

BW Hole not cracked

Tonight at hotel just before father awoke
at 6:30 am driving past Black Range and
Elephant Butte in Manzano, the mountains

- ⑤ fix tea pot
- ⑥ buy Ryan new press
- ⑦ fix chimpasas (sp?)
- ⑧ floaties for car locks

[5 June 2014]

arrived at camp ca. Noon

PAS, MESS, KEL, TKN, KES
just in cheeky, Shook, KEN, KWS, TKS

PAS, MESS, Chee, KEN, TKS
KEL to SW Hole
set 2 red coil traps

BWH is very down but still holding
BW caught her 2 small possums
ca. Pts & r pr 18, though 18 coils (2

Saw Zone-tailed Hawks

Saw high screech owl in a tree
Little else - very hot on midday
hike

5 JUNE 2014

KSL, KEB, SKM
SET 4 NETS IN BUCKHORN: 1S,
2 GARLOCK, 1L
FOUND A NET (GARLOCK) AND A BAIT
JAR, TRACKED BUCKHORN.

BUCKHORN WAS LOW; ~2 M BELOW DAM.
NO POOLS BELOW BUCKHORN. NO WATER
BETWEEN BUCKHORN AND FOSTER DRAW.

DRAVE TO 3-WAY; NO SIGN OF WATER.
NO WATER AT HUNT. KEBS CHECKED

WATER GAUGE; WATER SEEMED TO AVE
REACHED ~1M FROM BASE OF DAM.

RETURNED TO CAMP AND SET OUT TO WALK
CLANTON DRAW. WALKED THE DRAW FROM
THE CROSSING BELOW TURNER TO BUCKHORN
TO TWO CROSSINGS ABOVE GST. ONLY
SAW WATER AT CLANTON DAM (2 POOLS);
CAUGHT 1 TURTLE (#2319).

SAW: 1 ASPIDOSCELES, 1 SCOPULUS,
2 RABBITS, 1 UGRINILLION ELTCATCHER,
NUMEROUS JAYS AND KINGBIRDS.

-KSL

[6 June 2014]

PASMEB, TPS checked nets w/ greatest reduced
Buckhorn 2m S of lock, 1S, 1L
caught 31! pest nets

Then, check, McDonald hiked Swakili
to overhang pool caught 2 and
Saw car 3 pools - Swakili dry
The six of us then hiked those way
to big pool above Hunt
big pool above Hunt was medium
caught 9 there - rest of caras dry
all of foster except Buckhorn/Hunt
to 3-way which remained dry
Saw young toad and 2/5 sceloporus (8/9)
(not cloudy) off overhang pool

lots of cows 5th blade (C and
turned to 3-way (top of hill)
stack car dry
Then collected a few swak from bottom
for parasite analysis

evening party - KJL, TMN, Chee
hiked to Clinton Tank from
camp and set 2 gopher
traps in one of the turkey feed
~~holes~~ holes - no turkeys.
Clinton Table full.

Saw 3 Jackrabbits on road

other crew left mess

6-JUNE 2014

KSL, KEB HIKED TO BLACKWATER HOSE,
CHECKED NETS. 4 TURBES; 2 IN EACH NET.
KELP DREW BLOOD FROM IRCH FOR KER.
RESET NETS. HIKED TO JAVELINA TANK AFTER
MAPPING BLACKWATER HOSE. JAVELINA TANK
WAS DRY. HIKED DOWN SORON'S CANYON;
WAS TOTALLY DRY. HIKED UP CLOVERDALE
CANYON TO FIND THE LINK TO BLACKWATER
CANYON. FOUND THE LINK VIA LAST FORK.

Hiked back to car and returned to
camp. SAW A WHITE TAILED DEER, IS
HUNGRY. BLACK PHOEBE AT BUTH.
KSL, JLC, & JCA TRAVELED TO CANTON
VIA THE TORCERY CREEK ROUTE. SET 2
GARLACKS. CANTON TANK WAS FULL AND
ABOUT CHEST HEIGHT AT THE SNORG.
WOODDED A POOL ON THE WAY BACK; WAS THE
ONLY WATER PRESENT. JLC COOKED A LARGE
PIKE AT THE TRAIN HEAD.
ALSO IN SW CANYON: ZONETAILS HAWK NEAR
PIPE POOL. KEB GATHERED TWO SMALL BIRD
NESTS - KSL

7 June 2014

KEB, PAS, BNM TNS
Top of SWH
base of pool
caught 12 w/ no thromboly
collected blood
rest nets
for streams

checked depth gauge above SWH
way point - no coffee monsoon
bottom base of tube is ca. 0.5 m about
creak bottom
measured 120 below top of cleft
first slave sample and plus 50% line
and 120 depth - 2nd line
includes air - top of dam to bottom
pool

SWH = 97 cm
Top of dam to t20 = 97 cm
water depth = 114 cm

(taken at headstone first success)

pain of zone tails around fine Red
Tommy's whistle angled then
canyon tree flag in SWH edge

gauge
Duck horn
Top of dam to H2O = 165 cm
" " to bottom = 133 cm
over to buckhorn rest
checked nets - caught 22 or so
measured H2O depth at buckhorn
Collected blood for streams
went over to 3-way
gas walked around 3-way
pool long to - shells - none
offing measured current size
on SWH depth gauge = 67.5 cm
SWH 2 Open
canyon tree flag at buckhorn off
canyon take note must have
been checked and pulled
to dry

7 June 2014
JLC, MEBS, JKM, KSL HIKE TO BOW TANK. SET GARLOCK NETS. OBSERVED 1 TERRESTRIAL RESPONSE. BETWEEN NETS AND HAND CAPTURES, WE CAPTURED 15 TURTLES (14 ♀, 1 ♂). MALE WAS A RE-CAPTURE. BOW TANK WAS LOWER THAN PREVIOUSLY OBSERVED; ~1M DEEP AT THE DAM. JKM MAPPED WATER BELOW BOW TANK (~50m below). AT BOW TANK, TURTLES FREQUENTLY SURFACED AND VENTURED TOWARDS THE EDGE. RESET THE TWO GARLOCKS.

HEARD ZONE TAIL HAWK AFTER ENTERING WILDFIRE CANYON. SAW 3 or more Killdeer at BOW TANK. OBSERVED WHAT MAY HAVE BEEN WESTERN MEADOW LARKS. ONE LARGE PATCH OF CENTURY PLANTS WAS PRODUCING HIGH AND HEALTHY BLOOMS. CACTI IN PATCH WERE ALSO ACTIVE AND FLOWERING.

JKM GOT STUNG IN BOTH THE LEFT HAND AND LEFT FOOT.

-KSL

7 June 2014

MEBS drove to Phoenix to make phone calls and get ice. On the drive home I saw four pronghorn (two juveniles, a male, and a female), Sonoran whipsnake, and adult Gambel's quail with offspring. Later the group heard a night hawk in camp.

8 June 2014

MEBS, KGB, KJL, JKM hiked to Bow Tanks. On the drive before we saw a Gambel's Quail pair and 4⁺ offspring. As we approached the tanks, we saw three deer and two Mallard ducks. We caught one turtle in one medium net and three turtles in the other medium net. As MEBS,

KCB and KJL measured turtles,
JKM muddled over 50 turtles, most
of which were new captures.

After we finished measuring, we reset
both nets. Then we hiked the canyon on
behind the dam and found a dead
turtle (#316). We hiked down to
Walnut Creek.

On the hike we saw an Elegant
Earless Lizard.

(8 June 2014)

hiked to SWH - pulled nets
caught a few
above the rockhorn - pulled net
caught several

Saw 2 canyon tree frogs at SWH
Saw 2 duckies at SWH
House finches

hiked to the Grotto - set 1 net gathtch
no h2o up to Grotto
photo of shelf fungus

(9 June 2014)

much reduced
Grotto - surface area ca. 50 m²
max depth on bankside =
entire under shelf exposed

knobbed - nothing - difficult to pull
gives the open
red hawk hunting

Canyon 1
New Canyon

- camp for much - TNS (lost) tied

— MESS/TNS leave - Tuesday
Diamond 4 fourth Tuesday

Douglas linn and J.C. call - Tuesday
Maverick Spring

Pine Canyon
Pine Canyon

Sat - Sun - Mon → El Gordo
Thurs
Friday

9 JUNE 2014

KSL, JLC, JKM, BNM HIRED TO BOW TANK. CAPTURED 11 TURTLES IN NETS; CA. 6 TURTLES CAPTURED BY HAND. TURTLE 3180 IN BOOK IS MUCH SMALLER THAN THE 3180 WE CAUGHT; APPEARS TO BE A DIFFERENT TURTLE DUE TO SUBSTANTIAL DIFFERENCES IN SIZE. ONE TURTLE WAS CAPTURED AS IT WAS ATTEMPTING TO ENTER BOW TANK. OUT TURTLE THAT WAS CAPTURED IN BOW TANK WAS SUBSEQUENTLY CAPTURED IN A POOL BELOW BOW TANK; BOTH CAPTURES HAPPENED ON THE SAME DAY. MANY TURTLES URINATED.

Saw: ZONAL TAILED SKUNK IN WHITMORE ♀ ELEGANT EELLESS LIZARD ON HILL NORTH OF WHITMORE LODGE IN BOW TANK.

MAPPED BOW TANK: 677 m²
DAM WAS MARKED TO FACILITATE
DEPTH ESTIMATES

-KSL

9 JUNE 2014

IN AFTERNOON - WENT TO PROSPECT TALK
IT WAS DRY - DOESN'T APPEAR WILL EVER BE FULL - ALSO APPEAR THAT PROSPECT WOULD STOP FURTHER DOWNHILL
H2O FLOW COLLECTED DEAR HAWK
THOUGHTS AT MILLER SPRINGS ARE FULL
HALF-HEARTEDLY NOOTED NOTHING
IN PLAN WHOLE CREEK WEST TO G51 - TRACKED IT AND CUGHT A SCORPION BOAS FOR KIDS TO PICKLE
TODAY NOOTLED BACK AND BOTH ACROSS G51 WITH A GOOD SWIMMING SURVEY
10 JUNE 2014
OTHERS LIKED TO SOW TAILS PMS BORN MARCH TO A STARGRID THAT TO DOUGLAS
SC CAME IN A SURPRISE MOVE SET NETS IN SUCCESSION (3 IN ROW) DOWN (2 OR 3) IN RESPONSE

11 June 2014

PAS hiked to Fink - all dry except
1 m² fink pool
- nothing

Vermilion Flycatcher in camp

10 JUNE 2014
KSL, JSK, KEB, JLC HIRED TO BOW
TANK AND FILLED NETS. CAPTURED
~10 TURTLES IN THE TWO GARLOCKS.
CAPTURED ~30 TURTLES ACTOGETHER
BETWEEN BOW TANK AND THE POOLS BELOW.
OBSERVED ONE TERRESTRIAL FLEGT RELEASE;
INDIVIDUAL WAS ALLOWED TO EXIT THE G BASS
AT THE EDGE OF THE DAM AND WAS CONDUCTED
CA. TWO HOURS OF OBSERVATIONS WAITING
FOR THE INDIVIDUAL TO MOVE OUT OF THE GRASS.

WE WERE INTERESTED IN HOW AND WHETHER
TURTLES IN FLIGHT RESPONDED MOVES FROM
A TANK TO POOLS BELOW, AND WHETHER TURTLES
MIGHT MOVE RECKLESSLY DOWN CANYON SIDES
INTO POOLS. INDIVIDUAL LIKELY MOVED INTO
A DEEP HOLE UNDER A NEARBY YUCCA; WE
WERE UNABLE TO LOCATE IT.

10 JUNE 2014 CONT'D

BOW TANK APPEARS TO BE DOMINATED BY
BACONWORMS, PREDATORS DURING BEETLES,
CHARLES BROWNS, TIGER BEETLES, FLAMINGO
SKINNERS, BLUE DAMSELFLIES, DIPTERAN LADAS
(TABS). DISTURBANCE PECAN HOLLOWING
PRODUCES SUBSTANTIAL CHANGES IN TURBTY
BOTTON COMPOSITION, TEMPERATURE STRATIFICATION,
OBSERVATIONS ARE EUROPEAN COLLECTED DUE ON SITE

11 JUNE 2014

KSL, PAS, BULL DRIVES TO BUCKHORN CHECKED
NETS. CAPTURED ~13 ♀ + 4 ♂ IN FOUR GARLOCKS.
TRANSPORTED FEMALES TO JUSTIN CONGDON BACK
AT CAMP FOR X-RAY. JUSTIN CONGDON IS
A RICH AND INVALUABLE SOURCE OF KNOWLEDGE
AND PERSPECTIVE; THE CAMP WAS HONORED
TO BE WORKING WITH J.C. AS ALWAYS.

DRAE BACK TO BUCKHORN TO RETURN TURTLES
AND ROCKWELL NETS; CAPTURED NO TURTLES.
RAN ACROSS JOE KARRIS AND THE NEW
DISTRICT RANGER. JOE KARRIS CONFIRMED
THAT COLLECTED DOVES WERE HAVING THEIR WAY
INTO THE PELONCIUS. TALKED ABOUT ISSUES
AND DIFFICULTIES OF GABION & CONSERVATION
PROBLEMS. SEE NEXT PAGE.

11 JUNE 2014, CONT'D

KJL, PAS DROVE TO 3-WAT DAM AND
NOODLED POOL THAT WAS ~300M ABOVE
HUNT TANK. POOL WAS A SMALL FRACTION
OF ITS SIZE PREVIOUS IN THE WEEK; CAPTURED
NO TURTLES. DROVE TO BULL CANYON GLENDALE
PICKED UP ICES & # BURN; RETURNED TO
CAMP.

SAW 2 DEER & 4 TURKEYS AT BUCKHORN.

(11 June 2014)

Joe Harris re-tended his e-mail
pledge to develop a blanket protocol
for aquatic habitat notifications
in the District.

District manager was there and said
there would still be a 3-4 month
waiting period while the archaeologists
and biologists assessed the situation

they agreed that 2015 would be
the earliest the blanket protocol
would be ready.

(12 June 2014)

KJL and I HAD OFF ON AN OVERNIGHT
TRIP TO PINE CANYON TANK
REST OFF TO MERRICEL SPRING
SAW 4 DEER IN CORRAL AREA
AT MERRICEL SPRING
AND THAT WAS AS GOOD AS IT

11 JUNO, 2 SMALL POOLS IN PINE SPRING
NO OTHER WATER ENCOUNTERED
MERRICEL SPRING TO Y, UP CLONEHALL, THEN
UP SAVANNAH - DRY AND HOT
ALL WENT TO SOD CARRY
TRACE OF RAIN IN THE NIGHT
COLLECTED COATR. STELL FROM
CA 300M ABOVE MERRICEL SPRING
NO WAY POINT

(13 June 2014)

KJL AND I HAD BACK CA. 8 AM
SOT FIELD, LEFT NOKE, HIDED TO
SUGAR LAKES

KSB, TJC got ~~soil~~ cores
from Beehive Canyon
and soil samples from Black CCC

PAS, SMM hiked Diamond & Carbon Draw
way beyond previous route, found a
very nice set of large pools le^d
pools beyond half mile had
mopped cottonwoods (poplar?)
and willows and took
CCC on way back

left way north of trail end
Saw turkey - saw at least
of today, hatching 1/2 yard
from other cliff
PAS, BNM hiked Forte Canyon
all day - found dead turtle
Dives abundant 1st $\frac{1}{3}$ of canyon

KSB TJC cored pines at 65°

Leave to pass

Rainy in camp - trace but thoroughly wet

KJL/JKL went to Big Lake
and will have a report forthcoming

12 JUNE 2014

JKM and KSL HIKED from camp to
Pine Canyon via new route from Whitmore
to Bow Tank to Skeleton Canyon to Pine
Canyon tank. There was one pool present
below the tank. Pool was overrun by
bees, wasps, and giant water bugs, and
was flooded/covered by tumbleweed.
Captured 6-7 turtles from the pool; at
least one juvenile and one large male.
Hiked back to area near bow tank; sick
was harassed by mosps throughout (strong once)
Skeleton Canyon. Set camp near bow tank
and watched the sunset. Started with no
gallons of water and drank w/ that day.
The new route is much easier but longer
than the old route (i.e. plus canyon death march).
JKM and KSL now convinced that overnight
stays for both areas north of growing trail
and south of Blackwater Canyon would be
extremely useful. - KSL

13 JUNE 2014

KSL AND JEN WOKE AND BROKE CAMP NEAR
BOW TANK, AND RETURNED TO THE MAIN CAMP
TO RE-SUPPLY WATER AND FOOD. LEFT MAIN CAMP
TO SAMPLE ALONG (10m) BIG LAKE. FAMOUS OUT
MOLASSES POOL BELOW BIG LAKE DAM; CAPTURED
~8 TURTLES, SALVAGED A DEAD COATI,
OBSERVED ONE WHITE-BREASTED NUTHATCH AND
ONE SPOTTED TURKEY, AND MULTIPLE MOURNING
DOVES AND FLYCATCHERS OR ~~ANNA PEBBES~~ (NON-DESERT)
NON-DESERT PURPLE-CROWNED GYRATERGER-LIKE)

BIG LAKE WAS COMPLETELY DRY. HIKED TO
BOW TANK VIA ROAD JUST SOUTH OF SKELETON
CANYON. NOODLED AROUND THROLES AND AT
BOW TANK AND POOLS JUST SOUTH OF THE DAM;
RAIN WAS SETTING IN. CAPTURED 10 TURTLES
INCLUDING ONE OR TWO RECAPTURES. HUNCHED BACK
TO MAIN CAMP.

25 July 2014

ARRIVED IN AND SPENT NOON
STOPPED BY DIAMOND A FOR PERMITS
CLADIN DRAW AND ROAD THROUGH CANCELLED
TO SAW TALKS - JUST GOT PERMITS
PAS, MESS, JHM, KEB, BPF, BNM, TRS
SET SEVEN ~~TRAPS~~ NETS IN SAWHORN
S SAWHORN, 2 LARG
BUCKHORN IS BIGGER FROM JUNE 6TH
5th // NOT IMPRESSIVE
WOODED FROM SAWHORN TO FOSTER DRAW
THUS FOSTER TO ROAD - CUGHT 13
10 IN POOLS JUST BELOW SAWHORN
2 IN ~~POOLS~~ BIG POOLS OTHER THAT, 1 IN FOESTER
MAPPED POOLS - NOT MUCH WATER
LEFT MORNING TRAP JUNK - CLASSIC MATURE
WE LOADED IN EACH POOL - NO FALLOWS
FOSTER DRAW WETTER THAN SAWHORN CANYON
BLACK CCC IS DRY AS HELL AND IN MELTDOWN
BOW TANK AND BLACK CCC
SEVERAL TURKEY RESTING ON THE GROUND

Saw

several condors

2 deer

red-tailed hawk

~~Spotted~~ Tanager

2 squirrels

few lizards

Clayton Draw from camp to here at
Dinner A is all dry

no fish, lots of fairy shrimp in pools below
Buckhorn - suggests Buckhorn has not
overflooded.

26 July 2014

Caught 26 ~ Buckhorn - pulled nets
held 26 turtles for X-ray
one partly hatched over hung down
Buckhorn to pool above Hunt
caught 6 turtles from
ca. 8 pools

hopped, tadpoles present in
some pools - likely

nudibranchs Hunt Draw to pool along
nudibranchs Hunt Draw to pool along
Hunt

3-way Draw is holding a lot of
+ 20 tracked it
Saw 3 turtles - caught / hatching
+ 10 there clean enough to warrant
a go-pro offcut from Hoop net
Saw summer Tanager in camp

one by crew (back/leg)
Buckhorn water depth 175 cm
Buckhorn top of bank to WO 110 cm
Took a tract of Buckhorn
Put traps in 3-way Draw
on net - watched fur the eye lone
woodchuck Hunt to 3-way

this completes 3-way to pool above Hunt
Hunt area where Hunt Buckhorn
other crew woodchuck Diamond A
caught car 23, mostly hatchlings
held 4 for X-ray
Tinkle Pool Dry - 1 pool BT fence
and bank, plenty of the in half-mile
pool

(28 July 2014) Saw 800 55 cm
pulled 100 nets caught 288

one throwback
Treated Saw 936 M²
New Surface Area

Wooded all morning > 25 hatchlings
caught 790, including 25 hatchlings
x-ranged 50 spp.
wooded above and below Saw
caught hatchlings above and below
but also caught lots of hatchlings
in Saw tank itself

Set 4 nets (gambusia) ~ Saw

wooded Big Lake caught 2
set 2 nets in Big Lake
brought 1 qt from Big Lake to camp
major rain storm whipping up.

Rained hard (~ Camp
food/s round wet, some
puddles next morning
found several (3) mice
around camp
in old Tidew camp

(27 July 2014)

PAS, JKM, TNS, BNM hiked to Buff
Set 3 med snare locks
1ds at the in canyon
Zone-tailed hawk crying
big scorpions in tree
whiptails, rabbits, etc.

Buff smaller than Five 3rd
seems fine, lots of grass
over & edges
photo looks good

MBS, KEB, and BRF went to
3-way dam. Set a med. garlock
with the GoPro cam facing the
opening. While waiting for footages
headed between 3-way and
the Buckhorn T. Lots of pools,
and found several turtles. Also
found another dam similar in
structure to 3-way (same material,
zig-zag shape). Lethomed to 3-way
and pulled net. Recorded about
2 hours of footage.

Then MBS, BRF, and BTF set a
med garlock in the pool at
Clanton Draw dam for a little
over an hour.

In the AM MBS drove to
Animas. Saw a deer and an
ornate box turtle (GP's d).

29 July 2014

checked nets in Buff
Caught 1/3 - reset
Buff depth 140 cm
Buff SA Ca. 10 x 15 = 150 m²
Wooling below Buff
wooded through big gravelly
calf pat hatchlings, yearlings, adults
Saw Canyon is classic red pool level
all major pools one holding two
nothing much in minor pools
Hyla in many pools, gather smaller too

Tony caught a few more turtles
after 8 at low the other day
MEG, BRB, BMN, TTS b/c for
Denny in late afternoon

Thurbottom South of Canyon
all evening

30 July 2014

We agree that so far including
today, all mapped pools have
been surveyed for tadpoles, the
only "not" is NTS on way back,
but it was not checked.

checked most in SW hole
caught 6 - reset
needed BG to record
caught adults, yearlings, hatchlings
turtles in most major pools

in SW Canyon
KEY Collected small frogs
pool 20 m below SWH

Major rainstorms South and North
of Canyon - both may miss us, but
the study area is getting wet
in late afternoon

Saw large of gopher snakes
and many tadpoles today
Acotillo all over hillside above
WBR and beside last switch
to Bush

Thurs - lots of frogs in PGS, above north pool
Fri - Javalina, saw some
Sat - Javalina, last fork, Buckhorn
Sun - Guckhorn, Clayton AZ
Mon - Guckhorn, Swallow, Foster AZ
Tues - Maraville Spring AZ
Wed -
Thurs - Salt, Whitne Pipe

Fri

31 July 2014

PAS/JKR pulled nets in Bush
caught 4 woodlouse above Mesquite
pool to Hello Hill - caught 9 nymphs
changed out Data logger
in above BG, MT P, Sing Ranch

Kristen west to Douglas

on dropped off key at Diamond &
JHM/ME's Woodland / hopped
off the way down (labor)
drove to the next completed
below ½ mile pool - caught ca. 22
August 2014

Rained most of the night
not a downpour but a steady
rain - roads wet in AM
puddles in camp

weathered rain all yesterday
afternoon - rained on us 1/16s
soothed located a lot

Smooth cloud this morning
preparing for a cold soggy
rise to Sawdust
Blackwater Canyon much wetter
but few switchbacks require
crossing the
last fork over flooded w/ flow
apparently coming from West Fork
Canyon west Black Canyon
but hole unchanged

Javalina Dry
Sawmills continue and flowing
week after several hours
caught lots of adults &
few others, 2 hatchlings
The steady rain at Javalina
when we left

rain finally comes at last
Fork - rains hard nearly all
the way back to the west
is hilly net - soaked

BW Canyon even fuller now
apparently continuing all the
way to last fork
from here, continuous flow
in deeper dry between
lots of side washed running
waterfalls around

No Hwy 110 saw none
Saw Abbott Canyon footbridge
in BW Canyon

(2 August 2014)

Rode to Hwy, smooth road
cleared off corr, needed notes,
prepared for next wave of arrivals
Then to drive to Buckhorn
Black acc half full
Stopped driving there
Road muddy

Drove up to the pass
many crossings wet
especially in middle
drier near the top

BDS, JMB, LSK, RAC, AMM, H
arrived at Camp
hard rain in night
filled Clinton Draw and
Saw a bear on hill
Camp work
Saw up road - perhs
a very one

(3 August 2014)

DHS, JHN, LBL off to AZ
we're flooded in
west of Hwy Canyon / Clinton Draw
Confluence - all flowing
sand & turkeys
held to fire road - probably
not as high as 2006 but high
held to Clinton take from camp
all flowing

Took alternate route home - ended
up in canyon south of Hwy 110 not
dumped off by black rock road on GA
that canyon is winding and not worth
visiting

4 August 2014

drove off to Maricopa Spring
Tavares has water - tramped
200 feet wooded - nothing

Saw a lot lower but still
continuous by flow
Cloverdale and Miller both running
Maricopa flowing
wooded a long time - caught
ca. 10
+ the others saw all afternoon
Hyba hoppers all over lavender
Blue Hole is full and flowing over
down - saw Canyon down
a lot but still flowing
Clark's Still flowing

Kerrillious Flycatcher in camp
Kingbird song crazy at Africa tree
BDS saw mountain patched nose snake
on mount down - 100 m from saddle
"Gravel" from yesterday was present
was a scatter snakes

5 August 2014
heard turkeys and coyotes this am from
new at Swallow Tail, tracked
wooded down Swallow Canyon to
forest and then up a few hundred yards
caught 10

Flowing from Swallow Creek to
where we stopped
drove to 3-way for 90-canyon
3-way overflowing - flow in from
both west and border - wooded a little
Hyba tadpoles all over scrub / rocks
road to succulents very bad
Rockhorn overflowing
wooded up a little
Saw roadrunner

6 August 2014 Started woodling at the
wooded trout, first trout we caught
was wooded trout of canyon region
also caught 24 - flying
partly wooded 3 down near Lader Draw
Lava Cay #2 - flowing
water did not wood
Clayton draw down at stream leading to D1
flowing very top

PAS went to Aniver for ice.

JKM, BRF, DB, and DR (Massengill)
rest wood at Custer Draw
night 1 - 1st switchback to 2-3 switchbacks
waypoint at end before Custer Draw Dam
beginning and end

Saw 17 turkeys on hillside by camp / off road
Saw 30 lizards on CTR - way point
Saw leopard - say 13 Custer Draw way point
Cloudy Sunday in PM

WEF, Bill went to White Pine/Salt
in AM - both badly flooding

(7 August 2014) Rained all night,

Slow, steady rain
running now at dawn - smooth
flooding
Hopped Ocotillo beside WBR
very few

zone of Ocotillo midway up SE
facing slope - doesn't go to top
little ferns up at top
went home 1 day early

[29 Aug 2014]

MCS, BRF, JKM, and DR (Massengill)
arrived at camp ca. 2000h after

leaving ORC at 0515h. All plants were
tall and green. We had to set tents
close to where we normally set chairs/growth.

The sky was clear, and the stars
were beautiful. Night was cold. A
dog at the Cascabel barked most
of the night.

[30 Aug 2014]

Sun came up ca. 0645h. JKM discovered
trips and spea sp. tadpoles in
puddle in road ~~near big camp~~
near small camp. MCS took photos
of spea sp. and video of their
surfacing behavior. JKM collected
both trips and spea sp. tadpoles.

JKM and NCBS went to BW Canyon, and BRF and DRN went to 3-Day and Buckhorn.

JKM & NCBS hiked up to BW Hole. The canyon was continuous flow at least from Mosquito Pool down to Ceromino Trail. The trail was overgrown, and in some places was difficult to find. We did not hear or see Zone-tailed Hawks. We saw Hyla acuminata tadpoles throughout the canyon, but we did not see Bufo punctatus tadpoles. We did see a juvenile B. punctatus on the trail, so they might have ~~metamorphosed~~ arrived at the study area.

BW Hole was full ~~but~~ ~~not~~ ~~flow~~ and trickling over the dam. The area b/t BW Hole and Mosquito Pool was overgrown with plants and swampy. The willow has fallen into the tank even more and we saw few inverts and no tadpoles.

JKM now covers most of the stream. NCBS took standard photos while JKM mapped the tank. Because of all the plant growth and water, it was humid and ~~too~~ hot while working. We intermittently walked the canyon to the data loggers below Big Grcny. JKM switched out the loggers with replacements and found a turtle while locating the logger in the canyon. We walked the trail to below Mutant Tree Pool, and then went up

to the pool to change out the loggers. The pool below MTP was clear with some algal growth, but we saw few inverts and no tadpoles.

MTP was flowing down to this pool, and MTP had invert's and tadpoles. MTP was also clear. We walked the canyon from this point to the Wulld-Be Rapid. At large pool formed at top of WBR and we found two juvenile Kinosternon sonoriense dead, plasti~~n~~on up, under a pine tree. One was a yearling (44.3, 44 = 40 + 3+), and the other was a year older and unmarked. Both were collected, and GPS points taken. It looked like a hawk or other bird had eaten the soft parts and torn the plastic~~n~~on in the process. After walking down WBR, we came to a pool that had dried from being a small pool that morning. Near the pool but on a dry patch of canyon we found an unmated male burke that felt light weight and looked very dry. After processing, we released him into a shallow pool where he stayed even after we approached him.

several minutes after release. We then walked the canyon to Snag Pool. JKM examined the logger in water and decided to leave it since the seal looked good. We did not check logger on land. Still no sign of Zone-Tailed Hawk. We then hiked the trail to Cool Pool. JKM set two new loggers ~~at~~ at Cool Pool in and under a tree. We then hiked back to camp. MBS took photos of the variety of flowers throughout the canyon and on the road. There was so much water in the canyon we decided it was too difficult

for two people to ~~the~~ canyon
huddle, so we looked at the
water as we walked the canyon.
~~The~~ The only juvenile *L. sonoriense* we
saw were the two dead individuals
and we did not see any hatchlings.
We found three adult *L. sonoriense*,
and TLM took GPS points of each.
We saw three garter snakes, and we
took GPS points.
With so much water, everything was
dusky. It seemed like the animals were
taking a break from the heat and
the survival race. As a result, we saw
relatively fewer animals ~~than we~~
expected. lots of campillars (many diff species)
After returning to camp, we ~~were~~
saw an adult *B. punctatus*. ~~He was~~
~~in the bushes~~ ~~near the bushes~~
we also saw several ~~woodpeckers~~
in our surrounding trees. It appeared to
~~be~~ mating drama because
we observed displaying and
chasing.

30 Aug 2014

DPM, BDF drive to three way to set nets
with gopro's. Lots of water, no flowing.
One of three cameras failed set 2 nets-gores
in 3-way one above and one below dam.
Took standard photos and hiked to Hunt.
Very tall grass and lot of water between Jerry
and Hunt. Took standard photos and checked
GPS. Could see that the water had crested over
Hunt dam. The CH/G above Hunt had a water
mark for the first time. Pilled nets at 3-way
and drove to Blackhorn.
Blackhorn was huge, with water flowing around the
dam (DB) ~~Set~~ Set one net with gopro, took
standard photos, set 2 data loggers below
the dam Pilled net and drove to Black CC.
Black CC was very large and the grass was
so tall I was not able to take standard photos.
Tak soil sample and drove back to camp.

10-May-2015

W.M.H - Began Mapping of B.W.C
B.R.F
J.L.C - Waypoints CP-01-4 w/ 4m
Chiricahua Pine
W.M.H

- 28'7 pine Waypoints, some as groups
- + Dead pines not associated
- Waypoint for "fish pool" in B.W.C - shallow pool contains 5 fish
- + Mapped pines on right escarpment from B.W.C parking lot up to would-be rapids.

11-May-2015

W.M.H - Continued mapping (WSR → B.W.C)
B.R.F - Turtle found, waypoint / name: T1
J.L.C - Logged in turtle pool. #1, 2, 4

- Mapped the escarpment of the right escarpment bank.

MAX LUCHER NAU, Flagstaff

Box 1456

SODONAT, AZ. 85329

928.282.2071

mlucher@ualdapache.net

Jim McGrath

29 Robin Ct,
Flagstaff, AZ 86311
505-286-8745
505-286-8745
505-286-8745
505-286-8745
505-286-8745

Phil fore collections manager
John Dunnigan (num)
Bob Savinsky (retired)

Carter's thesis & thesis of W.M. - ref
Look for Crux hub.com - ref
rush-Tenous Field Key - Allred

Carex ultra 2800-6K m.

C. chihuahuensis
C. pseudocyperus
C. pumila

Juncus balticus
J. acuminatus - GST

~~AB~~ *A. tectorum* - GST
Equisetum - GST
Schoenoplectus acutus - GST
Chardion bellidifolium

Typha latifolia - GST
Southern & liff. folia

12 May 2015

0800 - HIKE TO BWK & SET 3 NETS;
AII MEDIUM. HIKE TO JAVELINA
TEAM THEN SPRT W/ KSL, LLL, &
WMH HIKE TO PELONCILLO TANK +
KRISTEN, RYAN, JUSTIN, MACEY, & AUDREY
HIKING TO MAVERICK SPRINGS.

NO TURTLES WERE CAUGHT ON THE WEST
TANK, OR FROM PELONCILLO TANK.
17 TURTLES WERE CAUGHT ALONG THE
MAVERICK SPRINGS RUN.

PELONCILLO TANK, BWK, & JAVELINA
TANK ALL WERE MAPPED AND HAD
SUBSTANTIAL AMOUNTS OF WATER.
JAVELINA TANK WAS NEARLY AS LARGE

SAW MANY WILD FLOWERS AND LARGE NUMBERS
OF WATER SCORPIONS, GIANT WATER BUGS,
ACROATIC BEETLES, AND WATER STRIERS.
THE BANKS HAVE GROWN A LOT OF NEW
GROWTH. SAW A GROUND SQUIRREL, TURTLE,
ROCK WREN, CONVN TREET FROG, AND
MANY BUTTERFLIES

-KSL

13 MAY 2015

0800 - KSL, LLL, WMH, A.MN., MLR, JSL
HIKED TO BWK. RESTERED AND BTWN LEFT FOR
RUBY IN AZ. CAUGHT 2 TURTLES AND ONE THE
3 NETS IN BWK. SET 2 NEW NETS IN
JAVELINA AND 2 SMALL NETS IN PEONCILLO.
WMH TOOK STANDALOID PHOTOS AT THE TANK
THE WORLD.

HIKED FROM PEONCILLO TANK TO SOUTH NOVE.
MAPPED AND LATER SAW THE LAST CAVES AT
NO TURTLES. WMH TOOK STANDARD PHOTOS AT
SOUTH NOVE. DISCUSSED MAPPING UNCOMMON
TREES LIKE WILDFIGS AND COTTONTAILWOODS.

HIKED UP FROM SOUTH NOVE OVER A SADDLE AND
DEEPED DOWNSIDE TO THE EAST. TOOK A LINE UP A
CAVITY NOT PREVIOUSLY EXPLORED WHICH WAS
JUST NORTH OF SOUTHERN. IT MEASURED OUT
THE MAIN TRAIL SEVERAL HUNDRED METERS
SWEATOUT BUT CANT TELL SAW THAT IT MEAS
MUCH LATTER.

-KSL

14 MAY 2015

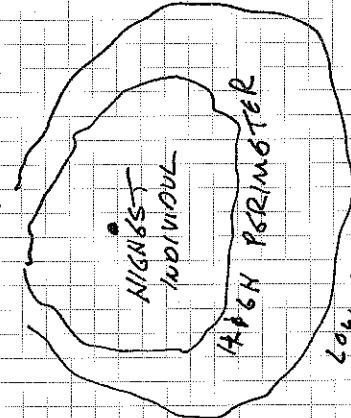
14 MAY cont'd.

0800 - KSL & JLC HIKE TO PELONCILLO.
TRAIL TO RETRIEVE NETS; CAUGHT NO
TURTLES. EXPERIENCED A SHORT BUT INTENSE
RAIN STORM (sideways rain, thunder). AFTER
THE STORM SUBSIDED, KSL & JLC HIKE DOWN
FROM PRINCIPAL TANK AND DOWN MILLER
CANYON, AVOIDING THE WATER, TO CHECK
AND HOODLE SAUERSONS AND THEN PLAC NETS
IN JUJUELLAS AND BULLA (7 total). SAUERSONS
HAD LITTLE WATER UNTIL 3/4 WAY UP
UNQUOTE IT WAS FLUSH WITH WATER.
PLACED NETS AT JUJUELLAS; NO TURTLES.
WAS GETTING LATE AND HAD TO LEAVE SAUERSONS
UNFINISHED FOR ANOTHER DAY. PLACED NETS
AT BULLA; NO TURTLES.
! JLC NEARLY STEPPED ON A BLACKTAIL DIAZQUILDE!
GRASS SEEMED TO BE SLIGHTLY TALLER
THAN DAYS BEFORE. THE ENTIRE DAY WAS
RIDDLED WITH PERIODS OF SUNSHINE, A LOT,
OVERCAST, COLD, WINDY & STILLY, AND
MINI DRIZZLE STORMS. INCREASED
GROWTH ON OAKS, EG., 1CM OF SOFT FIRM
& GLOSSY LEAVES. NOTE: THERE IS AT LEAST
ONE OAK IN MILLER CANYON.

-KSC

0800 - LLL, WND, MAR, & AUDREY SPENT
THE DAY NEAR WOULD-BE-RAPIDS. WND
FOCUSED ON CATCHING SNAKES AND PHOTOS
AND LEADING TRIG MAPPING EFFORT, WHILE
AUDREY, LLL, MAR ASSISTED WITH MAPPING
OCOTILLOS AND NOTING THE PRESENCE OF
FERNs. WND TOOK DETAILED NOTES. THE
GIRLS' ACTIVITIES FOCUSED ON THE NORTH
SIDE OF THE CANYON.

GENERAL OCOTILLO MAPPING PROGRESS:



LOW POINT

HIGH POINT
INDIVIDUAL

HIGH POINT

- LOWEST INDIVIDUAL
- HIGHEST & LOWEST INDIVIDUALS WERE
DESCRIBED AS BEING OUTRICES OF SORTS.

-KSC

15 MAY 2015

0800 - KSL, LLL, MAR, SLC, AND
Drove to BUCKHORN AND SET 4 GARLOCKS.
VERY WINDY + CHILLY. WMH TOOK STANDARD
PICTOS. LLL MAPPED THE TANK. JLC CHANGED
OUT THE DATA LOGGERS AND NEAR A LARGE
POOL BELOW BUCKHORN. DROVE TO 3-WAY
TO CHECK WATER SITUATION AT 3-WAY AND
HUNT TANK. THERE IS ENOUGH WATER AT
3-WAY TO SET MORE GARLOCKS IF WE HAD
MORE. ALSO ENOUGH WATER BELOW HUNT
TANK DAM TO SET A NET. WMH TOOK STANDARD
PICTOS AT HUNT TANK. SLC SAW A BLACKTAIL
AT 3-WAY.

Drove to CLANTON TANK TOWNSHIP AND
KILLED TO THE TANK. SAW NO ANIMALS OF
PARTICULAR INTEREST ALONG THE HIKE, BUT
MAR CAUGHT A GOLPER SNAKE AT CLANTON
TANK. MET UP WITH KRB + BRF AT
CLANTON TANK. CLANTON TANK LOOKED AS
IT NORMALLY WOULD; FLUSH WITH WATER
BUT APPEARED SURROUNDING AREAS
WMH TOOK STANDARD PICTOS.

DRIVE TO THE PASS SO THAT WMH COULD TAKE
ADDITIONAL STANDARD PICTOS. -KSL

16 MAY 2015

0800 - BRF, SLC, + WMH HEADED BACK TO
OKLAHOMA. KSL, KRB, LLL, AMM, + MAR DRAKE
TO BUCKHORN TO CHECK NETS AND TO WADOLE THE
STRETCH OF FOSTER DRAW BETWEEN SWANILI
AND BUCKHORN. KSL, LLL, AND MAR WOODED
FOSTER DRAW WHILE KRB, AMM
CHECKED NETS AT BUCKHORN AND WOODED
FROM BELOW BUCKHORN TO THE FENCE AT
FOSTER.

FOSTER DRAW AND A TYPICAL PATTERN
OF WATER, i.e., less than expected for such
a wet May. OVERHANGING POOL PRODUCED NO
TORTOISES, BUT WAS SO DEEP AND FREEZING
COLD THAT KSL, MAR, LLL, + KRC DIDN'T
DIVE TO WADOLE THE FURTHER AREAS
UNDER THE OVERHANG. NO TURTLES!
WATER FLOWING FASTER.

WENT UP WITH KRB + AMM ALONG
FOSTER; WAS TOLD THAT WE GOT SKUNKED
BUCKHORN PRODUCED NO TURTLES!!

-KSL

17 MAY 2015

0900 - KSL & LCL WOODED TURTLE
CANYON; CAPTURED ONE JUVENILE
THAT WAS PREVIOUSLY CAPTURED IN TURTLE
CANYON. TURTLE CANVAS ALSO HAD A
TYPICAL AMOUNT OF WATER. ARE
TURTLES DRYING UP QUICKLY?

KSL & LCL WOODED PORT OF
CLAWSON DESIGN FROM JAVELLINE TANK
TO THIS 3-D ROAD CROSSING BEFORE
THE BLACKWATER TURN OFF.

MET A GUY (MIKE WILKOP) WHO
THE G.R.T. WAS ASKING QUESTIONS
ABOUT SNAKES & SNAKE LOCATIONS,
WHICH WAS HIS QUESTION HIS MOTIVS
TO ROACHING? HE WAS WEARING A
PET STORE SHIRT "THE ARK".
KSH GAVE HIM USGS INFO; NOT
ENTIRELY SURE HE WAS LOOKING
TO ROACH; & KNEW THE RESEARCH AND
SCIENTIFIC COMMUNITY
DEALS TO STAY AND SET NOTES (3M)
DUN NEAR I TRACED BY A BULL!

18 MAY 2015 LAST FIELDWORK

0800 - KSL & LCL WOODED TO JAUGLINA
AND WOODED AT TOP ~400 m; WHICH
WAS FLUSH WITH WATER. WE CAPTURED
ONE TURTLE (JUVENILE). LCL DID
A LOT OF BROWNING; SAW SCOTT'S ORIOLE
& WOODED SPOTTED & ~~blue~~ SUMMER TANZ GOR.
TOOK HIS & LCL POINTS OF 500 GE AND
FENS IN SNAKES AND AT JAUGLINA.
WHEED WATER IN SNAKES BOATS
W BESIDE JLC KIJI STAPLED A FEW
DAYS PRIOR.