Mexican Biospeleology: Thanksgiving 1998

The November 1998, trip included only a group of four researchers (Jean Krejca [Zoology Department, University of Texas, Austin]; and Steve Taylor [Illinois Natural History Survey, Champaign, Illinois], James Brown [Plex Systems, Inc., Monrovia, California], and Lara Storm [Eastern Illinois University, Charleston, Illinois]). We focused primarily on a site in northern Mexico, Sotano de Amezcua (Coahuila), but also spent some time in the state of Nuevo Leon. At both sites, diving was emphasized, along with studies of the Mexican Blindcat and several species of stygobitic crustaceans.

Part of the work conducted involved a continuation of ongoing mark-recapture studies on the catfish. That aspect of the trip was very successful, and will be reported on in detail elsewhere.

A second item of business was to make a map of the upstream sump, and to survey the air-filled passage beyond. This work was successfully completed.

One of the divers (below) with tanks he just

hauled up the 213 foot pit entrance of Sotano de Amezcua.

Another focus was to initiate a study of microhabitat use by two species of isopods found in the stream of Sotano de Amezcua. Some good raw data were collected, but further work needs to be done.

We had planned to videotape the movements of the blindcats. This part of the trip was largely unsuccessful, but we hope to have learned from our mistakes.

Sorting invertebrate specimens found in the cave stream of Sotano de Amezcua.

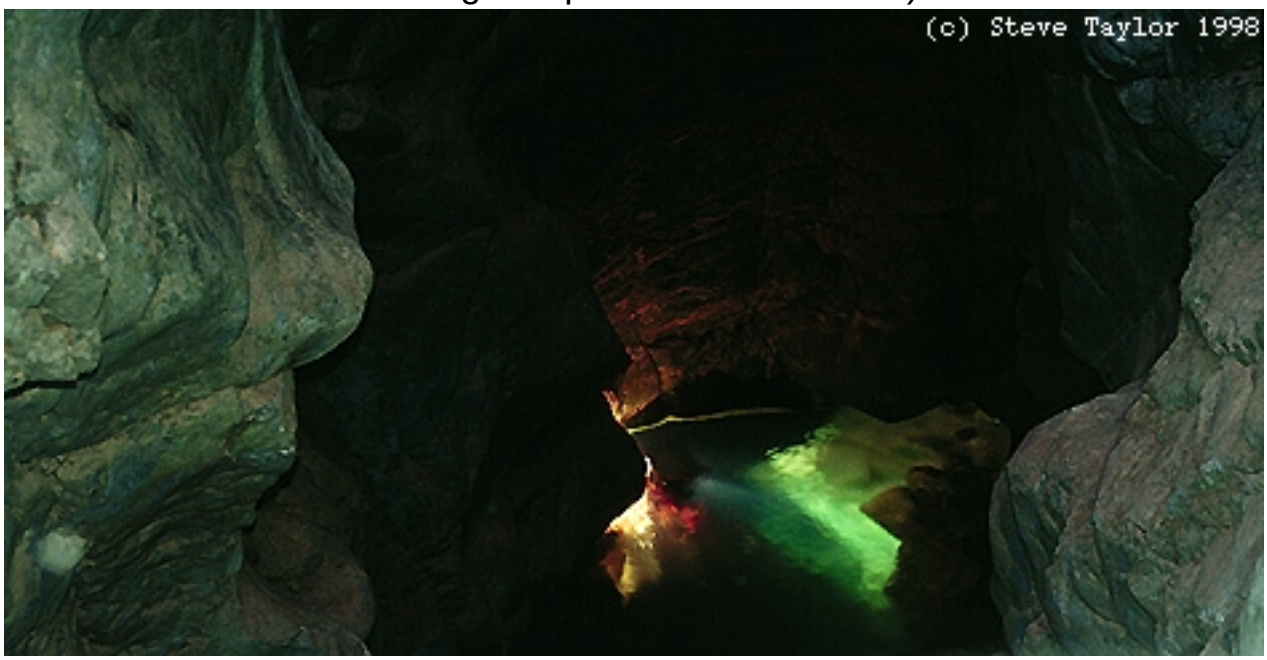
An added bonus on the trip was the relatively high numbers of several other cavernicoles which had either not been seen on earlier trips or which had previously been present only in small numbers. This apparent population increase allowed us to improve the thoroughness of our bioinventory at this site.

The picture below is of a cave-adapted ground beetle which preys upon cave cricket eggs.

The animal below is a troglobitic opilionid, also known as a daddy-long-legs or harvestman.

In Neuvo Leon, we worked with one of the larger cirolanid isopod species, and began population studies on this species. Techniques which were formerly only workable on paper were validated in preliminary field trials.

The picture below is the sump-pool at the Neuvo Leon site. The water is illuminated by the diver who is on his way up (decompressing after reaching a depth of about 100 feet).



The picture below shows some cirolanid isopods from the Neuvo Leon site. The numbers on their backs allow us to recognize individuals and document their movements - when they molt their exoskeleton the mark will be removed.

One of the highlights of the trip was when the divers discovered stygobitic shrimp at the Nuevo Leon site. The tall image on the left at the beginning of this web page shows of four of the little critters. This site may constitute an important extension to the known range of this animal.

The logistics of diving the sump at Sotano de Amezcua were complicated by the entrance to the cave, which was a pit 213 feet deep. After the diving, it took the four of us many trips up the rope to get all the gear out of the cave.

Starting down from the top of the 213 foot rappel.

Beginning the climb out of Sotano de Amezcua with a heavy load of research gear and diving equipment.

The sump dive at Sotano de Amezcua required some of the careful preparations (below) before entering the water.

The diver is about to enter the sump. Note the silt already stirred up in the water. This quickly became a zero visibility dive.

(click on image for larger version)

This diver (below) will follow a dive line laid by the first diver.

Illinois Natural History Survey

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