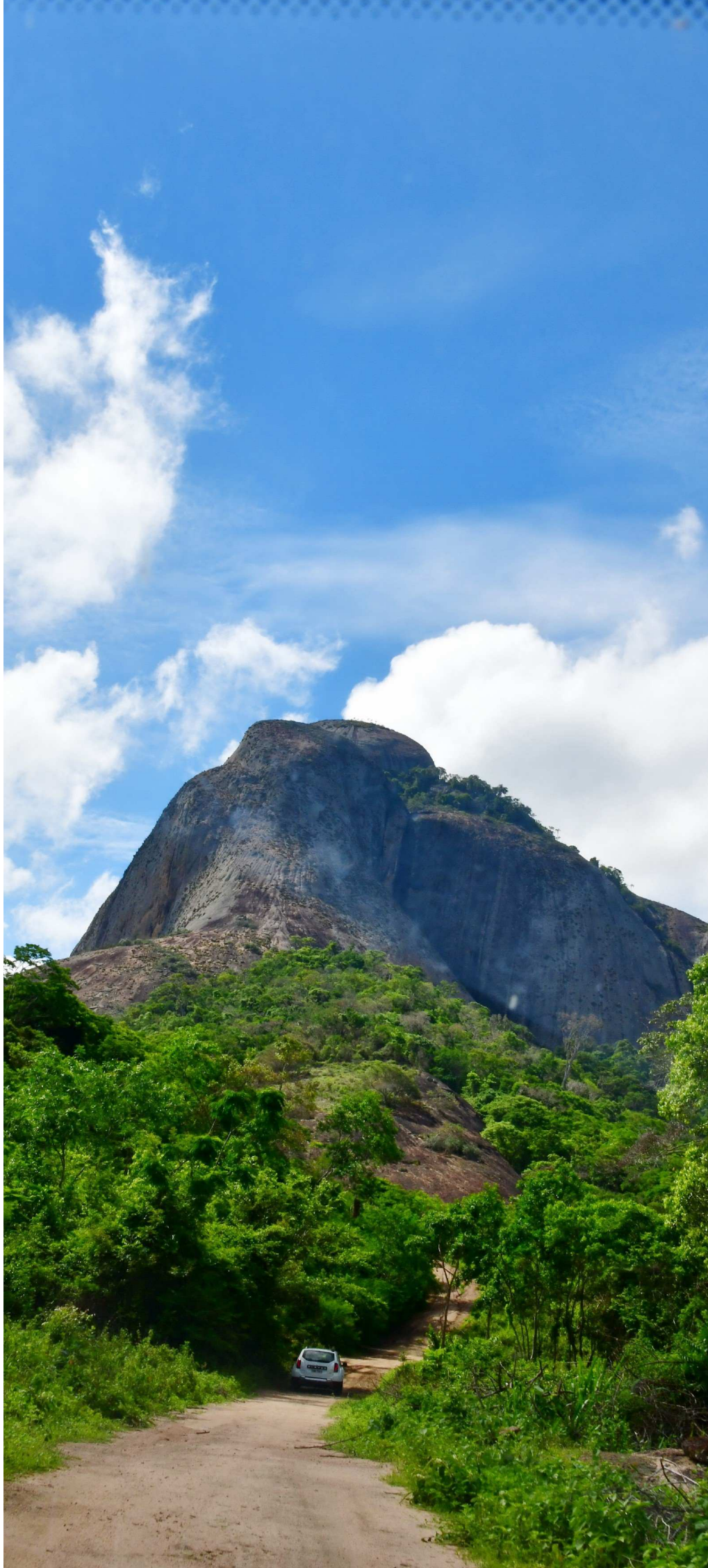
- *Coleocephalocereus*
  - *C. buxbaumianus*
  - *C. fluminensis*
    - *subsp. decumbens*
  - *C. pluricostatus*

- *Simplex*
  - *C. goebelianus*

- *Buiningia*
  - *C. aureus*
    - *subsp. brevicylindricus*
    - *subsp. elongatus*
    - *var. longispinus*
  - *C. purpureus*

I met my first *Coleocephalocereus, C. aureus* subsp. *brevicylindricus* outside the town of Pedra Azul in 1999. We had been the guests of a farmer whose farm stood right at the base of one of these gigantic inselbergs that dominate the landscape in this part of Minas Gerais.

Just a bit farther along the track, the terrain opened out to reveal an almost flat, smooth area made of granite. There were cracks in this granite, just wide enough for cactus seeds to drop into and germinate, with the seedlings forming small islands on an otherwise barren







Coleocephalocereus (Buiningia) aureus



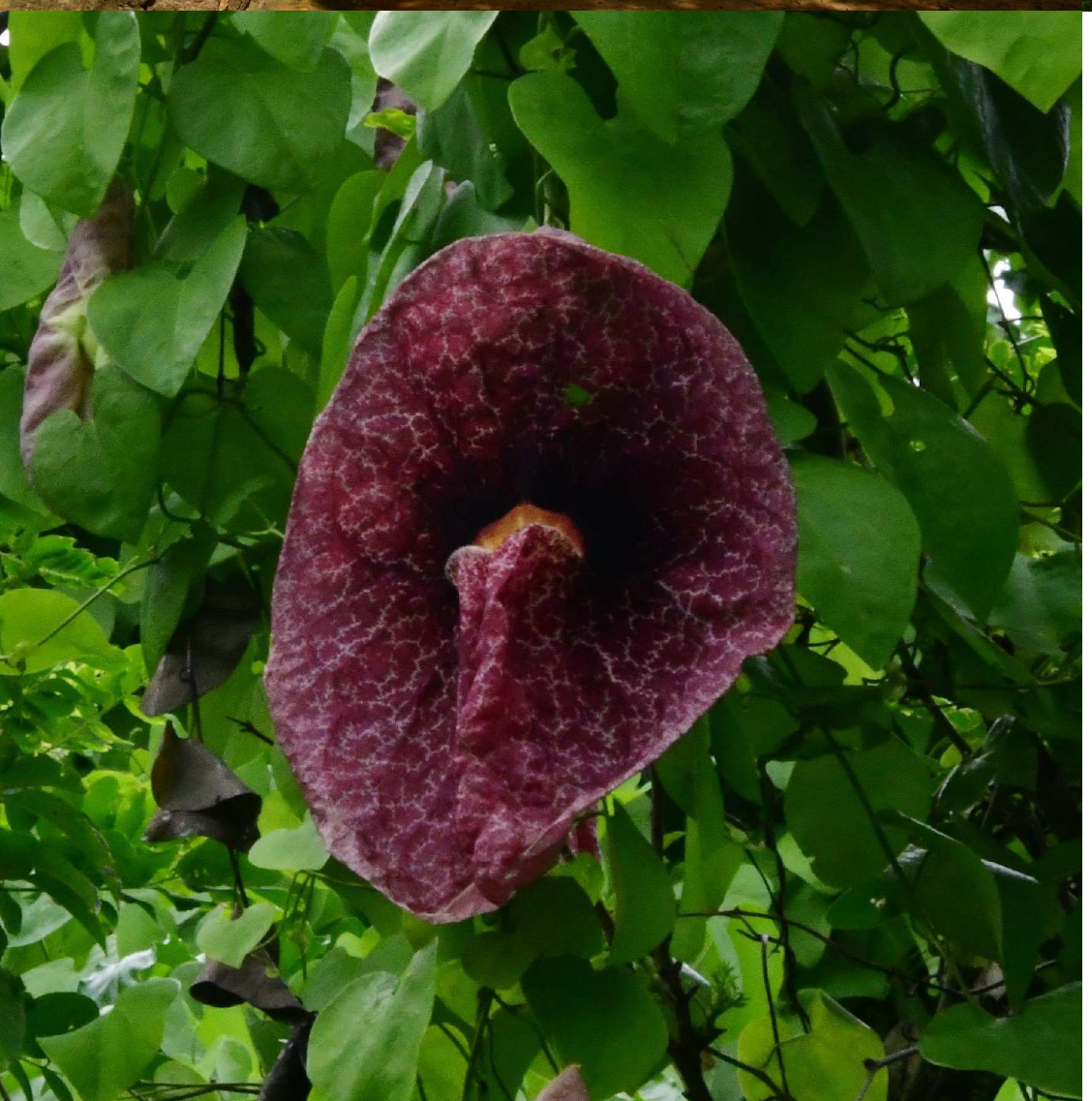
Coleocephalocereus aureus var *brevicylindrica*
pollinated by hummingbirds











Top left:
The farm house where we stayed overnight in 1999, just outside Pedra Azul.
This time: no one home.

Top right:
Another Inselberg

Bottom left:
Huge flowers! *Aristolochia gigantica,* also known as the giant Dutchman's pipe.

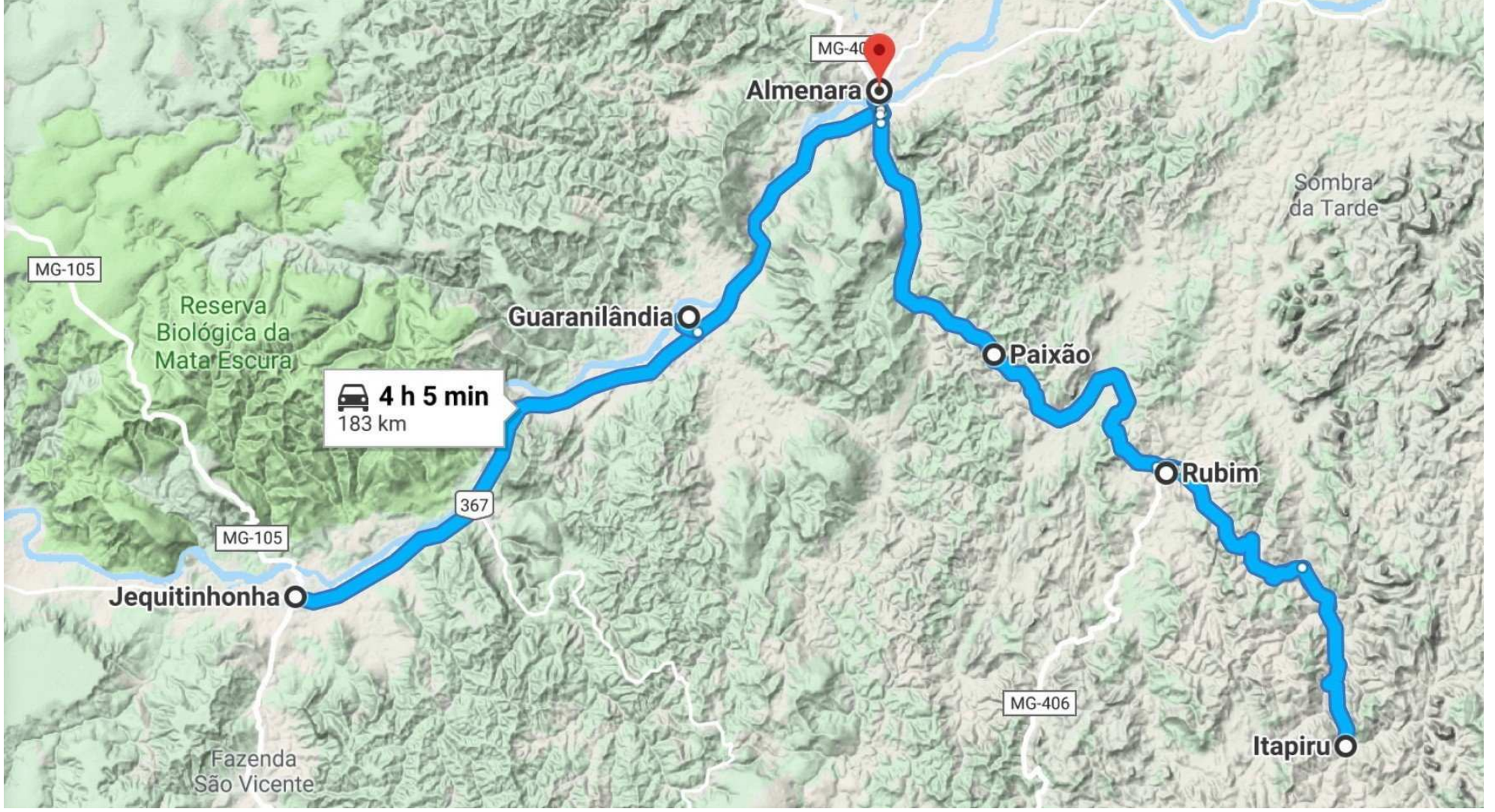
The genus *Aristolochia* can be shrubs or herbaceous perennials, many climbing, usually with heart-shaped or ovate leaves. The distinctive flowers have an S-shaped calyx tube and no petals, and can be white, yellow, brown or maroon, often mottled. The genus is found in North and Central America as well as tropical South America. It is a host plant for the pipevine butterfly (*Battus philenor*).

A. gigantica is a vigorous, evergreen twining climber with heart-shaped leaves 5-10cm long. The flowers are up to 30 cm deep, a dark, reddish-purple with intricate cream mottling, and an unpleasant smell. It is native to Brazil.

Unfortunately, pipevine butterflies will lay their eggs on it and the eggs will hatch, but many of the caterpillars won't survive past their first instar due to high plant toxicity or refusal to eat the distasteful leaves.

This is more of a problem in butterfly gardens than in nature where the ranges of the butterfly and plant species do not overlap.





28 November 2018

Jequitinonha to Almenare

Our stay last night in the town with the difficult to pronounce name (for a Dutch / Anglo old man) was quite significant as for most of today we would be traveling through the valley of the *Rio Jequitinonha*. Our target cactus populations are still members of the genus *Coleocephalocereus*. We were still surrounded by massive granite Inselbergs. Sometimes we'd explore on foot, is the hills were not too steep, sometimes we would search a steep hillside using binoculars or zoomlenses. We would assume that if we spotted one to two m. high cactus stems with a yellow coloured spination and flower that this was another possible spot for *Coleocephalocereus aureus*. The taxon was originally described by Ritter as *Coleocephalocereus* until Buxbaum created the genus *Buiningia* for two of its members: *B. aurea* and *B. purpureus*.















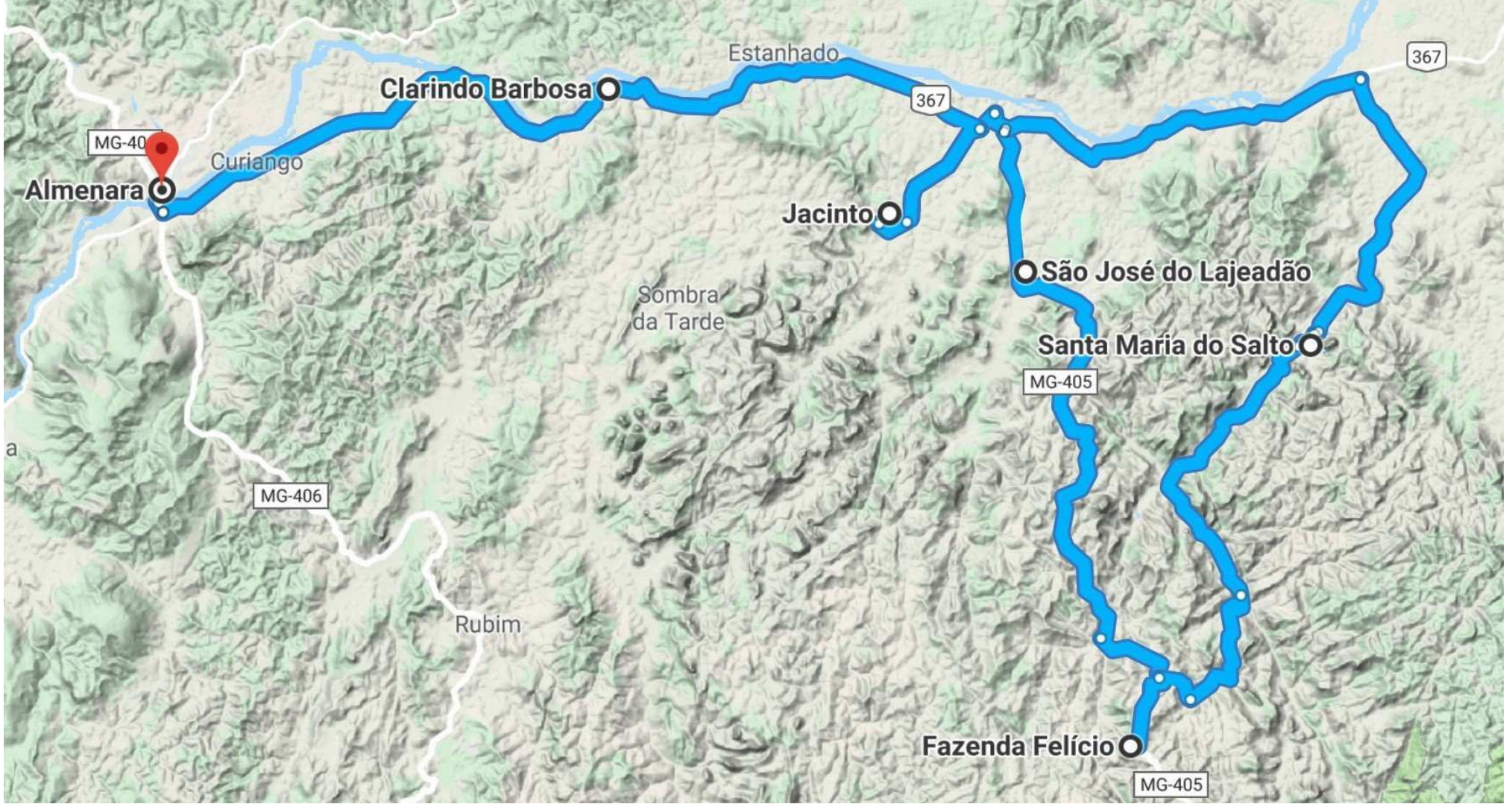
Coleocephalocereus sp. nova











29 November 2018

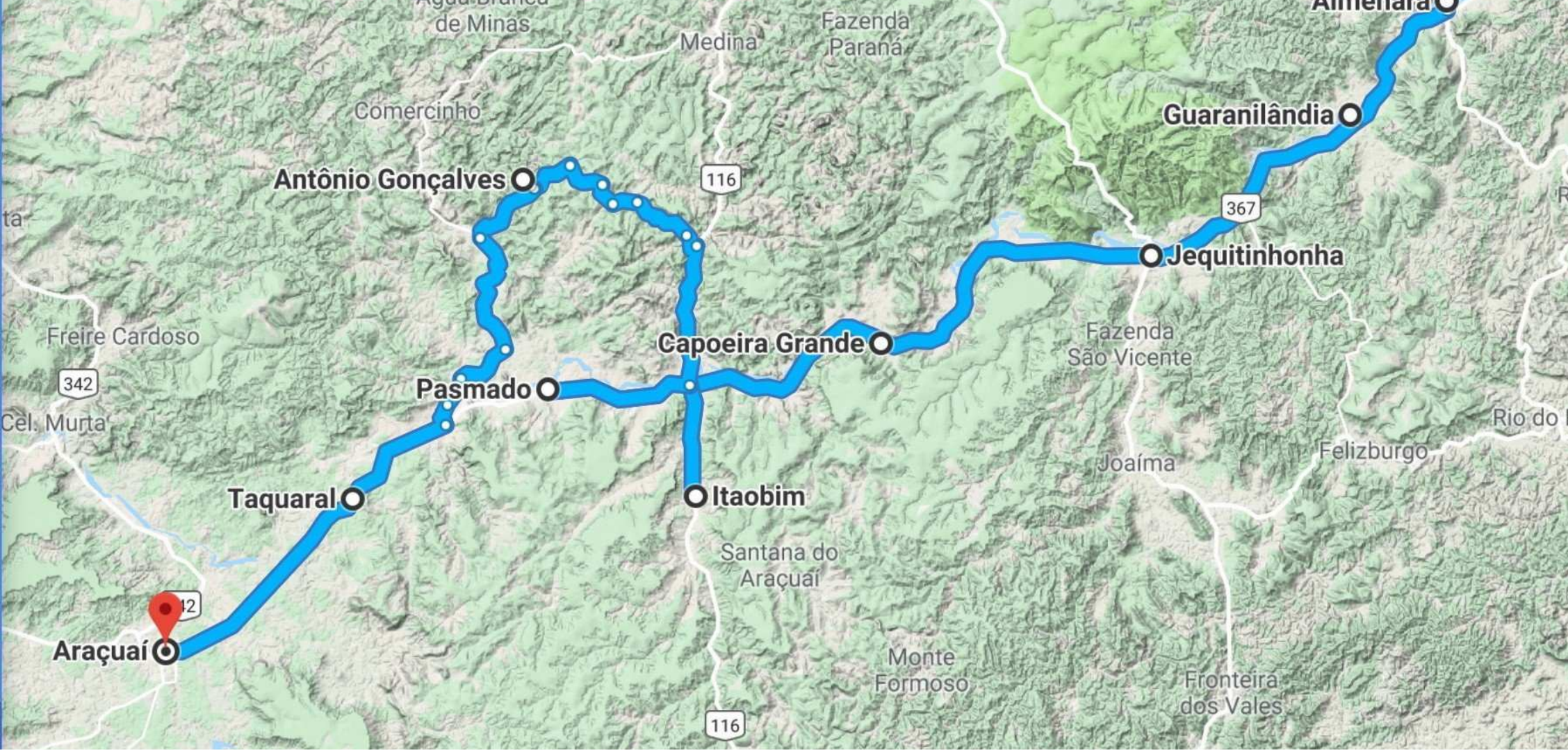
Around Almenare











30 November 2018

Almenare to Aracuai







Arrojadoa penicillata









Coleocephalocereus (Buiningii) purpureus

01 December 2018
Aracuai to Salinas

Finally a part of cactus exploring that I still excel in: crossing fences to gain access to the treasures growing on the other side.

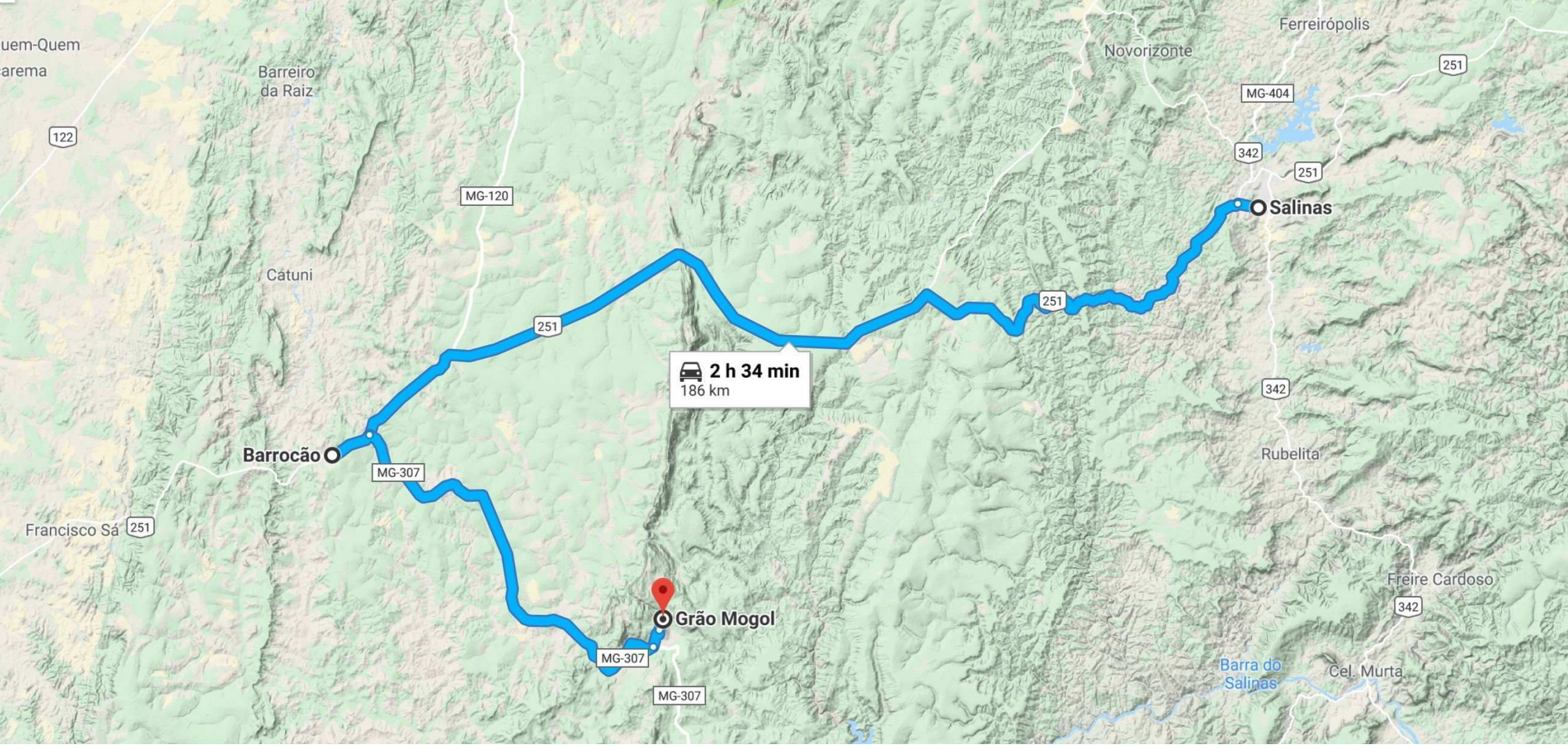


Top: sp in bud

Below: Melocactus Opuntia with mealy bug







02 December 2018

Salinas to Grao Mogol

Rain on BR-251

Turning right on dirt track

Pull up to Marlon's GPS coordinates and disappear into a dense low forest, following a track made by Marlon, Leo and Gerardus only some six weeks earlier to arrive at a small clearing where on black ferrous?) rocks we found a population of *Discocactus* growing in exposed places and an *Arrojadoa* that Leo & Gerardus call *Arrojadoa vanderhoevenensis*.





02 December 2018

Salinas to Grao Mogol





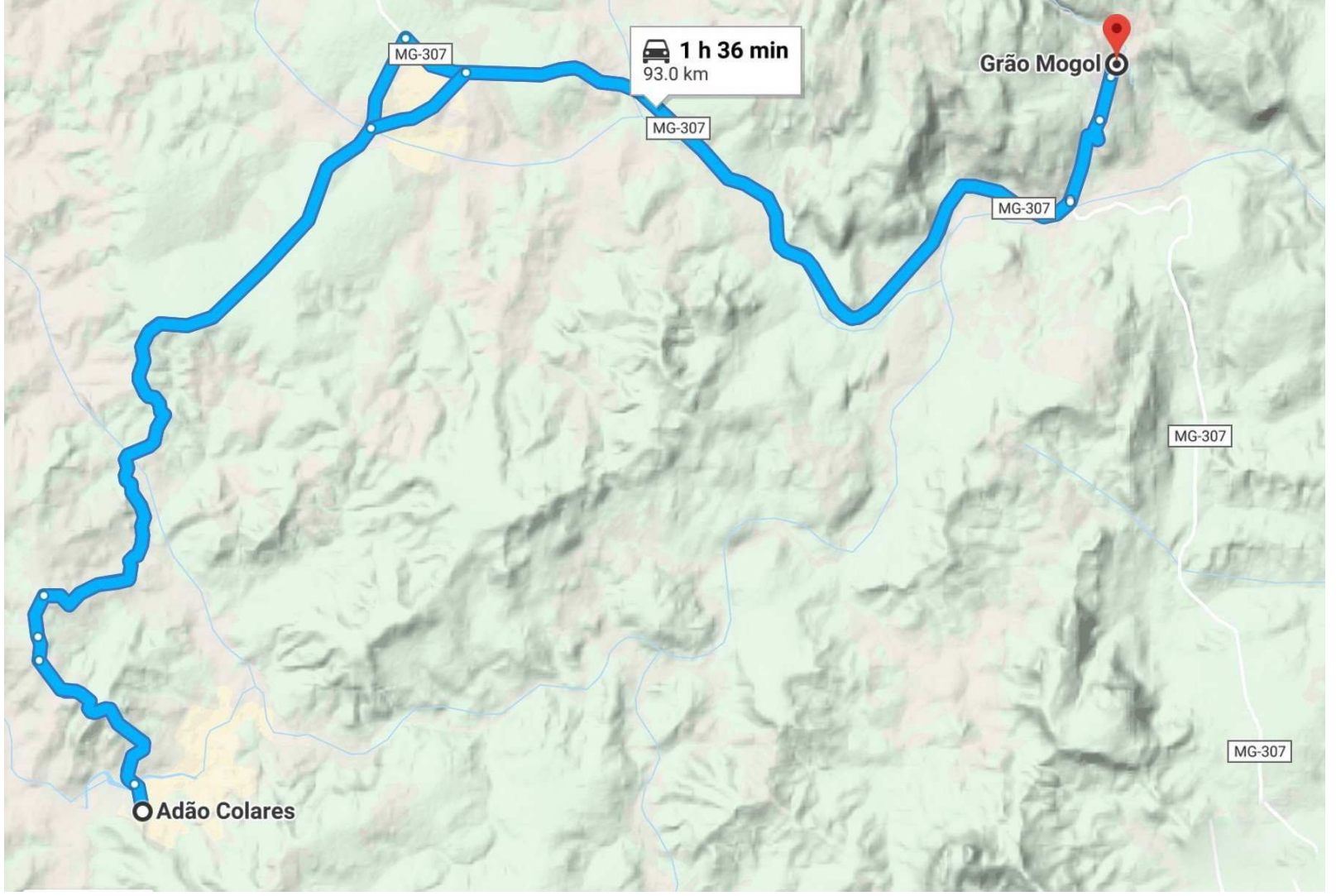








Discocactus



03 December 2018

Around Grao Mogol

Each time that I was in Grao Mogol (1999, 2009 and now, in 2018) there was a tension if we would be able to see the cactus that had been the cactus that got us here: *Discocactus horstii*.

In 1998, the area around the hill that arguably is the only place on earth where this little diamond in the cactus world is said to grow. Plenty of rumours that new populations had been found, some 200 km to the north or to the north east, but this is a hilly, inaccessible country and unless we could get our hands on GPS coordinates that showed such a location to be reasonably accessible by car, we would leave it to younger and better equipped explorers.

In 1999, Brian Bates' Nissan Patrol with Bolivian registration plates attracted a good bit of police offers as it was parked in the square in front of the Grao Mogol Pousada where the local police station is on the opposite end of the square. Brian had four large plastic crates on the roof of his car and Marlon had collected branches of Bursera trees for a Russian collector that were in the crates. Marlon had found a local botanist specialising in Brazilian trees who knew where *D. horstii* grew.

The local Police told us that this would not be allowed as the plants were now protected from illegal collection. Marlon again proved the use of a member of the party speaking the local language. He explained that Keith and I were authors and had written a book including pictures of Brazilian cacti.

We were very keen to see and photograph *D. horstii* in nature and to tell the story of the plant that was now severely threatened with extinction due to collection. We would be happy to explain rules and regulations for visiting the plants, accompanied by park officials or police officers who could make sure that we would not collect anything illegal. We had a great time, but the number of images taken were somewhat limited as we were still using 35 mm slide film.

Things had changed quite a bit by 2009 when Cliff and I visited the town with digital cameras. We went to the authorities in the Prefeitura Municipal for instructions and permits to visit *D. horstii*. It was a bit more complicated than that. The reserve was the responsibility of the State, and the municipio had no responsibility or authority there and could not grant permission.

We managed to find the offices for the State Conservation Agency. They were closed, with minimal signage about their name, what they did or when they were





Alain and Marlon dressed for a bit of *Discocactus* exploration.

open. We eventually found them open, but got no further than a hike with Volunteer Jato.

This time, the weather was the main barrier. We went to look for and found *Discocactus pseudoinsignis, Pilosocereus fulvilanatus*, and *Micranthocereus auri-azureus* at the bottom of the hill from the 'new' hotel where we stayed.



Coleocephalocereus aureus fa nova?
The is the western-most population.







Pilosocereus auri-azureus





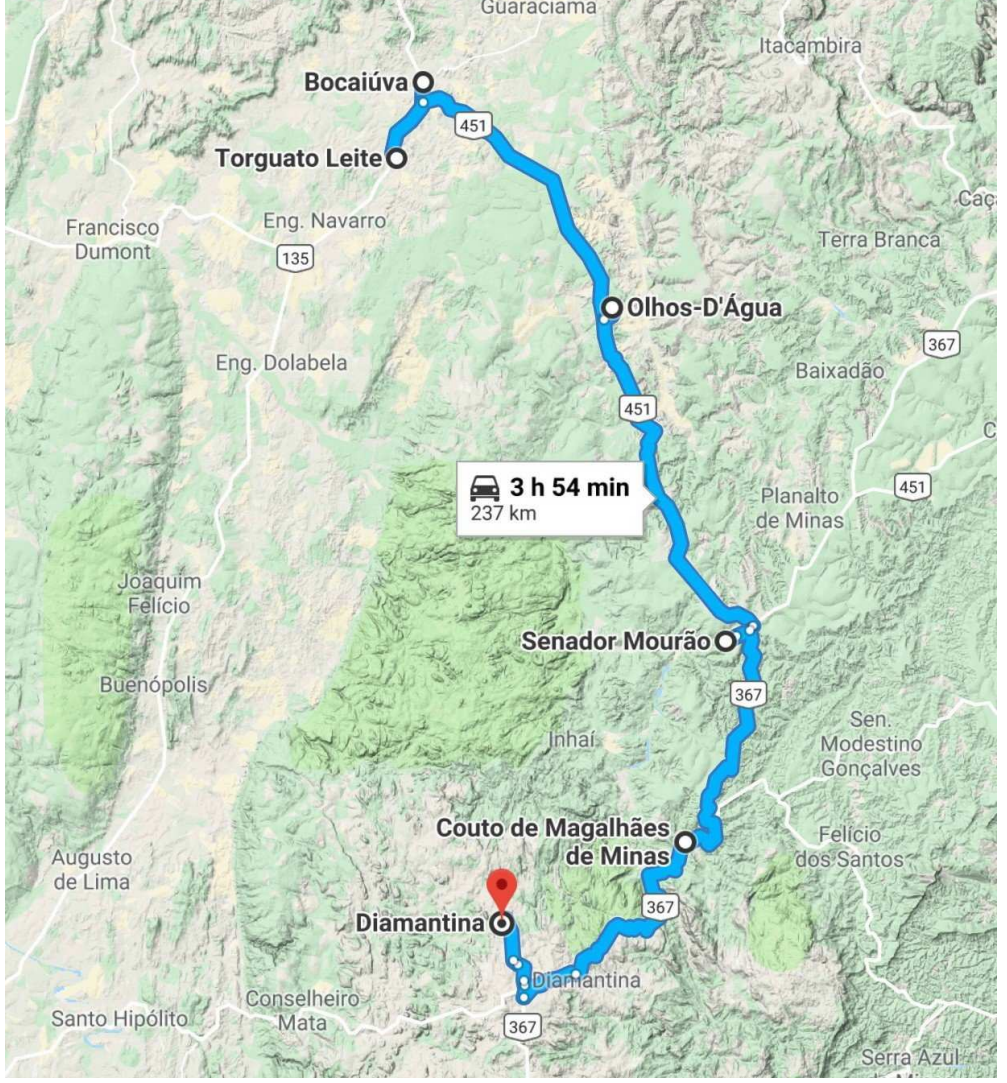
04 December 2018

Grao Mogol to Bocaiuva

The BR-251 in pouring rain must be my least favourite road. Much of it is a wide two lane hard top with potholes large enough for a small saloon car to disappear into. The spray coming off the road surface is dense enough for the front of the truck that you want to overtake to be invisible. You need to concentrate on the left hand side of the truck to find a gap, so you miss the speed restrictions and speed cameras on the right hand side of the road. Alain was good at taking a broom to the front and back lights of the car at every petrol station - perhaps a bit too good, also cleaning the number plates so that the speed traps could send us speeding tickets once we got home.

Soon after Baracao, we turned right, still on tarmac, and drove a man-made *Eucalyptus* forest. We stopped quite abruptly at GPS coordinates that Marlon had visited with Leo and Gerardus a few weeks earlier. It seems that the path that they had forced then through the herbaceous undercover of the deciduous forest was still visible to Marlon. Some 700 m. in, he announced 'we are here' and sure enough we saw Discocactus and Arrojadoa between the wet vegetation. Miraculously the rain had reduced to a trickle, but after 30 minutes , just as we had taken all the images we wanted the volume increased again.

Arrojadoa eriocaulis 'van der hoevenii'



05 December 2018

Bocaiuva to Diamantina

I'll admit it, I'm a collector! No, I don't look for cacti with a shovel in my luggage and a case full of dug up cacti, but if there are x species in a genus, I'd like to have seen them all. There was just one more species to see to complete the full set of *Uebelmannia*, *U. horrida*, to get the full set. Today was the day!

But first we visited another *Arrojadoa* that grew here, together with *Discocactus placentiformis*. There were some groups of young stems emerging from an underground tuber. Other plants were single stems with a prostrate growth habit. I'll have to ask Marlon to remind me of the Discocacti that grow here.

In 1999 we failed to reach the only location known at the time for this taxon. Our attempt included 'the original Dutch dismount' as I demonstrated my only attempt of riding a horse on a cactus trip, necessary to cross a river.

Rudolf Schulz and Marlon managed it on a second attempt after we had already returned to England. Marlon claimed that the plant's name refers to the degree of difficulty of reaching the plant.

This time we would try a new location recommended by Gerardus Olsthoorn that was accessible by car. Marlon had not yet seen this location. We stopped at Gerardus' coordinates. Great! No hills. Just a rocky terrain that allowed us to keep our feet dry.

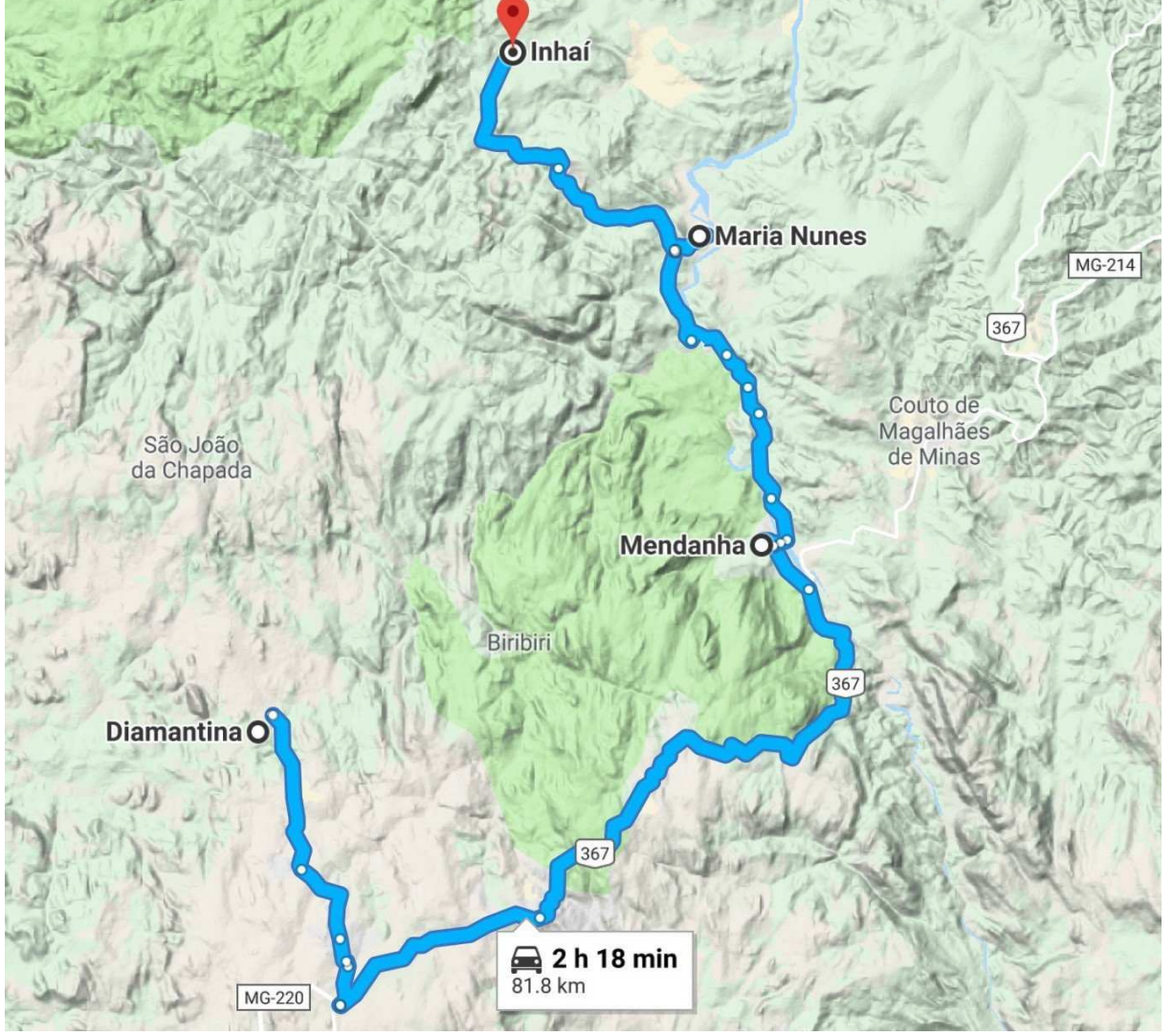
And so, I could claim having seen the full set of *Uebelmannia* in habitat!



Arrojadoa #1, young stems coming from a large central underground tuber.







06 December 2018

Diamantina - Inhai Again!

You may remember that on our first day in the field (12 November), I had a fall and did not climb any more damp hills in the heat. As a result I missed out on seeing one of my favourite *Uebelmannia*. So when Marlon asked me over breakfast, if there was a favourite plant location that I'd like to revisit, I did not have to think very long especially after visiting 'the real' *Uebelmannia horrida* in habitat yesterday.

I'm now convinced more than ever that *U. horrida* and this Inhai population of *U. pectinifera* are one and the same thing. And so we drove back towards Inhai, but only as far as the stop where we had first stopped in 1999 to watch Brian Bates pig out on *Cipocereus meninensis* fruit. After my failure to make what were even simple climbs in 1999 and 2009 when we were here on 12 November, I need to register a vote of thanks to my fellow travelers for their patience as I ignored their advice to walk around the side of the hill seen from where we had parked the car and went 'straight up the hill', the way we had done on earlier visits. I had a particular reason for my stubbornness as I wanted to check out a particular group of three mature plants that grew at what seemed to me to be a 'roof garden' towards the top of the hill. At times I simply got stuck - my brain simply refused to move my feet up the next few inches, even though the rest of my body felt perfectly capable to take that next step. It seems to be a mental issue rather than having hit a physical limitation - perhaps a matter of 'confidence', so it was very important that I reached 'the roof garden', even if I reached this place just as the rest of the party who had come the long way round, had taken their pictures and were on the way down. John decided to stay with me and told me of a very nice group of three plants. My ears pricked up. Could these be the same plant that I photographed in 2009 and was my goal this time? It certainly was! It became the cover photo of the Cactus Trip Diaries 2009 book.

It seemed to me that the plants had hardly grown during the last ten years. Come to think of it, neither has my ex-Ken Etheridge plant back in England, although it has flowered every year.

After taking the essential images this year, John hovered around like my guardian angel to ensure that I managed to get down safely. Thanks John!

As we drove back to Diamantina we made a few more stops. One was a place where we would stop on past trips at a patch of snow white quartz sand where there was a healthy patch of *Discocactus placentiformis*.







Uebelmannia pectinifera 'Inhai' population, or is it *U. horrida*?







Encholerium sp.



The dirt collected on our Dusters since 12th November was expertly removed.

07 December 2018

Diamantina

To all intends and purposes, the trip was over. We reached that stage that seems to happen at the end of all cactus & succulent plant trips: you're cactussed out. Just can't get excited by looking at yet another cactus and the mind is already moving 'home' where ever that is, or in Alain's case, to his next trip, as his wife Greet was whisking him off for a week of visiting Christmas markets in London!



And so the sun sets on another Cactus Trip.
Taking off from Rio de Janeiro.


blurb

