

## **Tarahumara Frog (*Rana tarahumarae*) trip report: 25 May 2006**

On the evening of 24 May 2006, Abigail Dinsmore, Suzanne Goforth, Chris Nyhart, Jennifer Spawn, and Mike Sredl arrived at Tunnel Springs in Gardner Canyon to camp over night.

The following morning we hiked in to Big Casa Blanca Canyon and set up camp at the bottom of the Bathtubs. We split into 2 groups; Chris, Jennifer, and Mike surveyed upstream of camp, while Abi and Suzanne surveyed downstream of camp and assessed the pool in Walker Canyon as a potential release site for the frogs housed at the Arizona-Sonora Desert Museum. In addition to monitoring, this trip was planned to conduct surveys following the recently revised monitoring manual and to ensure that permanent markers which were set up in March were effective.

### **LOWER REACH**

#### **Site 1 (Bathtub Area)**

On 25 May 2006, surveying began at 1120 at the downstream boundary of Site 1. There was no flow between pools in the bedrock reach where the Bathtub pools are located. However, all depressions in the bedrock along the main flow channel contained some water. Water in all pools was moderately clear except for a few small pools that were more turbid.

#### **Site Conditions**

Air Temperature: 31°C

Water Temperature: 28° C

Relative Humidity: 17%

pH: 8

*Rana tarahumarae* frogs were seen as far down as the downstream boundary of Site 1 but were more numerous just below Sycamore Pool, in Sycamore Pool, and in the Bathtubs area. Eleven adult *R. tarahumarae*, 9 juveniles, 22 large tadpoles (from last year), approximately 400 tadpoles (from 4 recently hatched egg masses), and 1 egg mass were observed (Photos 1 and 2). One adult *Kinosternon sonoriense* was observed as well as about 100 recently hatched tadpoles that were probably *Hyla arenicolor*. We were not able to positively identify these as *H. arenicolor* and they may have been *R. tarahumarae* tadpoles; but they were found in a shallow pool in the bathtubs and there were no remnants of an egg mass in the pool.

### **MIDDLE REACH**

#### **Site 2 (Ledge/Long Pool Area)**

In the Middle Reach, surveying began at 1415 at the downstream boundary of Site 2. Two large pools were observed downstream of the Site 2 downstream boundary within the Middle Reach. There was no flow between pools and all pools were moderately clear.

#### **Site Conditions**

Air Temperature: 32°C

Water Temperature: 27° C

Relative Humidity: 18%

pH: 9.3

Three plops were observed in Site 2 but were not positively identified. One adult *R. tarahumarae* frog was observed, as well as 1 juvenile and approximately 250 tadpoles. Roughly 80 *H. arenicolor* tadpoles were seen but these were not positively identified and may have been recently hatched *R. tarahumarae* tadpoles, but again, no remnants of an egg mass were found in the pool.

## **DOWNSTREAM OF THE LOWER REACH AND WALKER CANYON**

Abi and Suzanne surveyed downstream and hiked to the main pool in Walker Canyon to assess the habitat. Surveying began at the downstream boundary of the Lower Reach at Kinosternon Pool at 1400. One *K. sonoriense* was observed in Kinosternon Pool. Downstream from Kinosternon Pool was dry except for a few small pools and a couple of larger pools (Photo 3) (Figure 1) where 2 large *R. tarahumarae* tadpoles and 1 small juvenile were observed. These 3 individuals were likely to have been washed down the canyon during the flood in August 2005. The pools were approximately 4 by 2 m each and were only about 15-20 cm deep. All of Walker Canyon was dry except for the large pool (Photos 4 and 5) (Figure 1) that Mike confirmed on the October 2005 visit. This pool was approximately 40 cm deep at the deepest point and was not suitable at all for release of the ASDM frogs. Walker Canyon was surveyed up to 0520180E 3503282N NAD83 (Figure 1).

## **MONITORING PROTOCOL AND PERMANENT MARKERS**

All individuals surveying reviewed and field tested the monitoring manual as well as the new data sheet. Suggestions and comments were taken into account to further improve the protocol and data sheet and further input will be received from the TFCT in the near future. All flagging and permanent markers were located easily and were still in place.

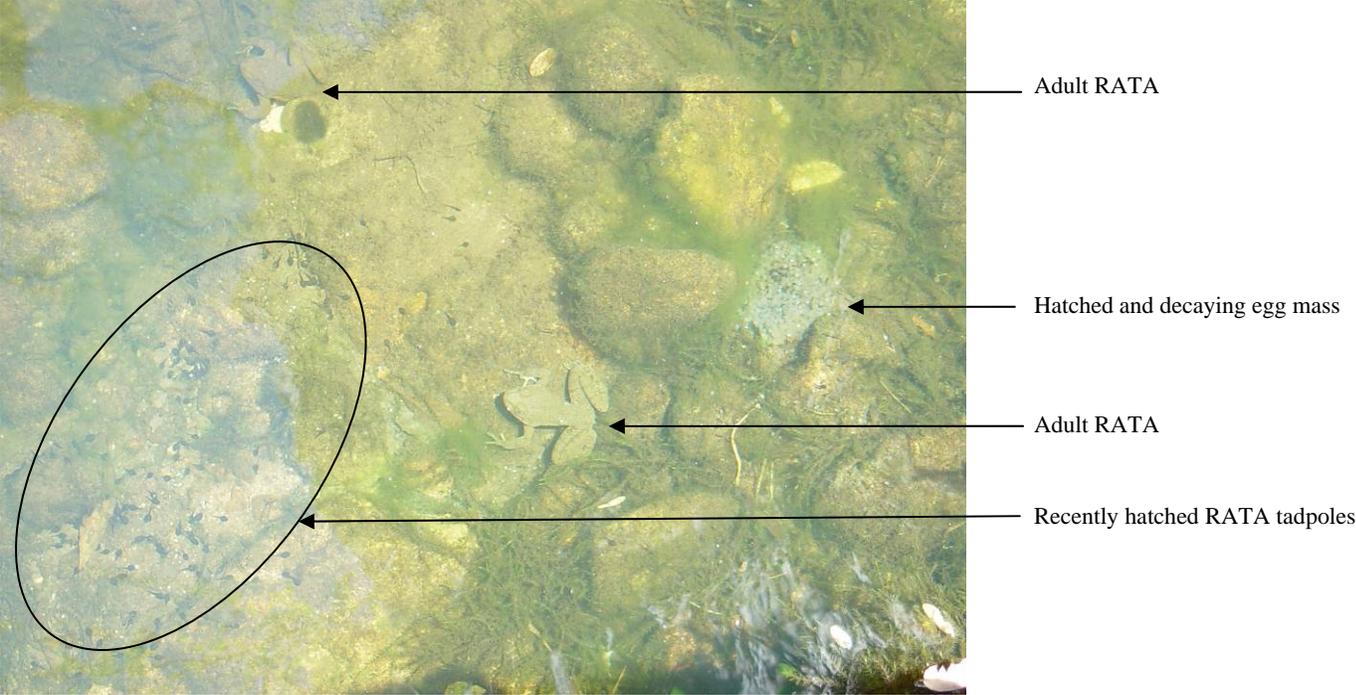
## **NIGHT SURVEY**

The entire group conducted a night survey in Site 1 starting at Sycamore Pool at 1957. Several adult and juvenile *R. tarahumarae* were observed in all pools from Sycamore Pool upstream to the top of the Bathtubs, where the group turned around. A couple of large pools just below Sycamore Pool were surveyed on the way back down. The survey ended at 2112 with 73 total *R. tarahumarae* frogs observed.

## **CONCLUSION**

Surveys from this trip further confirm tadpoles survived the flood last year and adult and juvenile frogs are also doing well; this was very evident from the results of our night survey. It was also encouraging to see the number of recently hatched egg masses. Permanent markers and flagging were in good shape and certainly aided in defining the boundaries of the surveying areas. The monitoring manual and new data sheet were simple and effective, and will allow us to maintain this data in our database.

**Photo 1: Two *R. tarahumarae* adults, tadpoles, and old egg mass in large pool below the Bathtubs.**



**Photo 2: Large *R. tarahumarae* tadpole.**



**Photo 3: Two pools downstream of the Lower Reach (0520784E 3503310N, NAD 83).**



**Photo 4: Pool in Walker Canyon (0520314E 3503234N, NAD 83).**



Photo 5: Dip net showing depth of Walker Canyon pool.



Figure 1: Two pools where *R. tarahumarae* were found downstream of the Lower Reach, location of Walker Canyon Pool and the turn around point for Walker Canyon.

