

# Chiricahua Leopard Frog Recovery Team SE AZ/SW NM Steering Committee

## 18 February 2010 Meeting Notes

### Southwest Research Station, Cave Creek (Portal), Arizona

#### Attendees

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Meeting purpose / mechanics. The focus of this steering committee is to address recovery across recovery units 1-4, looking at the bigger picture for the species, and determining what we need to

do to meet the recovery criteria for delisting in each recovery unit. The focus of local recovery groups should then be to work in specific areas where there is the greatest potential to meet the recovery criteria for the CLF. This steering committee can provide the regional assessment and help local recovery groups focus in on areas needing metapopulations or isolated, robust populations. There is a list of the local recovery groups in the meeting notes from last year.

*USFWS updates (see 2010 Recovery Update for RUs 1-4):*

1. Ramsey Canyon Leopard Frog now CLF.
2. Chiricahua Leopard Frog Criteria for Making Effects Determinations (CMED) is an expansion of Appendix I of the Recovery Plan. CMED may be useful for action agencies to evaluate effects and develop mitigation. Available on the recovery website.
3. CLF is a USFWS Spotlight Species in Arizona, as well as Sentry milk-vetch, Little Colorado spinedace, and Page springsnail. Also a Spotlight Species in New Mexico.

*Recovery Unit updates and needs for 2010 and beyond (this information supplements what is in the 2010 Recovery Update for RUs 1-4):*

#### RU 1

- No one has seen Pena Blanca Lake since it filled with water. Trevor Hare stated that he has two volunteer weekends left and could move CLF out of the lake before sport fish are moved back into the lake. Jim R. said to coordinate this with Tom Jones. We subsequently heard that AGFD has restocked the Lake with rainbow trout.
- Bullfrog eradication still needed in three sizeable areas (Arivaca Lake, Arivaca Cienega, and Ruby lakes/associated waters in the California Gulch area). Bullfrog eradication well underway in the eastern and western portions of the RU.
- Sky Island Alliance will be doing some assessment/survey work south of the border. There are bullfrogs in the area as well as lowland leopard frogs. CLF is not known south of the border in RU 1, but likely occurs there.

#### RU 2

- RU 2 needs to flesh out geographical areas for the different local recovery groups. For instance, should the Babocomari watershed be included with Ramsey Canyon/Huachucas or Las Cienegas group?
- Abby stated that AGFD wants to form a local recovery group for Santa Ritas and Empire Valley, including Las Cienegas. It was decided last year at this Steering Committee meeting that Mike Sredl would be the chair of this group. Dennis Caldwell will talk to Mike S. and a meeting will take place in March. The NFWF grant for Las Cienegas, as well as the proposed Rosemont Mine, provide some momentum for this area in terms of monitoring and recovery actions.
- Need to determine locations of metapopulations within the context of what's happening throughout RU 2. A metapopulation is in place on the east side of the Huachucas, and the bones for them occur at Las Cienegas and the east side of the Santa Ritas. There is potential elsewhere in RU2, and several isolated populations that could become robust in time.

- Dave H. brought up importance of understanding the ecology of the frogs within the context of successful work in RU1 and RU2.

### RU 3

- RU 3 needs a metapopulation of frogs and that the local recovery group needs to determine the areas in which they will focus. There are a number of scattered populations, some of which are close enough together to exchange individuals, but metapopulations are currently lacking. Dawn and Bill Radke are the RU3 local recovery group chairs.
- Geoff and Dawn would like more guidance establishing goals for the Cave Creek region. Dawn said there are eight landowners that want CLF in lower Cave Creek. Need a meeting with Cave Creek landowners to discuss recovery activities and Safe Harbor Agreement opportunities (Valerie B. lead). Geoff said that there are bullfrogs at Willow Tank and Morgan Tank in the valley and both of these tanks have solar power and dependable water. Need to be cognizant of potential stepping stones for bullfrogs to colonize Cave Creek from the San Simon Valley, although that has apparently never yet occurred. Dawn also had questions regarding monitoring and marking CLF. Except for the survey protocol in Appendix E of the Recovery Plan, there is no monitoring plan for tracking recovery or for intensive monitoring of populations. Recovery monitoring is decided by the local recovery group based on people and resources available. Need certain amount of information: number of occupied sites, breeding status, are sites part of a metapopulation, are breeding sites robust populations, and threats (non-natives, disease, water permancy, etc.). Examples of time periods to monitor might be dry season (May-June), post monsoon to see metamorphs (September), and Oct/Nov or ~March to observe disease-related dieoffs. The annual Arizona Survey Protocol Workshop will be held 19-20 May in Young.
- Trevor H. stated that West Turkey Creek has potential and someone should work with the Austins to rid area of bullfrogs. Jim R. reminded group that need to think of how areas fit into recovery – does work in an area help us meet the recovery criteria? Right now we have a number of scattered populations in RU 3. More than anything, we need metapopulations. Might be best to focus our efforts on establishing additional populations around existing populations, rather than working in entirely new, disjunct areas.
- The Austins have a ranch house just south of the border in Guadalupe Canyon where there is a large cement tank. Jim R. saw lowland leopard frogs there a couple of years ago. The tank is often dry – if it could be kept full, it would likely serve as breeding habitat for lowland and/or Chiricahua leopard frogs. Ann M. will contact the Austins.
- Trevor stated that Ruben should be included in RU3 meetings as well and that he will contact him.
- The headstarting facility at Douglas High School is sitting empty and needs to be used. It was decided that CLF from Stateline Tank (near Geronimo Trail Peloncillo Mtns, New Mexico) should be moved to Douglas High School for later possible release into Hog Spring, Blackwater Tank, and Geronimo Tank, which could potentially form a metapopulation in the Peloncillo Mountains. No permits from NMDGF are needed to

stock Chiricahua leopard frogs into suitable sites in New Mexico (AGFD permits and an EA Checklist are needed in Arizona). A USFWS permit is needed in both states.

- Charlie P. explained issue regarding lack of disclosure of scientific information from the Diamond A Ranch. NMDGF cannot publish or release site-specific locality data without the permission of the landowner, and currently the Diamond A has not given its permission regarding CLF data. Charlie will no longer be doing work on the Diamond A. Anna M. stated that there is a wonderful opportunity for CLF restoration in Guadalupe Canyon and that she and Matt will try to work with Seth H. This area was once part of the Magoffin Ranch.
- Need to investigate the status of High Lonesome Well (base of the Animas Mountains). This is one of the few robust breeding populations in New Mexico and perhaps the only one in RU 3. The tank, which is an elevated cement tank, is on lands owned by Freeport McMorRan and leased to the Diamond A. The tank needs to be repaired, which will likely require draining of the tank and moving/holding the frogs.

#### RU4

- Halfmoon Tank (Dragoon Mtns), which used to be a robust breeding population, began drying out regularly in the late 90s or early 2000s. A recent reestablishment there failed after the tank dried. Accumulated sediment needs to be cleaned out. The tank only can be accessed via hikers. Jack Church, State Fire 'guru' out of Douglas area, is contact for getting fire crews to hike into areas to clean out tanks outside of fire season. Someone will contact Jack. Trevor and Sky Island Alliance volunteers are also willing to go into the Dragoons.

#### Mexico

- Trevor H. stated that SIA is doing frog surveys at Plancha de la Playa, El Pozo, and Rancho Esmeralda in RU 1. A complex cienega in that area contains bullfrogs but likely leopard frogs, as well. SIA is putting in a grant for bullfrog and crayfish removal work in Los Alisos drainage in Los Fresnos, which drains Bear, Sycamore, Ida, and other canyons in the Huachucas (RU 2). Glenn F. stated a fish barrier at the border would be useful. There are green sunfish, black bullhead, bullfrogs, and crayfish in the Los Alisos drainage at Los Fresnos.

#### *Disease:*

Lots of discussion about *Bd*. Main message is that getting rid of *Bd* on the landscape is not a viable solution, and that hopefully frogs are adapting to deal with the disease. An ongoing study investigating using a bacterial soup – a probiotic – applied to frog skin could provide frogs with the means to combat the disease in the wild (see the Recovery Update). The current pre-release disease protocols we use for frogs and tadpoles (itraconazole and benzylkonium chloride) have been found to be ineffective at clearing 100% of animals. The recovery team needs to have a sub-team, consisting of veterinarians and other disease expert, to review the current protocol and recommend reasonable alternatives that address both potential risk and efficacy. The fallback is the protocol published by Nichols and Lamirande (2000 – see the recovery update).

*Bd* grows at temperatures of 4-28<sup>0</sup> C and pHs of 4-8. Anecdotal data showing temperature is a factor and that disease is more virulent in the cold (Phil R. stated that 'cold' is 10-14 degrees C). In addition, when frogs are stressed by various factors, they can become symptomatic. In Arizona, Jim R. stated the most serious problems with *Bd* are in the Ramsey Canyon frog populations. Phil R. stated that cold bottoms of Las Cienegas are a problem also. However, may be other areas that lack detection. Charlie P. tested 40 *Hyla arenicolor* in NM and all were negative, although some are located in a *Bd* positive site. However, *H. arenicolor* have tested positive in Arizona. Levels of infected Canyon treefrogs in Arizona have been found to drop in the summer – this species may be able to clear the disease because of basking behavior. Also, leopard frogs persist in warm springs at Alamosa Warm Springs and on the Mimbres Rivers. They are scarce on the Mimbres itself, which is colder. Abby stated that Australian studies show that higher temperatures may kill *Bd* and this could possibly be a treatment method for tadpoles. Treatment in warm water (32<sup>0</sup> C for 96 hours or more) may be a feasible way to treat tadpoles (see Woodhams *et al.* 2003, *Diseases of Aquatic Organisms* 55:65-67). The Magoffins have a pond with pH>8 in which the frogs have never tested positive for *Bd* suggesting pH may be important, as well. Many waters in Arizona have pHs >8, at least seasonally.

*Bd* Testing: UA has primer issue figured out for real time PCR and will let us know when they can handle samples again (they will process samples for free). AGFD is using Pisces Molecular at \$29 a sample with good turn-around times. A total of \$9,000 in CAP funding will be available in July to test frogs for *Bd*.

Research: Tara S. said that Dr. Miller in Georgia wants to study treatment of egg masses for *Bd*. Also, *Bd* treatments will likely be discussed at the climate change conference for reptiles and amphibians in Albuquerque in March. Can someone from the group who is going to the conference report back on this?

#### *Critical Habitat:*

A 6 May 2009 Order from the Federal District Court in Arizona that concluded the case WildEarth Guardians v. Kenneth Salazar, *et al.* requires the Fish and Wildlife Service to publish in the Federal Register a proposal to designate critical habitat for the Chiricahua leopard frog by 8 December 2010. Critical habitat, as defined in section 3(4) of the Endangered Species Act (ESA), includes:

1. The specific areas within the geographical area occupied at the time it was listed in accordance with the provisions of section 4 of the ESA, on which are found those physical or biological features (1) essential to the conservation of the species and (2) which may require special management considerations or protections, and
2. specific areas outside the geographical area occupied by the species at the time it was listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species.

USFWS must include all areas that meet the definition in the proposed rule for critical habitat. In the final rule, lands can be excluded from critical habitat if the benefits of such exclusion outweigh the benefits to designating the area as critical habitat, unless failure to designate will

result in the extinction of the species. Areas where we have worked cooperatively with private landowners will be among the lands considered for exclusion. Federal lands that are proposed as critical habitat likely will not be excluded.

There are many misconceptions about critical habitat. Critical habitat helps to delineate key areas for survival and recovery of the species. Once designated, Federal actions that may affect critical habitat require interagency consultation pursuant to section 7 of the ESA. If the species is already present in a critical habitat area, consultation will normally be required regardless of the designation. The vast majority of consultations on critical habitat result in no or only minor changes to proposed actions. On non-Federal lands designated as critical habitat, there are no additional regulatory requirements, unless a Federal action (e.g. Federal funding, permitting, or project) is proposed on those non-Federal lands. Jim R. will prepare a critical habitat white paper about the process and what critical habitat means. This white paper will be posted on the recovery website and the listserve.

Matt M. mentioned it would be valuable to have USFWS attend a Malpai Borderlands Group meeting to explain the process and critical habitat for the frog, as well as recovery planning and critical habitat for the jaguar. USFWS will attend the 1 April Malpai meeting for these purposes.

*Funding (see recovery update for additional information):*

- There is \$100K CAP funding for recovery projects (see recovery update).
- Rancho Los Fresnos NFWF grant was funded to control bullfrogs among other things.
- Las Cienegas NFWF grant.
- SBI Net funding for Pajarito-Atascosa mountains region should be available soon for control of non-natives at 5 sites. Additional funding could become available as part of a larger border-wide mitigation program.
- Possible mitigation \$ from AGFD Sport-fish Consultation.
- Need to investigate Joe Austin's Foundation.
- A new grant program through the State Department of Agriculture will become available next year for livestock developments that may have some applicability for frog habitat development/enhancement.

*How to improve local recovery groups:*

- In RUs 1-4, some local recovery groups are very well organized, while others are not.
- LRGs should meet at least once a year.
- LRGs need to develop a work plan for the upcoming year that identifies specific tasks; who's going to do what, when, and where; as well as an annual report of achievements from the previous year that tiers to that year's work plan.
- Jim R. stated that the best example of a local recovery group is the Ramsey Canyon leopard frog team, which has been operating since 1993.

### Tasks and Assignments

Trevor will organize an RU 1 LRG meeting (held 1 March).

Dennis C. will coordinate with Mike Sredl on a RU 2/Las Cienegas-Santa Ritas Local Recovery Group Meeting, possibly in March.

Need to capture frogs/tadpoles from State Line Tank and get them to the Douglas High School for captive rearing/breeding – lead? Charlie?

Need a meeting with Cave Creek landowners to discuss recovery activities and Safe Harbor Agreement opportunities (Valerie B. lead).

Anna will discuss with the Austins using the cement tank at their ranch in Guadalupe Cyn, Mexico, as a leopard frog site.

Need to investigate the status of High Lonesome Well and proposed renovations. Lead - Michelle Christman? Charlie Painter?

FWS will attend the 1 April Malpai Meeting to discuss CLF critical habitat and other issues. Lead – Jim R.

Need to contact Jack Church (State Fire guru) about using fire crews to clean out Halfmoon Tank. Trevor needs to investigate use of SIA volunteers. Best time to do it would be when it is most likely to be dry (June), however, with all the recent rains, it may not be a good year for this work. Lead?

Need to organize a meeting of veterinarians and other disease experts to recommend protocols for pre-release disease treatment. Lead - Mike and Jim?

Someone needs to report back to the group about possible treatment of egg masses for *Bd*. This may be discussed at the Amphibians/Climate Change meeting in Albuquerque in March. Lead – Tara?

Need to investigate possible funding sources (e.g. Joe Austin Foundation, new grant program from the State Department of Agriculture). Lead – all.

White paper on critical habitat will be prepared for posting on the recovery website and listserv. Lead – Jim R.