

# CHIQUIBUL CAVE SYSTEM

## CEBADA CAVE TECHNICAL REPORT

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# **Cebada Cave Technical Report**

## **Introduction**

Cebada Cave is the third group of four caves that make up 17.5km of the Chiquibul Cave System (CCS) which are hydrologically linked by the disappearing Chiquibul River. The entire system was mapped to be 55km in length by a series of expeditions led by Dr. Thomas Miller from 1984-1998. The Cave entrance is located 1.5km east of the Guatemalan border at the base of a deep collapsed sinkhole. The entrance of the cave is approximately 50m wide x 8m high. According to the literature first published in Journal of Cave and Karst Studies in August 1996 (Reddel, Ganter & Veni), this cave was perhaps the most spectacular and significant single cave in the CCS, at the time of its discovery in 1986 it was the longest cave in Belize.

The CCS is located in the Chiquibul National Park, Cayo District. This major geological feature is found in the Vaca Plateau Karst Region that was formed on a platform of Cretaceous Carbonates that spread about 10km west into Guatemala and to the South and east of the Maya Mountains. Caracol Archeological Reserve is approximately 16km to the north. During the second caving expedition back in 1986, the explorers mapped 2.2km of cave downstream of Cebada and found a sump before reaching Guatemala, they found an overflow passage that exits in the Zactun Sinkhole (500m wide) just inside Guatemala. The resurgence segment of the cave system is Xibalba located in the Peten Department of Guatemala.

In 1998 FCD organized its first major caving trip to Actun Tunkul along with members of the Forest Department, Belize Audubon Society and Dr. Ed Boles, a watershed Ecologist who later produced an Atlas of the Greater Belize River Watershed. In 2003, FCD personnel explored Actun Kabal and recently returned to Actun Cebada in August 2009 and Tunkul in 2009 and in December 2011. The latter was funded by the Rufford Foundation.

The FCD patrols form part of the co-management agreement signed with the Institute of Archaeology back in January 2008, in 2008 the CCS Management plan was also completed by Meerman & Salas.

## **Monitoring Objectives:**

The CCS management plan describes several long term objectives to preserve and protect the integrity of the system for its biological, cultural, archaeological and geological significance in the light, pre-numbral and dark zones of the caves. The goal of the monitoring trips is to determine the threats of human activity above and below the system, especially near Cebada Cave and Actun Tunkul that are located near the border incursions in the Chiquibul National Park. Also develop a public use plan for the cave tourism.

## **Expedition Team:**

Lenney Gentle: Caver and Naturalist and FCD Board Member; Boris Arevalo: FCD Biologist, Jose Sierra: FCD Ranger/ex BDF Special Forces; Lt. Gonzalez, and 7 soldiers of G Company BDF, 1 Police Constable of the Special Patrol Unit.

## **Expedition Plan and Route to Cebada**

The team departed San Ignacio Town at 4:30am and travelled to the Chiquibul Ranger base known as Tapir Camp. At this location we met members of the BDF and the Special Police Patrol Unit (SPU), we then were dropped at the start point in Caracol by Derric Chan, the Park Director. At 10:00am we began a long 17km hike south to Cebada. The plan was to use an old logging track to Retiro then to Sapote Camp 1. We arrived at our first campsite at 530pm GPS PSN 16Q0269518-1848030. This was only halfway to Cebada. The following day we hiked lightweight south through several milpas and also cross country to locate Cebada Cave. We finally located the sinkhole that leads down into the cave. At 11:10 am I arrived at the entrance of the cave. Boris and the BDF had reached earlier. We conducted a rapid assessment of the cave and took some photos of the natural features. At 1230 pm we hiked out of the sinkhole and back tracked through the same route back to our campsite near Sapote 1.

## **Cebada Cave Rapid Assessment**

A large milpa was located about 50m east of the Sinkhole that leads to Cebada Cave. Several trees have been felled near the sinkhole, part of it was actually blocked by dead trees and we had to descend through a steep side of the hill. Boris observed recent human footprints near the cave entrance. The entrance of Cebada faces to the west under a large limestone cliff face. The GPS position at the drip line was recorded as **16Q0269166-1842405**.

We observed that the cave was flooded and there was a fast current, the water was brown in color and there were signs of a previous flood about 5 m above normal level. There were not much signs of the cave fauna.

We did not observe damages to the cave formations or litter as have been seen at Actun Kabal, where xateros occasionally go into the caves to bathe and collect drinking water. Since Cebada has a flowing river, Guatemalans do not seem to venture into the dark zone that require car tubes and pumps. We did saw an old orange flagging tape from a previous expedition.

## **Recommendations**

1. Monitoring trips should be planned in the dry season when the river flow is normal that can allow explorations in the dark zone upstream and downstream the main entrance, the previous expeditions used this entrance as a base camp.
2. FCD should try to acquire recent satellite imagery with the adequate bands to determine the land use change in the area. Perhaps a generous donor can help with this.
3. This cave is only for professional cavers or high end cave tourists who can pay a helicopter drop off and pick up at the milpa which can be used as an HLS for emergency purpose.