2009-2012

THE STUDENTS LEGACY: FOUR OAK EDUCATION/REFORESTATION PROJECTS

Maureen Anderson

Descanso Ranger District, Cleveland National Forest

2009: Mt. Empire Oak Education/ Restoration Project

- Target: communities of Descanso, Pine Valley, & Guatay.
- Gifted the Pine Valley & Descanso Libraries with several books & publications re. oak restoration, including a children's book titled "Grandmother Oak"
- Gifted Pine Valley, Descanso & Julian Charter Schools with same books & publications, including an oak curriculum to science teachers created by the California Oak Foundation
- Met with Principal to discuss participation in projects

Pine Valley 2nd & 3rd graders:Direct Sowing of Acorns , Camp Oliver January 2010

"Although the most common method of planting oaks is from containerized seedlings, direct seeding of acorns into the landscape produces clearly superior trees."

Ronald Motz

Saplings vs. Direct Sowing

PLANTING SEEDLINGS

- Requires more skill and time
  - Need care before planting
  - Must be watered
  - More costly
  - Risk of transplant shock
  - Risk of taproot damage
  - Success rate no better
  - Danger of transporting pathogens, insects from nurseries.

DIRECT SOWING

- Easy and kinda fun! Very transportable.
- Local seeds adapt better and faster to their habitat
  - Roots develop naturally on site (no transplant shock or danger of J-rooting)
  - Requires little or no watering
  - Will often outgrow their trans-planted counterparts within 2-3 years

Descanso Elementary School, 5th & 6th: Collection of Acorns 2009

- "Local acorns are already adapted to the conditions in which they will be sown."

  Iris Theodorus

- "The purists gather within one mile of the parent trees."

  Tom Scott

Descanso Middle School Students, fall 2009

AIR DRYING THE "SINKERS" BEFORE BAGGING AND REFRIGERATING.

- "The easiest, least expensive, and fastest sorting method is the float test…floaters are discarded and sinkers are retained."

Douglas McCreary, *Regenerating Rangeland Oaks in California*

Pine Valley Elementary School Students, fall 2009

Third graders preparing to “float test” their acorns. Viable acorns will sink quickly to the bottom in a pan of water; desiccated acorns will float to the top.

Keeping and bagging the “sinkers”

“The biggest acorns are usually the best. Test by soaking them in a pail of water, keeping only the sinkers. “

Sharon Johnson, *Living Among the Oaks*

Refrigerate in plastic bags after collecting

PROTECTION

"Because it is easier and less expensive to directly plant acorns, this method may be preferable… however, it is important that steps be taken to ensure that acorn depredation will not be a problem."

Douglas McCreary

Root Predators

“Root Guard”

Foliage Predators

Tree Shelters

TUBEX

SELF STAKING TREE SENTRY

Moisture Predators

3X3 Vispore Weed Mats

2009, 1st Project: south entrance Cuyamaca State Park

Equipment for 10 fully protected plantings

Training USFS personnel before Cuyamaca Planting, December 2009

"First you dig a 10" by 10" hole…."

Filling “Gopher Guard” with soil.

3’ “Tubex” tree shelter secured to oak stake

Unfurling the Vispore weed mat

Working the top of gopher guard up

Securing weed mat with staples.

Tree shelter labled with pertinent info for future reference.

One Fully Protected Planting

Crew leaders for ten crews of 6th and 7th graders.

Marching Descanso students into the park.

Supplies for ten sites.

Acorns: easily transported.

Heading out to planting sites, geared up.

12/18/2009

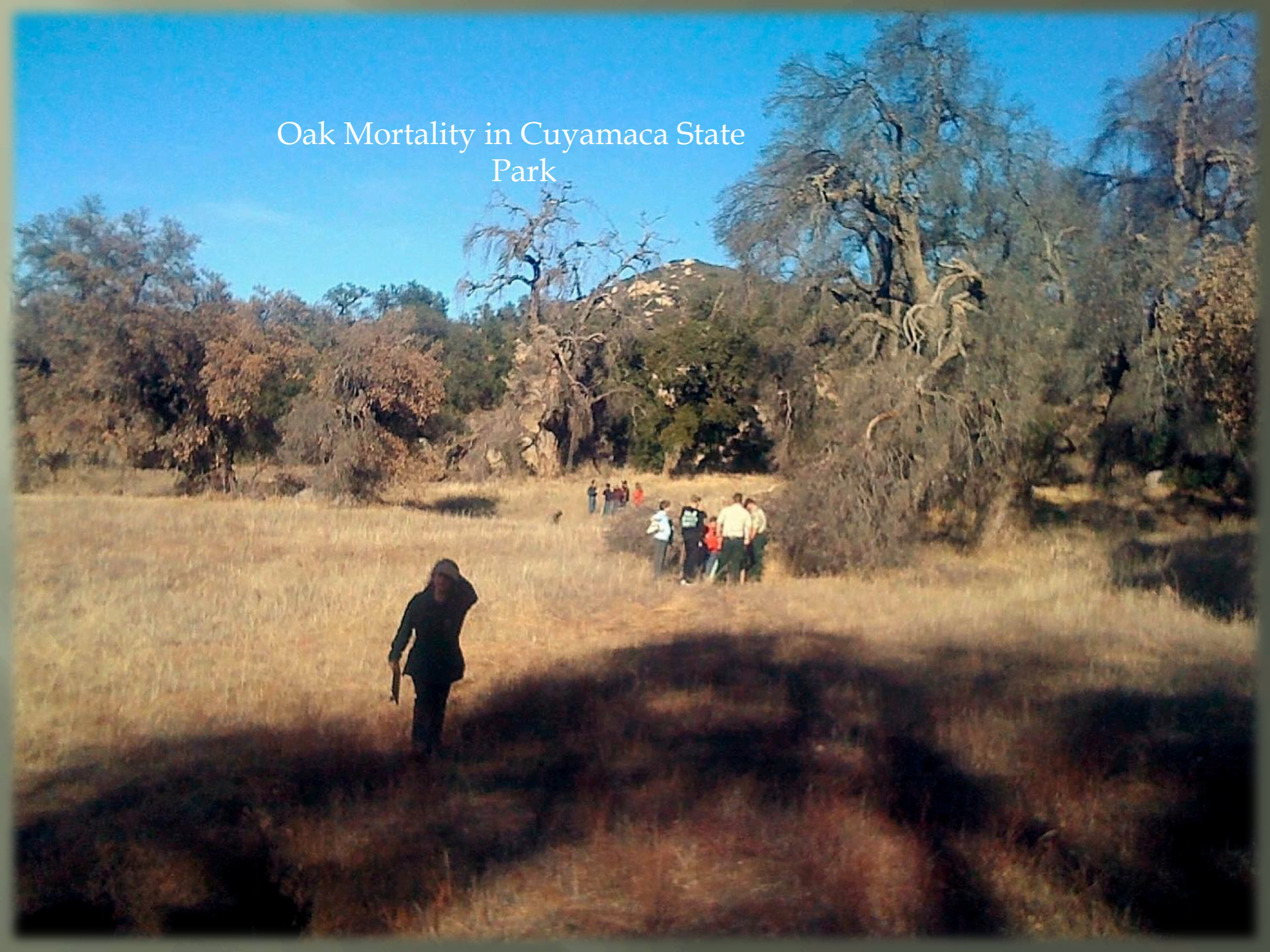
Student selecting an acorn at Site #1.

Securing weed mat at Site #4.

Labeling tree shelter at Site #8.

Pounding in the oak stake at Site #10.

Working hard at Site #8.


Oak Mortality in Cuyamaca State Park

Group photo, December 18, 2009

The students planted 200 fully protected acorns @ 2 per tree shelter.

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2nd Project:Camp Oliver, Descanso

Second and third graders from Pine Valley Elementary School planted 50 fully sheltered plantings on January 8th, 2010.

Equipment orientation pre-planting day

Students filling the gopher guard
January 8 , 2010

Securing zip ties to oak stake

Site #8, using 2’ Tree Shelters

Site #10

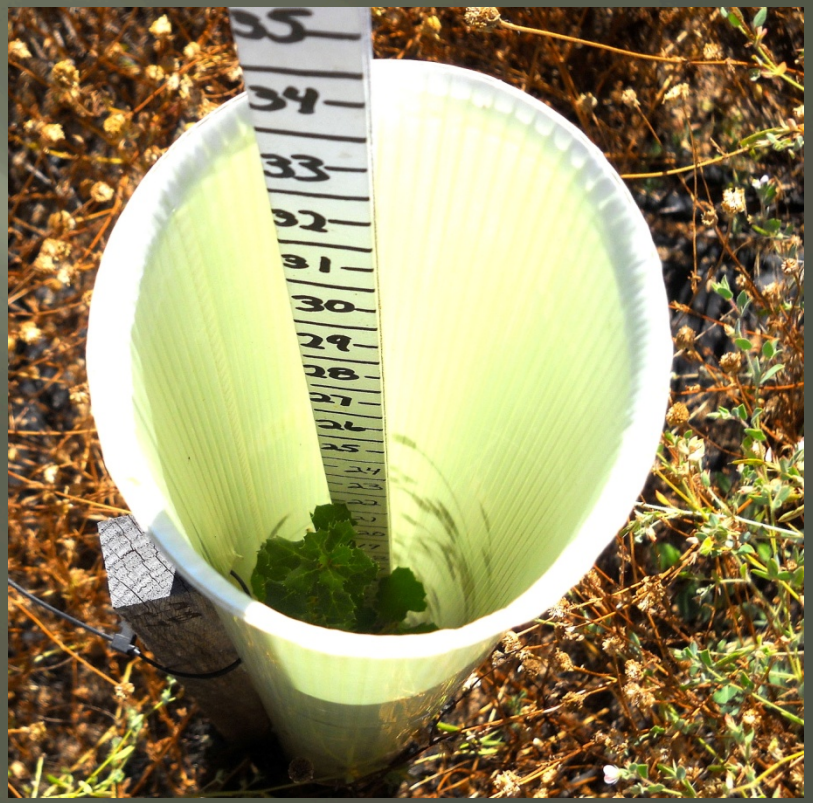
Crew Leaders, Martine Aguilera and Michele Barrios

Group Photo, Camp Oliver

CSP 9/2011

TUBEX BARELY VISIBLE AMONGST NATIVE VEGETATION

22" SEEDLING INSIDE



CSP @ 21 months

-79 tubes found standing

-most plantings heavily surrounded by timothy grass; difficult to access in last year due to extremely tall grasses.

-27 with no seedlings: 34%

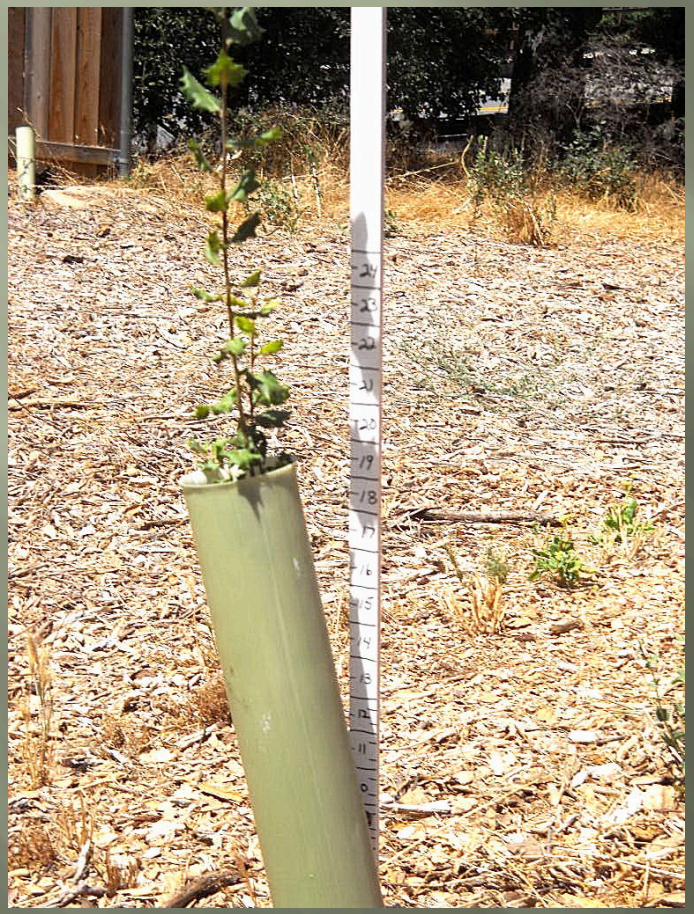
-17 with 2-10" seedlings brown & appear dead or dying 21.5%

35 with healthy seedlings 44%

Tallest seedling: 40.5 "

Mean Height: 10.9

Camp Oliver, 9/2011: 20 months



“Graduates” out of their shelters

44”

These 34″ – 44″ seedlings received plenty of water as they were planted on the leech field!

3rd Project12/19/2010: USFS Descanso Fire Compound.Acorn Collection behind Laguna Hot Shot Barracks, north side of Viejas Grade Road

Descanso Leadership students; community service volunteer work.

Float testing the acorns.

12/09/10

Viable acorns air dried, bagged and labeled. Ready to go into the refrigerator.

12/09/10

12/31/2010: Plotting planting sites on the Hot Shot side of compound.

Logical planting sites were areas where the oaks had been removed.

Natural regeneration

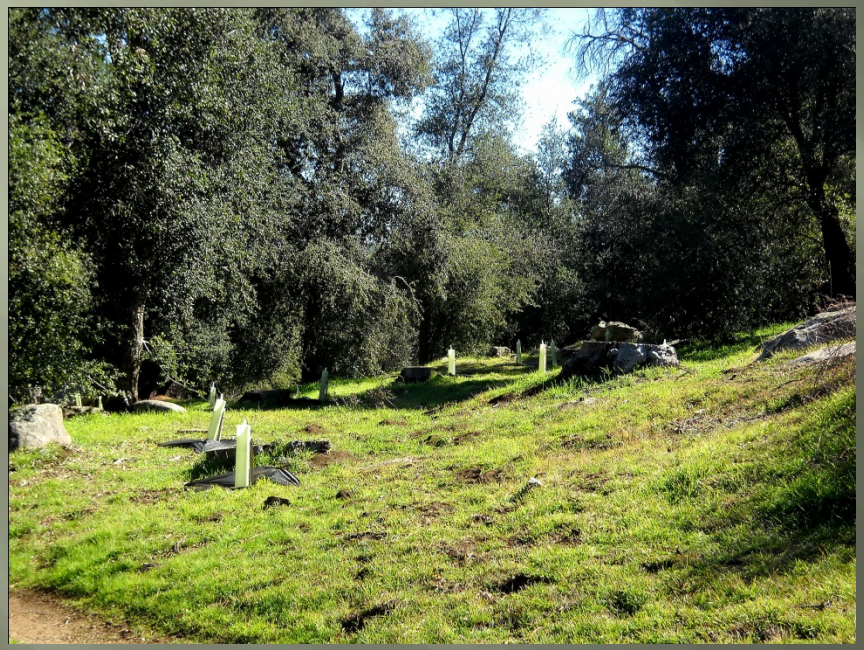
STUMP SPROUTS BEHIND HOT SHOT BARRACKS BUILDING

IN FRONT OF BARRACKS NEAR VIEJAS GRADE ROAD

Natural regeneration appeared prevalent on the Hot Shot (north) side of Viejas Grade.

1/22/2010: planting the Prevention side of the compound with Tubex tree shelters.

34 plantings accomplished in areas where oaks had been removed.



2/2/2011: Planting the Hot Shot side.

Leadership students from Descanso Intermediate School volunteered to assist.

Students float testing & air-drying acorns collected & stored since 12/9/2010.

Students working Vispore weed mat down over the Tree sentry.

Four sod staples, one at each corner, secure the weed mat.

The students worked hard, had fun, and accomplished 49 plantings.

Pizza followed…

(Picnic table next to the Hot Shot Barracks)

3/20/11: mulch was collected from Camp Ole fire station & transported to Descanso Compound.

Tree mats were then covered with a layer of mulch to aid moisture retention.

Cost savings to government at work: volunteer gopher patrol.

Schmegle, the Descanso Fire Station cat.

Results for total 85 plantings by 8/11/2011

- 75 out of 85 plantings have healthy seedlings for a success rate of 88%.
- Tallest (1): 18”
- Smallest (1): 2.5”
- Typical height (69): 6-14”
- Mean height: 8.6”

Breaking through! Lead seedling as of 9/2011 @ 20”.

20” AT 6 MONTHS

36.5” AT 1.5 YRS.

Collecting Acorns for Project #4: USFS Black Oak Restoration Burnt Rancheria Campground: Oct 2011

Volunteers recruited directly on site!

Float testing/air drying on campers picnic table

Total acorn collection for 200 plantings air-dried and bagged

USFS Fuels Crew plant the first 100 sheltered plantings

Even Descanso District Ranger Donn Christiansen gets down and dirty!

Leadership teacher Deborah Taylor a true partner in oak restoration

200 Fully Sheltered plantings accomplished in March 2012; most sprouting by June.

Lessons learned

- Partners must be forewarned of need for flexibility for planting times due to wx. Conditions. (Lower elevation student field trip vs. upper elevation weekend volunteers)
- Pre-planting 15 minute Power point & showing of equipment to be used proven helpful
- Step-by-step planting handout with photos for planters
- Interpretive flyers at public sites (CSP/vs. BR)
- Speaking at assemblies to show parents what students have done, awarding school: keep partners involved in the progress of their projects!
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Happy Planter

"Nothing grows slower than the seed that was never planted."

Maureen Anderson
Project Leader
Descanso Ranger District
Cleveland National Forest

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