Yosemite and Beyond: Field notes, what they are and why are they important

Rebekah Kim
Archivist
California Academy of Sciences

Amy Kasameyer
Archivist
University and Jepson Herbaria
University of California, Berkeley

Christina Velazquez Fidler
Archivist
Museum of Vertebrate Zoology
University of California, Berkeley

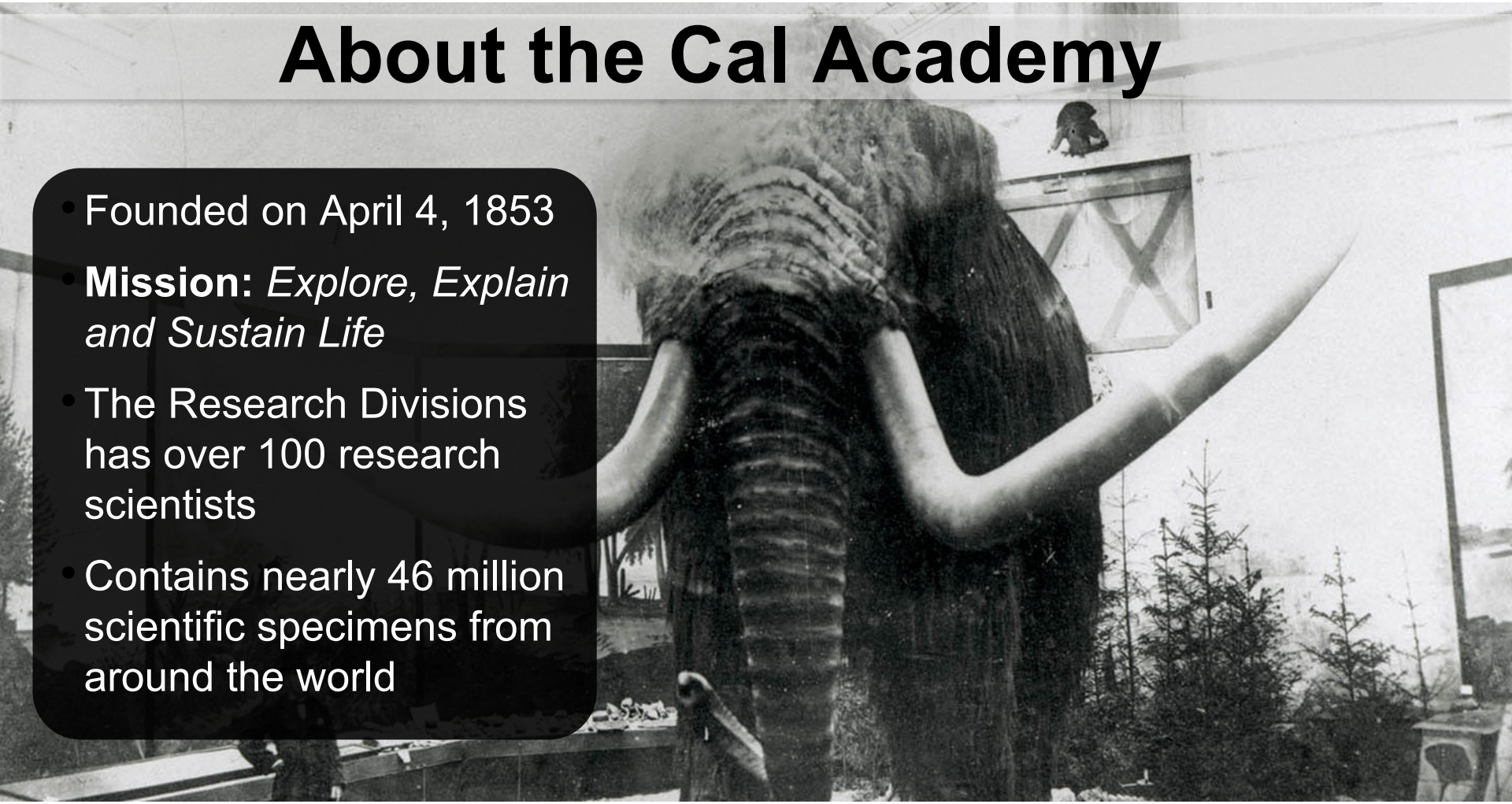
Field Books at the California Academy of Sciences

- Rebekah Kim
- Head Librarian

April 13, 2018

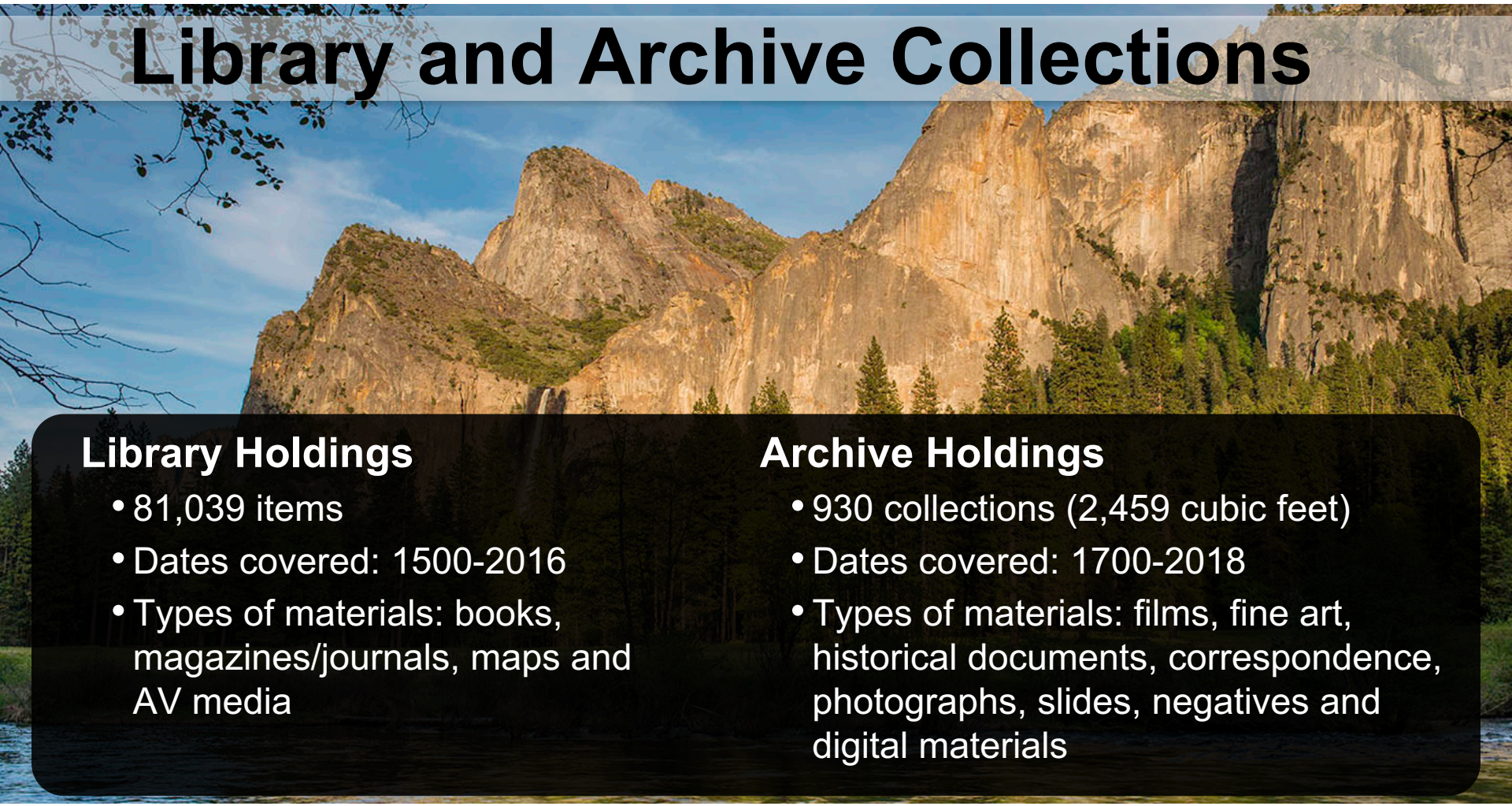
CALIFORNIA ACADEMY OF SCIENCES

About the Cal Academy



- Founded on April 4, 1853
- **Mission:** *Explore, Explain and Sustain Life*
- The Research Divisions has over 100 research scientists
- Contains nearly 46 million scientific specimens from around the world

Library and Archive Collections



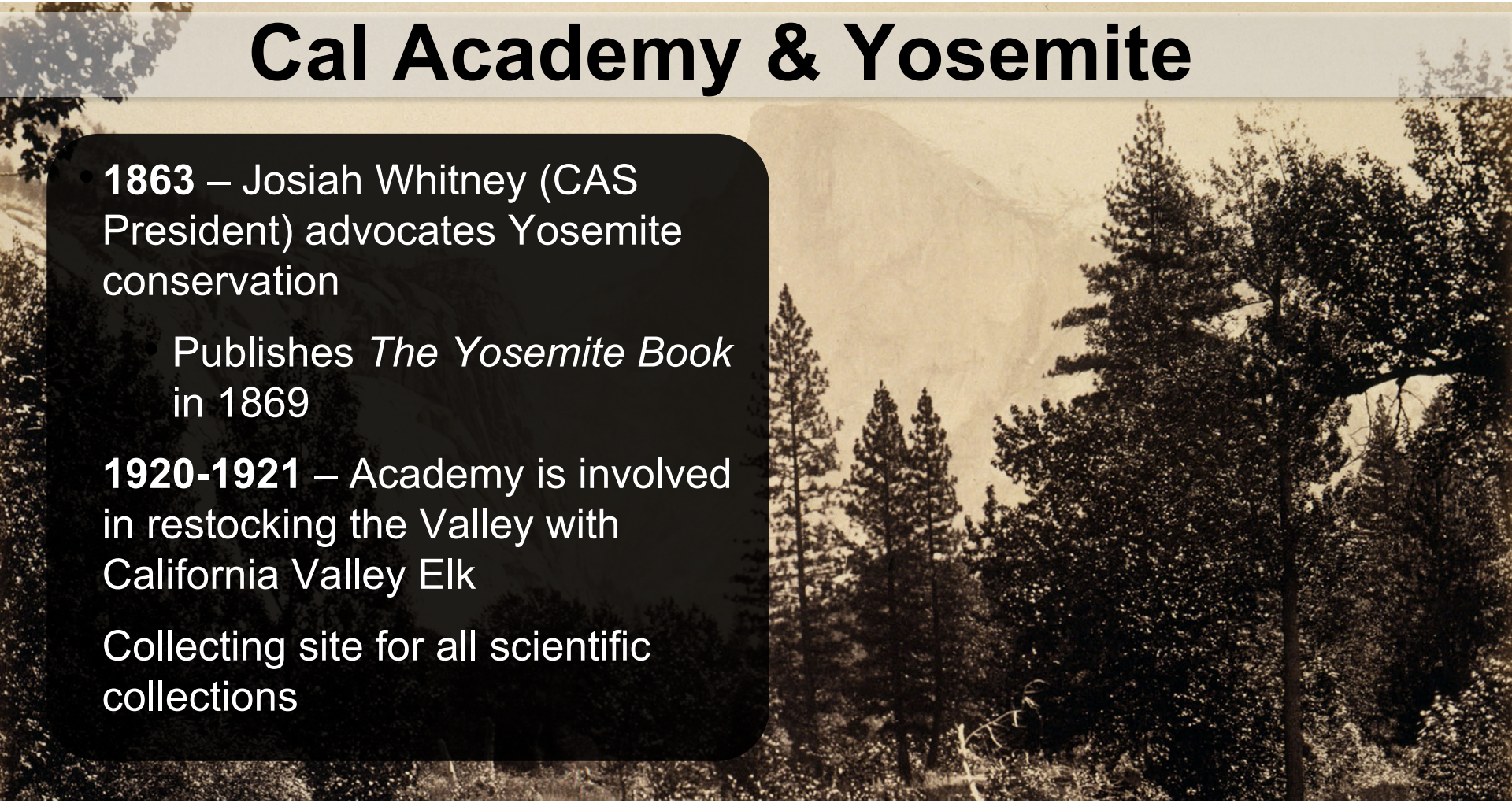
Library Holdings

- 81,039 items
- Dates covered: 1500-2016
- Types of materials: books, magazines/journals, maps and AV media

Archive Holdings

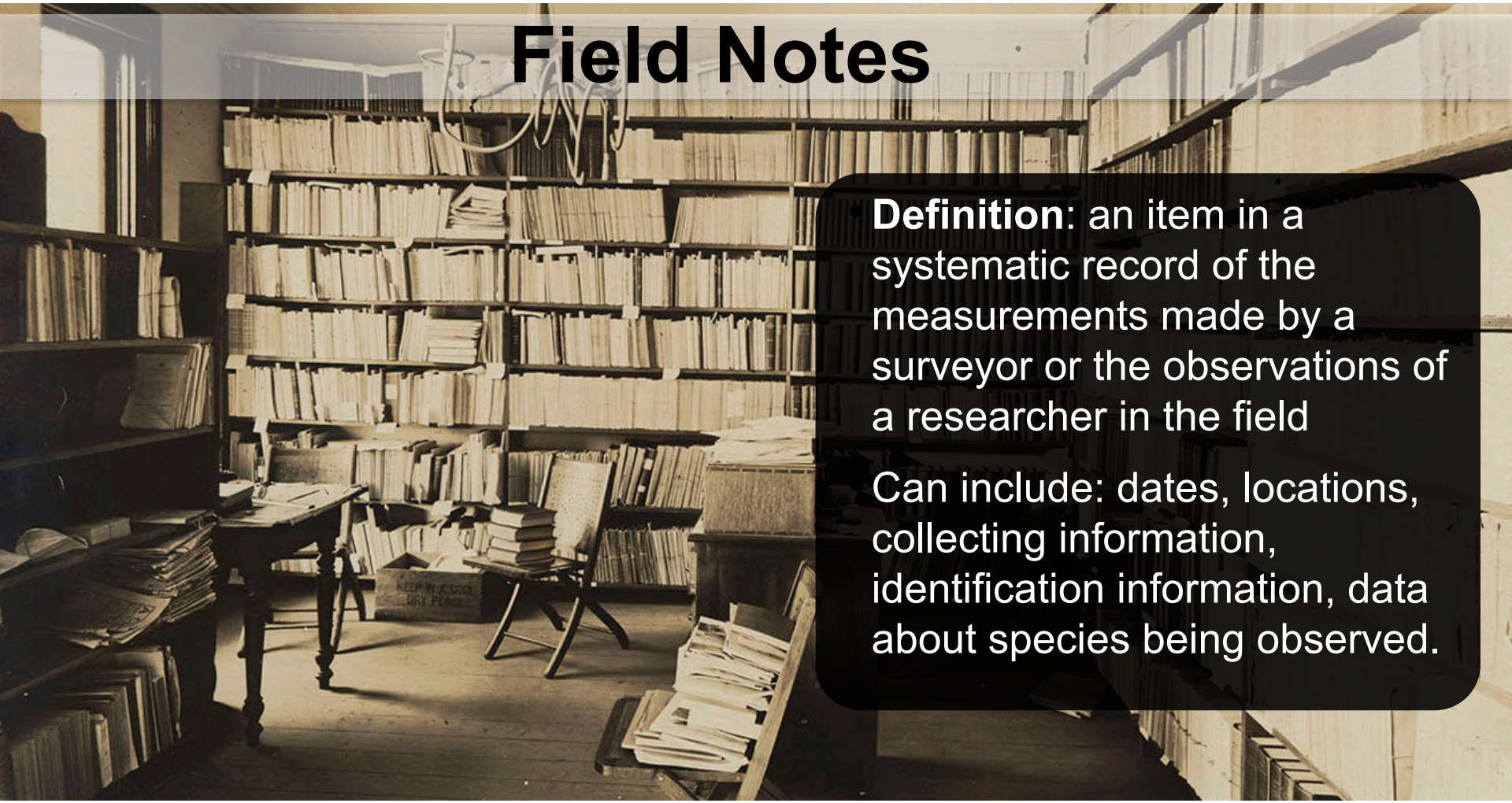
- 930 collections (2,459 cubic feet)
- Dates covered: 1700-2018
- Types of materials: films, fine art, historical documents, correspondence, photographs, slides, negatives and digital materials

Cal Academy & Yosemite



- **1863** – Josiah Whitney (CAS President) advocates Yosemite conservation
  - Publishes *The Yosemite Book* in 1869
- **1920-1921** – Academy is involved in restocking the Valley with California Valley Elk
- Collecting site for all scientific collections

Field Notes



- **Definition**: an item in a systematic record of the measurements made by a surveyor or the observations of a researcher in the field
- Can include: dates, locations, collecting information, identification information, data about species being observed.

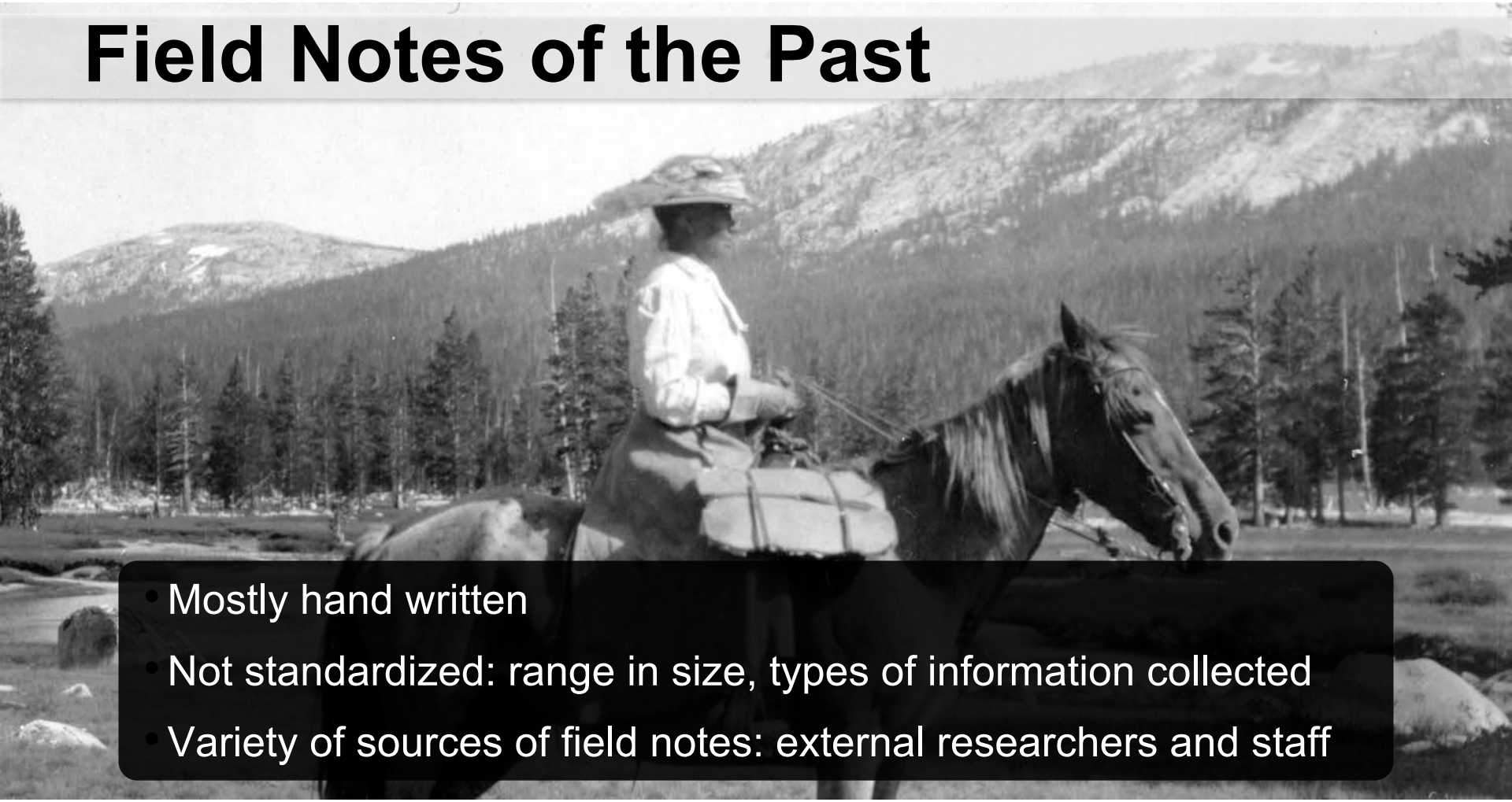
Active Records

- Correlate with the specimen collections.
- Stored in the departments they originated from, not in Archive.
- The few field books are stored in the Archive have historical significance.

Example

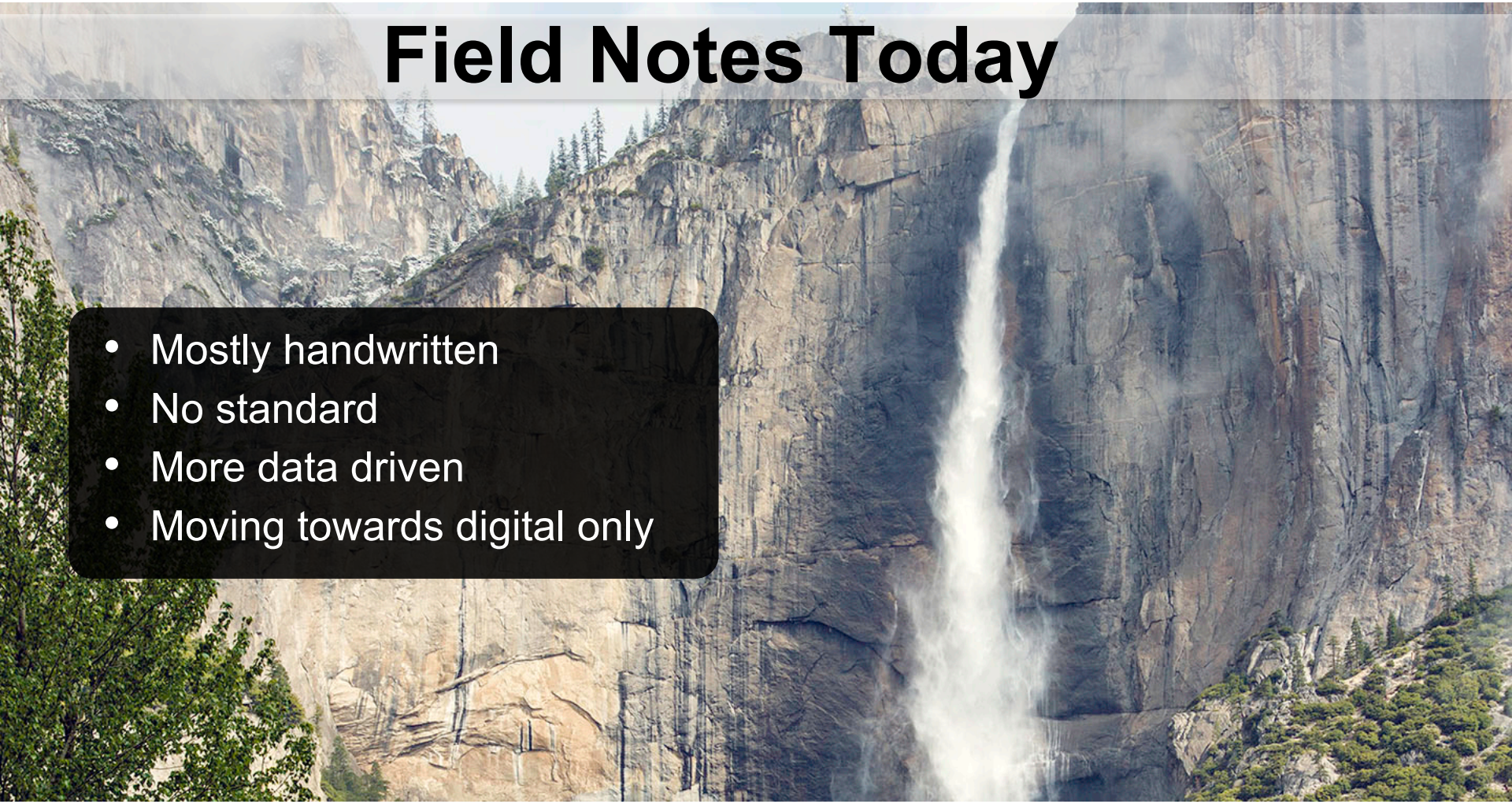
STOP 164 - A.P.: 10 MI. N.W.,
SADASEOPET, 600 METERS.
II-8-62
200 specimens.
Low lava hill in the fringe of Deccan lava country. Grassy slopes spotted with a few small bushes and large chunks of scoria. Red-brown soil, very dry. Shady and partially shady exposures. Some specimens were collected about ½ mile S.E. under stones beneath a large banyan tree

Field Notes of the Past



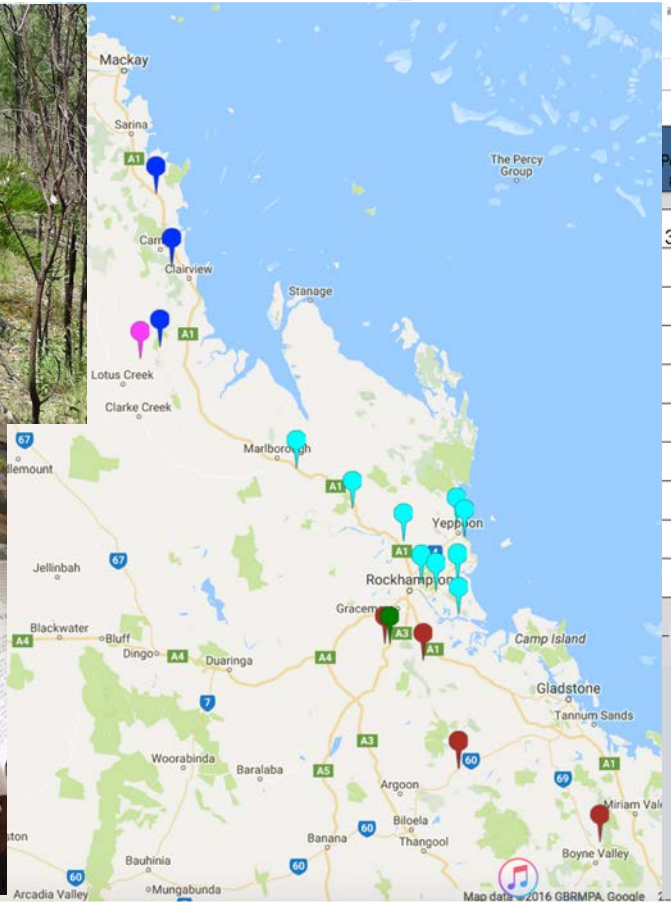
- Mostly hand written
- Not standardized: range in size, types of information collected
- Variety of sources of field notes: external researchers and staff

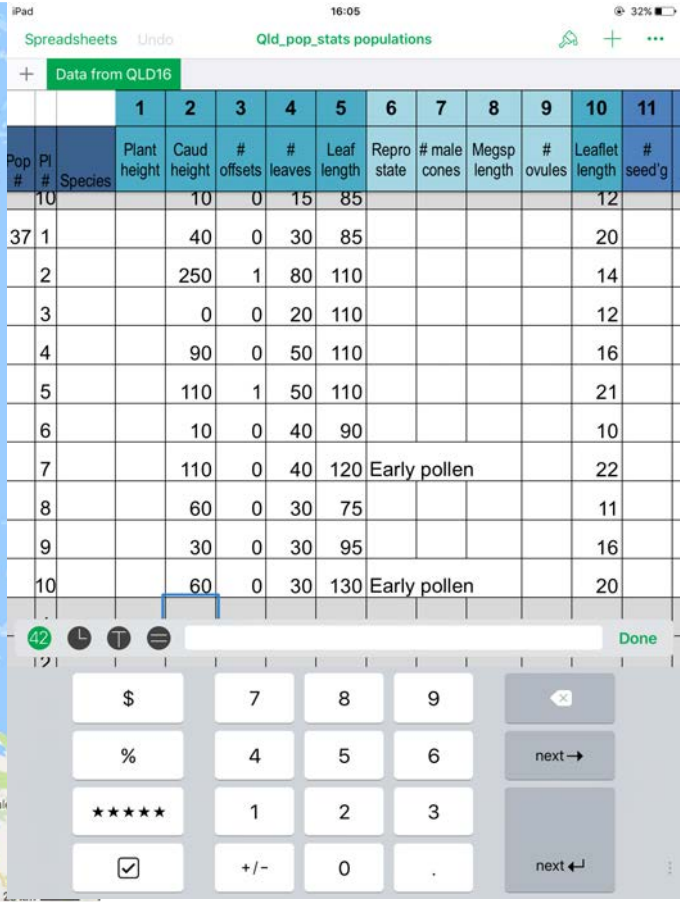
Field Notes Today



- Mostly handwritten
- No standard
- More data driven
- Moving towards digital only

Example

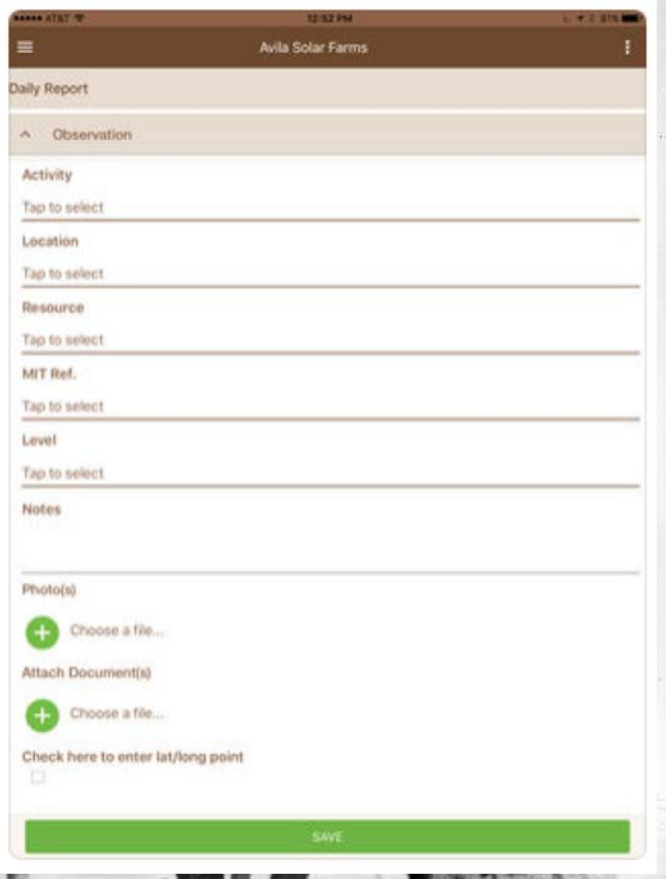




			1	2	3	4	5	6	7	8	9	10	11
Pop #	Pl #	Species	Plant height	Caud height	# offsets	# leaves	Leaf length	Repro state	# male cones	Megsp length	# ovules	Leaflet length	# seed'g
	10			10	0	15	85					12	
37	1			40	0	30	85					20	
	2			250	1	80	110					14	
	3			0	0	20	110					12	
	4			90	0	50	110					16	
	5			110	1	50	110					21	
	6			10	0	40	90					10	
	7			110	0	40	120	Early pollen				22	
	8			60	0	30	75					11	
	9			30	0	30	95					16	
	10			60	0	30	130	Early pollen				20	

Field Notes of the Future

- Transition to digital records
- Specialized apps: Wildnote



Digitizing Field Notes

- Starting a small project with volunteers and interns
- Coordinating with research departments
- **Goal:** Increase access to researchers

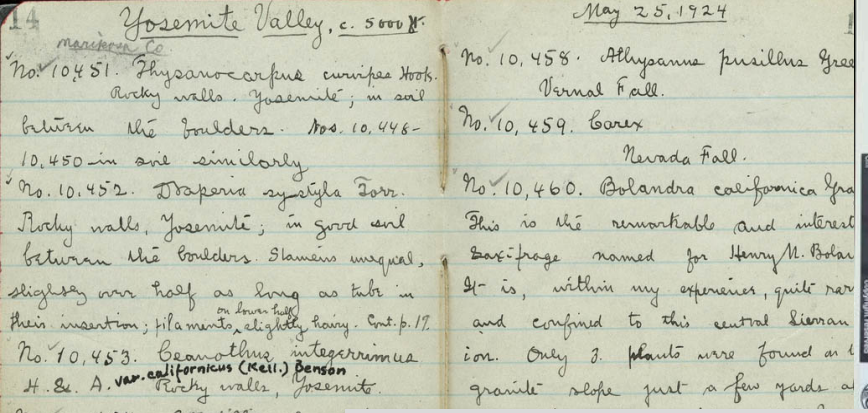
Future Aspirations

- Cross reference field notes
- Get more things online
- Standardize physical storage
- DAM

Thank you

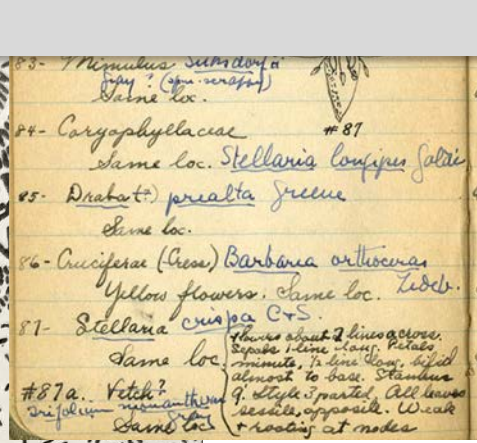
•

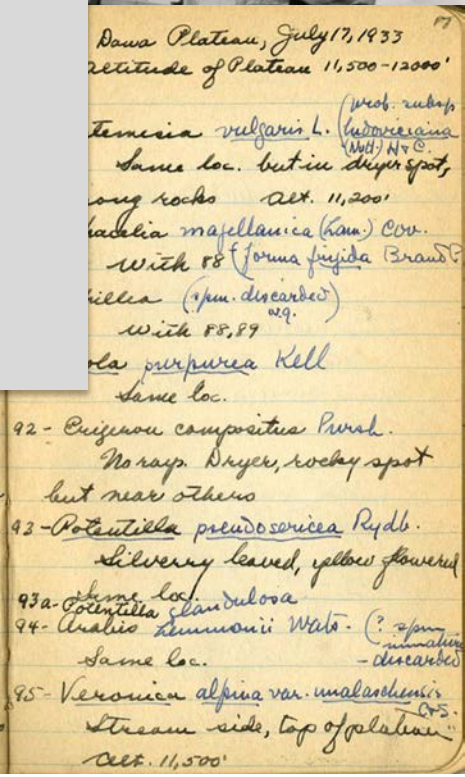
CALIFORNIA ACADEMY OF SCIENCES



Linking the University and Jepson Herbaria field books and botanical collections

Amy Kasameyer, Archivist, University and Jepson Herbaria





- What is a herbarium?
  - Not an herb shop!
  - Not a botanic garden!
  - Not a marijuana dispensary!!!

  - ✓ A herbarium is a collection of preserved plants stored, catalogued, and arranged systematically for study

The University and Jepson Herbaria

2 Herbaria housed together:

University Herbarium:

- Established in 1895
- ~2,100,000 botanical specimens from all over the world

Jepson Herbarium:

- Established in 1950
- ~100,000 botanical specimens from the state of California

Plant specimens sit arrayed on a table at the University and Jepson Herbaria.

Robinson Meyer / The Atlantic

What Good Is a Library Full of Dead Plants?

How 19th century scientists anticipated the data revolution

ROBINSON MEYER | MAR 18, 2016 | SCIENCE

Why keep herbarium specimens?

- Reference collection for plant identification
- Tangible record of biodiversity from a particular time and place
- Specimens preserved for centuries
- Vouchered observations
- DNA can be extracted from specimens for genetic studies

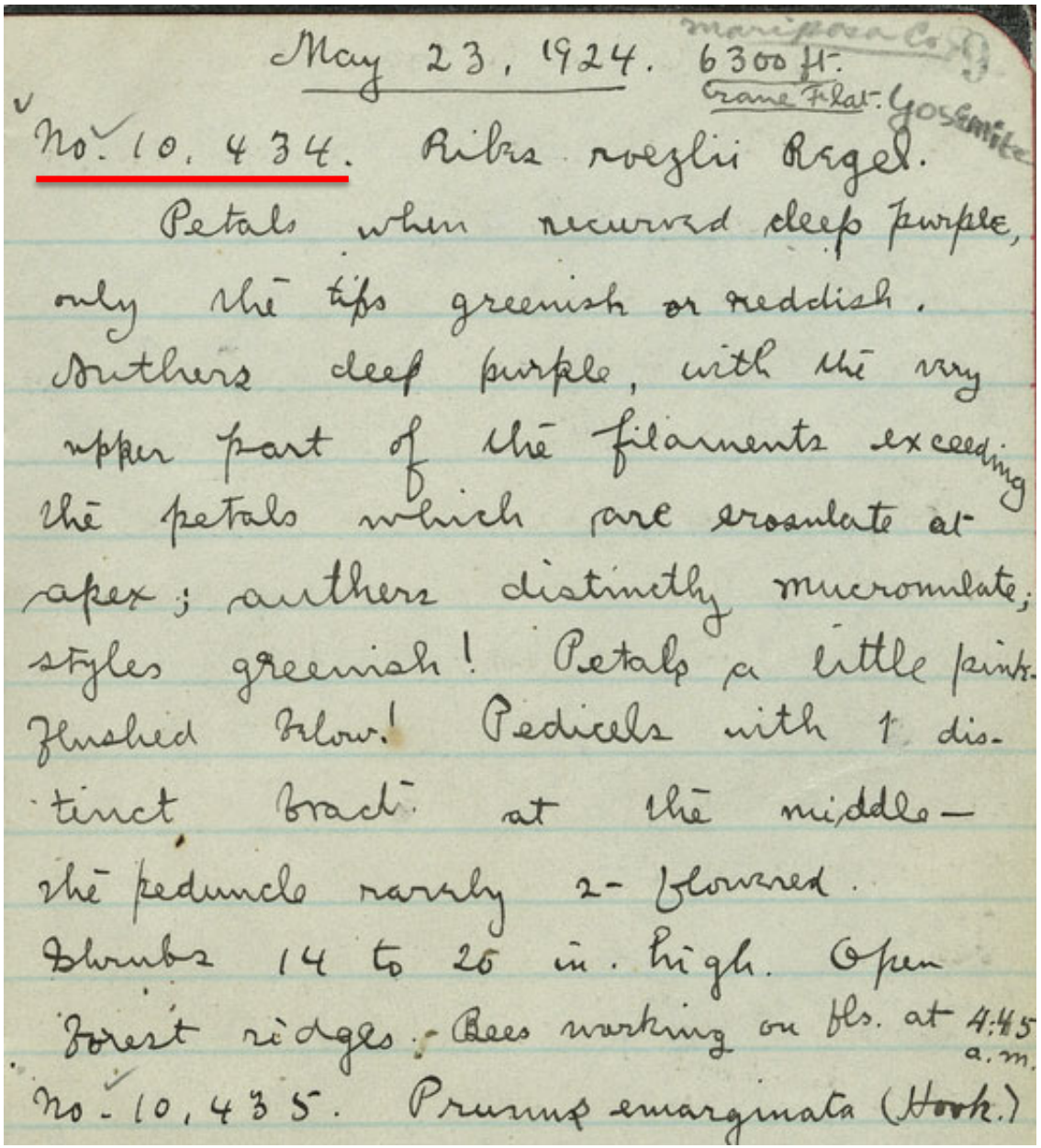
How did we get all of these herbarium specimens?

Observations made in Field Book

Collection Number

Each collector assigns unique collection numbers in a chronological fashion.

Collection numbers are never reused!



May 23, 1924. 6300 ft. Crane Flat. Yosemite

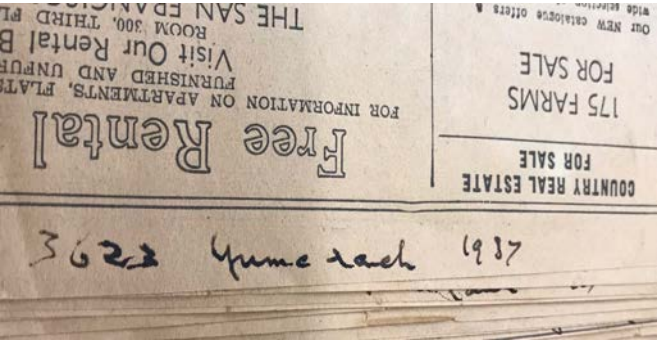
No. 10,434. Ribes roezlii Regel.

Petals when recurved deep purple, only the tips greenish or reddish. Anthers deep purple, with the very upper part of the filaments exceeding the petals which are crenulate at apex; anthers distinctly mucronulate; styles greenish! Petals a little pink flushed below! Pedicels with 1 distinct bract at the middle — the peduncle rarely 2-flowered. Shrubs 14 to 20 in. high. Open forest ridges. - Bees working on fls. at 4:45 a.m.

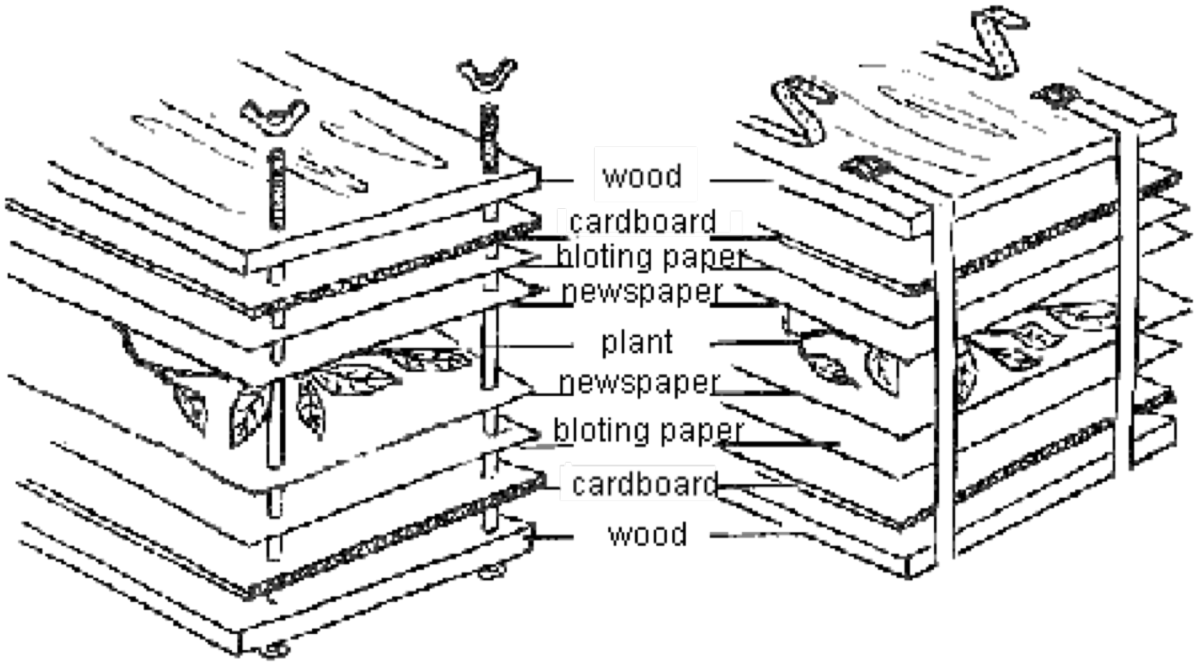
No. 10,435. Prunus emarginata (Hook.)

1. Plant is collected

2. Plant goes in folded sheet of newspaper



3. Collection Number Written on Newspaper



4. Newspaper folder goes in a plant press


All great ideas start with a blank page.
THE JOURNAL

Yosemite National Park, California

H. M. HALL, No. 8988

Calochortus venustus Benth.

Wawona road, near Alder Creek

Low Transition Zone, at 5000 feet altitude. June 18 1911

2-D Plant Specimen

Accession barcode

Annotation Label

Label

JEPS23387

Delphinium hansenii* (Greene) Greene subsp. *hansenii
Mariposa / CA / USA
Collector(s): W. L. Jepson
Collection date: Jul 1 1896

UC8012

***Carex athrostachya* Olney**
Mariposa / CA / USA
Collector(s): W. H. Brewer
Collection Number: 1650
Collection date: Jun 17 1863
Elevation: 4000 ft

UC119736

***Clintonia uniflora* (Menzies ex Schult. & Schult. f.) Kunth**
Mariposa / CA / USA
Collector(s): John Muir
Collection date: 1875

UC204666

***Gilia capitata* Sims subsp. *mediomontana* V. E. Grant**
Mariposa / CA / USA
Collector(s): Le Roy Abrams
Collection Number: 4435
Collection date: Jun 20 1911
Elevation: 4000-4500 ft

JEPS1947

***Clarkia williamsonii* (Durand & Hilg.) F. H. Lewis & M. R. Lewis**
Mariposa / CA / USA
Collector(s): W. L. Jepson
Collection Number: 14365
Collection date: Jul 1 1896

JEPS2552

***Cuscuta californica* Hook. & Arn. var. *apodanthera* Yunck.**
Mariposa / CA / USA
Collector(s): W. L. Jepson
Collection Number: 80a
Collection date: July 7-12 1896

UC11678

***Ribes viscosissimum* Pursh**
Mariposa / CA / USA
Collector(s): H. N. Bolander
Collection Number: 4896
Collection date: 1866

UC11677

***Ribes viscosissimum* Pursh**
Mariposa / CA / USA
Collector(s): H. N. Bolander
Collection Number: 6328
Collection date: July 1866

UC119799

***Lilium parvum* Kellogg**
/ CA / USA
Collector(s): John Muir
Collection date: 1875

UC72461

***Carex athrostachya* Olney**
Mariposa / CA / USA
Collector(s): W. H. Brewer
Collection Number: 1650

JEPS61750

***Calochortus venustus* Douglas ex Benth.**
Mariposa / CA / USA
Collector(s): W. L. Jepson
Collection date: Jul 7 1896-Jul 12 1896

UC38850

***Melica poaeoides* Nutt. var. *inflata* Bol.**
/ CA / USA
Collector(s): H. N. Bolander
Collection Number: 6121
Collection date:

UC2663

***Juncus triformis* Engelm.**
Mariposa / CA / USA
Collector(s): H. N. Bolander
Collection Number: 4864
Collection date: Jun

UC1134533

***Calochortus venustus* Douglas ex Benth.**
Mariposa / CA / USA
Collector(s): W. B. Augustine
Collection Number: 138

UC1134530

***Calochortus venustus* Douglas ex Benth.**
Mariposa / CA / USA
Collector(s): W. B. Augustine
Collection Number: 137

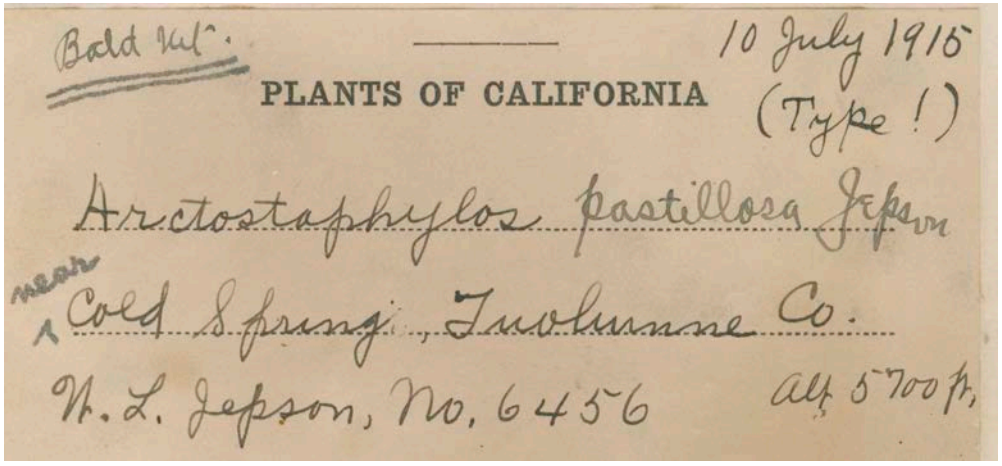
UC1105889

***Juncus triformis* Engelm.**
Mariposa / CA / USA
Collector(s): H. N. Bolander
Collection Number: 4864
Collection date: Jun

Field Books at the University and Jepson Herbaria

- Firsthand observations documenting botanical collecting activity
- Field books of over 60 botanists
- Spanning 1859-2012
- Provide context for botanical specimens

Field Book Page for Jepson's Collection No. 6456


Bald Mt.

PLANTS OF CALIFORNIA

10 July 1915 (Type!)

Arctostaphylos pastillosa Jepson

near Cold Spring, Tuolumne Co.

W. L. Jepson, No. 6456 Alt 5700 ft.

Label for Jepson's Collection No. 6456

124 Cold Spring, Tuolumne Co 5700 ft.

(betw. Stoddard Spgs. and Pine Crest)

Ridge near Cold Spring, locally known as Bald Mt. (but not the Bald Mt. near Yankee Hill (Big Trees Quadrangle).

No. 6456. Arctostaphylos pastillosa Jepson

Berries as large as crab-apples. Remarkable for their size, as large as the largest A. glauca berries. Shrub rather small, 3 or 4 ft. h., on rocky ridge (lava), near Cold Spring, locally known as Bald Mt. The stone not yet formed! It seems much slower of formation than in other species - A. viscida, A. manzanita, which have a formed stone even if not very hard, at this stage. The stone in 6456 at this stage is hardly more than like an apple core.

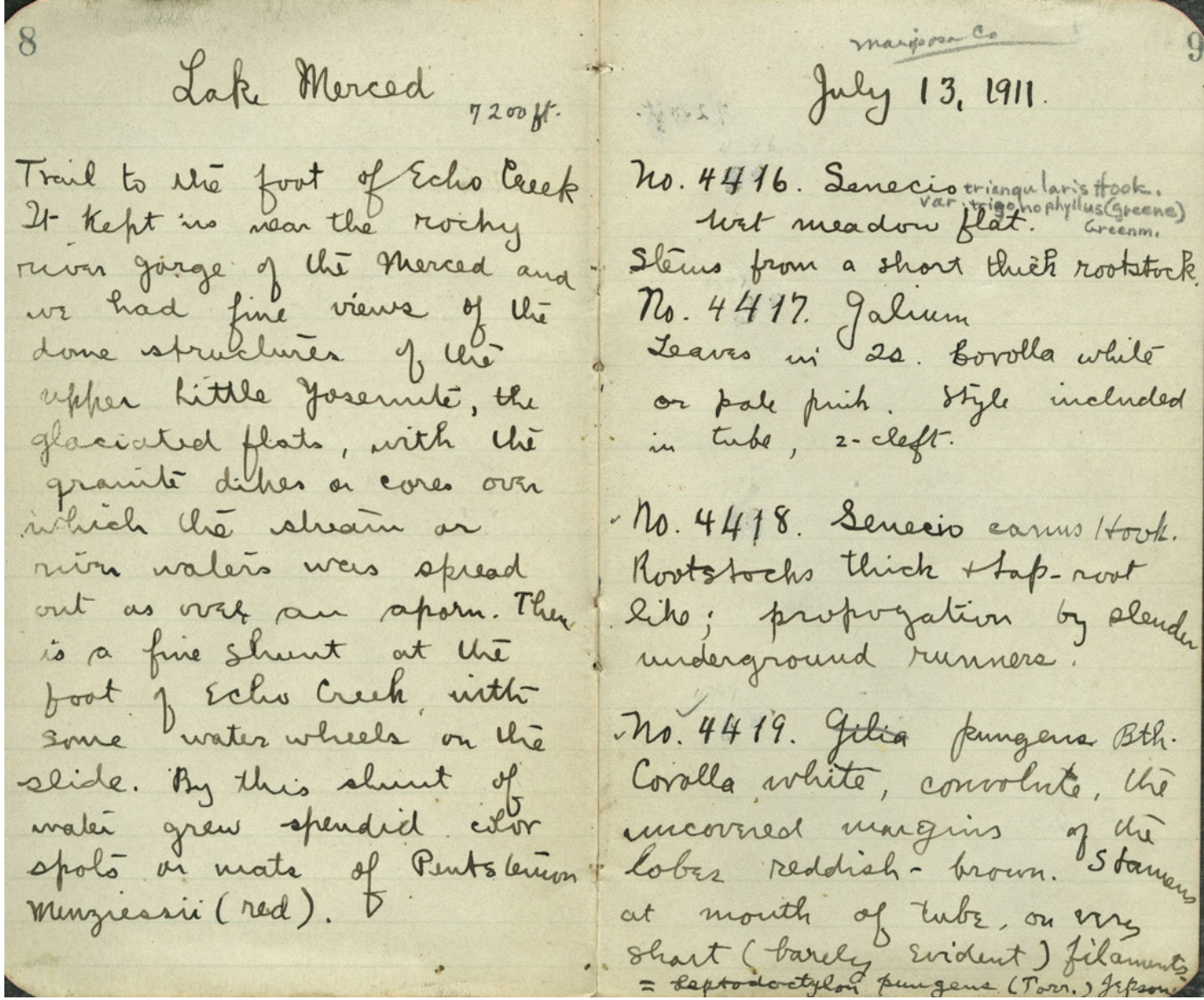
What data goes in a field book?

Always included:

- Location
- Date
- Collection Number

Usually included:

- Identification
- Plant Description
- Habitat Description



8

Lake Merced 7200 ft.

Trail to the foot of Echo Creek. It kept in near the rocky river gorge of the Merced and we had fine views of the dome structures of the upper Little Yosemite, the glaciated flats, with the granite dikes or cores over which the stream or river waters were spread out as over an apron. There is a fine shunt at the foot of Echo Creek with some water wheels on the slide. By this shunt of water grew splendid color spots on mats of Pentstemon Menziesii (red).

Mariposa Co.

9

July 13, 1911.

No. 4416. Senecio triangularis Hook. var. trigonophyllus (Greene) Greenm. Wet meadow flat. Stems from a short thick rootstock.

No. 4417. Galium. Leaves in 2s. Corolla white or pale pink. Style included in tube, 2-cleft.

No. 4418. Senecio canus Hook. Rootstocks thick + tap-root like; propagation by slender underground runners.

No. 4419. Gilia pungens Bth. Corolla white, convolute, the uncovered margins of the lobes reddish-brown. Stamens at mouth of tube, on very short (barely evident) filaments. = Leptodactylon pungens (Torr.) Jepson

Jepson Field Book Volume 23, 1911, pages 8-9.

16

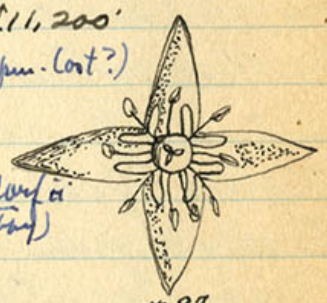
Dana Plateau – July 17th 1933 – Around North flank of Mt. Dana, across Glacier Canyon + up the plateau.

80 – Draba Breweri Wats.
In wet, sedgy spot on way up Dana Plateau from Glacier canyon. Alt. 11,200'

81 – Draba Lemmonii Wats
Same loc. Alt. 11,200'

82 – Arenaria (spm. lost?)
Same loc.

83 – Mimulus Suksdorfii (spm. scraped)
Same loc.


#87

84 – Caryophyllaceae
Same loc. Stellaria longipes Goldie

85 – Draba (?) prealta Greene
Same loc.

86 – Cruciferae (Cress) Barbarea orthoceras
Yellow flowers. Same loc. Ledeb.

87 – Stellaria crispa C+S.
Same loc
Flowers about 2 lines across. Sepals 1 line long. Petals minute, ½ line long, bifid almost to base. Stamens 9. Style 3 parted. All leaves sessile, opposite. Weak + rooting at nodes

#87a. Vetch? Astragalus drifolium monanthus Gray
Same loc

17

Dana Plateau, July 17, 1933
altitude of Plateau 11,500–12000'

88 Artemisia vulgaris L. (prob. subsp. ludoviciana (Nutt.) H+C.
Same loc. but in dryer spot, among rocks Alt. 11,200'

89 – Phacelia mafellanica (Ham.) Cov.
With 88 (forma frigida Brand?)

90 – Achillea (spm. discarded a.g.)
With 88, 89

91 – Viola purpurea Kell
Same loc.

92 – Erigeron compositus Pursh.
No rays. Dryer, rocky spot but near others

93 – Potentilla pseudosericea Rydb.
Silvery leaved, yellow flowered

93a – Potentilla glandulosa
Same loc.

94 – Arabis Lemmonii Wats. (? spm. immature – discarded)
Same loc.

95 – Veronica alpina var. unalaschensis C+S.
Stream side, top of plateau
Alt. 11,500'

Helen Sharsmith Field Book Volume 1 pages 16-17, 1933

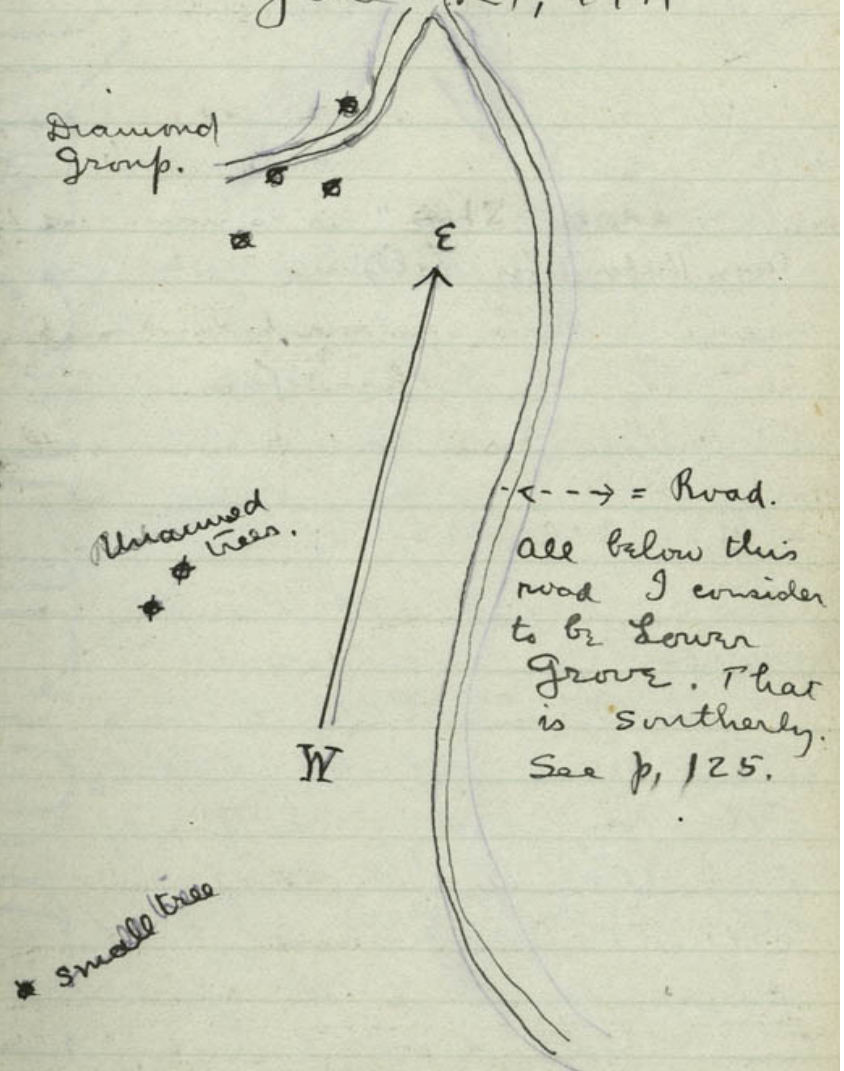
Mariposa Grove

- Trees = Sugar & Yellow Pine, Incense Cedar, Black Oak,
- "Woodland Star" is a name used by Mrs. Huber for Tellima.
- Ceanothus divergifolius, makes a fine soft carpet.
- Ceanothus parvifolius Trel
- Castanopsis sempervirens, thicket of it.
- Ceanothus cordulatus Kell., thickets high in centre, branches at tips going to ground. Low mounds, high in centre. C. parvifolius somewhat with ascending branches

"Grizzly Giant.

"Circumference 104 ft. Height 224 ft. Large limb 100 ft. above ground 6 ft. in diameter. Containing about 1,000,000 ft. of lumber. Estimated to be about 6,000 years old. The largest and oldest tree in the world." = Signboard on Tree.

June 29, 1911



Jepson Field Book v. 22 p. 122-123. 1911 study of the Mariposa Grove.

Willis Linn Jepson,
Mt. Dana, 1909

Willis Linn Jepson Field Books

- ”Father of California Botany”
- Dedicated his life to the study of the California Flora
- Kept extensive field books documenting his more than 20,000 collections throughout California
- 63 volumes of field books dating from 1883-1945

Tuolumne Mdws to Mt. Dana. July 13, 1909.
8600 ft. – 9800 ft. at Base Camp, Mt. Dana.

✓No. 3256. Sambucus racemosa L.
Bush 1 to 3 ft. h.
n. side Lambert Dome.

✓No. 3257. Potentilla flabelliformis Hook.
Leaves 3-fol. Petals yellow, round, emarginate. Disk-margin deep orange, glandular, bearing 20 stamens. Herbage a little clammy.

Carex exserta Mackenzie. Det. K.K.M.

✓No. 3258. Sedge. Open Tamrac wods.

No. 3259. Carex. Open Tamrac wood

✓No. 3260. Lupinus sylvestris gray var. dasyphyllus.

✓No. 3261. Calyptridium umbellatum var. caudicifera.

✓No. 3262. Phlox diffusa douglasii Hook. Dana Fork. Var. diffusa gray.

No. 3263. (Not used)

✓No. 3264. Cymopterus terebinthinus Dana Fork T. & G.

No. 3265. Willow. Salix vestitaeformis Coll.

– John Muir says: "I can't make Two species of Pinus contorta. Then there is the Lodgepole Pine of the northwest which has a different habit. Its long slender boles are different from this scrubby one here. That is because of fire. It holds its seed a year or two, some botanists say they have found them good at 8 years, and after fire, lo and behold, they sow the area with seeds on the ashy soil – just what they like and then comes the snow and the next spring there is a green sward so dense

Hetch-Hetchy (3700 ft.)

- Quercus chrysolepis.
The walls of the valley are given more character by this tree than by all other species combined. First of all at the easterly end of the valley has a series of high cliffs, great rocks rising out of the wall, which are remarkable, unlike the rocks of Yosemite, for their vegetation. These rocks are set in a mass of oaks which give a character to the rugged strength of the rocks that is very very pleasing. Great rocks set in trees, rising

July 26, 1909.

out of groves - a most enticing scene. Further down the valley, westerly, are great granite walls, smooth towering cliffs like Yosemite and utterly devoid of vegetation, save for 1, 2, or 3 sharply defined bands of oak (chrysolepis) which run nearly horizontally, i.e. inclined upward easterly, across the walls, taking advantage of a rift - or shelf in the mass of rock, a rift which runs with great directness, seemingly a straight-line. This oak is mossy

Jepson Field Book Volume 20, 1909, page 128-129. Description of Hetchy Hetchy Valley before it was flooded in 1923.

A YOSEMITE FLORA

A DESCRIPTIVE ACCOUNT
OF THE FERNS AND FLOWERING PLANTS,
INCLUDING THE TREES, OF THE YOSEMITE NATIONAL
PARK; WITH SIMPLE KEYS FOR THEIR
IDENTIFICATION; DESIGNED TO
BE USEFUL THROUGHOUT
THE SIERRA NEVADA
MOUNTAINS

BY
HARVEY MONROE HALL
ASSISTANT PROFESSOR OF BOTANY IN THE
UNIVERSITY OF CALIFORNIA
AND
CARLOTTA CASE HALL

PREFACE

The Yosemite National Park is perhaps the most delightful region in all the world for the study of plant life. The wide variety of conditions here found, ranging from the hot and desiccated slopes of the brush-clad foothills to the cold, bleak summits above timber-line, the abode of glaciers and perpetual snow, gives to the flora an exceedingly diverse and interesting character. Innumerable springs, creeks, rivers, ponds, and lakes provide suitable habitats for moisture-loving plants. Rocky outcrop-

8. To Yosemite via Big Meadows, Camped at Bridal Veil Meadows.
9. Spent in Yosemite
10. Vernal & Nevada Falls and Little Yosemite
11. Yosemite
12. Eagle Pk. trail to Yosemite Cr. then Indian Cañon, Snow Cr. and Snow Flat.
13. Sunday at Snow Flat, S. W. base Mt. Hoffman
14. To Lake Tenaya, where I left Babcock while Bally and I returned to Snow Flat and then back along side cañons &c. to the Lake. This was the day Bally slipped and fell with my leg under him; no serious damage.
15. To Tuolumne meadows, camping on N. side of river, near main ford.
16. Up Delaney Creek, to near Dog Lake and around Lambert Dome.
17. Up Lyell Cañon to opposite Kuna Creek
18. To lake at 10 000 ft. on Lyell, along the crest at 11000 ft. "Cassiope Crest"
19. Over Tioga pass to Tioga, Camp at pass
20. Sunday in camp & around base of Dana

21. Went on to Saddlebag lake. But little botanizing in this region, partly on account of late season but more on account of sheep - back to
22. pass and up the cañon to between Dana and Gibbs to cir. 10 500 ft. and near timber line. F (Timber line camp).
22. Climbed Dana by way of Dana-Gibbs divide and crag rocks separating snow fields.
23. From timber-line camp to Snow Flat, camping in cabin for fear of rain.
24. Porcupine Flat, Dark Hole (lunch) and Aspen Valley.
25. Trail lead today through one of the grandest forests I have ever seen; mostly Yellow pine. Ideal camping spots if water could be found. To Segoria & Wolfor Spr.
26. To Groveland, where we sold our animals to Mr. James (¾ drunk) & camped in the old Hotel.
27. Stage at 4: A.M. Berkeley at 6: P.M. (Sunday)

Hall Field Book volume 2 pages 86-87, 1902 trip to Yosemite. Section showing detailed itinerary

Libocedrus decurrens, P. ponderosa & Ceanothus integerrimus give place to P. Sabiniana, Q. Chrysolepis Abies dwerisloba, Alnus sp. -, Acer macrophyllum, Ceanothus cuneatus, Arctostaphylos tomentosa, Vitis Californica & Cerco-carpus betulaefolius, which species continue to the bottom of valley, the under-lined also running out into Transition of valley floor.

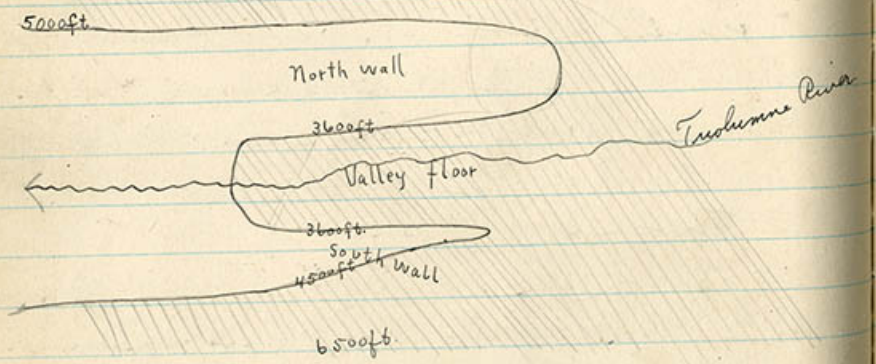


Diagram showing zone position in Hetch Hetchy Val. Shaded portion is Transition; clear is Sonoran. On north wall wherever mountains or spurs project out into valley, the P. ponderosa runs down the east (N-E) sides 1000 ft. or so lower than elsewhere. The water of the river is very cold, estimated at 7° C. It seems unusual for the Sonoran elements to ascend to 5000 ft, even on a south exposure and 4500 ft. on a north-west exposure is unusual; may the enormous amount of rock surface have something to do with this? cf. Crane Cr.

Plants of Hetch Hetchy.

All the following grow in the valley proper at about 3600 ft. Many others occur but all are listed that could be determined with certainty.

Plants on Catalog No 3057-3068

Pinus ponderosa	Polygonum amphibium
Libocedrus decurrens	Spragnea umbellata
Brodiaea grandiflora	Aquilegia truncata
Br.	Philadelphus Lewisii C. Californicus
Populus trichocarpa, com. along river.	
Alnus sp.	Rubus leucodermis
Quercus Californica	Cercocarpus betul. n. wall
Eriogonum nudum	Prunus demissa

Hall Field Book volume 2 pages 90-91, 1902 trip to Yosemite. Section showing detailed site description and list of plants growing in each area

3373 Viola blanda Willd. {Hetch Hetchy July 4, 1902}
In wet meadows, hidden by grass.

3374 Hieracium albiflorum Hook

3375 Boisduvalia stricta (Gray) Trelease.
With. 3364

3376 Agoseris retrorsa (Benth.) Greene.
Alt. 5200 ft., Hetch-Hetchy Trail

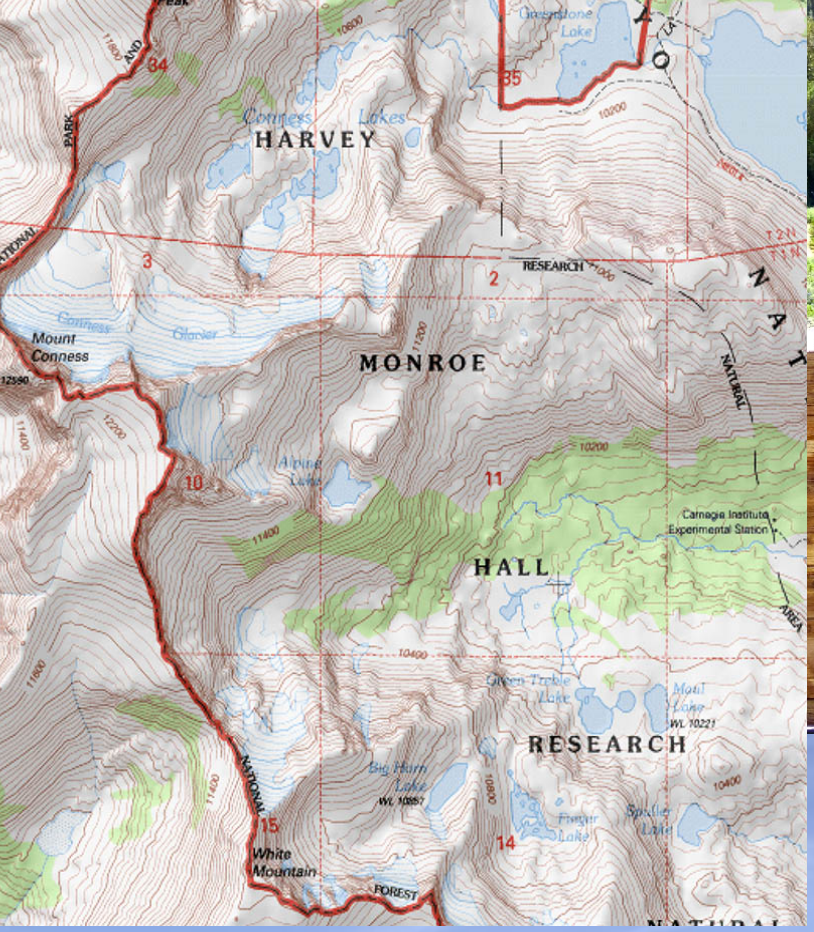
3377 Erigeron salsuginosus

3378* Horkelia parviflora, = Potentilla andersonii Greene

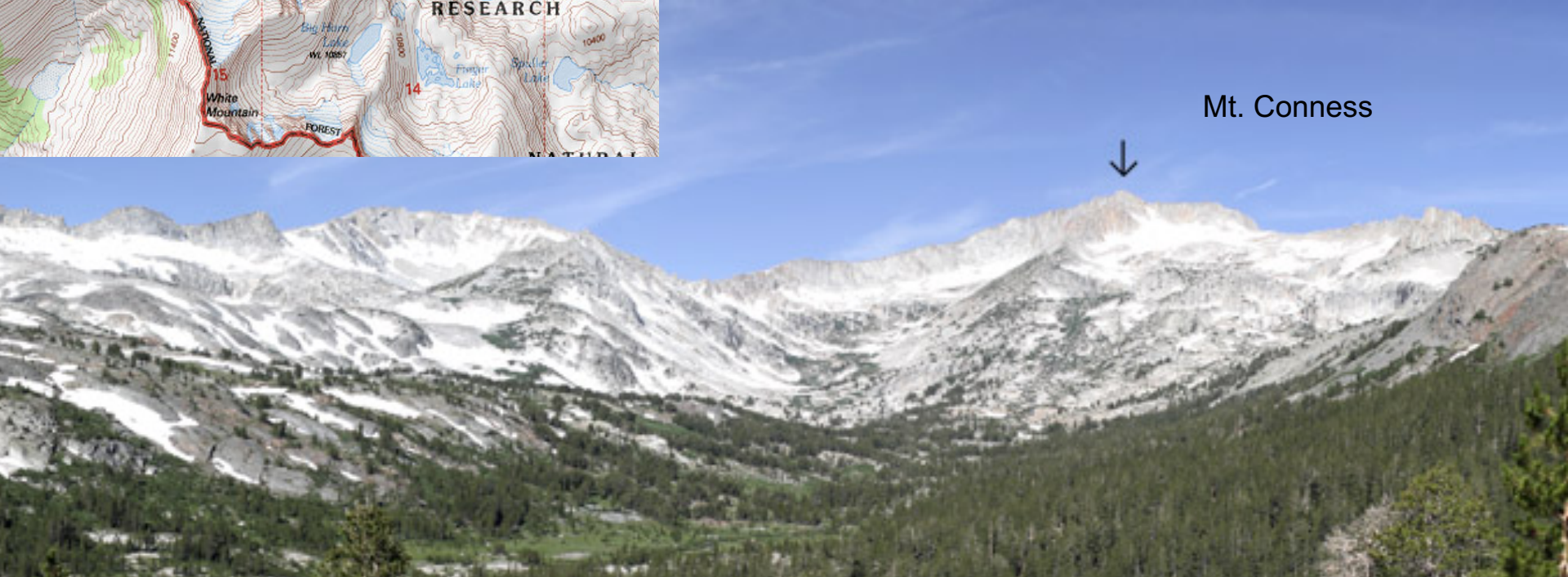
3379 Osmorhiza brachypoda Torr.
Trail at 5000 ft., Transition Zone.

3380 Sedum yosemitense Britton.
Com. on rocks at 4200-4500 feet.

Hall Field Book volume 2 page 121, 1902 – section with catalog of plant collections


HARVEY
MONROE
HALL
RESEARCH
Mount Conness
Conness Glacier
Conness Lakes
Alpine Lake
Green Treble Lake
Big Horn Lake
Finger Lake
Spuller Lake
Carnegie Institute Experimental Station
White Mountain
RESEARCH
NATURAL
AREA
FOREST
10
11
14
15
2
3
84
35


HARVEY MONROE HALL
NATURAL
AREA
RESEARCH ON
EFFECTS OF HEREDITY AND CLIMATE
ON PLANTS
CONDUCTED BY
CARNEGIE INST. OF WASHINGTON
DEPARTMENT OF PLANT BIOLOGY
INYO
NATIONAL FOREST


Mt. Conness

Helen Sharsmith Field Books

125

Astragalus lentiginosus Dougl.

Growing with 123, etc.
on top of buttress, among rocks.
11,500'

As I climb along the shoulder of the buttress + look down into Glacier Canyon, huge patches of the Ribes just mentioned are seen, the only shrub up here for the last + smallest white bark pines were passed some 200' back. It looks, then, to be the highest shrub on the mt.

126 Draba Breweri Wat. alt. 11,500'

On northern buttress. Dry soil bet. rocks. With Erigeron compositus, etc. Collected here

alt. 11,500'

because a couple of the plants were still in good bloom. This species (the white flowered) one is mostly fruiting already.

127- Potentilla diversifolia glaucophylla Lehm. var. Lehm. alt. 11,500'

The orange flowered one found mostly at lower altitudes. Rather surprising to see it here towering above the tiny alpines which hug the rocks all around it. On eastern edge of Dana on bench-land.

128 - Eriophyllum alt. 11,500'

Near 127. Senecio Muirii Greenm.

129 - Erysimum ~~asperum~~ capitatum perenne

Wall flower. Another surprise at this elevation. Like the Potentilla it towers above its alpine neighbors like a giant forest tree. Quite an area

Helen at Benson Lake
August 11, 1936

33

Back-pack trip; northern part of Yosemite National Park. Aug. 6-18, 1936

Benson Lake. A mile of forest & we come out upon the sandy, crescent-shaped beach of Benson Lake, the forest reaching to the edge of the sand. But all the rest of the shore-line of this huge lake, seeming like an inland sea, is enclosed by steep rocks, cliffs coming down straight to the edge of the water.

The pack party is already established in the mosquitoey forest area back of the beach. We trudge along it camps on its far end on a story partially protected sprawling juniper. Wind less, isolated, and with the lake lapping on the rocks away. It seems queer to upon metamorphics.

A big mess of bea

34

Back-pack trip, Northern part of Yosemite National Park. Aug. 6-18, 1936.

just hits the spot tonight. Oxtail soup, stewed fruit, cookies & tea in addition fed us almost beyond capacity.

The clouds are still ominous & we have some rain after we turn in but not enough to disturb our sleep.

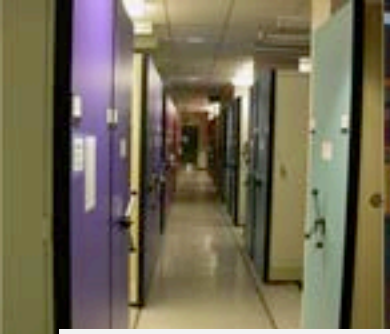
Tuesday, August 11 - afternoon trip around Benson Lake, 4 miles.

Fleecy clouds are covering the sky when we arise but the sun shines through encourag-

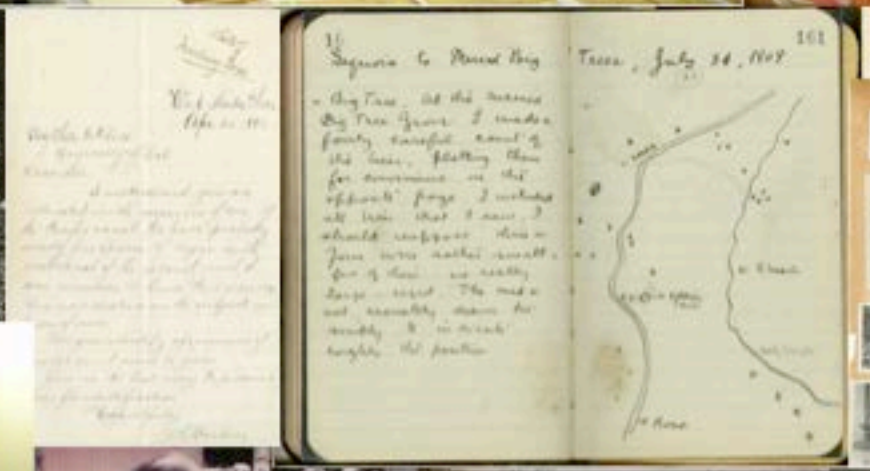
Helen Sharsmith
Field Book volume 5,
pages 33-34, 1936

Benson Lake,
August 11, 1936

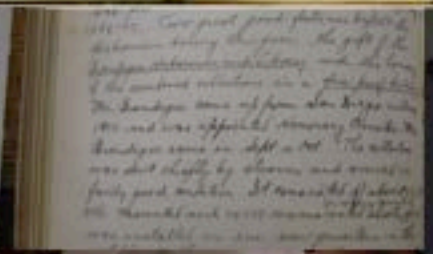
Integrating field books and botanical collections







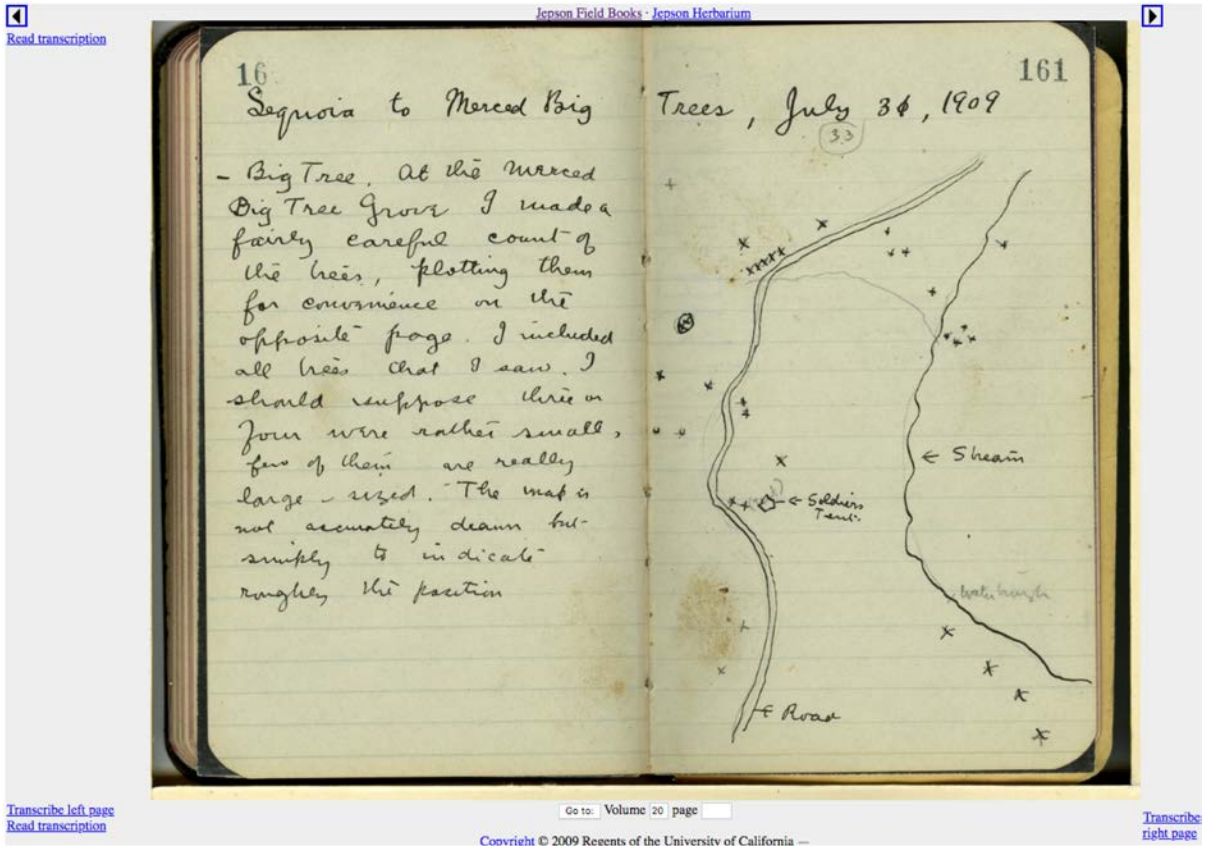


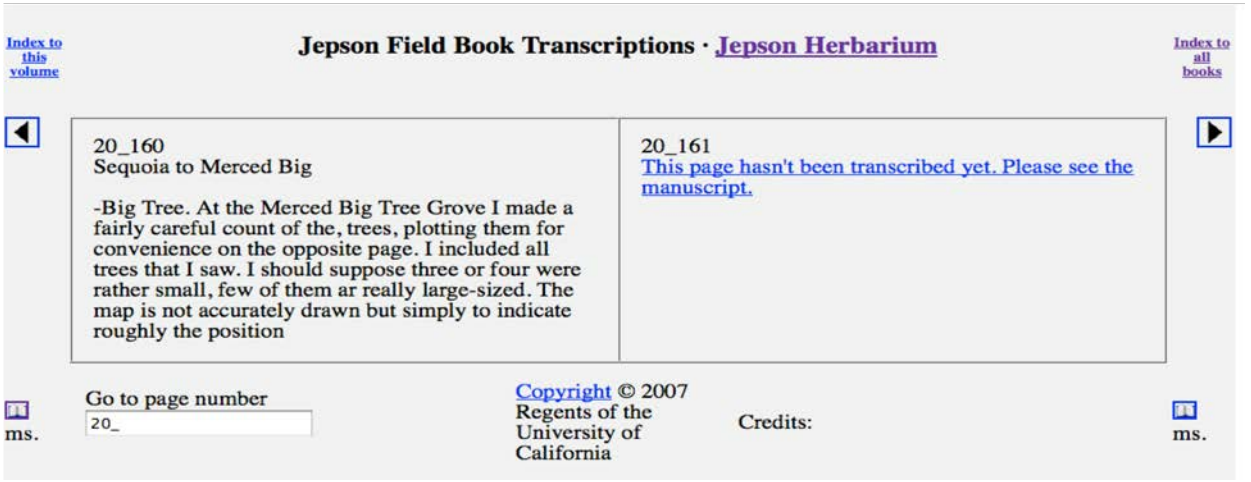




Jepson Field Books

- 63 volumes of field notes (1883-1945)
- Scanned and made available online in 2007





Read transcription

Links to specimen database

5667 5668 5669
5670 5672 5673
5674 5675 5676

20

Yosemite Valley 3900 ft.

No. 5667. Salicum

No. 5668. Polygonum douglasii Greene Yos. valley.
Stamens 8! Yos. valley.

No. 5669. Rhamnus rubra v. ramulana C.B. Wolf Californica

Loch. Yosemite. Intergrade to Rhamnus rubra Greene var. obtusifolia Jepson.

No. 5670. Eriogonum roseum v. nagatum Bentl. El Portal.

No. 5671. Arctostaphylos manzanita Dudley. This looks to me exactly like the best or most typical herb. spm. of A. manzanita. El Portal Common in this reg. and below!

No. 5672. Sambucus glauca
Back of Glacier Pt.
Berries blue black! Cluster taken about 1/6 of panicle - compd.

Sept. 8–11, 1913

21

No. 5673. Quercus chrysolepis, var. Low shrub 5 ft. high, not differing in habit from the shrubs of Q. vaccinifolia a little higher up, towards Glacier Pt. (no. 5637), unless possibly the stems not quite so slender as in 5673. These specimens were taken from shrubs on the granite shelf overhanging and right by the summit of Nevada Fall.

No. 5674. Polygonum minimum Nutt.
Nevada Fall, at summit, in moist soil collected in crevice of granite 5900 ft.

No. 5675. Juniperus occidentalis Hook.
Summit of Nevada Fall. 5900 ft.

No. 5676. Acer glabrum Torr.
Illilouette Trail.

Transcribe left page
Read transcription

Go to: Volume 28 page

Transcribe right page
Read transcription

28_20
Yosemite Valley 3900 ft.

No. 5667. Galium [Yosemite] Valley

No. 5668. Polygonum douglasii Greene
Stamens 8! [Yosemite] Valley.

No. 5669. Rhamnus rubra yosemitana C B Wolf
Yosemite. Intergrade to Rhamnus rubra Greene var. obtusissima Jepson.

No. 5670. Eriogonum roseum Benth. El Portal.

No. 5671 Arctostaphylos mariposa Dudley.
This looks to me exactly like the best or most typical [herbareum specimen] of A. mariposa. El Portal. Common in this [region] and below!

No. 5672. Sambucus glauca Back of Glacier Pt.
Berries blue black!
Cluster taken = about 1/6 of panicle-corymb.

28_21
Sept. 8-11, 1913
No. 5673. Quercus chrysolepis, var.
Low shrub 5 ft. high, not differing in habit from the shrubs of Q. vaccinifolia a little higher up, towards Glacier Pt. (no. 5637), unless possibly the stems not quite so slender in 5673.
There specimens were taken from shrubs on the granite shelf overhanging and right by the summit of Nevada Fall.

No. 5674. Polygonum minimum Wats.
Nevada Fall, at summit, in moist soil collected in crevice of granite 5900 ft.

No. 5675. Juniperus occidentalis. Hook.
Summit of Nevada Fall. 5900 ft.

No. 5676. Acer glabrum Torr.
Illilouette Trail.

Links to specimen database
5667
5668
5669
5670
5672
5673
5674
5675
5676

20_160
Sequoia to Merced Big

-Big Tree. At the Merced Big Tree Grove I made a fairly careful count of the, trees, plotting them for convenience on the opposite page. I included all trees that I saw. I should suppose three or four were rather small, few of them ar really large-sized. The map is not accurately drawn but simply to indicate roughly the position

20_161
This page hasn't been transcribed yet. Please see the manuscript.

Jepson Field Books

Transcribe 20_161

Store transcription

Note: Don't reuse the form for a second page.
Generate a form from the page you intend to transcribe.

The idea is to concentrate on the content; the form we can get from the image.
You don't need to indicate underlining or other formatting.
Please use the form rather than copying and pasting from another editor.
You can expand abbreviations like this: spms [specimens].
We will index the content and point to the image pages.
If you encounter words that are illegible, put a guess in square brackets.

Help with interpreting writing, botanical jargon, etc.

- Specimen database
- Jepson place name index
- Jepson Interchange
- Jepson's A Flora of California: searchable by plant name
- Look up words in transcriptions

To increase access, transcriptions are bulk uploaded into Archon, our archives database

Search Results for "wawona" | University and Jepson Herbaria Archives, University of California, Berkeley

You searched for "wawona".

Records and Manuscripts (1 Matches)

Willis Linn Jepson papers, 1867-1946

Results Found Within Box List

Series 11 → Sub-Series 4: Photographs arranged by subject → Box 21 → Folder 13: **Wawona**

Digital Images and Records (8 Matches)

Jepson Field Book volume 18 page 44
Jepson Field Book volume 27 page 192
Jepson Field Book volume 28_14
Jepson Field Book volume 28_16
Jepson Field Book volume 28_18
Jepson Field Book volume 28_2
Jepson Field Book volume 28_202
Jepson Field Book volume 28_4

Available:	**http://ucjeps.berkeley.edu/cgi-bin/display_fb.pl?page_no=28_2**
Title:	Jepson Field Book volume 28_2
Description:	El Portal to Wawona smaller passes of Ceanothus cuneatus. The next morning we rose at 5:00. Two stage [?] for Yosemite arrived Sentinel Hotel at 10:00. Mr. Whitney of the S.P. Co.,: traveling passenger agen, had been sent with us and facilitated things all along the line. Going up the hill to Inspiration Pt. we in the second stage walked a good deal: Schroter, Paulsen, [?Dachinowski], Skottsberg, etc collecting. We stopped so much that it fell dark after Chinquapin and we drove into Wawona about 7:15. Next am. up to Big Trees in same way. Schroter took off his hat and waved it wildly in sight of the great giants. We spent ::::::::: Sept. 8, 1913 all day in the Grove, the party collecting and photographing and looking at the trees. (Baxter is still the photog. at the Big Tree Cabin). To my dismay the park authorities are clearing out the brush clean and trimming up little fir trees from below like specimen trees on a lawn! It is terible. We saw Major Littlebrant in Yosemite. He seemed delightful; was most kind in offering help and animals; and asked for suggestions regarding the care of the park. So I have written him about this matter. I saw no Abies magnifica in association with Sequoia gigantea in Mariposa Grove!!
ID:	http://ucjeps.berkeley.edu/images/fieldbooks/volume_28/img332.jpg
Repository:	University and Jepson Herbaria Archives, University of California, Berkeley
Found in:	Jepson Field Book volume 28 transcriptions

Linking the Jepson Field Books with our Collections Database

Image File Name	Collection Number Range
Jepsv2p3.jpg	1771-1774
Jepsv2p5.jpg	1775-1782
Jepsv2p7.jpg	1783-1795
Jepsv2p9.jpg	1796-1802

Associating the collection numbers with each page image enabled links to be generating automatically between the field book viewer and our collections database

Collections:
Jepson 1771
Jepson 1772
Jepson 1773
Jepson 1774

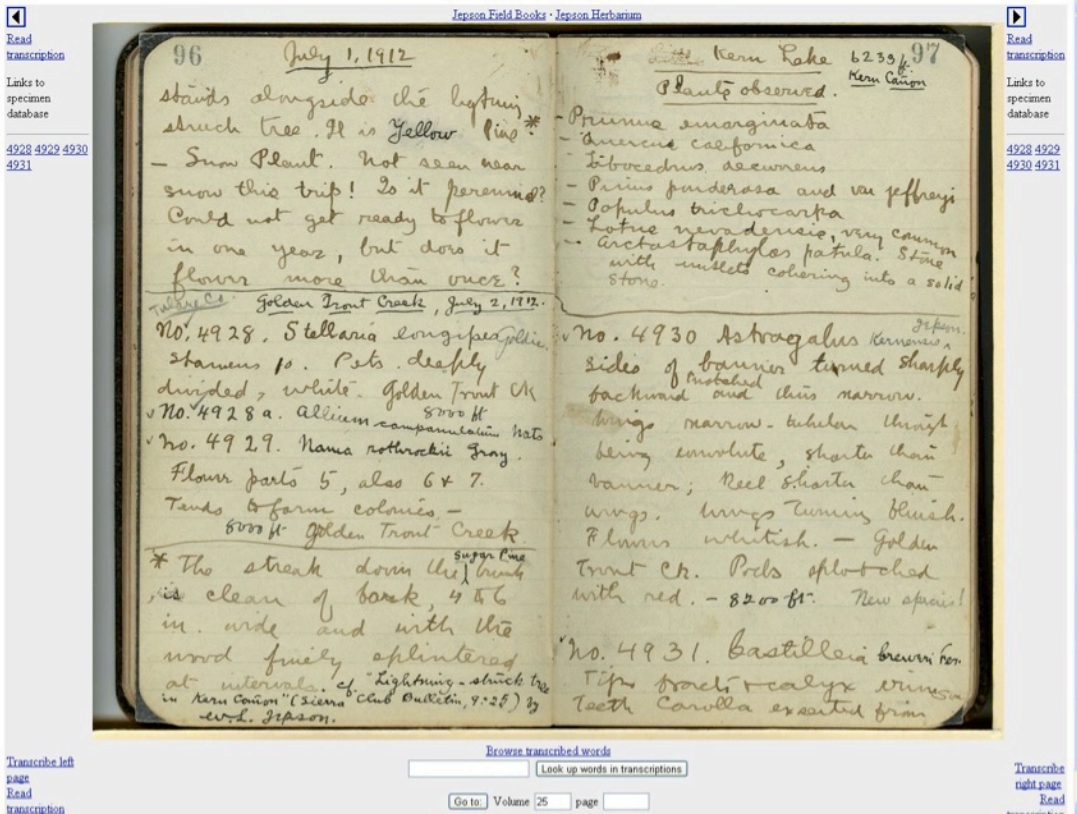
> Jepsv2p3.jpg

University and Jepson Herbaria

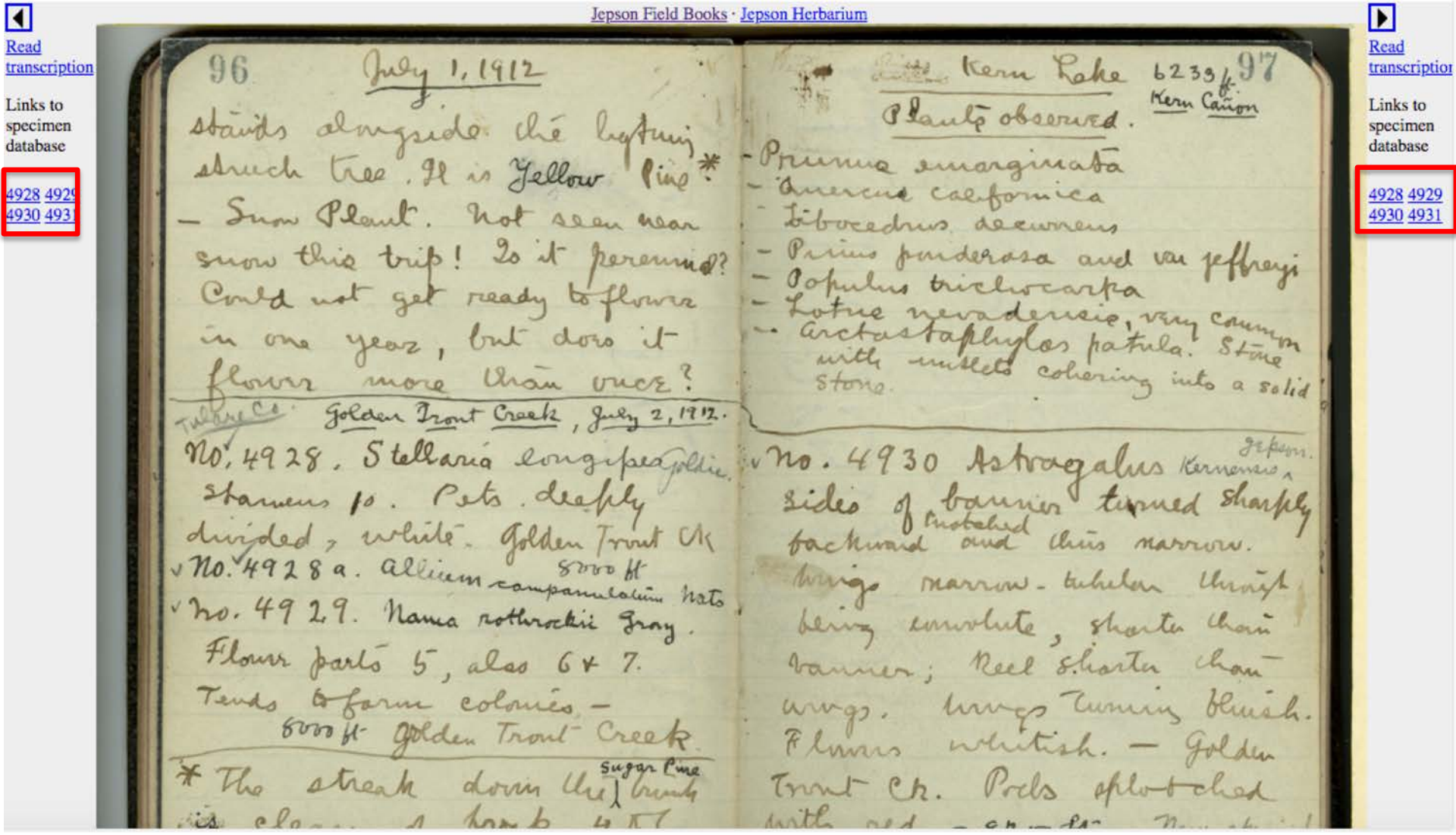
Accession Detail Results

JEPS is the home institution for this record.
Please cite data retrieved from this page: Data provided by the participants of the Consortium of California Herbaria (ucjeps.berkeley.edu/consortium/; Fri May 20 15:37:22 2011).

Accession number	JEPS2760
Determination	*Astragalus lentiginosus* var. *kernensis* More information: Jepson Online Interchange
Collector, number, date	W. L. Jepson, 4930 [illegible], Jul 2 1912
County	Tulare
Locality	Golden Trout Creek - - Golden T
Elevation	8200 ft
Coordinates	36.366 -118.360 BerkeleyMapper
Datum	WGS84
Coordinate source	BerkeleyMapper
Voucher information	reproductive biology: Data on label not transcrib publication: Data on label not transcrib data in packet: Data on label not transcrib color: wings turning blui type: Type: Astragalus E13



Numbered Links in Field Book Viewer take you directly to the corresponding collection record in our specimen database



Current Specimen Record display in CollectionSpace

select all **download selected as csv**

JEPS43212

Family: Montiaceae
Major Group: Spermatophytes

Lewisia pygmaea (A. Gray) B. L. Rob.

Collector(s) (verbatim): W. L. Jepson
Collector(s)
- W. L. Jepson

Collection Number: 3329
Locality: Mt. Lyell
Madera / CA / USA
Collection Date: Jul 16 1909
Elevation: 11000 ft
Description: includes macromorphology:
Phase: Flowering/Fruiting
Comments
- data in packet:

Last updated at: 2012-05-30T08:17:15+00:00
email a comment about this record

Results | Facets | Maps

select all **download selected as csv**

JEPS43212

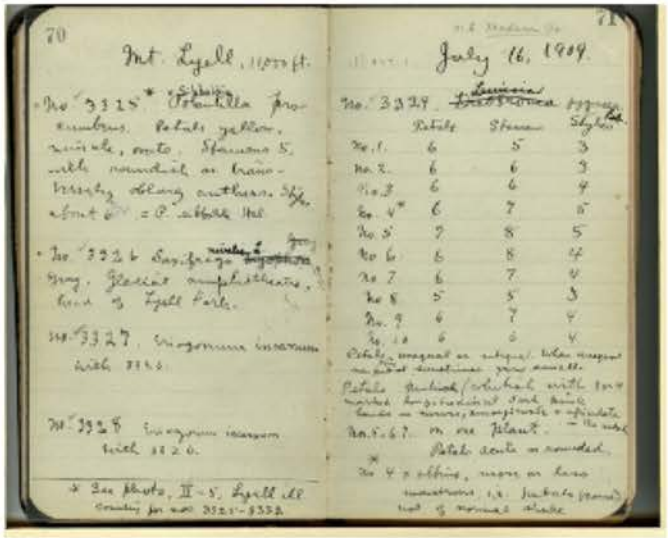
Family: Montiaceae
Major Group: Spermatophytes

Lewisia pygmaea (A. Gray) B. L. Rob.

Collector(s) (verbatim): W. L. Jepson
Collector(s)
- W. L. Jepson

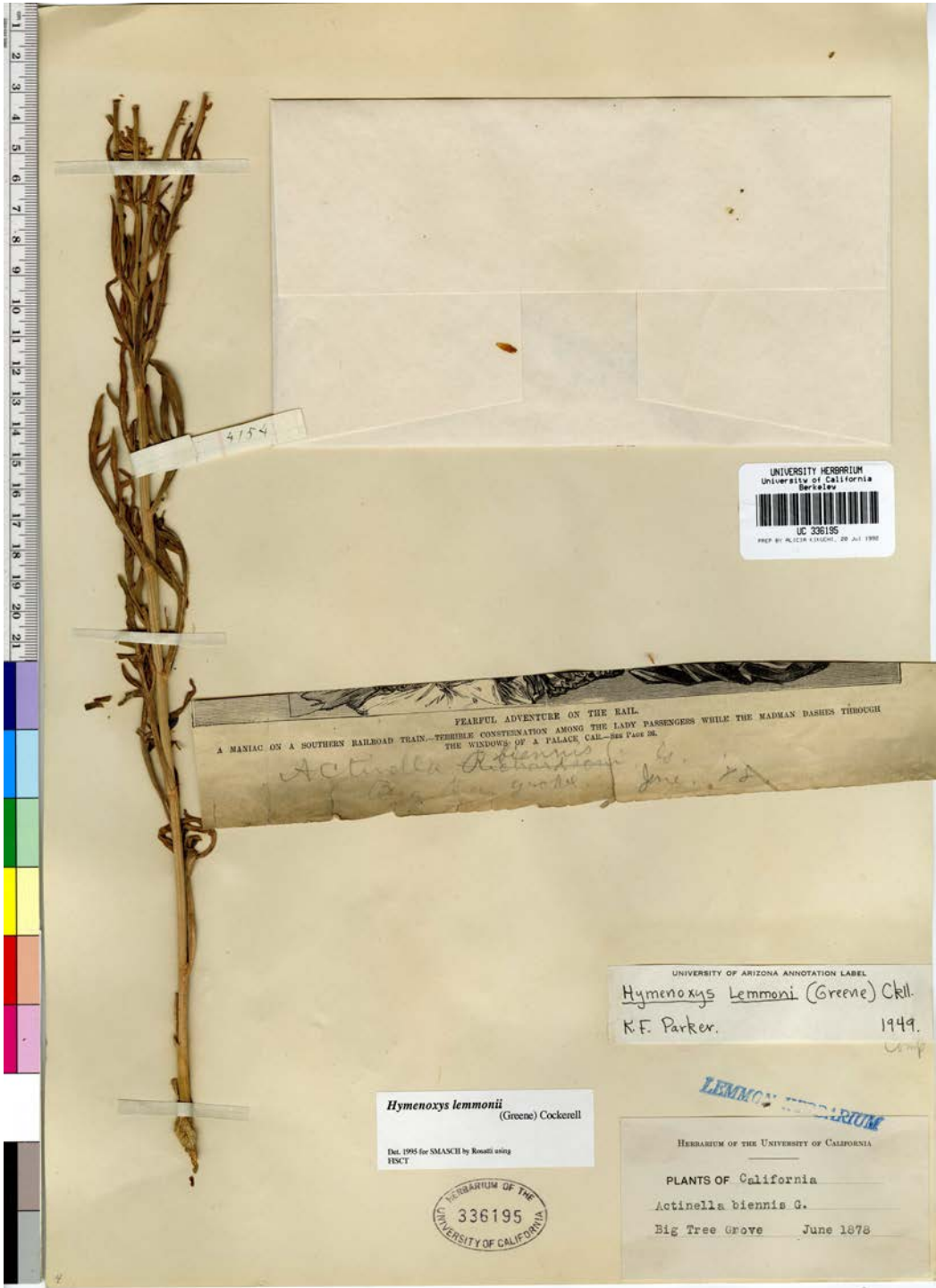
Collection Number: 3329
Locality: Mt. Lyell
Madera / CA / USA
Collection Date: Jul 16 1909
Elevation: 11000 ft
Description: includes macromorphology:
Phase: Flowering/Fruiting
Comments
- data in packet:

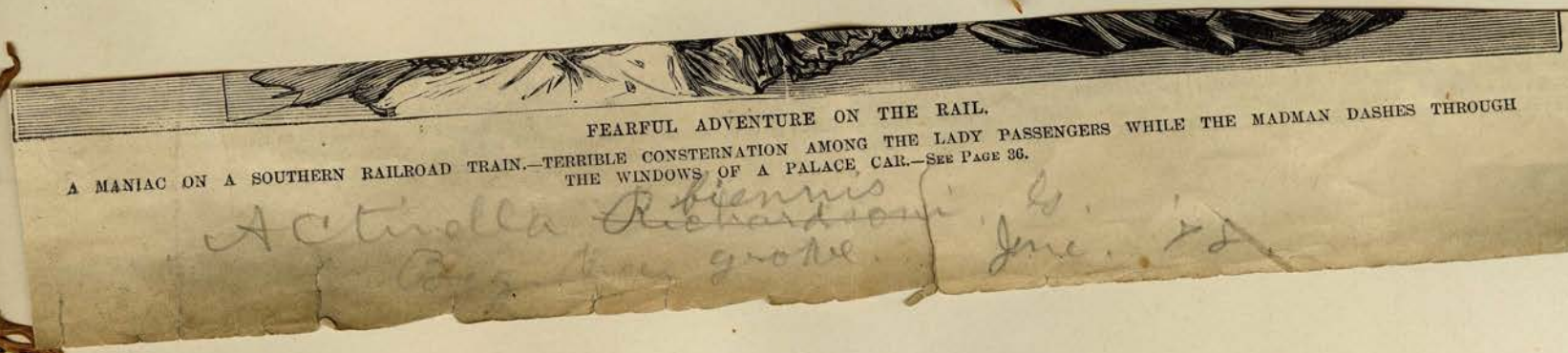
Last updated at: 2012-05-30T08:17:15+00:00
email a comment about this record



Outside URLs don't currently display in our system!!!

If you have field books in your collection, they may be the missing piece of a natural history puzzle!





FEARFUL ADVENTURE ON THE RAIL.

A MANIAC ON A SOUTHERN RAILROAD TRAIN.—TERRIBLE CONSTERNATION AMONG THE LADY PASSENGERS WHILE THE MADMAN DASHES THROUGH THE WINDOWS OF A PALACE CAR.—See Page 36.

Actinella biennis Richardson
Big Tree grove. June '78

UNIVERSITY OF ARIZONA ANNOTATION LABEL

Hymenoxys Lemmoni (Greene) Ckll.
K. F. Parker. 1949.

Hymenoxys lemmonii
(Greene) Cockerell

Det. 1995 for SMASCH by Rosatti using FISCT

HERBARIUM OF THE UNIVERSITY OF CALIFORNIA

PLANTS OF California
Actinella biennis G.
Big Tree Grove June 1878

We can make inferences about a collection locality based on information in our archives, but the Field Book is the definitive source of the actual location

Lemmon party in Tuolumne Grove, 1878

Questions?

Amy Kasameyer
akasameyer@berkeley.edu

UC Berkeley: Shaping our National Parks and Preserving a Century of Environmental Data

Christina Velazquez Fidler
Society of California Archivists
April 13, 2018

CALIFORNIA

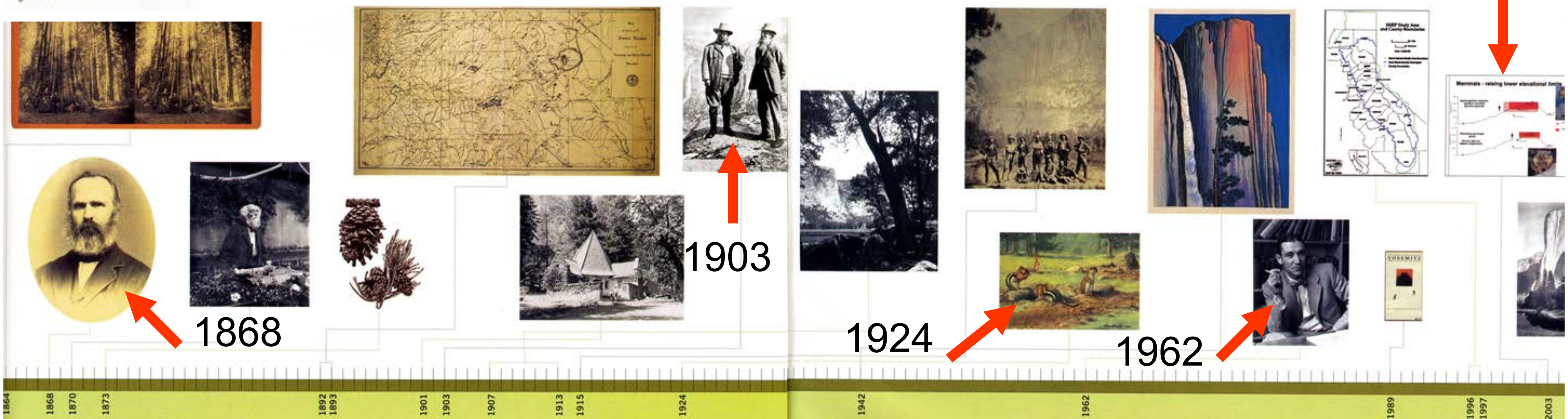
May June 2006

Disturbing Yosemite

By Kenneth Brower

UC-Berkeley and our National Parks

a timeline of collaboration



BERKELEY AND YOSEMITE NATIONAL PARK: BOUND SINCE BIRTH

1864 A STAR IS BORN For the first time, the federal government protected scenic lands for posterity when President Abraham Lincoln signed legislation creating the Yosemite Grant.

1868 YOSEMITE GETS A LITTLE BROTHER When the University of California was created by the Organic Act, State Geologist Josiah Whitney saw an opportunity for sibling symbiosis between Yosemite and the University. Data collected by University scientists and students in the canyons, meadows, and forests of the gigantic outdoor lab of Yosemite would be housed in University collections, and the University would publish Yosemite-related science—giving the nascent University academic street cred.

Today, a multitude of UC collections and museums embody Whitney's vision of UC as home to Sierra collections—including the Lowie Museum of Anthropology (now the Phoebe A. Hearst Museum), Bancroft Library, Jepson Herbarium, and the Museum of Vertebrate Zoology. Throughout the 20th century, research conducted by the likes of botanist Willis Jepson, zoologists Joseph Grinnell and Starker Leopold, forester Harold Biswell, and plant pathologist Daniel Holmes influenced environmental policy, not just in the Sierra but also in ecosystems around the country.

1870 A PROFESSOR MEETS A SAWYER Professor of geology Joseph Le Conte travelled with a group called the "University Excursion Party"—including one-quarter of the University's total enrollment—across the Central Valley and into Yosemite, all on horseback, tin pans jangling all the way. At Sentinel Dome, nine days into the five-week trip, Le Conte wrote, "Such a sunset I never saw; Such a sunset, combined with such a view, I had never imagined."

On his fifth day on the valley floor, Le Conte met "a man in rough miller's garb, whose intelligent face and earnest, clear blue eye, excited my interest" at the foot of Yosemite Falls. The next day the man, John Muir, joined the group as a guide. Muir and Le Conte became lifelong friends.

1873 YOSEMITE PINES TRAVEL Jeanne Carr, a self-taught botanist, early Yosemite explorer, and wife of the University's first professor of agriculture, Ezra Carr, planted Yosemite pinecones in Berkeley. "On the highest point of the grounds, but not the driest, I have put as tenderly as carefully as ever I put my babies in their cradles... thirty species of cone trees," she wrote to her close friend John Muir. Where exactly Carr planted the Yosemite pines remains a mystery, but it is assumed that they would not have thrived in an East Bay habitat.

1892–93 SIERRA CLUB AND UC PRESS LAUNCH Joseph Le Conte and his son, "Little Joe," an avid mapmaker and mechanical engineering professor, joined John Muir as charter members of the Sierra Club. That same year, the Sierra Club published the first issue of its *Bulletin* (still alive and kicking as part of *Sierra* magazine) and UC Press launched, subsequently publishing Sierra-related research by faculty in geology, anthropology, botany, economics, engineering, geography, history, linguistics, and zoology. Le Conte the elder served on the Sierra Club's board of directors until 1898, and Muir was its president until he died in 1914. Little Joe led the club's map-making efforts and succeeded Muir as president.

1901 WHAT A WAY TO GO The night before the Sierra Club's first High Trip, Joseph Le Conte died of a heart attack in camp on the valley floor. His friends honored him with LeConte Memorial Lodge, a library and education center built near where he died that remains in operation today.

1903 THE PRESIDENT PAYS A VISIT Fresh from a triumphant commencement speech in the unfinished Greek Theatre, President Theodore Roosevelt toured Yosemite with his old pal from New York days, University President Benjamin Ide Wheeler. In Yosemite, Roosevelt slept outdoors in a snowstorm on Glacier Point and bonded with John Muir. Wheeler opined to a reporter that the view from Inspiration Point was "equal to anything around his university campus." In 1906, during Roosevelt's presidency, Yosemite became part of the National Park System.

1907–13 TO DAM OR NOT TO DAM When the controversy over the future of the Hetch Hetchy Valley ignited after the 1906 earthquake, President Benjamin Ide Wheeler was pro-dam because the system, as it was originally conceived, would provide water to the East Bay, and campus resistance to the project was somewhat squelched. In 1913 Congress approved the construction of a dam and reservoir on the Tuolumne River. O'Shaughnessy Dam was completed in 1923. To this day, spectacular photographs taken by "Little Joe" Le Conte of the pristine, turn-of-the century Hetch Hetchy Valley are known in the Sierra Club community as "Requiem for Hetch Hetchy."

1915 MR. MATHER GOES TO WASHINGTON When avid Yosemite hiker Stephen T. Mather, Class of 1887, complained to fellow Cal alum Secretary of the Interior Franklin K. Lane about the state of the parks, Lane invited him to run them himself. As assistant to the secretary, Mather immediately organized a pack train excursion of politicians, business leaders, writers, and conservationists that traipsed from the southern Sierra to Mono Lake and back through Yosemite. The trip made converts of the participants and helped bring about congressional creation of a new bureau for national parks, which Mather headed until 1928. In Yosemite, he also worked tirelessly to improve park roads and facilities for visitors. During his last trip to the park in 1925, Mather's park friends threw a private party for him atop the Ahwahnee Hotel, which he had helped plan.

1924 ANIMAL LIFE IN THE YOSEMITE Zoologist Joseph Grinnell and UC Press published a landmark survey of mammals, birds, reptiles, and amphibians in Yosemite, *Animal Life in the Yosemite*. The survey, which started in 1904, remains a priceless snapshot of animal diversity in the Sierras, and the collection of animals gathered (housed today in the Museum of Vertebrate Zoology) includes more than 20,000 specimens, 13,000 pages of field notes, and 2,000 photographs (*http://www.cr.nps.gov/history/online_books/grinnell/contents.htm#cplates*).

1942 "NO YOSEMITE FOR YOU" During World War II, the University suggested an alternative to banishment for Japanese-American professor of art Chiura Obata, who had painted in the Sierra. Instead of dispatching him to an internment camp, why not arrange for him to live—and paint—in Yosemite? But the National Park Service, not wanting to tangle with the War Department, denied the request. At the end of the war, Obata returned to Berkeley, where President Robert Gordon Sproul had kept many of his paintings safe in the attic of University House, and Obata resumed teaching.

1962 NATIONAL PARK SERVICE TAPS UNIVERSITY OF CALIFORNIA In response to public controversy over shooting elk in Yellowstone, Secretary of the Interior Stewart Udall appointed professor of zoology Starker Leopold (eldest son of pioneer wildlife ecologist Aldo Leopold) chair of a committee on wildlife management. In 1963 the committee produced *Wildlife Management in the National Parks*, a watershed publication that determined the fate of generations of deer, elk, and bears in national parks around the country.

1989 YOSEMITE: THE FATE OF HEAVEN Journalism faculty member and MacArthur fellow Jon Else captured the beauty and tortured fragility of a national park that could be loved to death in *Yosemite: Fate of Heaven*, a film narrated by Robert Redford and produced for the Sundance Institute.

1996–97 UC WRITES THE BOOK When Congress requested a scientific review of old-growth forests and the entire Sierra Nevada ecosystem, it called on the UC Centers for Water and Wildlife Resources. The resulting massive four-volume *Sierra Nevada Ecosystem Project Report* is perhaps the single most comprehensive report on any mountain range.

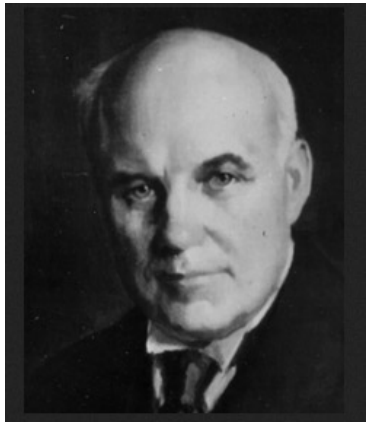
2003 THE ANIMALS ARE RISING Staff of the Museum of Vertebrate Zoology began surveying the same areas in Yosemite that Joseph Grinnell scoured a century earlier to honor Grinnell and the museum's centenary in 2008, discovering that many animals had all scrambled to higher ground since Grinnell's time—doubtless decamping due to global warming.

2005 SIERRA NEVADA RESEARCH INSTITUTE IS BORN When the long-awaited tenth UC campus—UC Merced—opened, the Sierra and Yosemite became the main focus of research at the Sierra Nevada Research Institute.

—Compiled by Meghan Laslocky from a text prepared by James Snyder, former historian at Yosemite National Park, and from notes of Steve Finacom, campus historian.

Joseph Grinnell 1877 - 1939
MVZ Director 1908 - 1939

- One of great naturalists / ecologists of early 20th century
- Founding director of MVZ at UC-Berkeley
- Trained generations of scholars
- Detailed field studies of species distributions
    - * ecological niche
    - * competitive exclusion
- Emphasized recording observations in archived field notes, taking photographs, and preserving specimens
- Promoted a conservation ethic based on the maintenance of natural processes



Franklin K. Lane [1864-1921]

- UCB 1884-1886
- Secretary of the Interior at time of creation of NPS

Stephen Mather [1867-1930]

- UCB class of 1887
- 1st NPS director, 1917-1929
- promoter, developer, and builder of the parks [C-P-R]

Horace M. Albright [class of 1912

- succeeded Mather as 2nd NPS director, 1929
- emphasis on wilderness values of parks1890-1987]
- UCB

George M. Wright [1904-1936]

- UCB class of 1925
- assistant park naturalist, Yosemite 1927
- promoted science-based wildlife management in the parks

George M. Wright
Chief, Wildlife Division,
National Park Service
1929-1936

Recognized inherent conflict between human use, commercial or recreational, with maintenance of pristine wilderness

"Joint occupation of national parks by animal and human populations is prescribed by the organic laws which define national parks. Maintenance of wildlife in the primitive state is also inherent in the national-park concept. The conclusion is undeniable that failure to maintain the natural status of national parks fauna in spite of the presence of large numbers of visitors would also be failure of the whole national parks idea."

[G.M. Wright, 1935, "Men and mammals in joint occupation of national parks." Fauna Series 2]

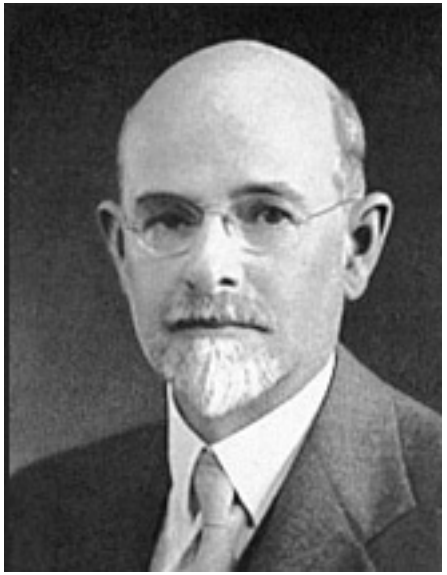
GEORGE WRIGHT SOCIETY
The George Wright Forum
The GWS Journal of Parks, Protected Areas & Cultural Sites

Joseph Grinnell: the "father" of the science based education and management programs eventually developed by the National Park System

- advocated for the Parks as wildlife preserves – directly influencing policies subsequently established by Horace Albright and George Wright for the NPS

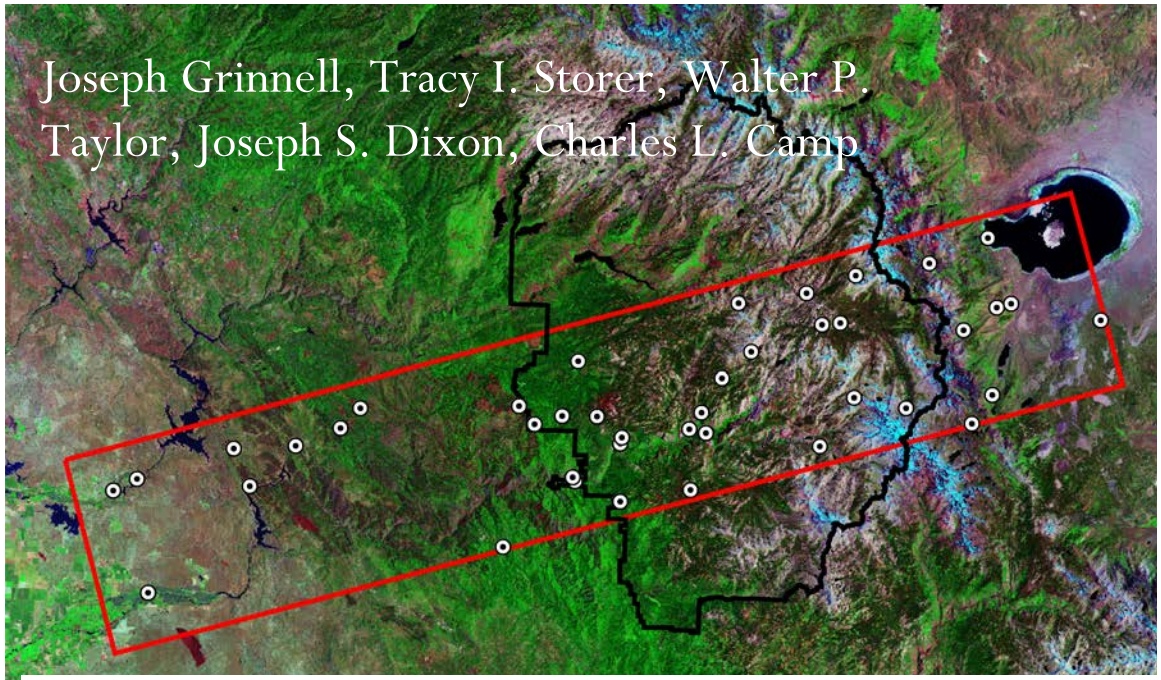
- advocated for the Parks as a venue to teach the public about the natural environment

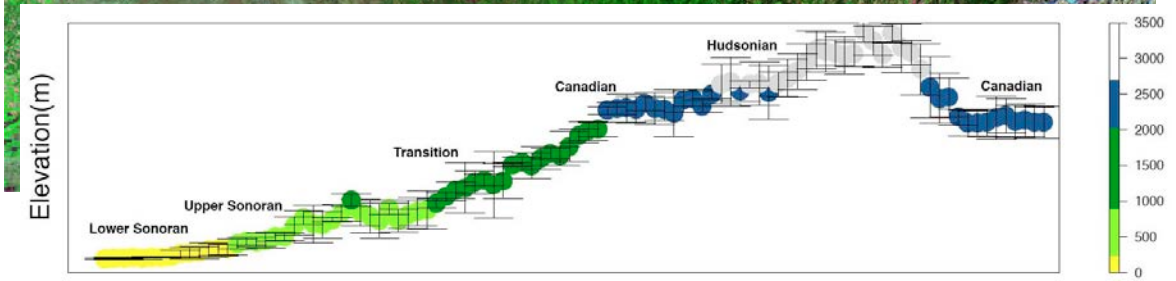
- advocated for "wilderness," where natural biological processes should be allowed to operate unimpeded (he was a strong, vocal opponent of federal policies on predator control, fire suppression, mining, grazing, timber harvest, and other commercial ventures within the parks and in adjoining National Forest lands)

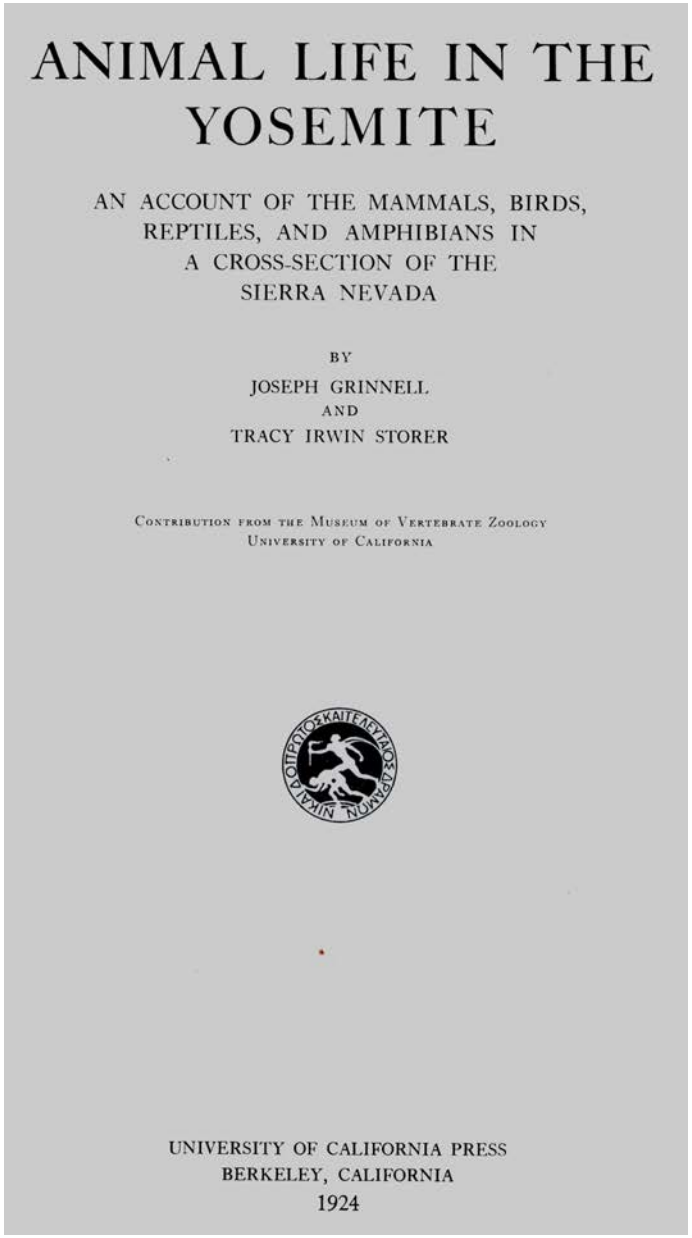


Yosemite transect

41 sites, elevational range 150 – 11,800 ft







1914-1915

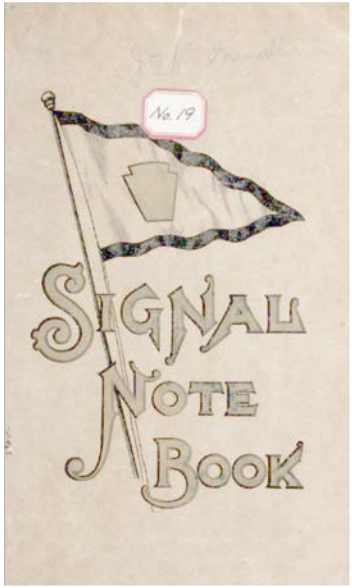
---

957 "man-days" in the field
~3,000 pages of field notes
4354 specimens obtained
~700 photographs

Archival Workflows

Acquisition

Processing
- Arrangement
- Preservation
- Description
- Security



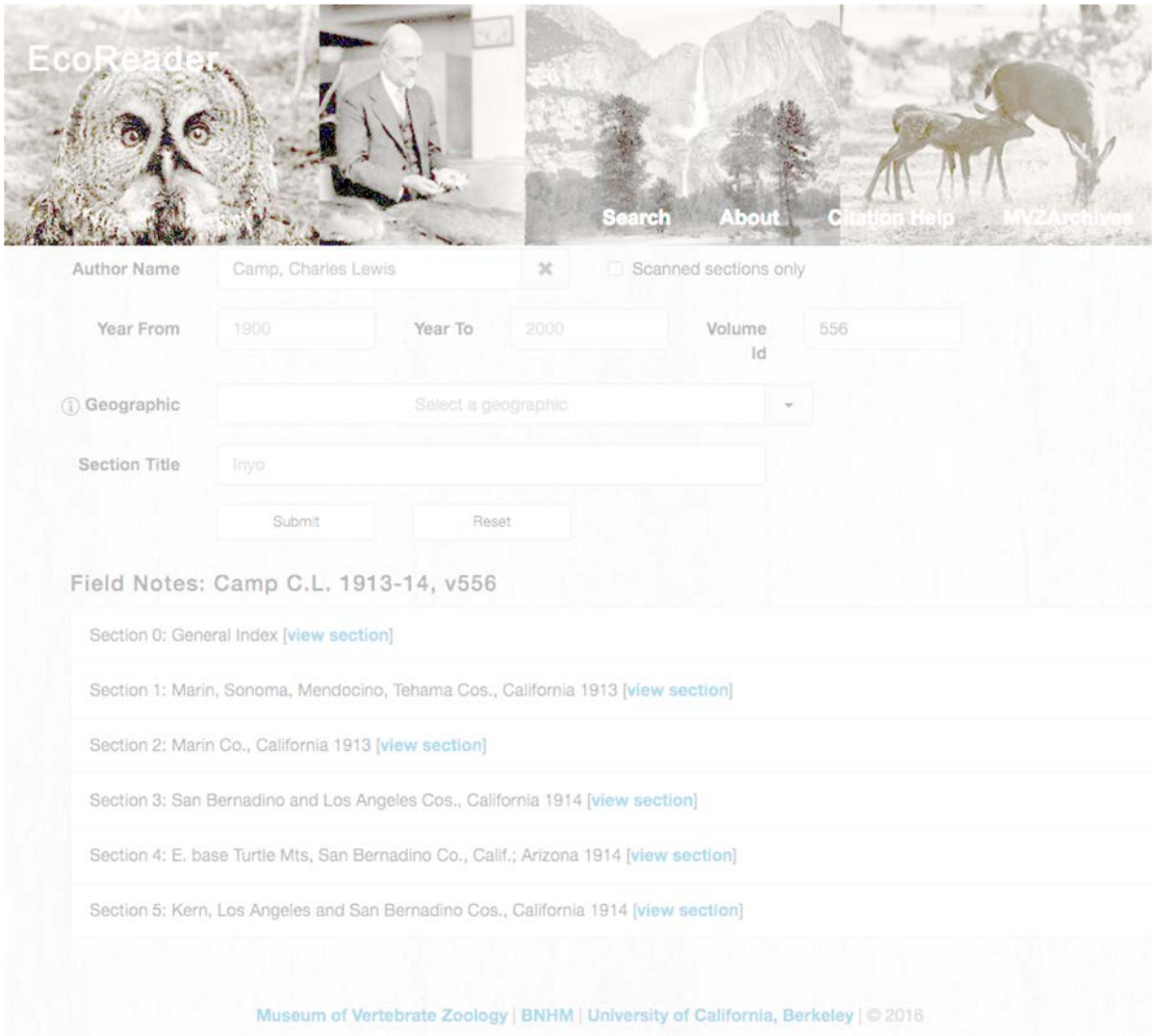
Collection Level
- Personal papers
- Standards: DACS , LCNAF, AAT
- Record: EAD encoded finding aid

Item Level
- Digital Object
- Standards: DACS , LCNAF, AAT, Arctos
- Record: MODS encoded XML file

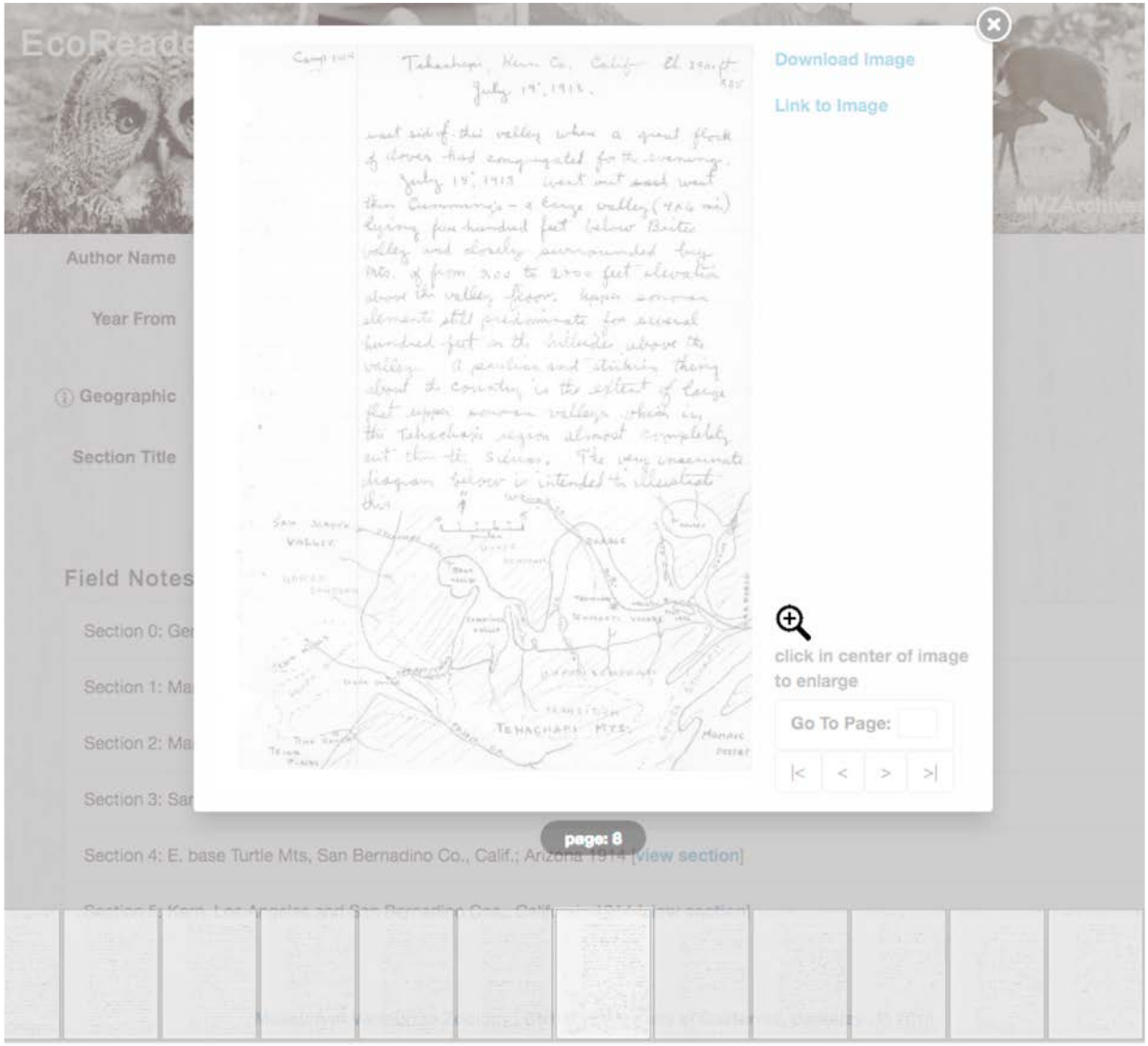
Access
- Online Archive of California
- ArchiveGrid

Access
- EcoReader

Specimen Like



Knowing our Users



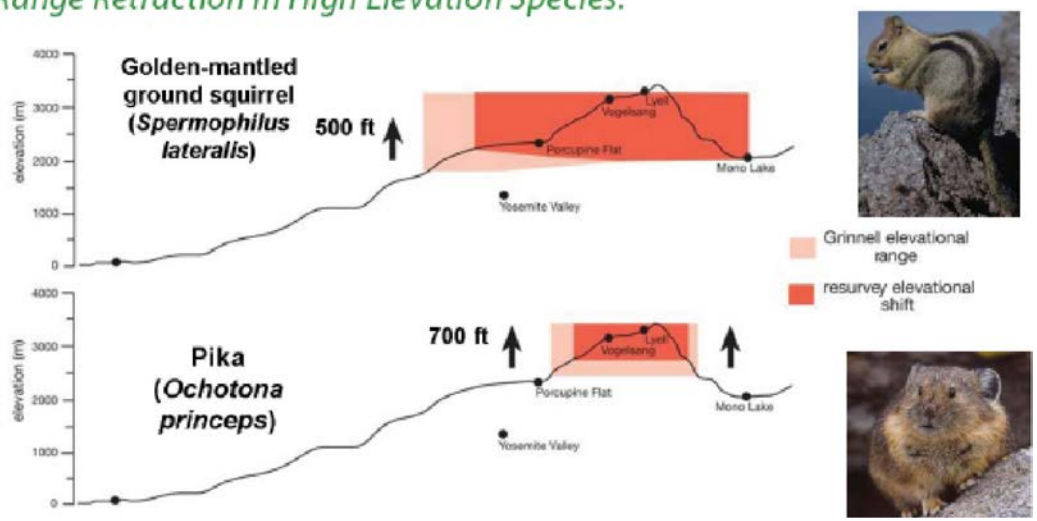
Internet Archive/BHL

Grinnell Resurvey Project

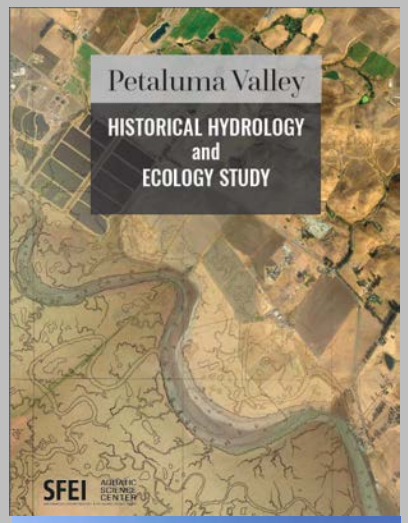
Impact of a Century of Climate Change on Small-Mammal Communities in Yosemite National Park, USA

Craig Moritz,[1,2*] James L. Patton,[1,2] Chris J. Conroy,[1] Juan L. Parra,[1,2]
Gary C. White,[3] Steven R. Beissinger[1,4]

Upward Range Retraction in High Elevation Species:



Petaluma River Watershed: A Slough of Change



TUESDAY, APRIL 17, 2018

6:00 – 8:00 pm
Petaluma Community Center at Lucchesi Park, 320 North McDowell Blvd, Petaluma
Please RSVP: REGISTER HERE

Come learn about an exciting report recently completed by the San Francisco Estuary Institute (SFEI) and Sonoma RCD on the historical ecology of the Petaluma River watershed. SFEI will highlight interesting details about the history of this unique watershed and share insights about how historical data can be used to improve future management and conservation decisions. Anyone interested in learning more about the past, present, and future of the Petaluma River is encouraged to attend.

To read the full report please visit: http://sonomarcd.org/resources/

QUESTIONS? Please contact Anya Starovoytov, Sonoma RCD project manager at (707) 569-1448 or email astarovoytov@sonomarcd.org

SFEI AQUATIC SCIENCE CENTER
SAN FRANCISCO ESTUARY INSTITUTE & THE AQUATIC SCIENCE CENTER

SONOMA RESOURCE CONSERVATION DISTRICT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement 99T34001 to Sonoma RCD. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

GRATITUDE

Carla Cicero
MVZ Staff Curator of Birds

Michelle Koo
MVZ Staff Curator, Biodiversity Informatics & GIS Researcher

Joyce Gross
BNHM Programmer Analyst

John Deck
BNHM Programmer Analyst

Instagram: MVZArchives

Blog
https://mvzarchives.wordpress.com/

EcoReader
http://ecoreader.berkeley.edu/