

Projects (continued).

26 June 2010

Arrived @ Muleshoe Ranch, ^{Southern} Galiuro mountain,
set nets in a nice tank (4)

Tank was built in the late 1800's
mostly just a rock berm collects much
of the spring seep.

Several nice pools in Bass Canyon
approx. 1 mi. from Ranch headquarters
caught 1 ♀

Muleshoe is a Cooperative Management
area (C.M.A.)

They have put us up for the night
in some bunk houses

Secret Spring (the nice tank)

Contains Sonoran Mud Turtles,
Gila ~~topminnows~~ topminnows, Desert pupfish
& Northern Leopard frogs

tank is not real deep but has tons of muck

Saw several *Chenidophorus* & *urosaurus*

~~now~~ NO cattle are run on this
ranch

3 nets x ca. 3 hrs = 14 turtles

27 June 2010

Left muleshoe and headed for the central Galiuro's.

~~Only tracked briefly and explored~~

Entered Coronado National Forest off Ash Creek road.

Checked nets @ Secret spring

4 nets = 21 turtles

Ken collected blood and we split.

Set ⁴ nets in a small ^{unnamed} tank
checked 2 hrs later = 0

Set 10 nets in Red tank

Saw 4 turkeys @ Red tank

Tiger salamanders everywhere

Red tank is a very large & deep tank
tons of aquatic vegetation surrounds the tank

28 June 2010

* Left CNF and headed to Willow for some gas.

Checked nets @ small unnamed tank
= 0

Checked nets @ Red tank = 0

* saw a garter snake w/ a tiger salamander in its mouth

Explored Southern Pinaleno's w/ no avail.

headed towards Deer Creek
off ~~of~~ US. 266

Arrived @ the trailhead & hiked to mud spring which was empty.
saw a really cool den.

Beautiful but tough hike
Camped near trailhead ~~at~~
in Coronado National Forest

29 June 2010

THE DEATH OF VADER! Aug. 2007 - June 2010

Last night's wind storm nearly blew vader over,
no zipper doors worked either.

Found a wind scorpion in my bedding.

Left Deer Canyon wilderness area for
Seirra Vista to get a new tent.

Drove & explored southern ^{central} Huachacua's
to no avail.

Drove along the border fence for several hours.
Consisted of barb wire & steel.

Checked several tanks that were either
dry, a storage tank, or on someone private
property.

Drove into Parker Canyon Lake, ~~planning~~
Stayed the night. Hiked around lake.

met
Campground Supervisor & assistant campground
supervisor: Dave & Bonnie

LAHEY ↑

30 - June 2010

Hiked to spillway & below the dam @ Parker
Canyon Lake.

Wooded the small stream @ base of
lake ~~to~~ no avail.

Explored South Lake drive. Set 2 nets
in a small spring. = X
Set 4 nets in a small stock tank (cows)
= X

H₂O very, very cold. Large ^{emergent} aquatic vegetation.
Duckweed present, covered most of surface H₂O
waters appear tannic, w/ a brown algae
covering surfaces submerged.

Saw a few white-tail

Explored scotia Canyon approx 650-700m
upstream

headed back to camp

Ken's tent is the biggest I have ever slept in.
It dwarfs vader and shall be called spaceball
I

1 July 2010

Boy Scout troop 412 is finally leaving!

Hiked down to a small backwater ponds that
are west of the dam to Parker Canyon Lake.

Hike ⁴ nets into the backwater Ponds,

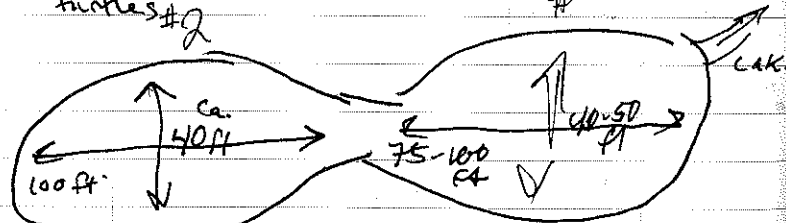
Set	In	Pond 1 #	Pond 2 #
	11:00 am		11:00 am
	1:00/1:30	2	1:30/2:30 5
	3:30	1	4:30 3?
	2		
	6 2 5 ♀		

- Set nets overnight.

Saw a turtle in Pond 1, almost certainly mud turtle
(11:45 am)

12:25 pm: Chorus of Bullfrogs? started
w/ one & then several more joined in.

heard another Bullfrog chorus while measuring
tunnels #2



- brook connects
#1 + #2

12 July 2010

2 nets in #1 = 2 turtles; both recaps

2 nets in #2 = 1 ♀

Reset nets & checked @ 10:30

= #1 = ♂

= #2 = 1 ♂

Reset nets & checked @ 1:00

#1 = ♂

#2 = ♂

Reset nets & checked @ 4:00

#1 = ♂

#2 = ♂

#1 & #2 both have fish including
Green sunfish = #1 & #2

Catfish (spp?) = #1

Longear sunfish = #1

I observed several largemouth bass but
none were caught in nets

#1 is much deeper than #2

Both are certainly permanent

Saw a Sonoran mountain kingsnake

Left for Sierra Vista

3 July 2010

Sierra Vista rest time

4 July 2010

Drove to Reef Canyon + Ramsey Canyon in the Huachaca's. Neither were suitable for turtles.

Drove to Turkey Creek Canyon in the Aravipa Canyon Preserve via US 266 in Galiuro Mtns

Absolutely beautiful!

5 July 2010

Aravipa Canyon is a large canyon that serves as the main drainage for the Galiuro mtns. It has a perennial stream that flows through the canyon. Right now the stream ranges from < 1.0 m - 1.5 m in depth + 1-3 m in width.

This creates a lush riparian area w/ lots of aquatic vegetation. We have observed several species of fish including different suckers, darters, + dace. We noodled about 1-1.5 km of the Aravipa canyon.

No turtles captured or seen.

Met up w/ Stace Walker @ his house. He confirmed that he has observed Sonoran mud turtles in the area.

He suggested to meet w/ Mark Haberstick + that Mark would have a good idea about where to find turtles. Mark mentioned several places that might be good + confirmed seeing turtles in the Aravipa Canyon. 100-200 ft
Aravipa Canyon walls are breathtaking!
Saw several species of *Cnemidophorus*
saw a great blue heron

6 July 2010

Explored Turkey Creek looking for a tank that Mark talked about.

No luck!

Made a brutal death hike to Mesral tank. I hoped the tank was dry the entire hike just so I wouldn't have to carry nets back up that mountain. The trail felt like it went straight up the entire way. The contour lines were so tight they looked like one big contour line. The tank was dry!

Turkey Creek ~~to~~ also has some cliff dwellings. ~~the~~ The Salado people lived in this area until around 1400 AD. Saw one of the dwellings. Very cool.

Decided to set nets in the Aravipa Creek backwaters. Set 2 nets @ 1st switchback 1 @ the 2nd, 1 @ a boggy area, & 2 in Marks cattle ponds.

Looked @ Maps w/ Mark to clarify some of his instructions.

Found out that we went the wrong way and were in the wrong canyon altogether. (from our earlier search)

7 July 2010

Checked nets in Aravipa. Caught 2 ~~adults~~ ^{adults} in one net (1 ♂ + 1 ♀). @ the 1st switchback caught 1 J @ 2nd switchback caught 2 J in boggy area, & got 1 in cattle ponds. Moved cattle pond nets to other areas in the Aravipa.

Goal was to set nets in slow moving backwaters.

set 3 more nets in boggy area.

checked @ all nets 2 more times w/o any luck

2 Juveniles = no blood

Reset all nets

8 July 2010

checked all nets (n=8) = 0 captures
Nets were pulled.

Hiked up Oak Grove Canyon. There was a stretch of perennial flowing water w/ beautiful pools. Stretch was ca. 1.5 mi

Some pools as deep as 3-m

Fish present: Dace, Sonoran sucker &

Desert suckers

However, we captured no turtles. Devastating.

Looks like great habitat.

One issue may be that the canyon walls (60 ft) are too close. It most certainly floods

the entire canyon. This may reduce nesting sites ???

Decided to leave and regroup @ Justin Congdon's in the Chiricahua

Drove to J.C.'s after having a few beers w/Steve & talking to Mark for awhile.

Got to J.C.'s well after dark
Justin lives on Barboot Ranch

19 July 2010

Planned the next couple of weeks of trapping

Called people about land access.

Person of Interest: Mike McCarthy
Biology faculty @ Eastern AZ College:
Thatcher

apparently has studied mud turtles in the area
ate a wonderful meal @ J.C.'s

10 July 2010

Left J.C.'s & got supplies in Willcox.
Drove 191 N to Pima through Safford & Thatcher. Took Tripp Canyon Road - to National Forest from Pima.

NORTHERN PINALENO'S ^{spelling?}
Hiked to several tanks ¹⁻² ridges over from where we are camped.

• Circle Tank - metal tank on top of ridge ~~is~~ = No turtles
No H₂O

• Camo Tank - metal tank near the creek.
No H₂O
No turtles

• Double trough tank - ~~an~~ Earthen dam bisecting the creek.
- filled w/ silt
- ~~is~~ No H₂O & likely doesn't hold any H₂O
- No turtles

Pipeline Tank - Earthen dam bisecting creek. filled w/ silt, No H₂O probably doesn't hold much H₂O
No turtles.

- Holdout Tank - Earthen dam bisecting creek, filled $\frac{1}{2}$ w/ silt. No H₂O looks like it ~~may~~ holds a decent amount of H₂O. ~~No turtles~~

- Deer Tank - Earthen dam bisecting creek. Had H₂O 25 m² surface area ca. 0.5-1 m deep
- noodled Deer tank w/ no luck

- Brushy Tank - Earthen dam ~~was~~ bisecting creek completely filled w/ silt, looked much like Prospect Tank in Palomillas holds no H₂O

➔ Took a death hike up & over a mountain that would have bitch slapped Mount Doom. Brutal! Cleared brush most of the way. Keular is gone. Had very little to no H₂O. Dropped down the other side to a large hiking trail. Got separated from Ken. Hiked back to camp solo.

Drank a big deal of cold gatorade & then threw up! 15 min later.

1st time since high school that I have thrown up due to exhaustion.

Took Aravaipa Canyon rd to Cedar Springs road looking for two tanks. Access was blocked by private land.

Saw an AZ black rattlesnake during the hike

Saw an western diamond or Mojave during drive back from blocked tanks

several kangaroo rats & other rodents cross the road and scurry frantically on the drive back.

saw a Bufo alvarius Colorado River Toad on drive back.

→ a subspecies of western rattlesnake

Crotalus viridis cerberus

Jet black w/ yellow markings on back determining interspace positions

clouded up a bit w/ some thunder but no rain.

11 July 2010

Left Tripp Canyon camp because the only tank that wasn't dry was too shallow to set a small net in.

Went by Rogers Reservoir = dry

Webb one tank also dry

Went to Roper Lake St. Park but could not get permission to trap before it is cleared w/ Dan Shein.

Called Dan & left a message

~~Went to~~ Went to Riggs Flat St. Park @ 8800 ft
Not likely that we will catch *Desmognathus* turtles
b/c it is above their elevation limits.

Set 6 nets & checked once ^{lake}
~~Long~~ Long, winding road to ~~top~~

Walked around lake does not look very good.
Trout (3 spp present) & fisherman everywhere

Tire is losing air. started to rain around 5:00 pm

~~Beautiful~~ Beautiful area. Large Pines & conifers
Lake was built as part of a reconstruction project 1957

Surrounding vegetation very different (i.e. montane forest) from other places

Greater earless lizards *Cophosaurus texanus*

near Webb one tank
stopped tire leak
rained lightly

Riggs Flat Lake ^{campground} ~~campground~~ host = Carl

12 July 2010

Checked nets 3x = 0
except for a few trout

Saw a black bear stroll through
the campgrounds
ca. 100 m away

Left nets set over night / changed out bait

talked to a guy that
has lived in the area all his
life and has never seen a
turtle @ Riggs Flat Lake
but he has seen turtles
@ ~~Cliff~~ Cluff Reservoir #3
in Pima.

Did not know what kind

Given this ~~very~~ comm & the
~~apparent~~ exceeding limits of the
range I think it is safe to
say there are no turtles @
Riggs Flat Lake

13 July 2010

Checked & pulled nets @ 8:00 AM
= 0

~~At~~ Broke camp and headed
for Cluff #3

Stopped by Eastern AZ college
to try to make contact

First Real Rain of the Year!
w/ Mike McCarthy or Dan Hansen
(both Broke / faculty)

Set 11 nets in Cluff Reservoir #3

#1 & #2 = Day @ noon - 1:00 pm

Cluff is extremely littered and appears
to be the town's swimming pool.

Several groups of people continue
to come & go.

Fisherman confirm seeing turtles
SMT ???
1x 3:00

Check nets = 1 T. scripta
0 SMT

Check 2x 6:00 = 1 T. scripta
0 SMT

pull nets & head to Wilcox
going back to N. Galupos

Saw a Bobcat while coming down
from Mt. Graham

14 July 2010

head to Cobra Ranch in Northern
Guluro's

Struck out in Pinaleno's in

Staying @ Bunk houses @ Cobra
(Nature Conservancy plot)

Set 8 nets in 2 diff.
backwaters (4 in each)

Ken saw a Western rattlesnake
a black necked garter snake
found a DR black necked garter

Urosaurus ornatus on patch @ bunk

Explored a bit of Bear Canyon

15 July 2010

caught 4 adults (3♂ 1♀) in
the four nets set in the
bog next to Mark's old house.

Bog #2

- this is located just upstream (200-250m)
after the first stream crossing
GPS points as AC bog #2 yes

- took blood from all 4

checked nets @ bog #1 = 0

- located ~~near~~ ^{between} Bear Canyon

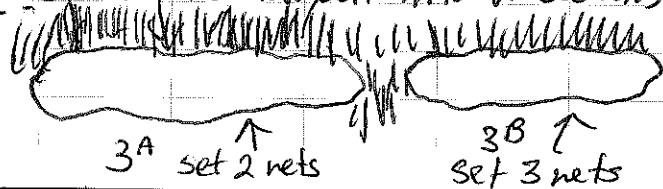
+ ~~at~~ 6 or 7th stream crossing

- marked w/ gps AC Bog #1 yes

set 1 more net in a small backwater
near bog #2

found a 3rd bog near the Aduipa
Canyon wilderness sign

3rd bog is broken into 2 sections



* All nets are set ^{at} 5 nets in the bog

Saw a *Sceloporus virgatus*
@ Stace's house. according to
Brennan & Holycross 2006, ~~scor~~ does not
occur in N. Galico's.
Could be a new Co. record

- several lizards are on the porch of
the bunk houses we are staying in.

#1 = 4
#2 = 6
#3 = 5

15

- Started to rain lightly around
5:00 pm
- ~~started~~ spit ~~to~~ into the night
- several *Bufo alvarius* around the
house & on the road

Bufo alvarius = Sonoran Desert Toad
large parotids & white tubercle
under chin are best ID's.

15 nets = 10 turtles

1/6 July 2010

Bog #1 = 3 (2♂, 1J)
4 nets
↓ recap (#29)

Bog #2 = 4 (all recaps)
6 nets

Bog #3 = 3 (2♂, 1♀)
5 nets

reset nets

17 July 2010

Checked nets; only 2 turtles from
Bog #3. Skunked everywhere
else. Left Cobra Ranch

Drove to Muleshoe Ranch to get
access to Redfield Canyon. ~~Bob~~
(Bob Rogers) has seen turtles there.

Drove to Sycamore canyon via Muleshoe
Rd. Hellish trip in, should be
interesting getting out. Rained like
hell.

18 July 2010

Hiked down Sycamore Canyon
to Redfield Canyon.

Redfield Canyon consists of
1.5 miles of perennial pools.
Some as deep as 3ft

Beautiful pools. Filled w/ small fish

Noodled 2 turtles, heard noodling

Walked down to Swamp Spring
Canyon.

Saw 3 AZ black rattlesnakes

Saw 2 juvenile madroan alligator lizards

Hiked 3 hrs back to camp from
Swamp Spring canyon.

very hard hike

19 July 2010

Left Sycamore canyon and
headed to Dragon mountains.

Checked out several tanks
along a CNF trail.

Only one (tank 51) had H₂O
got ready to set nets but they
were covered w/ duckweed.

Decided to clear them @ Justin's.

Got talked into staying the night

Cleaned nets w/ bleach

Started to rain, rained for
1 hr or so.

[20 July 2010]

Left Justin and headed
for west side of Dragoons.

Drove up into the Dragoons

There was a small stream
running. Talked to a man
named Bill, who informed us
that it had flooded the previous
night.

The road was quite washed out

Bill had spent alot of time
in the area and had never seen
a turtle. Said that the canyon
is mostly dry. but did tell us
of a tank called half moon tank.

Checked out several
other tanks. all dry

Cochise campground was
closed and we found no
place to camp. So we
drove to Douglas to get
a room. Douglas motels
were full b/c of a little league
Championship. So we drove
to Bisbee to get a room.

We are now closer to Huchucas
Plan on going to Finish Packer
Canyon Lake.

I picked up a brochure about
the San Pedro Riparian
National Conservation
area. we plan on
calling them to do research.

Saw a ^{Banded} juvenile Gila monster on W. Yale St.
Heloderma suspectum GPS

Rained like hell on 19/1 had to
pull over

21 July 2010

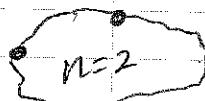
Drove to Parker Canyon Lake

Sent off Proposal to work on San Pedro River
they have ponds & SMT

Set 6 nets in large pools behind PCL



P2



P1

Rained again

Hail @ the top of Montezuma Pass
in Huachuca's

Yarrow Spiny Lizard @ camp site

Clark's Spiny Lizard near pool 2

22 July-2010

Checked nets

P1 2 nets = 4 turtles
3 recaps

P2 4 nets = 9 turtles
3 recaps

*none had moved w/ ponds
&

there of 4 nets had &

1 net had 9 turtles
there was a $\frac{1}{2}$ eaten dead
fish in w/ the 9 turtles

?? might have been red ear sunfish

took blood
was able to palp several turtles

None had eggs

woodhouse? 6 campsites in Oregons
road @ hotel stayed in willcox rained
again

~~23 July 2010~~

~~Left Willcox for Dragoons.~~

22-Con't

Drove to Dragoons & set 2
nets in Half moon tank

Half moon tank looks to be a CCC
project.

H₂O is @ the top of the dam
has obviously been flooded very
recently

a mile or so from Cochise
Stronghold

a good trail leads to tank
a little over 2 mile hike almost
all uphill the way there.

Saw a Sonoran whip snake

Black necked Garter Snake

23 July 2010

Left Willcox for Dragoons

Set 2 nets in Tank 51

ⓐ Rained ~~late~~ like mad for
20-30 mins. Flooded the
road we were on.

*Road impassible from other
side due to flooding*

after raining, we saw a Green Toad
Bufo debilis
Canyon Tree Toad Hyla arenicolor

Western Diamondback ~~Crotalus~~ Crotalus atrox

(after)
Regal Horned Lizard Phrynosoma solare

Reticulate Gila Monster Holoderma
suspectum

Red Groundsnake Sonora semiannulata

checked nets @ half moon = ♂
reset for 2 hrs = ♂

pulled nets

Checked nets @ tank 51

2 nets x 8 hrs = 0

Saw the same giant

W. diamondback near the tanks
edge

also saw a ~~giant~~

Eastern Patch nosed ^{snake}
Salvadora grahamiae

Drove to Empirita Ranch
pulled into a camping
spot around 8:00 pm.

24 July 2010

Drove near Nogales & Lil Nogales
Spring.

Captured a small male
S. muel hille a little Nogales,
as big as Juvenile w/ smooth plastron
& enlarged tail

growth rate undeterminable.

Nogales spring = dry

Spring 42 = dry

Spring 47 = wet but 0 turtles

Lil Nogales spring = wet = 1 turtle

Saw a Sonoran whipsnake
Masticophis bilineatus

Saw a potential juvenile Gila Monster ^(Banded)
~~hearts~~ it hissed @ me.

Heloderma suspectum

Truck is making funny noises???

Power steering issue??

Power steering fluid
dangerously low.

25 July 2010

Got power steering fluid
@ walmart / noises stopped
but is still rattling abit

hiked down French Joe
Canyon to French Joe spring
& two other springs 27423

There was a nice area of pools
but we noodled no turtles

Rained on us most of the day.

Power steering fluid dropped from

Max to below Min. Refilled.

Talked to Ranchers that lived
on Empirita Ranch.

One (Sam Elliot) was kind of
a dick. Said that in 20 years
he has seen ~~no~~ turtles.

~~Did~~ Saw it @ Lil Nogales
Never saw one @ Wakefield
Canyon

Confirmed that the small house
that we found on the road to
Nogales & Lil Nogales was
an old outlaw cabin, ~~then~~

and that they ran moonshine
out of there. Doesn't make much
sense.

Cabin was covered w/
psychedelic-trippy art, seemed
more like a commune than an
outlaw cabin.

"Seek harmony without"

"Find harmony within"

126 July 2010

Drove to Sierra Vista to
meet w/ Heather Swanson.
She is the land specialist for
San Pedro Riparian National Conservation
Area (SPRNCA) - BLM

She gave us access to trap the
ponds near the San Pedro
House

Big = Green Kingfisher
2 Ponds small = Black phoebe

Met w/ Glenn Frederick
on CNF - Sierra Vista
& Nogales Ranger district

Q told us of good spots
to check in the Huachuclas
& wet stones, canelo Hills.

Gave us the phone # of
Sheridan Stone = Biologist @
Et. Huachuca

* much promise for the next
few nights

rained like hell

Dried in S.V.

Car was fine, ~~a~~ small
leak near the power steering
pump

27 July 2010

Drove to Miller Canyon (Canelo core)
near Hereford St. to set up camp.

Drove to SPRUCA to ~~set~~ ^{check out} ~~set~~ ponds - they look good
~~to~~ rained all day

~~Went to~~

Cleaned nets & got
bait.

Set 8 nets in green King
got too dark to set nets
in black phoebe
- saw a Couch's spadefoot

28 July 2010

8 nets = 1 SMT (♀)
spring softshell
Saw an ornate box

~~Green~~ Green Kingfisher is full
of muck.
Very hard to get
around in.

pulled a few nets from
G.K. ~~here~~ and set nets in B.P.
7 nets in B.P. = 1 T. scripta
set for a few hrs. & SMT

fish present in ponds as well
as Bullfrogs

Fish

~~Red~~ Redear sunfish
Largemouth Bass
some type of Catfish
think Yaqui Catfish

also Salamanders

129 July 2010

G.K. = 1 Spiny Softshell

B.P. = 1 spiny softshell

Saw a western diamond back
on trail.

I think ppl have been
messing w/ the nets.

Interlude

Talking to Glenn Frederick
he said something interesting

One of the tanks called Mud Spring
Tank, which they (KNF)
have nicknamed Turtle Tank

he said that he always sees
hatchlings below the clay and never
in the tank, fits my story well

29 July 2010 cont

~~Heads~~

Went to Mud spring tank in the Huachuca mountains.

Set 2 Large nets in the tank.
approx 1.5-3.0 m deep
about the size of Lake Blackccc

SMT
Saw a dead turtle on the road to mud Spring.
Looked like road kill but was by a stream

Saw a large garter snake in a pool

Saw 3 turtles in mud spring tank
they looked small

Noodled 2 hatchlings below the tank

Started to rain, so we left

Earthen dam, looks like Invaline

There has got to be something to the fact that the most dense turtle pops persist around

a tank and a canyon below it.

Threatens to rain as I write this (7:00pm)

There is another spring called Sycamore Spring nearby. There are turtles there also (supposedly)

Saw a Sonoran whipsnake
Rained

30 July 2010

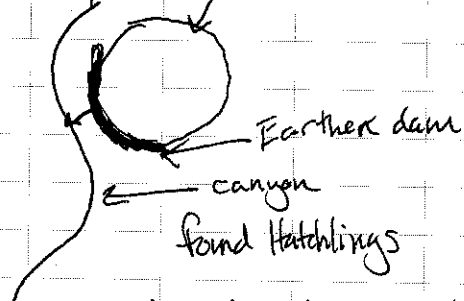
Checked nets @ B.P 7 nets = 1 SMT
1 LMB
1 SSS
~~1 SSS~~

checked nets @ G.K 5 nets = ~~1 SMT~~
one was a giant ♀ w/dark tail
1 Spring SS
2 T. scripta
2 Bullfrogs

pulled 4 nets from Black phoebe

checked nets @ Mud spring
1L = 12 turtles
2L = 17 or 18
all very small 1 got 10 & 10

mud spring fits the canyon w/ tank
 story well flow in



population density is extremely high
 most turtles ranged from 96.0-106.0
 they looked like little white castle burgers
 tinier than in Buckhorn

Not a very big tank

No macrophytes, small bullfrogs present
 heard several yips as I walked around
 pond.

pulled nets @ mud spring

31 July 2010

checked nets & BP (3 nets)
 pulled, one net had a large
 carp

checked nets @ G.K. 1 small net had
 a giant Spring softshell, ^{small} caught
 Same dove tail ♀, & a ♂ SMT

Reset nets in G.K

Went to Bisbee after getting

Shut out of Lewis spring.

High Knoll Rd was being
 worked on

Will try 4 access tomorrow

⊗ Drove near Herford Bridge

access point but the Sand Pedro
 is flooded x saw an ornate box
 turtle (credeyes)

11 - August - 2010

did not rain ^{hard} on 31st

Green Kingfisher pond has risen

4-5 ft overnight. Our nets are
 completely flooded.

We literally have to swim to
 get nets, had to drive to get

them back.

1 net had a large Spring Softshell

4 a small T. spinifera

The small SSS was dead.

Tried to resuscitate but was dead.

Large one was fine

Small guy was pickled by BDS w/
10% formalin

One net had several catfish, Bass, &
carp but thankfully no turtles

Saw a Ring-necked snake

~~Heard~~ pulled nets.

Broke camp & headed to

Justin Congdon's to wash our nets.

Stayed & had dinner w/ Justin & Nancy

washed & bleached nets

2-Aug-2010

Left Justin's & headed for the
Dragoons.

Dragoons must have gotten a lot of
rain since we were here last b/c
the roads are messed up

Set 3 nets in Half moon tank

(H₂O)
Half moon tank is barely sparkling
over the dam

Saw an ornate Box turtle
w/ red eyes →

Couch's speedboat &
Hotel

Stayed in Willcox

Got pulled over by Border Patrol

13-Aug-2010

"Do you have
any drugs or
guns"?

checked & pulled
nets @ Half moon tank.

Every indication is that it has no turtles.
No one has ever seen a turtle
there, no one has ever trapped

a turtle there, no one even knows of anyone who has heard of a turtle being there.

It is safe to say no turtles @ Half Moon built in '52

Went to Tucson to get new tires & brakes.

Got some really nice wheels @ Bigo
Jared was our salesman

Got rotors turned & new brake pads.

New tires & brakes = \$1,100

Stayed in Tucson.

4 August 2010

Left Tucson & went to Benson to grab groceries.

Then set up camp in French
Isle Canyon. Drove to Dry

Canyon to check out upper,
middle & lower tank in Dry Can

• Lower tank is full, looks flooded
set 4 nets

Via Glenn Frederick from a local rancher
that lower tank is perennial.

doesn't really look perennial but
maybe it holds ²⁰ like State line
No turtle heads

• Middle tank is dry. No turtles
likely, habitat is not conducive
for juvenile development
No rock pools, just muddy draws

• Upper Tank was full, had tons
of swimming insects
• Baetidae
set 2 nets

saved a juvenile lark from
a water storage container
It would have drowned

5-August 2016

~~the spring is on a dry up~~

Urosaurus on the trees @ our camp

Saw a giant Western Diamondback on the road from French Joe Canyon to Dry Canyon.

checked nets = 0
reset nets

Drove to ~~some~~ no-name canyon near Bear spring in whetstone mountains

Via Granite Peak rd of off SR 82

Bear spring was capped & had a large cement tanker that was less than $\frac{1}{3}$ full.

There was a carcass of a dead dog there.

From Bear spring we hiked over to Simpson spring.

Simpson spring was capped but it looks as if the cap failed. The collecting tank is rotted & busted.
There were several pools below Simpson Spring.

We noodled until the H₂O ran dry.
(750-800 m)

Caught 4 turtles, (3 ♀ & 1 J)

Juvenile was as big as a 2nd year turtle in Pelonchino system but this guy had 5 lines.
Ken threw him back before I could get any measurements.

These are certainly intermittent pools that are assisted by the spring

Maybe a good look @ what a system may look like when the spring is uncapped.

Drove to Benson to get more ice & provisions
Back @ camp it rained hard for 30 min
it hailed & rained off & on all night.

16 August - 2010

Rained off & on all night &
threatens to rain this chilly
morning

Check nets @ Lower tank = ~~Q~~
pulled nets 8:00 am

Left for L/Nogales Spring via
Empirita Ranch 9:00 am

Arrived @ Lil Nogales around 10:30

Noodled 650 m - 700 m of the
canyon below Lil Nogales Spring.
Caught 3 turtles!

Saw a terrestrial flight response
by # 8 (whetstones)

Left pool 3-5 min after release
from taking blood & measuring

~~16/20~~

Stopped by "Outlaw" cabin
& took some pics.

⊙ Hiked up French Joe canyon
& set 1 net in a pool
eye
Noodled but no luck
sprinkled"

Saw a black necked garter
snake

17 August 2010

checked nets in pools of
French Joe canyon
= ~~Q~~

Went to Benson for the day

18 August 2010

Checked nets in pools of
French Joe canyon = ~~Q~~

✓

Drove around St. David
Cinaga area near the
SPRNCA.

Several large tanks around
the SPRNCA, but ~~none~~ ^{all}
are on private property.

Types of Hyla in pools in
trench Jac canyon.
No Bufo

9 August 2010

Checked nets @ FJ canyon
= X

Drove to Simpson spring
noodled Simpson Spring

Less H₂O than last time

Recap of #5

Capture of a new ♀

Recap of #6 on land!

#6 was in the middle of the
canyon w/ no water w/in
~~4000~~ 20 m either direction

⊙ Could be a very small
population.

Saw a ~~Sceloporus~~ S. clackii

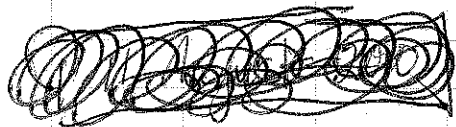
110 - August - 2010

Aravapai is flooded ~~see~~ pers com
Mark

Redfield is most certainly
flowing

check nets @ FS Canyon

head to Benson to waste
time ~~and~~ & rest up



noticeably less H₂O in FS
canyon since we started
setting nets in the pools

11 August 2010

Drive to & roadlaid for
Wagles going

Recap #7 & throw it!

Disappointing last day
of wet season

Drive to Douglas to refuel
& get supplies

get to camp @ dark
on the GTR from Douglas

~~to~~ to ascent at

McMon pass we saw

1 Gophersnake

2 Western Diamond backs

1 Blacktail rattlesnake

12 August 2010

Clanton draw has H₂O in every
low H₂O crossing.

H₂O spilling over top of ~~the~~ filled dam
in clanton

Ran into an illegal, who wanted a
ride

Set 4 nets in BW Hole

Set 1 net in mosquito pool

" " " " Deep pool
" " " " in pool below
BW Hole

noodled from base of BWH to
150-100 m below.

Caught 5 turtles

Saw 4 guys stranded on CTR
they had ripped the oil pan off
the car.

Got Border patrol for them
Gila monster ~~on~~ just outside CNF

got caught in a territorial downpour
@ BWH, jogged back to the car

Went to Douglas to get Ken an air mattress

13 August 2010

PAB showed up bright & early.

No turtles in deep pool

No turtles in mosquito pool

2 turtles in pool below BWH

4 nets = 0-7 turtles

4 nets left in BWH

Other 3 pulled & set in Savalina

Noodled from 150 - 300 m
below BWH

Small metamorphosed Bufo

Hyla are 1/2 metamorphosed

14-August - ~~20~~2010

checked nets @ BWH
4 nets = 2 turtles

checked nets @ Savahna
3 nets = 2 turtles

Wooded Samons canyon

Wooded Big Gravelly

3 Zone tails near Pine Pool

Caught several Hatch in Samons
n = 8

However, it is surprising ~~to~~ how
few H are out.

Thought they would be
swarming but are
mostly absent

Lots of H₂O in BW Canyon
Tent almost blew away in large thunderstorm
that rolled through

15 August 2010

Check nets @ BW Hole
4 nets = 8 turtles

Check nets @ Savahna
3 nets = 5 turtles

Hike over Mt. Doom into
Miller canyon ~ 250 m below
S. Hole

Wooded approx 300m until
we reached the intersection of
Clowdale & Miller. Hiked to Mau. Spr.

Wooded 100-200 m below Mau. Spr.
Wooded 500-600 m above Mau. Spr.

18 MAY 2013

Ken Lacey (KSL) + LAURA BETH KIMMEL (LBK) drove to the Pinaleno Mountains to conduct mark-recapture and collect blood samples.

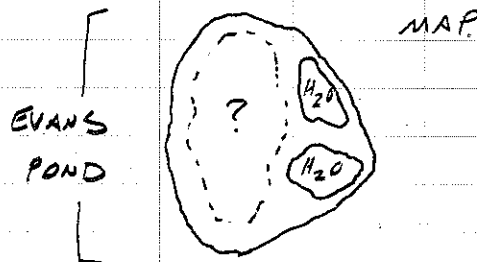
SET 2 large + 1 small net in Evans Pond. LEFT A NOTE FOR GEORGE HAYES, MANAGER OF CLUFF RANCH. DROVE TO MARASILDA CREEK AND SET CAMP. EARLIER THAT MORNING, HAD A FLAT 5 minutes into the drive out of the Pinalenos. FIXED IN LODSBURG; COST A MINT.

19 MAY 2013

PINALENOS: MARASILDA, CLUFF RANCH
0630 - KSL + LBK DRIVE FROM MARASILDA TO CLUFF RANCH; CHECK 3 NETS IN EVANS POND. CAPTURED 3 TURTLES (2 ADULT ♂, 1 ADULT ♀); 2 ARE UNMARKED. MARK AS 17 + 18, COLLECTED MEASUREMENTS AND BLOOD. DROVE BACK TO MARASILDA AFTER RESETTING NETS IN EVANS. 1300 - WALKED MARASILDA CREEK; NOODLED ~ 400 m (3 hrs). HIKE TO MARASILDA CREEK TO S CANYON DAM TANK. TANK IS EITHER FILLED OR DAM HAS BEEN DESTROYED.

19 MAY 2013 (CONT'D)

MARASILDA CREEK IS FLUSH WITH WATER. MANY POOLS DEEP ENOUGH TO SET NETS. EVANS POND (CLUFF RANCH) WAS ONLY PARTIALLY COVERED WITH WATER. TOO REEDY TO



MARASILDA CREEK HAD A LOT OF VEGETATION, MANY LARGE BOULDERS, DEEP HOLES, SPIDERS, AND TONS OF SMALL INVERTS THAT LOOKED LIKE LEECHES.

20th MAY 2013

CHECKED NETS AT CLUFF RANCH (EVANS POND); NO TURTLES. PULLED NETS; RETURNED TO MARASILDA CREEK. TALKED AT LENGTH ABOUT TURTLE PHYLOGEOGRAPHY AND LAURA'S THESIS. NOODLED FOR TWO HOURS DOWN STREAM FROM CAMP; FOUND NO TURTLES. DECIDED TO BREAK CAMP AND HEAD TO DEER CREEK POND IN THE GALIUIROS. WASHED NETS IN WILCOX.

21 MAY 2013

KSL + LBK WAKE IN THE DEER CREEK AREA OF THE GALIUDOS. HIKE NETS TO DEER CREEK POND. POND WAS EMPTY. PACKED ~~FROM CAMP~~ CAMP AND HEADED TO WILCOX; RESTOCKED WATER, ICE, ETC.

DROVE TO COCHISE STRONGHOLD CAMP IN THE DRAGON MTS; SET CAMP + PAID FEE. HIKE TO HALFMOON TANK; SET TWO MEDIUM NETS. MET A HIKER ON THE COCHISE TRAIL WHO TOLD US OF ANOTHER TANK ALONG THE MIDDLE MARCH CANYON TRAIL; PLANNED TO SET NETS THERE THE NEXT DAY. COCHISE CANYON AND ALL WASHES AND SMALLER CANYONS ON THE COCHISE TRAIL WERE DRY. ONLY WATER SEEN WAS IN HALFMOON TANK. HALFMOON TANK WAS BEAUT WITH DEBRIS AND ALGAE; < 1m deep. LBK TOOK PICS OF HALFMOON TANK.

22 MAY 2013

0630 - KSL + LBK HIKE TO HALFMOON TANK TO CHECK NETS (2 MEDIUM); NO TURTLES. HIKE TO TANK IN MIDDLE MARCH CANYON; SET 2 MEDIUM NETS. TANK IS LARGE AND DEEP ENOUGH TO SET LARGE NETS. SAW CHIRICAHUAN LEOPARD FROGS AND LARGE TADPOLES IN TANK; ALSO SAW 2 GARTER SNAKES. SAW A GOLDEN EAGLE! HIKE BACK TO CAMP AND DROVE TO NEAREST GAS STATION TO GET CASH TO PAY ANOTHER DAY'S CAMPING FEES. RETURNED TO CAMP AND HIKE BACK TO TANK IN MIDDLE MARCH CANYON; SET 1 LARGE AND 1 SMALL NET. RETURNED TO CAMP AND WITNESSED A RESCUE EVENT. A YOUNG TEENAGER HAD GOTTEN HIMSELF STUCK ~~IN~~ SOMEWHERE IN ONE OF THE CANYONS. RESCUE ATTEMPTS LASTED FROM ~5pm TO MIDNIGHT, AND INVOLVED AT LEAST 7 VEHICLES, AMBULANCE, & HELICOPTER. SAW A GREY FOX THAT WAS ROAMING THE CAMP GROUND LOOKING FOR FOOD.

23 - MAY - 2013

0615 KJL + LBK HIKE TO MIDDLE MARCH TANK TO CHECK NETS; NO TURTLES.

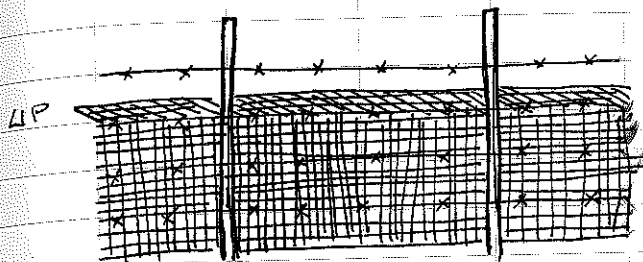
(1L, 2M, 1S NET) TOOK PICS + GPS'D TANK. FOUND 2 LEOPARD FROGS IN THE NETS. CAPTURED 1 LARGE BLACK-NECKED GARTER SNAKE. HIKE BACK TO CAMP; where we were approached by an elderly Mormon couple; tried to give witness to Laura; gave her a Book of Mormon. They were nice. Broke camp and headed to Douglas to restock. HEADED TO THE HUACHUCAS TO SAMPLE MUD SPRING HOLE AND SET CAMP. HIKE TO MUD SPRING HOLE / TURTLE TANK AND SET 1L + 1S NET. SET CAMP AT ESTABLISHED CAMP SITE ALONG THE MONTEZUMA TRAIL ROAD.

24 - MAY - 2013

0630 KJL + LBK HIKE TO MUD SPRING TO CHECK NETS (1L, 1S). CAUGHT 11 K.S. 7 WERE NEW CAPTURES (BLOOD TAKEN). RESET NETS AND TWO ADDITIONAL NETS (2M). TOOK PICS OF TANK. RETURNED TO CAMP. SAW WHAT MAY HAVE BEEN A FAMILY OF COATIS (≥ 4). MAPPED THE TANK.

24 MAY 2013 CONT'D

USFS HAS BUILT A FENCE AROUND MUD SPRING TANK; TO KEEP OUT BULLFROGS.



1 cm holes
runs several inches below ground

There is a set of steps built to allow human access, but most any heep or small mammal would be denied exit or entry. So what's going to happen to the turtles ???

LBK TOOK TRACK OF FENCE

POTENTIAL NOTE:

Effects of fencing off a water source on a population of Sonoran Mud Turtles (K.S.)

Population estimates before and after?
recorded individual-level turnover?

Basic idea: a fence built closely a tank prohibits use/immigration and prohibits dispersal/emigration from the tank.

- tank is abundant with invertebrate predators

25-MAY-2013

0630 KSL & LBK HIRE TO MUDSPRING
TO CHECK NETS; NO NEW CAPTURES,
plenty of recaptures. HAS THE FENCE
PREVENTED DISPERSAL/EMIGRATION FROM
TANK? ALMOST CERTAINLY. PULLED NETS
& RETURNED TO CAMP. DROVE TO PARKER CANYON
LAKE AND HIKE 4 NETS (1L, 1S, 2M) TO
BOGGY AREAS BELOW PARKER CANYON DAM.
SET ALL 4 NETS IN BOGGY AREA #2.
RETURNED TO CAMP. CAUGHT AN ELEGANT
EARLESS LIZARD.

26-MAY-2013

0700 KSL & LBK DRIVE TO SONOITA
TO CHECK TIRE (SUSPECTED LEAK) AND
GET WATER. DROVE TO PARKER CANYON
LAKE; HIKE DOWN TO BOGGY AREAS
BEHIND THE DAM TO CHECK NETS. CAUGHT
3 ADULT K.S. (2♂, 1♀); ALL RECAPTURES.
SET THE FOUR NETS (2M, 1L, 1S) IN BOGGY
AREA #1. SAW TWO ELEGANT EARLESS
LIZARDS ALONG BEACH OF PARKER CANYON
LAKE. SAW ONE ADULT ♂ CLARK'S SPINY
LIZARD ON A TREE IN CAMP. SAW A HAWK
GRAB A SMALL MAMMAL. [turtle no. 47 CAUGHT
IN BOGGY AREA #2 WAS RE-IDENTIFIED NO. 86 ~~WAS~~

26 MAY 2013 CONT'D

NO. 47 WAS ORIGINALLY MARKED AS 86;
ALL COMMENTS AND MCL MATCHED EXACTLY.
IN THE TURTLE BOOK $47 = 40 + 3 + 4$ BUT THE
TURTLE WAS MARKED AS $40 + 30 + 9 + 3 + 4$.
NO IDEA HOW THAT COULD HAVE BEEN INTENDED,
i.e. 5 marks. There was no #86 listed.
So #47 is now #86, to match existing marks.
THIS NEEDS TO BE CORRECTED IN THE BLOOD SAMPLES!!!

27-MAY-2013

0700 KSL & LBK DRIVE TO PARKER CANYON
LAKE, HIKE TO BOGGY AREAS BEHIND DAM, CHECKED
NETS. CAUGHT 6 TURTLES, INCLUDING 1 JUVENILE.
SOME OF THE TURTLES HAD THE BUMPY, KNOBBY
CARAPACE TYPICAL OF PARKER CANYON DAM TURTLES.
OTHERS HAD A SMOOTH, CLEAN, NORMAL CARAPACE.
MOST OF THE 6 WERE NEW CAPTURES; TOOK BLOOD.
TOOK PICS OF THE BOGGY AREAS AND GPS MAPPED
THEM. TOOK PICS OF LBK SAMPLING BLOOD. PULLED
NETS & HIKE THEM BACK TO CAR; THAT WAS "FUN".
DROVE TO TANK #3 IN THE CANELLO AULS; IT WAS
COMPLETELY DRY. THAT WAS VERY SURPRISING, GIVEN
HOW LARGE IT WAS PREVIOUSLY. DROVE BACK TO
CAMP; TOOK NAP.