

REPORT
Euro Speleo Project ESP 2017-03
International Expedition to the Serra da Bodoquena (Brazil)
7 - 27 August 2017



Gruta Beija-Flor, 2nd waterfall (photo: Irina Ermakova).



1. Summary and short expedition log

The international speleological expedition to the Serra da Bodoquena, Mato Grosso do Sul State, Brazil, took place in August 2017. The expedition was organized by the Speleo Club allocated to the university of Campo Grande, from which three members accompanied the expedition nearly the whole time and various other members joined during the week-ends or for some days only. The mission of the project was to survey a number of larger caves so far unmapped (or only partly mapped) in the area of the Serra da Bodoquena - these were the Gruta das Fadas, the Burcao do Bicho, as well as the Gruta Beija-Flor. The targets were met with the afore-mentioned three caves now fully documented. Another task was biospeleological sampling; the comprehensive collection all went to the university of Campo Grande. The core area of the Serra da Bodoquena is a National Park with the park authorities having supported the investigation project. However, the NP office was unable to provide transport as all the available vehicles were broken and no budget for the repair was available. Alternatively, two Brazilian NGOs (mentioned in the financial report below) generously provided vehicles for the fieldwork. Also the private cars of expedition members were used. This was vital as the area is vast and daily transport to the caves proved to be essential.

Except of the National Park all land is owned by farmers or tourist resorts - the Bonito/Bodoquena region is a very popular tourist area with several show caves (including the famous Gruta do Lago Azul) and eco-tours. It is not allowed to enter private land without previous consultation of the landowners of which not all are interested in speleological research. As no free access to the karst mountains is possible, fieldwork needs a lot of preparation and networking. Another obstacle is the massive presence of ticks in the bush where it is impossible to cross even short areas of grassland without fetching plenty of “hitchhikers”.

The first week of the expedition was spent on the Fazenda Campina near Bodoquena town, from where Gruta das Fadas and the Burcao do Bicho are accessible on foot. Both caves were fully explored with Gruta das Fadas now over 1 km long. The cave has two underground rivers with cave fish. It is also known for its many Quaternary fossils. Burcao do Bicho has a 20 m deep entrance pitch that continues with an active but narrow passage to a terminal sump. The team partly divided in two subgroups thus enhancing the number of explored caves.

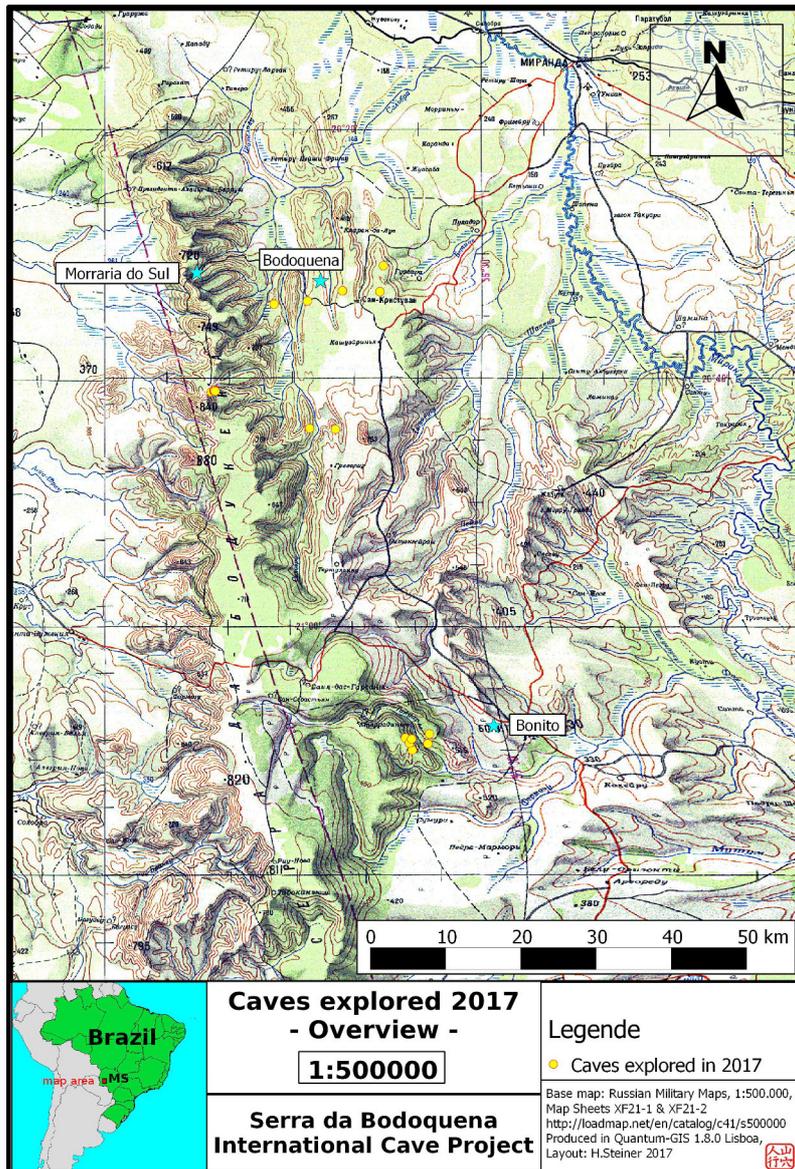
The daily temperatures exceed 30° Celsius in August with the sky usually cloudless. Very unexpectedly (“It never rains in the winter!”) heavy rainfalls hampered the expedition during the second week, where nevertheless a couple of smaller caves near Bonito town were mapped. Three days were used, however, to provide an indoor SRT training for the new members of the Campo Grande caving club.

The third week was spent in a hired house in Morraria village in the NW of the Serra da Bodoquena. The village has a beautiful view over the vast Pantanal lowlands. The main target was Gruta Beija-Flor, which turned out to be a superb and sportive cave with a total length of nearly 1.4 km and a depth of about 60-70 m (preliminary data). It is the currently 4th longest cave known in Campo Grande do Sul State. The cave is an active sinkhole that swallows the Beija-Flor river. A narrow singular passage, which follows the dip of the thin carbonate layers, channels an underground stream down over rapids and four waterfalls (rope and wetsuit needed) to a large horizontal terminal passage that ends in a sandy sump. The black metamorphosed host rock, the narrow main gallery, with the noisy underground river rushing through, and the fact that the cave is dangerously flood-prone, creates a fairly hostile impression when visiting Gruta Beija-Flor. This is in strong contrast to the beautiful virgin calcite decoration throughout the whole cave. Altogether, 25 caves and dolines were investigated, of which 11 were surveyed with a total of mapped passages of 2,548 m (preliminary value).

2. Area of fieldwork



Location of the Serra da Bodoquena.



Overview of the fieldwork area, showing the caves explored in 2017 (drawing: H.Steiner).

3. Photographs:



Boca da Onça River in the Serra da Bodoquena (photo Dominik Fröhlich).



Karst plateau on the Serra (photo: Helmut Steiner).



Fossil gallery in Gruta das Fadas (photo: Irina Ermakova).



Gour pools in the fossil level of Gruta das Fadas (photo: Irina Ermakova)..



The underground river in Gruta das Fadas (photo: Irina Ermakova).



Gruta Beija-Flor (3rd waterfall) (left) and main river passage (right) (photos: Irina Ermakova).



Gruta Beija-Flor, underground stream in the terminal cave section (photo: Irina Ermakova).



Gruta Beija-Flor, underground stream in the terminal cave section (photo: Irina Ermakova).



Fruit bats (presumably *Platyrrhinus lineatus*) in Gruta do Cachoeira 1 (photo: H. Steiner).



The daily way to the caves (photo: Daniel Silva Talarico).

4. Team 2017 (only core group)



Country / Pays	Participants	Name / Nom	Email
Brazil	4	Livia Borghezan Cordeiro Anna Carolina Resende João Frederico Berner Daniel Ben Yisrael Aranjyo Silva Talarico	liv.biosubt@gmail.com (3d from right) annac.resende@gmail.com (1st from left) jfredericoberner@gmail.com (1st from right) contato.bendaniel@gmail.com (2nd from left)
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Portugal	1	Renato Serodio	renato.serodio@gmail.com (2nd from right)
Russia	1	Irina Ermakova	irserg@rambler.ru (center)



Co-ordinator (a big merci!) Dr. Livia Borghezan Cordeiro, with the Pantanal in the background.

5. Financial Report

Participants(core team): 9 Duration: 20 days All currency in Euro (1 EUR = 3.2 Real)

Travel:

International: flights to Campo Grande	1.100 € x 5 persons	5,500 EUR
Domestic: petrol for private cars of BRA participants		550 EUR
Domestic: replacement of one tire for private car	80 Real	25 EUR
Domestic: bus travel Bonito to Campo Grande (27 th Aug)	60 € x 3 persons	180 EUR

Inland expenses:

Expenses for Camp 1 st week on Fazenda Campina	120 Real	38 EUR
Hire of house in Morraria 3 rd week	900 Real	281 EUR
Accommodation (27 th -28 th Aug) in Campo Grande	60 € x 2 persons	120 EUR
Food bought in supermarket for whole team	5,600 Real	1,750 EUR
Restaurants and entry fees	1,920 Real	600 EUR
Gifts for Brazilian hosts (caving equipment etc.)		400 EUR

Communication, Outreach and Reporting:

Production of BHB reports	8 EUR x 50 pcs	400 EUR
Mailing, telephone		100 EUR

Total cost **9,944 EUR**

In comparison: preliminary budget in the ESP application **13,200 EUR**

(the final costs were less than those expected as most of the domestic transport and accommodation were arranged for free by our Brazilian hosts).

Other grants than the support from FSE were not received.

We are grateful to our Brazilian hosts (especially Anna, Joao and Livia's family), as well as the Fundação Neotropica do Brazil (Bonito) and the Geopark Bodoquena-Pantanal GEMAP (Miranda) for providing free vehicles for the expedition.

6. Outreach

During the expedition a presentation on the 2017 expedition, that highlighted the support received by FSE and its partner Beal, was made in front of officials of the Bodoquena Tourism Board. The Campo Grande caving club also produced a video of the expedition that is intended to be broadcasted in the local TV.

The expedition results will further be published in the magazine of the Brazilian speleo federation SBE, and in European caving magazines. Bearing in mind that the next Brazilian national caving congress will be held in 2019 in Bonito a comprehensive book on all the caves so far known in the Serra da Bodoquena is planned in the expedition series "Berliner höhlenkundliche Berichte" in English/Portuguese language.

