6/8/13

Dr. Dirt's

Field Notes (7:30 AM)

I don't know if anyone is reading this stuff, but here goes.

Three of the 4 blue-eyed grass explants appear to be alive with weekly watering. I am watering the soap plant bulbs that I can find in hopes of survival until winter rains. Several of the transect markers at planting site flags can still be found.

There are many milkweed beetles and butterflies and skippers; Stockton Collegiate students could do meaningful insect surveys. I think I found a tobacco plant seedling and a few CA poppies. I don't know what spp. of milkweed or *Datura* (lots of insect action) is present.

Has anyone seen earthworms, I haven't. I detect very little organic content in the riverbed "soil".

4/25/13

Dr. Dirt's

Field Notes (9:30 AM)

This is an addendum to today's entry.

It should be recognized that the installation of the blue-eyed grass at Transect "0" and the soap root bulb at Transect "1" was accomplished with the assistance of students from Kohl School in John Niemi's and Desiree Forsberg's classes. That includes digging a hole, placement of the caged roots, backfilling with soil, watering, and flagging the specimens. They are still surviving and it is hoped that these students will witness the production of flowers and seeds.

Thanks,

Dr. Dirt

<u>Status</u>: inspection of each blue-eyed grass and soap root at Transect "0 to 8"

Once a week watering takes 45 minutes, not counting observation, note-taking and drawing. Jim has me convinced I could put my notes, etc. in directly - into a computer and send them to interested participants quickly.

So I must evolve into a "computer friendly person".

Transect observations:

As of this date the following sites located near a Transect marker.

0 T : the blue-eyed grass (beg) has a caged root ball to prevent predation on the roots of and bulbs of the soap root, and by keeping them well-watered to see if we can harvest any seeds.

1 T: The similarly caged soap root bulb (srp); while a flower stalk is forming at the base of the well-developed central leaves. We need to get flowers and seeds to prove that these types of native plants can survive on the conditions in the flood plane. This plant needs more than the mid-week 1 pint each they now get, to May or June. You won't believe the gorgeous fragrant lilies and we need to find out if we can produce seeds. Transect stake is missing.

2T: srp There may be life in the bulb – keep water.

3T: beg. numerous flowers, maybe some forming seed heads

4T: srp. May be alive and needs more water.

5T: srp. Same condition as **T2, T4, and 5T.** unlikely survival.

6T: beg. No survivors.

7T: srp. No survivors.

8T: beg. No survivors,

9T: beg. Numerous maturing flowers

My conclusion: springtime is thee wrong to transplant soap root bulbs; We should not plant in the spring when the California Indians did their work- in the Fall and Winter. As for the beg specimens, long as roots remain wet the beg transplants well in the spring.

Remember, we need seeds. This is where the concept of "sustainability" works or it doesn't.

Mowing observations: it seems to need further mowing. Many mature seeds are about to be dispersed, soon. Can the mower negotiate lower mowing setting levels, with all of the irregularities in the terrain. I presume weed whips are never used.

John De Gregoria or Jeff Holt should look at the situation. I'm not a very good plant ecologist, after all they were food for my "insects". At heart, I'm better at microbiology; it must be all those years sitting in front of an electron microscope, trying to imagine what I has looking for on that glowing screen, in a cold dark room..

Maybe Eric Ambriz has some ideas. We are still producing an enormous seed bank, not the tight ones; the seeds we sewed in December, 2012. I am sure we can find something beyond, the creeping rye and salt grass.

Dale

ttfn

4/11-14/13

Dr. Dirt's

Field Notes (12:45 PM)

Conditions: cloudless sunshiny day with brisk gusts from the West.

Purpose: Visit each transect site (0 to 8), make new observations, estimate results of that mornings mowing by River Partners, suggestions for activities.

Mowing observations: Looks Great; an anecdotal observation. Now we need measurements on the 4 grass spp. for some "science". Next week?

More to follow.

Dale

4/3/13

Dr. Dirt's

Field Notes

Once again, this project demonstrate the Interconnectness of Nature. Pieces will always "fall into place", if you look hard enough. And that is what detectives do, ask questions and reach for answers.

Main goals today: 1. Assess the condition of each plant transplanted in the project area (see prior entries for 3/17 to 3/27/13, and). 2. Evaluate the post-mowing (3/28/13). 3. assessment of existing macro fauna and flora, with particular attention to rangeland grasses and new seedlings. Jim has some observations in this regard.

1. The rescued and transplanted grassland species are the soap root (bulbs) and blue eyed grass (not a grass at all). The scientific names are: (*Chlorogalum pomeridianum* and (*Sisyrinclium belum*). Four each were planted at each transect location and staked and marked so they would not be mowed. Luckily we have had rain and the bleu eyed grass is doing well, the soap root plants not so well, this takes patience. It rained again last night – we will see tomorrow.
   Starting with "0": **b e grass** was installed by Kohl School (John Niemi's and Desiree Forsberg's classes. This specimen had caged roots and it didn't take long for students to figure out why, with all of the gopher holes around. The same protection for a maturing specimen of the **s r plant** roots was planted near Transect # "1" Students were informed that a flower stalk may form and large white lily-like flowers will make seeds – maybe. The list of transects and plant status follows:
   0. Transect # "0": **b e grass** flower buds present, grass and forbs cleared around plant to reduce shading and provide bare ground to encourage seedling germination and growth.. Approximately 15% of grassland mowed remains bent or standing. Socks were covered with mature viable foxtails and oat seeds.
   1. Transect # "1": **soap root** plant flourishing, no flower stalk
   2. Transect # "2": " " plant not green but wet. May not survive, large crane fly under grass clump.
   3. Transect # "3": **b e grass** blossoming and healthy. 2 lupin seedlings found
   4. Transect # "4": **soap root** no green showing. 12 mm. pentatomid stink bug, jet black with orange border.
   5. Transect #"5": **soap root,** some greening. It may survive
   6. Transect # "6": **b e grass** some flower buds

7. Transect # "7": **b e grass** numerous flowers. Black-crowned Night Heron spoted
8. Transect # "8": **soap root**, some greening
9. Transect # "9": **b e grass**, flourishing (8-10) flowers

2. Observations of mowing

Feliciano mowed the day before with an articulating 3 –gang rotary mower. The rangeland vegetation was almost ½ Meter tall with mature flower heads with mature seeds. At least 3 species of grasses could be identified with my white sox and boot laces (*Poa, Bromus and Avena?).*

The duff/compost on the site create ideal cover for cryptic/fossoral organisms such as ladybird larvae and pupae, fly larvae, and Jerusalem crickets. This is where the decomposition and recycling begins in this ecosystem. Micro and macro organisms prevail here; they are food for the larger organisms living in this niche. This is where our "seeds" are trying to "make a living" and survive.

Should we consider some alternatives? I think the County has used "flail" movers with some good results. I would not be willing to sacrifice the excellent job Feliciano does moving around resources we are studying and monitoring as part of the River Detectives program. On Wed., John Degregoria suggested we consider using grazing animals such as sheep or goats. An idea FLCR has suggested in the past. I'll see if "Goats R Us" can come take a look at our project. Any suggestions?

3. Macro organisms are mentioned by transect #, above. With one exception. Professor R. Hill in the Biology Dept. at UOP was leading a field class in Ornithology. Dr. Hill knew about our project and expressed an interest and support for the 2005 plan developed by Professor Greg Anderson. I later flushed a black-crowned night heron and kingfisher that headed their way. We need to set up a field trip for Steve Stocking and others soon.

\\3/31/13

Dr. Dirt's Notes

What an Easter; just what we all wanted after planting the soap root plant and the blue-eyed grass. Friday morning the Kohl School students agreed – we need rain. All of the transplants and seedlings have a better chance now.

3/29/13

Dr. Dirt's Field Notes

John Niemi's K-1 class and students from Desiree Forsberg's 4/5 arrived at Transect "0"at 9:20 to transplant a specimens of blue-eyed grass and a specimen of soap root at Transect "1"; each had anti-vertebrate cages around the roots for protection from predators (gophers, raccoons and skunks).

Dr. Dirt dug holes at both sites and students back-filled around the root balls, watered, and hammered stakes at each site.

They went to Transect #3 and observed the preciously planted blue-eyed grass.

The students returned to Kohl School to plant their own raised bells on the school grounds for Cesar Chaves Day.

Dr. Dirt's

Field Notes
3/27/13

River Partners demonstration of monitoring methods for Transects, etc:
Jeff Holt, and John Degregoria of River Partners, Paul Ustach, Delta College, Biology Dept., Jeremy Terhune, Jim Marsh, Dave Wagner and Dale Sanders from Friends of the Lower Calaveras.

¼ M. frames were used to demonstrate the several assessment methods we may be using with students from Stockton Collegiate Academy. Jim will make the data and work sheets available to all. First and foremost – don't walk in the transects you will be measuring. The mainplant cover we will be observing are: *Bromus, Avena, Hordeum, and Lolium.* The native *Laymus triticoides* and salt grass were up in on 12/15/12, and appear to be surviving.

Several specimen seedlings of *Lupinus were observed.*

Dr. Dirt's
Field Notes

DRAFT

3/23/13

Status of soap plant and blue-eyed grass plantings by transects, transplanted on 3/19/13:
None in T-1 yet
T-2: soap plant, slightly wilted
T-3: b-e grass: blooming
T- 4: soap plant slightly wilted
T- 5: soap plant not wilted
T- 6: b-e grass: buds showing
T-7: soap plant wilted
T- 8: b-e grass healthy
T-9: b-e grass blooming

All plants given 2 cups of water. Will check next week on Tues. or Wed.

Dr. Dirt's
Field Notes

DRAFT
(3/17 to 3/20/13)

The partners in this project are the University of Pacific, River Partners, FLCR, and with support from the SJ County Levee Maintenance and Management program. Are there more to come?

Tomorrow we will launch into the unknown; we will all discover how little we know about the landscape that surrounds us. While we are becoming good detectives we may figure out how we can help the River become a more natural system. It was a day filled with questions, you know, " notice and it looks like".

Activities from Sunday (!7/ through Wednesday (3/20/13)

The Rescue

Anderson Valley, Mendocino

Rescue #1: soap plants (*Chlorogalum pomeridianum* were dug up in Wally's lawn/grassland destined for mowing.

Rescue #2: blue-eyed grass (*Sisyrinclium belum*) was right in the way of Ric's new foundation.

I consulted with Steve Stocking who agreed that the 3 acres on UOP land for our Grassland Restoration project would be an appropriate location for those species; they are found on the Calaveras already. On 12/15/12 we put seeds of the blue-eyed grass along with 9 other species, that have yet to produce any seedlings. They were put in pots and placed on the 3 acres: 4 soap plants and 4 blue eyed grass clumps Then on the 1st day of Spring – it rained!

One of the activitie for tomorrow will be plant one or the other at each 50 Meter transect line near the quadrants used in tomorrow's monitoring session (our #1 target for the day).

Activities of 3/19

Field Trip to 3 acre study site/management area, the "Project"

Preparation

Materials: folding table, chair, dissecting microscope, Acorn viewing units, flags, metric tapes, reference guidebooks, plastic bags. And binoculars

My goals that day:

1. Assist with the identification of plants, etc.: from mating damsels to prickly *Datura* seed pods. 2 or 3 students were assigned to each of 8 transects, with a Meter square quadrant for counting plants. They did amazingly well and were not timid about asking questions. We got to test our identification methods and materials and add to our next candidates for study. Jim was taking pictures like crazy.
2. Select and flag site for planting either soap plant or blue eyed grass. We will see if they thrive or become gopher or raccoon food.
3. Record wildlife evidence: kingfisher, female mallard, large carp breaching. Damsels and dragonflies, numerous ladybird beetles and larvae, swallows gathering under the footbridge. Did not see a Jerusalem cockroach this time.
2. Encourage students to put together some field notes for later consolidation and editing. They could be the start of our Natural History of the Calaveras River.

My hope is the students will come up with their own Fiend Notes filled with "I notices" to "it looks Likes".

Great way to witness the first day of Spring with rain. It couldn't be better for the transplants.

Activities of 3/20

SJ Rivers Symposium
Most important thing: Julie's observations on one important factor TIME!

It was a great opportunity to discuss case studies to find out what works. Now if they can only find some of the elderberry long-horned beetles.

FLCR will prepare a complete rundown on the Symposium. I had a good time and learned a lot.

Dr. Dirt's
FIELD Notes

Most recent First (latest date)

DRAFT
(2/13 and 2/14/13)

Field Notes, from Dr. Dirt's observations

Jim Marsh, steering committee FLCR and Paul Ustach. Biology Instructor, SJ Delta College

Calaveras River Detectives – Kohl School, Stockton Collegiate

Purpose: To develop a Monitoring and Field Reporting system for the RP/FLCR Native Grass Planting Demonstration at the Calavras River. To lay the groundwork for creating a Natural History of the Watershed and implementation of Adaptive Management process. This effort is an integral part of the Calaveras River Detectives program.

This 1st field trip is to acquaint students and teachers with the plan approved by the California Central Valley Flood Protection Board: 11/13/2012. River Partners and Fiends of the Lower Calaveras are asking Kohl School to assist with the implementation program for the restoration of sections 0 through 2 at the UOP foot bridge.

We have identified a number of potential "haul out" sites in the study area. We have identified clumps of California rose, California Poppy sprouts, and planted creeping wild rye. Teams of students can be studying and mapping these locations. They are growing some of the seedlings in the classroom and will be drawing and photographing the early stages to be able to recognize them in the field.

The Army Corps Guidelines are flexible and we are allowed to revegetate the slopes of the levees; there are California poppies and *Latherus* growing on the slopes.

Students are germinating seeds for transfer to beds and the field.

In the morning of 2/14/13 the site was mowed to a depth of approximately 6 centimeters, part way up the slope. The one patch of California rose was not mowed. Seed pods of *Daytura* were collected. Shirley's students will try to germinate them.

Dale

DRAFT
(2/7/13)

Field Notes, from Dr. Dirt's observations
Calaveras River Detectives
2/7/13
Site inspection with Eric Ambriz, General Foreman,
Channel Maintenance, San Joaquin County, Public Works

Purpose: To develop a Monitoring and Field Reporting system for the RP/FLCR Native Grass Planting Demonstration at the Calavras River. To lay the groundwork for creating a Natural History of the Watershed and implementation of Adaptive Management process. This effort is an integral part of the Calaveras River Detectives program.

We were able to observe some seed germination, probably spp. broadcast distributed on 12/15/12. We could not identify specifically which ones germinated and the rye grass plugs seem to be doing well. We observed many seeds on the soil surface and some newly germinated seedlings of unknown spp. Eric suggested that light raking before the next rain might encourage more germination.

Eric suggested that the AC might entertain seeding the inboard levee surface to prevent erosion and improve appearance of the "naked" levee. I showed him the ryegrass plugs and seeds broadcast on the surface partially up the levee from the floodplain.

We observed the new sprouts of the California wild rose. We discussed the upcoming mowing by River Partners to open the annual grass canopy to encourage germination and sprouting of the seeds broadcast on 12/15/13. We discussed the mowing depth (3 to 6 inches) might be recommended. The canopy must be released.

We should consider a formal suggestion that we try seeding the inboard slopes to determine if the spp. that have been used can survive and become established up the sides of the levee.

We need to do frequent inspections to determine germination rates and success probability.

Shirley Cook is germination seeds in her classroom to teach students what they look like and they will be looking for in the field. This is in order to execute the "monitoring protocols" called for in the plan approved by the CV Flood Control Bd. We need to come to an understanding of how we are to measure success and failure of this project. In my opinion that is the guiding philosophy of Adaptive Mangement.

Please comment and make suggestions to improve these "notes".

DRAFT
(2/4/13)

Field Notes, from Dr. Dirt's observations
Calaveras River Detectives

Site inspection with Tristan Edgarian, CSU Stanislaus
Brush Rabbit Protection Program,
Oak Grove Docent Council

Purpose: To develop a Monitoring and Field Reporting system for the RP/FLCR Native Grass Planting Demonstration at the Calavras River. To lay the groundwork for creating a Natural History of the Watershed and implementation of Adaptive Management process. This effort is an integral part of the Calaveras River Detectives program.

We were able to observe some seed germination, probably spp. broadcast distributed on 12/15/12. We could not identify specifically which ones germinated and the rye grass plugs seem to be doing well.

The grass dominated growth appeared to annual imported spp. California rose is putting out fresh shoots and mature hips are present. A few seed pods from *Datura sp.* were observed

Numerous un-germinated or inviable seeds were present. Shirley Cook's class has geminated some seeds at Kohl School, so some material is viable, which spp. is unknown. We need specifically identified seeds for artificial germination and propagation for future field seedling plantings, if necessary. Perhaps Stockton Collegiate classes will want to try to grow materials in the future.

The site needs mowing as the plants are about 25 cm. tall and quite dense.

We need a mowing scheme that avoids disrupting areas of bare dirt where very small seedlings are taking root and avoid some clumps of Ca. rose regrowth.

The mowing depth of flail or reel mowers should be regulated.

Question to River Partners: do we have control of these factors with the parties doing the mowing? We need to work with the SJ CO Levee Maintenance program to find out what their anticipated mowing, and veg. spraying, and rodent control activities are for this year. I will send these field notes to the supervisor, Mr. Ambiz. Jeremy and I met with him several months ago and went over the restoration proposal before it was approved by the Central Valley Flood Control Board.

We recommend placing some Sherman traps to assess rodent populations

DRAFT
(1/20/13)

Field Notes, from Dr. Dirt's observations

1/18/13

Calaveras River Detectives – Kohl School

Purpose: To develop a Monitoring and Field Reporting system for the RP/FLCR Native Grass Planting Demonstration at the Calavras River. To lay the groundwork for creating a Natural History of the Watershed and implementation of Adaptive Management process. This effort is an integral part of the Calaveras River Detectives program.

This 1st field trip is to acquaint students and teachers with the plan approved by the California Central Valley Flood Protection Board: 11/13/2012. River Partners and Fiends of the Lower Calaveras are asking Kohl School to assist with the implementation program for the restoration of sections 0 through 2 at the UOP foot bridge.

Participants were Teachers: Shirley Cook, John Niemi, Desiree Forsberg and Dale Sanders and students from K through 6 from 3 classes
We worked from laminated maps at several scales.

Time: 9:15 am through 10:45

App. Distance from Kohl to site at UOP R/T: 2.17 miles(3.5 K), ___ Calories consumed

Conditions: weather – clear and frosty, temperature (?in degrees C.), etc.

Overview: what is this place, what can we observe and remember?

Observations: we saw a narrow trail leading to the river bank that appeared to be an otter haul-out and access slide. There were numerous active gopher mounds, one appeared to be dug out by a predator (dog, cat, fox, coyote or otter?)

We found seeds that had been broadcast on 12/15/12, none have germinated, grass plugs were observed. The line made by the spray booms to control plants was observed. We will map this zone location in the future. Students observed the concrete plugs placed in ground squirrel holes

Please add more.

Suggested reviewers: Kohl School Water Cycles Team – Isabella, Moses, and Leaea
Jeff Holt, Nan,Eric Ambriz, Bob Benedetti, Shana Eller