

Biographical Sketch
August L."Gus" Hormay

Vital

Born May 10, 1907 San Francisco, California

Education

High School

1921-24 Lick Wilmerding School of Mechanical and Industrial Arts
 San Francisco, California

College

1/26-5/29 University of California
 Berkeley, California

7/29-5/30 University of California
 Davis, California

May 1930 B.S. Degree in Forestry

Took courses in plant and animal sciences and range management during attendance.

Employment

1931-'66

California (now Pacific South West) Forest and Range Experiment Station, Forest Service USDA Berkeley California in range management research. While there developed the concept of rest-rotation grazing. Two principal publications on the subject are: Hormay, A.L., and Talbot, M.W.

1961. Rest-rotation grazing-a new management system for perennial bunchgrass ranges. U.S. Dep. Agr. Prod. Res. Rep. 51, 43 p., illus.

Hormay, August L.

1970. Principles of Rest-Rotation Grazing and Multiple-Use Land Management. U.S. Dep. Int. Bureau Land Management. U.S. Dep. Agri. Forest Service 26p., illus.

1966-'77

I transferred to the Bureau of Land Management in 1966 where I served as a range management advisor. I remained headquartered at the Experiment Station. I retired from government service in 1977. While in service I conducted training sessions on rest-rotation grazing for BLM and Forest Service. These were attended by Federal and State agencies, stock men, various rangeland resource users and environmentalists. I got rest-rotation grazing applied on several ranges in each of the western range states. Results are there to see.

History
to 1934

I was born in an outlying district of San Francisco in the month of May, 1907. This neighborhood had none of the aspects of a big city. Dwellings were rather sparsely scattered over a landscape of open hills and the streets as late as 1920 were unpaved and only horse drawn vehicles could get through the deep mud of the winters.

Nearby were extensive areas of truck-crop farms where toiling Italian gardeners grew fresh vegetables for San Francisco markets and tables. These vegetable gardens were the scene of many boyish escapades. They were the source of cabbage leaves and "milk weed" for the rabbits and chickens which we raised at home. They were also the source of stolen carrots, lettuce and artichokes, for which the "gang" risked the wrath of the gardeners, who often gave chase and threatened us with great bodily harm. But we simply had to munch a raw carrot or an artichoke after school -- and besides it was fun. Not unfrequently we found our way to the dairy where we watched the men feed and milk the cows and then got "Mushy" to get us some buttermilk.

Trapping "rod heds" (California linnets) either down at the "spring" on the Ocean Shore railroad track or up on the "rocks", saw Pete and me late to supper many evenings. For over a period of two years most of the boys singly or in pairs, became firewood peddlers. On Saturday mornings they raced down to Frenchys so that they could have the pick of the best horse and wagon in the stable. Two trips a day from the heart of town, where most of the building construction took place and where we got our wood, gave us a two and one half dollar profit.

My father was a European trained cabinet maker, a craftsman in every sense of the word, but his employment was not altogether assured and there were many times when he did not work. His normal wage was just sufficient to meagerly support a family of four. It was quite natural for me to develop interest in woodwork and I helped my father build many things, from chicken houses to beautiful pieces of veneered furniture.

Upon being graduated from primary school, I entered Lick-Wilmerding, a high school of mechanical and industrial arts. There I studied architecture and my entire training was along artistic and mechanical lines. Over a period of four years my shop work at school included masonry, sheetmetal work, foundry, automobile repair, pattern making, and woodwork. In the class room I took those courses that would permit me to enter college. During vacation period I invariably found work in a woodworking shop.

By the time of my fourth year in high school I had acquired considerable proficiency in architecture and had drawn two plans for buildings that were constructed. I won school awards of block letters for art work and for playing football.

I was graduated from high school in December, 1924 and decided to spend one year in the "country" before entering the University of California. I stayed with some friends on a small ranch in the hills of Lake County, which is about 150 miles north of San Francisco. There I had my first farm experiences. I milked my first cow and learned to ride a horse. I plowed and harrowed acres of land riding on a Fordson tractor. I went through a cycle of haying, from mowing to storage. Hoeing weeds around fruit trees was a back breaking job and cutting oak and manzanita firewood for home use and for sale was as bad. Marking and branding calves and ^{were} ringing and marking hogs ~~were~~ at first a somewhat unpleasant job^s, but time slowly calloused my sensitiveness.

I will always remember my first cattle drive. It was three thirty in the morning when we got out of bed and started breakfast. A few minutes before four Wes rode in to join us. He had already ridden 5 miles from his ranch. The sky was gray as four of us started on the fifteen mile ride to the spring pasture near Lakeport. The feed was about gone and what remained was harsh and dry, so we were moving forty head of cattle on to green feed closer to the home ranch. The thrills and the experience of that first drive will always remain in my memory.

With the approach of fall I went to live with an elderly gentleman who had a small farm in the valley near Clear Lake. While there I got work picking pears and still later spraying and pruning trees in the orchards of that region.

In January, 1926 I entered the University of California. The experiences of the preceding year turned my interests from architecture to plants and animals. In my search for a field of study I became acquainted with forestry and range management. With little hesitation I began my college work in forestry. What courses I took and how I fared is briefly set forth in my college transcript.

In the summer of 1926 I returned to Lake County and took up where I left off the previous winter. Dad, as everyone called the elderly man with whom I was staying, had a five acre truck farm next to Clear Lake, where he raised everything from peanuts and tobacco (merely as curiosities) to various vegetables and melons. I helped him grow, harvest and sell his crop during the summer.

I returned to school in August and the following summer went to Forestry Summer Camp. During the vacation period of 1926 I worked as a field assistant for Duncan Dunning, Silviculturist of the California Forest and Range Experiment Station. I assisted in the measurement of permanent sample plots designed to study such phenomena as the growth and yield of forest stands, and the influence of different methods of cutting on the growth and composition of the reserve stand. New plots were established and boundaries and interior mapping controls surveyed. True and type maps were made for these areas. In conjunction with reproduction studies quadrats were surveyed, mapped and measured.

Because my school funds were rather low, I decided to work on through the remainder of the year and return to school in January, 1929. In September I was transferred to the Feather River Branch of the Station to act in the capacity of a caretaker and to handle the necessary station projects that were in progress there. Beside the general work around the grounds and buildings there was a complete meteorological station to tend to, including soil thermometers and ^a dendograph;

phenological notes of different plant species were carried on for correlation with the climate records. Perhaps the major task was that of handling the tree nursery. New transplant beds were prepared and the seed of certain tree species, which had to be planted in the fall, were sown in special beds. Those trees that were ready for planting in the field were dug up, packed, and shipped to the Forest requesting them. I was alone at the station in this work.

From January, 1929 through the school semester I continued with the Station at part time work. The summer of 1929, however, found me on the Lassen National Forest with a range reconnaissance party. Because we were working on scattered tracts along the boundaries of the forest, we covered a large territory and worked in practically all the vegetation types from foothill woodland-chaparral to the high mountain meadows. Most of the reconnaissance was of the intensive character and was done on foot. Some extensive work was conducted on horseback. There were some areas for which drainage maps had to be prepared and considerable plane table mapping accompanied this work. I handled all of the plane table mapping.

The next school semester I resumed at the University Branch at Davis, where I put in the most enjoyable of my four years at school. Upon completion of my work at Davis in the Spring of 1930, I was graduated with a B. S. degree. However, four years of college work for a basic forestry training was hardly enough and I was determined to return to Berkeley the following semester for at least one more year of schooling. I spent the summer with the Intermountain Forest and Range Experiment at the Great Basin Branch near Ephraim. My tasks were varied, ranging from plant development work, through soil sampling, plant utilization studies, detailed chartograph and other quadrat work, reseeding, erosion streamflow measurement and climatology.

When I returned to school I was fortunate enough to receive the Bidwell Fellowship for the school year 1930-31, and so I was able to devote all of my time to my studies. In the spring of 1931 I took the Junior Range Examiner examination,

passed with a grade of 89, and in August accepted an appointment at the California Forest and Range Experiment Station. Range research was inaugurated as a project at the Experiment Station in the fall of that year, and I started as one of its three staff members. Commitments called for the initial work to be started in the foothill of the eastside of the San Joaquin Valley in the East-side Pine region of the State.

For two years work was centered largely in the foothills. Preliminary efforts were made to answer such questions as : What constitutes the range forage? When did it grow? How did it develop? In general what were the physical and economic factors influencing the use of the foothill ranges? This work was preliminary to the selection of an experimental area on which detail studies would finally be carried on.

During this period a report on the public domain areas of California was prepared. Late in 1933 a systematic range survey of the entire valley floor and foothill region of the San Joaquin, totaling 13,000,000 acres was started. I was in direct charge of the field work which was conducted by two crews of two men each over a period of 6 months. I also handled the compilation and analysis of most of the data.

In 1934 I was put in charge of that phase of the range project which was being carried on in the East-side Pine region. I located an experimental area suitable for studying some of the problems of range management in the Jeffrey-ponderosa pine type. With an average of four technical assistants and twenty-five C.C.C. boys, sufficient preliminary inventory and the physical construction work has just been completed in the last few months to start the experiment. The experimental range totals about 1250 acres; half of it was fenced and developed for the work contemplated. A well, a windmill and accompanying troughs, and a corral and livestock scales were constructed. The experimental details would be too much to discuss here.

I have not had any formal teaching experience. I have spent some time instructing various survey and mapping crews of the Station in the fundamentals of taxonomic botany, particularly those related to the taxonomy of grasses (Poaceae) and I can say that I enjoyed it very much.

I hope that the preceding pages will throw some light on my general background and education.

Schooling and work

1924	Dec.	Graduated Lick W. M.onding.
1925	Jan - Dec	Lake County M'Intyres, Womack
1926	Jan - June	U.C. Berk
	June - Aug	Lake County Womack
	Aug - Dec	U.C. Berk
1927	Jan - June	U.C. Berk
	June - Aug	Forestry Summer Camp
	Aug - Dec	U.C. Berk
1928	Jan - June	U.C. Berk
	June - Aug	Dunning silviculture Plumas
Leave of U.C.	{ Aug - Dec.	Dunning (Sept) <u>Feather River</u>
		Branch (Sept - Dec)
1929	Jan - June	U.C. Berk. Part time Dunning.
	June - Aug.	<u>Range Survey Lesson</u> <u>N.E.</u>
	Aug - Dec	U.C. Davis
1930	Jan - June	U.C. Davis
	<u>B.S. in Forestry May 14 1930.</u>	
	June - Aug	<u>Great Basin Station</u> <u>Utah</u>

1930 cont'd Aug-Dec. { Edward Fellowship
1931 Jan - June { U.C. Berk graduate work
 " " " "

August started Junior Range Examiner
with California Forest
and Range Exp. Station

Took JRCEx.

July With Kraebel San Dimas, Glendora

(1)

First breakdown

1931

JRE

- July 1 Started working for experiment
Station - Civil Service appointment.
- July 28-Aug 13 Watershed studies with Kruckel
Devil Canyon, Southern Calif.
- Aug 15 Fred Penner arrived Berk.
- Aug 17-31 } Plumas, Long Canyon sheep-tree reproduction
Field } plots Hazel, Keween, Horway
- Sept 1-19 " " " " "
- office
- Sept 16 Tolbert arrived in Berkeley to head Range Division
- Sept 24-26 Started Seed hill shooting - Sonora - with
Penner
- Oct 5-8 Trip to east side - Siskiyou
- Oct 10-21 Miscell animal type
- Oct 27-30 Fall hill shooting for exp area North Lake area
also for plant growth plot sites
- Nov 3-6 Fall hill shooting plant growth plot sites
Sonoma
- Nov 7-15 office " " " " " "
- Nov 16-25 " " " " " North Lake area
Portola, established first plots
- Dec 1-4 Plant growth plot examinations Sonoma
- Dec 7-12 " " " " " Moved to Portola

1932

JRC

- Jan 2-9 (field) Foothill plant growth
10-19 (office) " " " vog
20-29 " " " and type appraisal
- Febr. 1-10 (office) " " " " "
16-19 (field) " " " "
20-29 (office) " miscell.
- Mar 1-5 (field) Foothill plant growth
12-18 (") " " "
22-26 (") " " "
April 1-2 (") } " " Scouting for exp. sites
3-10 (office) site
11-21 (field) " " "
25-30 (office) ^{Sacto} Scouting exp. site - Public Domain records
- May 3-6 (field) " " " " "
9-17 Grass identification training Redwood regions
Forest management.
24-28 Foothill plant growth - scouting.
- X June 8-11 Plumas Long Canyon plots - mapping
15-18 Foothill Public Domain records Sacto
- July 13-21 Scouting eastside pine - Modoc 1st trip.
- Aug 2-14 (field) Badger well - Porter pasture maps - plots
15-20 (office) " " " " "
21-29 Foothill project.
- Sept 3-7 Oct 1 Copeland report (watershed sections for C.R.)
10-15; 18-19; 21 " "
17-19 Public Domain report.
22, 24-27, Foothill project
- Oct 4-8; 25-31 Foothill project - relief areas started
- Nov. 14-17 (field) Public domain report - north coast ranges.
- Dec 2 days " " "
28 " Foothill project, relief areas, greenhouse
scouting studies.

1933

- Jan 2-3 Foothill scanning study
12-17 " project plant growth, climatological zones
Sonoma - Petaluma. Started scouting for
plot sites, Auto transects.
26-Feb 6 (Folsom) Auto transect, plots established and examined
Febr. 15-26 " " " " "
Mar 15-23 " " "
April 4-12 Foothill - Clark Site study - located plots etc
Measured same Fischer Ranner
13-16 Foothill auto transects
26-May 16 " " " " " Clark site studies
← $\frac{1}{2}$ time each Fischer, Klugh.
22-24 Foothill - related areas.
June 1-5 Mapped Clark Site Klugh Johnson
6-23 Clark site and auto transects 50-50
June to Sept. Foothill work

Sept. 5-9 Foothill auto transects

Oct 16-19 Halls Flat CCC camp. Charcoal pine-
reprod. study work by Fischer, Johnson
Livestock exclosures constructed by Lassen
NF Oct. 194.
Nov. Bentley and Short start work.
2-6 First swing to 5130 on San Joaquin Valley
range survey possibilities. (Bentley)
27-Dec 6 " " "
Dec. 14-20 SJ Range Survey Peacock, Tallet, Bentley, Short
Magede

16

Jan 1-12 San Joaquin range survey
Johnson, Short, Mayes, Bentley.

1934

Febr. 7-16 " " " "

Mar. 23 - Apr. 4 " " " "

April 8 - 14 " " " "

17 - 20 " " " "

28 - May 2 " " " "

6 & May 8 - 18 Scouted Blocks mt Expt. For and vicinity
for experimental range area - mountain
range research.

June 15-28 " " " "

Halls Flat house pasture planned

July 3 - 25 " " " "

Aug 2 - 17 Located BSER; started staking pasture
fence locations; made arrangements
with Lassen and perm. fee for coop.
exp. program. Started construction CCC

24 - Sept 4 Planned exp. program for BSER
(Blocks mt Br Sta. being constructed) Sept.

Sept 18 - 27 Bentley, Klugh, Biswell, Johnson, Parker
Plans construction BSER; mapping + prep
contours

x 28 Modoc Examined Badger Well and Potter Pasture
plots with Bentley.

29-30 Modoc Examined Long Canyon Plots

Oct 10 - Nov 28 At Halls Flat with Biswell worked
on Brand Station facilities, House pasture
BSER plans - construction, materials etc
Thompson - caretaker started working
Nov 19

1935

- June 8-12 BSER plans; construction
Study plans
19 Thompson terminated at Hells Flat
18-26 BSER program T.W. Daniel, A. Schmitz
arrived
July 8-17 " " Daniel, Bentlay.
Sept 3-12 " " R. Gardner arrived
27-Oct 4 " " L.S. Short arrived Oct 3
Pine plantings

1936

- Mar. 26-28 Annual type SSER
Apr. 16-21 BSER programs
26-May 2 " " Gardner, Short
May 5-15 " "
17-June 13 " " T.W. Daniel May 17
Tree removal; salt-water use etc
June 18-May 12 BSER programs
July 19-Aug 1 " "
Aug 11- " " Bentlay started assisting
Daniel - water use monitor
23 First water use records
Browse cruise, Pt survey, utilization by cattle
-29 Weighed cattle
Sept 10-29 BSER programs
Oct 5-15 " "
23-25 Annual type SSER
26-Nov 3 BSER programs; also Badger wool
Nov 11-19 " " Pine seed planting
Dec 10-12 SSER range problem discussions
NMT, Biswell & D. PreSeed.

1937

4
ARE

Jan 6 to April 19 Statistical training Wash. D.C.
 April Placed in charge WRS - a new project.
 May 4-5 First trip WRS Ventura
 June 7-10 WRS Hollister meeting

1.0

July 8-11 BSER programs
 July 13-16 WRS.
 26-30 "
 Aug 11-13 "
 23-26 " ; SJER 12
 Sept 22-24 "
 28-29 "
 Oct 1-2 "
 8-9 "
 15-20 "
 Nov 9-10 SJER
 Dec 11-19 WRS meeting Ogden

7.0

Summary

Man months

Statistical training Washington

4

Western range survey May start

7.

Annual type ranges

0.5

Perennial type mt. ranges

0.5

12.0

1938

Jan	WKS
Febr. 23	"
Apr. 20	"
May 5-7	" Madera, Marred reports review of SJSR
June 7-15	Mt range Trip with Dwight Fausett to Programs 1, 2 & 4. also Geomorph
21-24	BSER

Sept. 1-5	BSER
20-24	" program Chapline inspection
25-26	WKS To Hollister with Chapline looks at Horner Long Canyon plots, BSER, Badger Well.
OCT 7-16	

1939

- Febr. 25-26 SJER2 Koogler, Cooperider
Mar. 29-Apr. 3 SR survey Swing around SS Valley
with MAT, JRB.
- May 1-6 BSER
13-18 "
- June 22-23 SJER Tad Osborne
- July 7-25 MT range Great Basin Meeting with
Biswell, MWT.
- Sept 18-25 BSER
- Oct 9-16 { BSER NF Survey meeting
Badger Mnt
- Dec. 15-16 SJER with Hasel, MWT Statistical
analysis pasture experiments

1940

- Mar. 15 SJER
- Apr. 2-3 " Statistical analysis pasture experiments
- May 15-17 " Dr Muir, Australia
- June 20 " "
- O.3 (X) July 14-20 Mt ranges Botanical inspection trip
Plumas, Modoc, Lassen, First Pt on Tahoe
- (X) Aug 6-11 Mt range - scouted out area for season of use study BSEID-Squaw Valley
Started Pt studies Grass Valley-Bear Mt
- Aug 20-23 BSER-Squaw Valley Mapped Squaw Valley
- Sept 14-25 Mt range problem analysis and Pt studies Lassen Modoc trip with Dochtitt.
- 25-27 SJER Study program analysis Hart Bullion Pasture use program
- Oct 4-24 SJER-Mt range - Ray Price trip

1944

Febr. 5-7 SJER Pasture analysis

May 5-8 Pt Deer use and germination; Modoc Rds., IT
9-10 BSER-Squaw Valley
11-12 Mt range problem analysis Dog Valley, Taho
also Pt.

(X) May 17 AAA meeting in Beck. Davidson, Perkins,
Hazlett, Rockford, G. Wood, Doethitt, Taylor
Clegg, Jones,

May 19 SJER - AAA

28-June 2 Modoc Scarification plots Pt. Pine

June 5-9 Reseeding, Phenology, Hound Flat, Dry Lake

(②) 16-28 Mt range Started Soil mapping U.C. Starke
Reseeding Meadow water-level Started
Scarification Hackamore

July 10-18 Pt - Hot Crk, Modoc, lesson, Plumes
with Doethitt.

Aug 24-Sept 3 Pt lesson BSER-Squaw Valley Meeting
Wyckoff, Chapline Cronenwitter, Rockford.

(②) Oct 3-4 SJER Pasture analysis with Dr. Neyman
8-13 Modoc Scarification & Pt.

29-Nov 4 Modoc Scarification & Pt deer use

Nov 11-24 " " " " " Banning along

Dec 5-8 SJER Pasture analysis Dr. Neyman

1942

- Feb. 5-7 SJER pasture analysis - Dr Heyman
- April 2-4 Mt Range Downhill to Idanaville
- ④ 5-8 First AAA training school - Paul Blodf
Bob Conard, Lomasson, Bradley, Pittman, G. Wood
- 9-17 SJER - AAA
- May 7-19 Modoc Pt deer use; Scardination
E Horn shown Pt rodent catching etc.
(Forsell along)
- June 12-26 { Fire training Farther River
Portola Pt plots
BSER - Squaw Valley - Located source lines
around Squaw valley.
Pt of Hockanure Modoc. C. Hunter said
- July 28-Aug 6 { Pt - Portola with Horn
Gros Ventre MT "
- Also AAA @ Rail Bluff 5-6th
- Aug 9-13 AAA Ukiah & Modoc
- Sept 29 Oct 8 { Pt Portola (examined unscathed plots - spots)
" Halls Flat - Black Mt
" Hockanure

1943

Jan 21-22

AAA Santa Rosa.

May 3-15

PT spot planting trip Eastside region
Walker River to Modoc. With Dothitt
and Forest personnel.

21

June 10-19

{ AAA Klamath wool problems,
Fire training school Feather River
BSEIR - Squaw Valley Marquis cattle
Phenology etc.

July 7-13

AAA training

5-7

BSEIR - Squaw Valley.

8-17

AHA training

Oct 8-17

BSEIR - Squaw Valley 50%
PT 50%

27-28

SJER

Nov 18-30

Bitterbrush

1944

- Jan 3-7 Fallon place. Problem analysis, Research, program planning. Post war planning
Jan - Feb Post War Planning
May 24-28 Pt. and scorification plots Moroc
29-June 5 BSER-Squaw Valley cattle meetings etc
- June 15-19 " " " & pt
28-July 3 " " " "
- July 12-21 " " " & pt & Researching
25-Aug 14 " " " & pt
Inspections W.O. and R.O. personnel programs
C.O. started working B.S.
Aug 3 - Sept 3 BSER-Squaw Valley
Sept 4-6 AAA
7-8 BSER-cattle
9-12 AAA
⑧ 13-26 BSER-Squaw Valley programs Mineral Mine
- Oct 4-Nov 16 BSER-Squaw Valley programs
2 days pt.
- Dec 1-16 Denver Meeting

1945

- Jan 1-31 { B.S. Manuscript Post war Planning
 } Pt. ger. experiments
 } Pt. Manuscript.
- Feb. 1-28 Pt. ger. experiments and manuscript.
 SJER analysis 2 days.
- Mar. 26-31 BSER - Squan Valley.
- May-June 1 BSER - Squan Valley
Pt planting Gross Valley enclosures and
Blocks Mt Br. Station grounds 2 days
Reseeding planning 1 day.
- June 8-22 BSER - Squan Valley
Pt studies. 2 days
Reseeding plan.
Manuscript - first years cattle wts (1944)
- July 2-15 BSER - Sq. Valley cattle wts.
- 18-24 Reseeding - site selection
- 25-29 BSER - Sq. Valley
- Aug 5-9 Reseeding - Pease trip
- 10-14 BSER - Sq. Valley.
- 21-31 " "
- Sept 5-25 { Reseeding - 2 days. Britton
 } BSER - Sq. V.
- 30-Oct 31 Reseeding Lesson, Madoc Britton
- Nov 1-14 Reseeding Britton
- 15-21 " " " "
- 27-29 BSER - Sq. V. weighed cattle MacClelland's

1946

Feb 1-3	BSER - Sq. V.
15	SJER Richardson, Australia
Apr. 10-12	BSER - Sq. V.
29-May 7	Pt scattering - ger. 3 days Pt " " 3 " Reseeding - grass. 3 " BSEER Sq. V. 3 "
May 9-10	Coop F&G, R.O. Browse-game nestling South Hill Cr. Pacific R.S. Placerville Jim Ashley.
11-13	BSEER - Sq. V.
21-24	" "
25-Mon 1	2-H-D spraying Coop Fire Division 3 days
BSEER - Sq V	2
	Reseeding 1
June 11-21	BSEER - Sq V 8 Reseeding 2
July 5-20	BSEER - Sq V - (Mello, Ares started work)
31	1 } Squirrels poisoned - July 17 Sq V. Barren F.W.S. 2 } Pt ger - reseeding
	2 Reseeding
Aug 1-10	4 } Logging plots - Mello Ares 6 } BSEER - Sq V.
20-28	6 } " " 2 Reseeding
Sept 4-11	BSEER - Sq V and reseeding (Mello Ares left Sept 9.)
19-Oct 2	" " (5) " (5) logging plots (5)
Oct 9-24	" (Perchance, Reid trip to B.S.)
(X) 22-	Fish & Game Meeting Gold, Ore. Modoc M.F. Inter-state problems - Use, sampling etc

1947 (Dry year)

Jan	{	Comp. B.S. data	11
		Chapline Inspection	9
		BSER - reports etc	10
Febr 3 - 28		BSER - Sq V.	4
		BS Manuscript compilation	20
		Reseading	1
Mar. 1 - 25		BS Manuscript compilation	20
		Reseading	2
		B SER - Sq V	3
26 - 28	{	Reseading	3
- 31			
April 1 - 15		As for March.	15
April 16 - 19		B SER - Sq V. (Field)	3
21 - 29		BS Manuscript (Book)	9
April 30 - } 2		B SER - Clipping study	2
May - 7 } 6		B SER - Sq V.	6
14 - 23		(See diary for auto breakdown problems)	
Marlo		8 B SER Sq V	
Colleman (C)		1 Prof Mol Morris and students to B.S - Sq V, Pt	
June 2 - 11	9	B SER - Sq V.	
16 - 28	(9)	" " (3) Reseading	
July 9 - 23	(10)	" " ; (4) B SER	
Aug 4 - 8		U.C range class (First) students measured	
11 - 24		plots B SER, Sq V., Pt, Timber use (Gifford)	
31 - Sept 8		B SER Sq V.	
15 - 28		" "	
Oct 29 - 30	(2)	Coop FEE 6, Madoc Inter-state herd methods Dry lake	
Oct 1 - 4	(1)	Reseading (2) B SER logging (1) B SER - Sq V.	
13 - 27	(10)	B SER Sq V. (4) Reseading	
Nov 14 - 15	(2)	SJER; Nov 18 - 19 → B SER - Sq V Statistics	
Dec 14 - 23	(10)	SAF meeting Minneapolis - Presented paper	

1948 (^{very}
wet year)

- Feb 29-Mar. 2 SSER Australian Dr. Davies -
and Dr. Malone JRB, MNT Dr Howard
- May 10-14 (5) BSER - Sq. Valley
- 27-30 (5) " " " - Clipping study
- June 4-11 (8) " " " " " " " " " "
- (R) 21-28 { BSER { Charky Graham started work
BSER - Sq. Valley
- July 12-13 (4) " " " " " " " " " "
- (6) Clipping (5) Reseeding
- Aug 9-13 (2) BSER Sq. Valley
- 31 (1) Clipping (1) Forage yield
- Sept 1-7 (1) BSER Util. section
- (2) Tested survey method for Harvey Valley pilot test
and started surveying
- Sept 14-20 (1) Reseeding (5) BSER. Sq. V.
- 27-Oct 2 (3) H.V. survey (3) " " " "
- OCT 8-25 (8) " " (9) " " " K. Parker visit.
Finished Survey in 1948

1949 (Dry year)

- | | |
|-------------------|--|
| Apr. 25 - 28 | BSER - Phenology |
| May 10 - 13 | BSER Made map of clipping enclosure
Phenology Clipping |
| June 8 - 13 | BSC12 Clipping, Phenology. |
| July 18 - 23 | " Clipping " " |
| Aug 1 - 8 | Tables with Barker. NW Wood coop condition
trend steady Bear Valley |
| 22 - 26 | BSE12 Clipping, Phenology |
| Sept 19 - Sept 23 | (2) Interstate deer study meeting
(3) Researcning Modoc |
| Oct 6 - 16 | (10) { BSER Utilization and other
{ Eg. Valley |

1950

Feb 1-2 Range Meeting Davis
Soc.

May 22-26 ⑤ BSEIC Clipping study

June 12 - 16 ③ Cope condition and trend transects
in H.V for Parker.

① Harvey Valley planning - facilities with losses

20 - 25 ④ Condition trend Cope

Sept 11 - 25 ⑦ Shasta Board Forestry meeting

⑧ Condition trend Parker

④ Other.

Archery hunting Newsom, Bass etc

1951 (Not lowland Are upland)

- Mar. 5-7 Meeting U.C.^{Ex}, Lassen NF
- Apr 11-13 Grass Valley Clipping
Phenology etc.
- May 9-12 Grass Valley Clipping
Heavy freeze May 11th
- June 8-14 2 Clipping in enclosure, Grass Valley
Cattle in BSER pastures. June 9
2 Spraying H.V June 11 (First)
1 Herd control erosion control work
1 Readings on BSER-H.V work
- July 9-13 3 Clipping studies, phenology
1 Mowing in Little H.V by Graham
- Aug 4-12 1 Manito range meeting.
- Aug 15-19 2 Clipping
2 Maryland cattle
- Sept 25-Oct 4 3 { Inspection Loweridge etc
1 } H.V plans with Lassen
1 } Util. 39 from BSER-Sy.V.
1 } Clipping
2 Hors Barn - resampling coop FEG
- Oct 17-22 3 Coop Pt planting resampling Modoc
over winter range
- 2 Resampling
- Nov 15-19 5 Rest rotation grazing Shasta N.F advisory
committee

1952

- Jan 21-23 Orientation school Los Prietos
Feb. 4 - 7 " " "
13 - 14 Range Soc. meeting Davis
21 - 23 Regional Conservation Com. Chico
May 12 - 13 2 Game Browse - Scouting for Flutay Exc.
14 - 17 3 Clipping studies
June 9 - 15 6 " "
July 9 - 17 1 Range condition trend Parker
7 Game Browse - Flutay Scouting
" " BMT Br. Hubbard Kay
1 Clipping
Oct 18 - 31 10 Game Browse Pearson
office } 3 Clipping
Aug 1 - 10 ③ " ⑦ BS manuscript
11 - 15 Game Browse Located Flutay Spring
(office) 16 - 26 ⑧ Game Browse ⑦ BS Manus
27 - Sept 7 ② " " ⑥ H. Valley pilot (researching)
Sept 16 - Oct 26 ⑥ " "
15 ⑧ H Valley pilot
⑦ RCE Trend Parker
Oct 27 - 31 (office) Game Browse ④
Nov ⑯ " " ⑮ BSER manuscript
Dec 1 - 4 ④ Stockmans Meeting Modoc RR grazing
5 - 31 ⑩ Game Browse ⑥ BSER

1953

- Jan 1-15 Game Browse
16-31 " " ASRM Meeting Albuquerque
Febr. " "
Mar. " "
Apr. " "
May 1-11 { Burning plots - Doyle
 Fence location Fleckey
12-31 (3) H Valley, (16) Game Browse
June 1-4 (7) " " (7) " "
5-23 (15) Game Browse, (3) RCET transects with
 Shuman, Fontaine etc.
 5 Idaho, Wash trip.
27-30 Game Browse
July 1-11 (9) " " (2) H. Valley RCET
12-31 (16) " " (3) " "
Aug 1- " (6) " " (5) " "
Sept 1-15 (8) " " (7) " RCET
16-30 (8) " " (7) " "
Oct 4-17 (7) Estab RCET transects, (6) Clipping study
 and other H. Valley
18-31 (13) BSER report - made
Nov. (15) Game Browse (15) BSER camp
Dec. 1 Watt not yet passed away today
2-31 Reorganization underway.
 (20) Game browse (9) BSER camp

1954

Jan 1-31 (16) Game Br. (14) 14 BSEK comp

11 (2) Pt. Germation teeth pulled

Febr. 1-29 (14) (20) Game Br. (9) 11 BSEK

Apr. 13-18 (15) Game Br.

May 24-30 (6) { Established RCET transects H. Valley
 staked 7 livestock enclosures

June 6 - 11 (5) { RCET measurements First. J Barl

H.V. Cattle weights - H. V. Poison lake.

Established transects

17-24 (3) Game Br. (Jenison) (4) RCET Bell
and photos

July 5 - 7 (1) RCET - Bell (2) H Valley Indian visitors

16 - 19 (4) H Valley

25 - 31 (6) H Valley Meetings

Aug (31) H Valley RCET Sanderson started

Sept 1-19 (19) " " " measurement; staked 2'6"

24-30 " " "

Oct. 1-11 (10) " " (1) Game Br.

1955

- May 15-18 Game Br. Rail Park burn trip
Mada. Fleckay
- 19 H. Valley
- June 10-27 ⑩ " ① Game Br. Com Meadrig
Jackson Hole
- July 14-19 ③ H. Valley ② Game Br.
- 25-31 ⑥ " " EJ Woolfolk first
trip
- Aug 1-8 } Appendix operation - mainly skit 1v
- 18 } ⑧
- Sept 1-4 ⑦ H. Valley ③ BS mms.
- 25-30 ⑥ " "
- Oct 1-10 ⑨ " RET ① Game browse
- 17-20 ⑧ RCET Coop K.W. Parker lesson
Stansbury, Sequoia.
- 26-31 ⑤ H. Valley RCET
- Nov 1-4 ⑥ " "

1956 (wt year)

Jan 22-28 ⑩ ASRM Meeting Denver - presented paper

Mar 19-21 ③ Extension RR grazing pattern Posture Motoc

Febr. 20-21 ③ Game Br. Sacto meeting

Apr. 8-14 ① Range Analysis Meeting Ogallala

May 31-June 22 ② PCET-DYER transects H. Valley
Cattle weights

July 9-20 Center leader assignment

⑩ H Valley Transect and clipped yield by Sanderson

Aug 1-4 ② Brush conversion Ws Koller North coast
C. McCall ① Harvey Valley ① Presenting

13-21 ⑤ H.V. 5th Field Day & U.C class

④ Transects. Clipped yield

26-29 ④ U.C faculty meeting Bill H.V.

Sept 1- ⑦ H. Valley

25-29 ④ "

Oct 7-8 ③ H Valley Meeting Jacobs, Max Costell,

9-16 ② H Valley cattle wts, ② Transects Utilization
Lowell Adams reported Oct 16

17-21 ⑤ " "

22-31 ⑧ H Valley Center Admin. ① Game Br.

Nov 1

Dec 5

6-

Van Zandt office

Hodges
sus

1957

Jan 11 (10) B.S Man. (20) SRC Admin
Feb 8 (15) " " (15) "

Mar 23-24 (3) Game-browse Woolfolk (3) H.V
 Floty, Hartung (5) SRC Admin
Apr. 11 (2) SRC advisory committee members
 lineup. (15) Ext. N.F. R.R.G.

May 15-25 Washington D.C. Service Award

June 3-8 { Cattle wts Start of 6 Br
 project by EJW
 Ratcliffe-Sanderson worked this season
 H.V. spray program
 K.W. Parker

18 (2) For management SRC adminis

19-21 SRC admin (4) (H.V. Koller, Hull, K.W. Parker
 (1) Game-browse (EJW, Boelke)

 (2) Harvey Valley Extension Book writeup

July 1 26 - July 6 SRC Administ.

K.A
Director

July 10-25 (3) DYEV transacts - Ratcliffe.
 (2) Harvey Valley Improvement program
 (2) Game-browse
 (8) SRC Admin.

Aug. 1-31 (5) H.V. Imp. Program
 (3) H.V. management (2) Field Day
 (2) Game-Browse Redding
 15 SRC Admin.

Sept (3) Cattle wts H.V. (3) H.V. Exten

Oct. (3) SRC Admin

1958

Jan

Febr. 11.

SRC Admin

Game-browse

Mar.

(10) Asilomar

Apr.

May

(2) Ext. RR Gr. Millions Foothills Plants

June

(6) Game browse

Caldwell, Lyle Brown

(5) H.V. program contents Harper (9,10,11)
SRC Admin.

Springing

(5) H.V. Extension

July

SRC FM

(5) H.V. program Data compilation

(4) Ext H.V. Grade Soils. Construction

Aug

(5) Coop HF Tishoo Sharp

(3) Transect methodology Hubbard, Adams Brown (alluvial)

(2) Clipping soil collection

(2) Advisory Committee

Sept

SRC FM

(6) Ext. H.V. Cattlemen, Idaho Fed BLM

(3) Advisory Committee

Oct

Cattle arts

(5) Forage use

(10) BS Man. and others

Nov 10-78

(5) Research H.V.

(5) Photo Silos

5 BS Man and others

Dec.

(5)

BS Man (5) Data comp. SRC Admin.

1959

Jan 10

- (16) Manuscripts
- (5) Data comp.
- (13) SRC admin
- (2) HV improvement program

Febr (5) Mans.

- (3) Ext. RR. Grav.
- (10) Plans valley
- (12) SRC admin

Mar 12-13

- (2) HV program - Rorays Chico

19-21 (3) " " "

- (7) HV. story

- (5) Cattle at's report. animal handling

April

- (6) HV story (4) Cattle at's SRC Admin (2) Ext RR

May

- (2) Game browse (5) Photo Site (2) Ext RR

June 9-11

- (3) Ext. P.R. Gr. BLM Linn - Bishop

20 (2) " " U.C.

- (5) Photo Site

- (3) HV transects? Trend

July 12

Howard came on job.

- (5) Area statistics (3) Ext RR Joy, Lambate Nigerian

Aug 2-7

- (12) Ext RR Gr. Spermids Chapline R-4 Supers

- (3) Reseeding mapping (5) SRC Admin etc

7 29

Howard last day

- (5) Game Browse

Sept 9-12

- (5) Type area data

- (3) Loop BLM (10) SRC Adm

16-18

- (2) Utilization

- (3) HV. Reseeding spray

- (2) Ext RR Crane Cattlemen

Oct 19 -

- (5) Photo guards - trend

- (5) Utilization

- (10) SRC Admin Adr Com.

- (3) Bee reporter Ext

Nov.

- (10) SRC Admin Auditors (3) BLM Loop

- (3) Meetings SAF

- (5) HV map

- (10) SRC Admin HV data comp. HV story

Dec.

1968

Jan. 29 - Feb. 6 ⑨ Portland meeting SEC

⑤ HV Data comp

⑧ HV story

② SEC Admin. Advis. Committee

Montague

Febr.

③ Work plans. Sectors ⑥ Portland meeting

⑤ SEC Admin.

⑮ Data Comp

Mar.

⑥ Data analysis starting in pastures

③ HV Story

⑮ New assignment - TB Washington

Memo

to Director

April

⑤ SEC Admin

⑩ Comp data H.V. (5) v. 1.3 edition ⑤ REET data

Reassignment discussions

SEC Admin

May

⑩ HV statistics comp for broadcast workshops

⑦ HV spraying

Photo sites

⑤ Ext RR gr. Ext. Service etc.

June

③ Ext " " Nevada Ext Ser., Aggrendine

4

Transferred holgers to Berk

SEC Admin and transfer

③ HV Ext field day.

Photos site

④ Photo trend pictures 1st explanatory

Ext RR Grazing Cat. Farmer Advisors HV Day

Tule Lake Range Training N.F. personnel

BLM Coop Leg SE Oregon allotments

Rader to July 7-16

Sus.
1st

17-22

⑦ Trend Method

Aug 1-12

⑮ Trend Method

Sept 8

⑤ RR Ext.

② Travel Method

Oct. -

⑮ RR Ext Region 6 ⑧ PA BMT ⑦ Trend Method

Nov.

⑧ " " Sequoia

Dec. ⑯ P4

⑧ " " Sequoia ③ Research P4 compilation

1961

Jan	(20) Pt.	(8) Reports	(7) Meeting Salt Lake
Feb	"	(15) Pt. Get.	(3) " "
Mar		(25) " "	

Apr.			
May 21-	(5) BMF Pt.	(5) H.V. program spray ok	
June 1-	(8)	" "	(2) B.S man gallery
	(7)	Trend method	
July 5-14	(15)	Ext Repair 1	
July 17-29	(15)	Ext Repair 4	
August 4-20	(20)	Ext Repair 2	
	(5)	" reports	

Sept. 1-	(5)	BMF Pt	
10-16	(8)	Ext Rep 9	South Dakota
25-30	(4)	BMF Pt	(2) Spray USC Can.

Oct 1-6	(10)	Ext Rep 6	Prineville
7-16	(20)	BMF Pt	
19-			

Nov. Trend method

Dec

1962

Jan

Febr

Mar

Apr. 73 - May 10 Los Padres with W. Wood marmots

May 1-4 (8) Los Padres R.O. W. Wood (3) Pt Bmt
23- (2) Ext. training course (3) Trend

June 10-21 (15) Ext. Reg 4 Frank Smith J Jacobs
 (2) Pt Bmt (3) Trend method

July 14-20 (7) Ext. BLT training school (short course)
 (2) Pt Bmt (8) Trend

Aug. 4-26 (25) Ext Regs 1,284,
 (4) Trend (2) Pt B.S.

Sept 10-27 (20) Ext. Reg 3 & R-9 Coke

Oct 6-20 (15) Ext Reg 6 Andy Wright Big storm.
22-31 (2) Pt Bmt (7) Trend method

Nov 1- (9) Trend method (8) Pt Bmt

Dec. 13- (5) Trend method

1963

Jan

Febr

Mar 17-27 (12) Ext R-3 Albuquerque Cont. Drive

Apr

May

16-31 (13) PT BMT (2) PT BSER

June 1-5 (5) PT BMT

17-30 (13) PT BMT

PT Plannings

July 1-7

(2) PT BSER

3-6 (1) Photos

(2) PT "

29 - (2) PT BMT

(1) Trend

Aug 1-

(2) Coop Lassen Game problems Day

2-29 (6) PT BMT (3) Trend

15 (1) PT Photos Portola

Sept 1-9 (9) PT BMT

9-13 (5) PT Photos Portola

16-21 (3) Trend (3) Comp data all trends

Oct 1-6

(2) Trend (3) Director Marquie

7-31 (6) PT BSER (6) Trend (3) PT Madoc

Nov 1-

(2) BLM Coop

(29) Prep. Training course Ext.

Dec

31 " " "

1964

Jan to Feb 9 Prep training course - Programs

Febr. 9-16 Presentation training course R-4

17-23 " " " R-3

24-29 " " " R-2

Mar 1-11 Training course revision etc

15-20 Presentation training course R-9

29-3 3 " " " R-1

April 4-5

6-13 " " " R-6

May 26-31 ③ BH Pt ③ Travel method

(2)

Second breakdown
(a condensation)

1931

July 1 Division of range management
established at California Forest &
Range Experiment Station

M W Talbot Chief Sept. 16

F G Renner ARE Aug. 15

A L Hormay JRE July 1

First steps in developing research program

1. Get acquainted with problems and people. Start exploratory studies, survey
2. Find suitable location and establish experimental brush stations

Foothills (San Joaquin Valley) &

Mountains (Northeastern California)

Non Native Mountain Ranges

Effect livestock grazing on tree reproduction

- (1.0) (5) Long Canyon Plumas N.F. Sheep. No Pub.
Scout for experimental range

Foothills San Joaquin Valley.

3.0 Scout for experimental range

(2.0) Plant growth and development - Sierra

6.0 (3) = study started to Porterville

Plan Nos

1932

Mt. Mountain Ranges

- 1.3 Effect livestock grazing on tree reproduction
0.5 Long Canyon - Plumas Sheep
⑤ 0.8 Badger Mtn - Modoc Sheep
0.5 Scout for experimental range

Foothill Ranges

- 6.0 Plant growth and development & relict areas
3.0 Scout for experimental range
0.5 Grass scanning identification key Pub. 1942

Other

- 0.7 Copeland report
0.8 Public Domain report
0.2 Coop. Forest Management - Grass identification

12.0

Weeks

1932

28 3 4, 4, 4, 2, 4, 2, Foothill plant growth and character reflects
18 2 1, 2, 1 2, 3, 1, 1 Seeding
1 1 Coop FM training grass identification
2 2 Seeding studies

1 1 Plumas Long Canyon
3 3 Malac Badger Well sheep
2 2 Seeding
3 3 Copeland Report
3 1, 2 Public Domain Report

46
6

Man Mous

1933

Alt Mountain Ranges

Livestock tree reproduction

1.0 Blakely Mt Exp For. Lassen Sheep-Cattle
Survey No pub Fisher, Johnson Sept. act

Foothill Ranges

5.0 Pub Growth, development, soils

0.2 ⑤ 1947 Grass seedling taxonomy
Scripps

1.8 Clark site (mapping, plots) Fisher, Hough
Johnson (Apr. June)

1.0 Seeding

3.0 ⑤ San Joaquin Range Survey No pub.
Pub 1939 Bentley, Short started work Nov 1 approx -
Mayee in Dec.

12.0

1933

Mountain Ranges

Livestock grazing tree reproduction

- 4 4 (10) Blacks Mt Exp. For Lassen sheep-cattle
Sept-Oct Fischer, Johnson

Foothill Ranges

- 0.2 1 (0.1) Grass scarring study
5.0 28.8 3, 8, 1, 2, 1, 12 Plant growth and develop
- 7.0 4 3 (1.8) Clark site (mapping and plots) Fischer, ^{Wright} Johnson Apr-June
- 4.0 4 (1.0) Rooting
- 17.0 4, 8 (3.0) San Joaquin Range Survey
Bentley, Short started work Nov 1?
- — 54 12.0 Major on job in Dec.

- Man Mos 1934
- ALH Mountain Ranges
- 2.0 Scouting - located BSER Decision
cattle on rangeland
BSER
- 4.5 Study plans and supervision construction
experimental facilities Parker, Biawall, Johnson
Bentley, Klugh
- All (No Pub) Effect cattle grazing on tree reproduction
No Pub Effect of logging on grazing capacity
Pub 1961 Effect of grazing on range condition
- ALH " " and grazing capacity
⑤ Range response to cattle to timber-type grazing
Range utilization, and grazing habits
of cattle
Growth and development of vegetation
- " 1940 Salt and water consumption by cattle
Bentley and effect on distribution of range
utilization
- Outlying study areas
- 0.5 Livestock tree reproduction
Badger Well - Modoc
Long Canyon - Plumas
- Foothill Ranges
- 5.0 San Joaquin Range Survey
-
- 12.0 ✓ Pub PR = Progress publication

1934
San Range Survey 16 4

Scout Mt Ranges	8	2
Study plan - supervision	(Bentley, Hugh, Buswell)	
Construction Facilities	12	Johnson Parker mapping Contractors etc
Pine reproduction		3
Badger	1	
Plomas	1	0.5
		<hr/>
		12.0

Mar Mos
ALH

1935

Mountain Ranges

6.0 Burgess Spring studies (Pasture 1 fenced)

T W Daniel 3 months SM, water etc
A Schulze

Bentley, Gardner, Short establish plots
plant pine seed,

1.0 B. Spring Pasture 2

Pub May 5 Eddet logging on grazing capacity Pasture 2
PR

Foothill Ranges

5.0 San Joaquin Range Survey Compilation, analysis

12.0

Man Mts

1936

Alt

Mountain Ranges

11.0 Burgess Spring Studies First measurements

0.5 Artifying studies Badger West
Plans

Foothill Ranges

0.5 San Joaquin Exp. Range Program

12.0

1937

Mountain Ranges

0.8 BSR Studies Supervision
Plans

Foothill Ranges

0.5 San Joaquin Exp Range program

4.0 Statistical training Wash. D.C.

6.7 Western Range Survey

12.0

1938

Mountain ranges

2.0 BSEJR studies

0.5 Effect grazing reproduction

Long Canyon

Badger Mtn

0.5 Training Coop. Reg. 5 (Trip to R 1, 2 & problems)

9.0 Western Range Survey

12.0

1939

Mountain Ranges

1.0	BSEIR Studies	0.8	0.5	1.3
2.0	Training (Grand Basin Summer)	0.8		0.8
0.5	Extension (Summer meeting)	0.8		0.8
6.5	③ Pub ④ Problem analysis NE GI.			

Foothill Ranges

0.5	Extension (program) visitors	0.2	0.2	0.4
0.5	San Joaquin Range Survey	0.3		0.3
0.5	③ Pub ← Pasture problem analysis	0.2		0.2
1	Publication fluctuations SJEIR program			

12.0

1940

Mountain Ranges

1.0

Extensions

Burkmarier trip 0.3

Pike trip 0.5

1.0 (5) Pub 1961 Timber-meadow - Squaw Valley 0.5

BSEIZ studies

4.0 (5) Pub 1943 Bristlebrush Ecology - Utilization 0.3
② Scattering plots,

4.0 Problem analysis NE Gal.

Foothill Ranges

1.0 Pub 1949 Pasture analysis - Coop Dr Neyman U.C.

1.0 Extensions

Pike trip

12.0

1941

Mountain Ranges

Start Pub 43

4.0

⑤ ~~Bitterbrush~~ ⑦ Utilization, ⑦ Germination

Scarification

2.0 ⑤

Pub
1945
1961

Timber-meadow Swan Valley

① Plant Field 2

2.0

Problem analysis NE Col 1.0

BSER studies

0.5

Soil type map Coop U.C.

Other

2.0 ⑤

Pub
Report 1941
1943

Water level study - Lassen Coop

Foothill Ranges

1.0

Pasture analysis

0.5

Other

0.5

⑤ 1944 1A coop 0.2

1942

MT Ranges

4.0

Bitterbrush

1.0 1.0 1.0

1.0

Timber-mtns. Spruce Valley

1.0

Region Coop

Problem analysis N.E. Col manuscript

Training

0.5

Fire school

Foothill ranges

0.5

Pasture analysis

0.2

Other

Mont school

2.0

③ School AAA Coop

1.0 1.0

2.0

Utilization standards

2.0

Key for identifying grasses

scouring study 1933

17.0

1943

MT Passes

0.5 {
2.5 Botanywest's Coop R.O. Flag Interstate 0.5
3.0 < Pt < Engleide planting swing Dottishill 0.8 1.0 1.0
Publications
3.0 Timber - meadow Swan Valley 1.0 1.0 1.0
First records.

0.5 Water level manuscript.

0.5 Training
Fire fighting

Foothill Passes

Other

2.0 AAA 0.5 0.5 0.5 0.5

12.0

1944

MT Peacies

3.0 Bitterbrush 0.5 sanctification. Gemination 1.5
late summer
Proposal to check grazing value Mt. of BS
rejected.

3.0 Timber-mader Swan Valley 2.0 2.0

0.5 BS Field Day October

1.0 Inspection 0.8

1.0 Denver Meeting 0.8

Foothill Ranges

Other

2.0 Post War Planning 2.0 and reports

1.5 AAA 0.5 Pub Mod Gr. Pays

12.0

Total time A.L.Hornady Range Research Projects
from July 1, 1931 to June 30, 1964 (33 yrs)

Projects and studies	Period of study	Time % of year (1931-1964)	Time yrs	Time yrs
I Mountain Ranges				
A Exploratory work; problem analyses	1931-1941 (10)	5.4	1.8	
B Burgess Spring studies	1934-1964 (30)	24.3	8.0	
C Bitterbrush	1940-1964 (24) ²⁸ ⁽³⁶⁾	9.8	3.2	
D Artificial reseeding	1945-1962 (17) ⁽²⁾	3.1	1.0	
E Game-browse	1951-1957 (-5) ⁽¹⁾	3.4	1.0	
F Harvey Valley pilot test	1948-1959 (-64)	18.2	6.0	
G Administration Research Center	1956-1960 (4)	4.4	1.5	
H Extension Mt Range results (^{NFA} BLM)	1960-1964 (4)	6.4	2.1	
I Other jobs and training (Statistics)	1931-1935	<u>5.7</u>	<u>1.9</u>	
		82.7	27.3	
II Foothill Ranges				
A Exploratory work; problem analyses	1931-1935 (4)	8.1	2.9	
B Western Range Survey	1937-1938 (1.5)	4.0	1.3	
C San Joaquin Exp. Range program	1936-1949 (13)	2.5	0.8	
D Cooperation Agr. Adjust. Minn.	1940-1943 (3)	<u>2.1</u>	<u>0.7</u>	
		17.3	5.7	
Grand total		100.0	33.0	
O Incompleted studies				

Mountain ranges

Tree reproduction 1931 - 1938

Search, estab. BSER 1932 - 1935

Assignment to Mt Range 1934

Problem analysis NE Cal 3. 1939 - 1941

BSER

Study plans 1934 - 1935

Studies (Timber) 1. 1936 - 1953

Studies (Timber-meadow) 5. 1942 - 1950

Bitterbrush 4. 1940 - 1943

Other special jobs

Postwar planning #14,15 1944

Water level meadow types #13 1941

Coop F&G Interstate study 1943 - 1949 (1mo)

3 stop method Parker W.O. 1948 - 1955 (1mo)

Statistical training 1937

Artificial reseeding 5' 1945-1946...64

Harvey Valley pilot test

Survey plans 6 1948-50

Program 7 1951-1959 then Radar

Game-brake Coop F&G. 7' 1951-1957 then Radar

Susanville Research center 8 1956-1959 then Radar

Studies related R.R. grazing 1960 - 1964

Extension R.R. grazing FS. BLM 9 1960 - 1964

Foothill ranges

Exploratory surveys, search 1931-1933

for exp. area site, size-up probs

Veg, growth, develop. survey 1931-1933

San Joaquin Range Survey 1933-1935

San Joaquin program

Program analysis-extension 1931-1948

Extension

\$20 Statistics (Nevada) \$20 1945-1948

\$5,8,4. Pubs (gross key, ^{potability}, animal type) 3. 1939-1942)

Western Range Survey 2. 1937-1938

\$10 Coop. AAA 4. 1941-1945

Research by Periods (All time)

Period	No Span Years	Assistance Man months per year BSEIR & H.V. studies	Subject
1 1931-1933	2.5	■	Problem analyses (Mt & foothill ranges)
2 1934-1935	2.0	14.0	Establishment experimental range (BSEIR) and study plans (Mt ranges)
3. 1936-1939	4.0	36.0	(1. Research BSEIR) → Western Range Survey Problem analyses (Mt ranges)
4. 1940-1950	11.0	1.5	↓ Research coordination timber- madden grazing Bitterbrush ↓ Coop Fish & Game and other. ↓ Coop AHA ↓ Artificial reseeding
5. 1951 - 1959 (9.0)	1.0		(2 Harvey Valley pilot test) ↓ Game-browse Calif Fish & Game ↓ Susanville Research Center
6. 1960 - 1964	■		Extension RR grazing Mt. range management studies Bitterbrush

Principal studies and status at The
 (B) Burgess Spring Exp Range

Studies (also see bitterbrush studies)	Status " 1964	Publications as, reports to date
---	------------------	-------------------------------------

1. Effect cattle grazing on tree reproduction. Terminated 1938 BSR #
- (2) Effect logging and harvest regeneration on grazing capacity Not completed Pub # 6
3. Effect cattle grazing on grazing capacity Completed Pub # 73
- (4) Cattle grazing habits-range use Not completed Pub # 73
5. Plant phenology, weather (records) Completed Pub # 73
6. Soil and water use by cattle Completed Pub # 7 Bentley
7. Cattle weight trends in relation to plant development Completed Pub # 73
- (8) Coordination grazing in timber and meadow types (Effect of moving cattle) Not completed Pub # 73, HVR # 2
9. Effect of defoliation on forage species Completed Pub # 73

✓ BSR = Burgess Spring Report } In Station files

HVR = Harney Valley Report }

Pub = Publication printed or duplicated and distributed outside Station.

(C) Bitterbrush Studies and Status

Principal studies

Status

Pubs & reports

1964 to 1964

- ① Ecology and management Not completed Pub #11
- ② Effect of forest regeneration
on growth and reproduction (BSER Not completed none
study).
3. Method of measuring utilization Completed Pub #12
- ④ Seed germination Not completed Pub #11

Estimate of manpower needed
to complete measurements

Study	Man months (All ALH)
10	
1	1.5
2	0.8
3.	none
4.	none

Compilation and computing help needed in
addition

(F) Harvey Valley Studies

Time by periods

1948-1950

All %
of ave. yr.

Assistants
Man months
per yr.

1. HV surveys and plans

(31)

0.7

2. Other studies

69

100

1951 - 1959 Study period

1. HV management &

measurements (^{first} in 1954)

(45)

2.7 (^{first}
1954)

2. Other studies - jobs

a) Game-browse (1951 start) 20%

b) Administration SEC (1956 - 15%

c) BSER

17

d) All other

3
100

1960 - 1964 Extension HV program

1. Methodology studies

(17)

none

2. Local extension HV program

6

3. Other (Ext NPA, BLM
Bitterbrush etc.)

67%

100

(F) Harvey Valley Studies and Status

Principal studies

Status Pubs & reports

1964 to 1964

(1) Effect grazing on regeneration
and grazing capacity

- a) Trend on Harvey Valley Allot Not completed HVR (#1)
b) Trend on Poison Lake Allot " " " " "

(2) Effect rest-rotation grazing

on livestock production Not completed HVR #3
Harvard 1960

(2a) Effect of moving and

handling on weight gains Not completed HVR #2

(3) Methodology

a) Appraisal range trend Not completed -

b) Determination grazing capacity Not completed -

c) Getting reliable livestock
weight-numbers of animals
and handling

Not completed -

*Study Priorities
(going work)*

*(Completion Time
through manuscript)*

Alt Assistants

<i>Field Office</i>	<i>Fk Office</i>
<i>2 lab.</i>	<i>1 ab.</i>
<i>MMos</i>	<i>MMos</i>

1. HV3g Method of appraising trend		0.8	1.0	— none —	
2. HV2g Effect moving and BB handling cattle		none	2.0	none	2.0
3. Bitterbrush 2. Forest regener- (pt) ation on growth Pt		0.8	1.0	none	1.0
4. Bitterbrush 1. Ecology and (pt) management Pt		1.5	2.0	none	2.0
5. HV3c Reliable cattle weights BB		none	1.0	none	2.0
6. Bitterbrush 4 Seed germination		none	2.0	none	1.0
7. HV3b Method determining grazing capacity		2.0	2.0	none	2.0
8 B4 Cattle grazing habits		none	1.0	none	1.0
9 B2 Logging and forest regen- eration on grazing capacity		1.0	2.0	6.0	6.0

Other

Completion Time

ALH Assistants

F O F O

← Man months →

*1. HV 1026 Range trend
on Harvey Valley 1.0 1.0 1.0 1.0*

Publications and reports

(By A.L.H unless noted otherwise)

Projects and studies

Publication or report

I Mountain Ranges

number

A. Exploratory studies & surveys

Pub #9

#21, #22, #23

B. Burgess Spring studies

Pub #6, #7 Barley, #17, #19

C. Bitterbrush

Pub #11, #12,

D. Artificial reseeding

Pub #24

E. Game-browse

F. Horney Valley pilot test

G. Other

Pub #13, #18

II Foothill Ranges

A. Exploratory studies & surveys

Pub #4, #5, #8

B. Western Range Survey

Pub #1, #2, #3

C. San Joaquin Exp. Range program

Pub #20

D. Cooperation Agt. Adjust Admin.

Pub #10, #16

III General State-wide

Pub #14, #15

(B) BSER Studies

Time by periods

Time

All % of Assistants
ave. year Man months
per are yr

1934-1935 Establishment BSER - timber range

1. Plan and construction facilities	23	(14.0)
2. Study plans (1935)	35 - 58	none
3. Other studies (annual type)	<u>42</u>	
	100	

1936-1939 (4 years) Principal field measurements - 1935 Plans

1. Measurements and supervision	(32) (mostly 1936)	(36.0)
2. Other (Stat. WRS, prob analyses)	<u>68</u>	
	100	

1940-1950 Expansion of programs to include meadow type.

1. 1935 Studies (compilation, analysis) ^{measurements 1946}	14	1.5
2. Coordination timber-indw. gr. 20 -	34	none (1.5)
3. Other	<u>66</u>	
	100	

1951-1959 Compilation and analysis primarily

1. 1935 and later studies	17	(1.0)
2. Other	<u>83</u>	

1960-1964 Publication	3	none
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Distribution Hormay Time on Range Research

July 1 1931 to June 30 1964

By Periods

Introduction

Range division of California Station established July 1 1931. M.W. Talbot, leader; F.G. Renner and A.L. Hormay assistants. See next two pages for purpose of research and appropriations.

Period 1. July 1 1931 through Dec. 1933 (2½ years).

Problem analyses, and search for experimental areas in both mountain and foothill areas by MWT, FGR and ALH

Time distribution (ALH)

Mountain Ranges (NE California Time % work Status of Publications,
Plumas, Lassen, Modoc NF's) reports ✓

Livestock grazing-free reprod and problem analyses	11	Terminated	—
Search for exp. area	<u>2</u>	Completed	—
	13		

Foothill Ranges (San Joaquin Valley)

Problem analyses and range

Surveys San Joaquin Valley	58	Completed	P*
Search for exp. area	<u>23</u>	Completed	—
	81		

* P=publication R=report Cont'd

Period 1 Cont'd

	Time % Status of Publications	
	work	reports
Station projects		
Copeland and Public		
Domain reports	6	Completed
<u>Grand total</u>	<u>100</u>	

Period 1

Technical assistance - Mountain Ranges

Job	Personnel	Total Man Months
2	J. R. Bentley, H. Biswell, I. Johnson R. Klugh, J. Parker	
	(Sept. - Nov. 1934)	12
3.	George Fisher, Irwin Johnson	6
	(October - Dec. 1933)	

Hornay time

Period 2 Jan 1 1934 through Dec 1935 ✓ Establishment

A.L.H made leader, mountain range project Sept. 1933

FGR " " Scott Hill " " " "

Mountain ranges	Time %	Status of work	Pub & reports
-----------------	--------	----------------	---------------

Located, planned and established the Burgess Spring Exp Range ²	23 (14) ³	Completed	3
Study plans for BSER	35	Completed	58

Foothill ranges (San Joaquin Exp Range established by Penner)	42	Completed	42
San Joaquin range survey			

✓ CCC, WPA era

✓ Experimental facilities built largely by CCC

✓ Technical assistance in setting up facilities and
making maps and inventories - man months per year

Period 2

Technical Assistance - Mountain Ranges

Daniel-Ebels

Job	4	5	3	4	1935
-----	---	---	---	---	------

3	Daniel, Bentley, Short Gardner	1936
27418 (45)	4 5 9 9	

22418 (40)	10	Turner 2	10	1937	Short Last Stadium
------------	----	----------	----	------	-----------------------

20418 (38)	10		10	1938	
------------	----	--	----	------	--

16 (16)	16		6	1939	Left July Stadium
2 (7)	2				1940

4	36	11	35	
---	----	----	----	--

Total 86.0

Temporary help - students

$3 \times 6 = 18$ man months in 1936, 1937, 1938

$18 \times 3 = \underline{\underline{54}}$

Technical assistance - Foothill Ranges

Job	Personnel	Total Man Months
2.	J E Bentley, L R Short, I Johnson J Magee	48
3a	Johnson, G. Fisher, R Klugh	4

Date started work at Experiment Station

April 1933 G. Fisher Temporary

June " " I. Johnson, R Klugh

Nov " " J E Bentley

" " " L R Short

Dec " " J Magee

June 1934 H. Biswell

" " J Parker

June 1935 T W Daniel Temporary

" " A Schulze " "

" " R Gardner

Period 3 Jan 1 1936 through 1939 (4 years)

Active research started on both mountain and foothill ranges in 1936

Mountain ranges

	Time Alt % Assists M/Mos/yr.	Time Alt Mmos by years			
		1936	1937	1938	1939
BSEE Studios	37 36	(11.0)	0.8	2.0	2.0
Problem analysis	15 -	-	-	-	(6.0)
Statistical training to Seminars	<u>14</u> - 61	(4.0) Stat.	0.5	2.0	

Foothill ranges

SJER range program

analyses, extension 6 0.5 0.5 - 2.0

Western Range Survey
(1937-1938)

33 (6.7) (9.0)

39 Other 0.5 0.5

Grand total 100 12.0 12.0 12.0 12.0

Period 4 Jan 1 1940 Through 1950 (11 years)

1935 BSER studies inactive from 1940 through 1945 because of lack of technical help. Resource problems analyzed further for studies that could be handled by ALH alone

Time

Mountain Ranges	ALH %	Assists M/Mos/fyr
-----------------	-------	----------------------

1 Problem analysis	4	-
2 BSER studies (1946 on)	14	1.5 students
3 New studies		

a) Coordination timber-meadow grazing	20	-
(Chaco)		

b) Bitterbrush ecology ("")	9	-
-----------------------------	---	---

c) " " utilization ("")	4	-
-------------------------	---	---

d) " " seed germination ("")	8	-
------------------------------	---	---

e) Coop projects State Fish & Game, Lassen NF, N.O and others	9	-
--	---	---

4 Harvey Valley pilot study (Plans 2 Surrey 1948)	8	
--	---	--

5 Artificial resodding (1945)	7	0.2 students
-------------------------------	---	--------------

6 Extension Mt Range program	6	
------------------------------	---	--

89

Foothill Ranges

5 JER program analysis, ext.	5	
------------------------------	---	--

Cooperation AAA (1944)	6	
------------------------	---	--

11
100

Grand total

Period 5 Jan 1 1951 Through 1959 (9 years)

All but BSEER studies completed or inactivated by 1951
and ideas on rest-rotation grazing well formulated. Harvey
Valley pilot management started 1951. Mountain range
project assigned L. Rader 1960 J. Report 1962

Mountain Ranges Time Assists

Alt % 11 mos/yr

BSEER studies	17	1.0 Students
Artificial reseeding	1	
Other jobs Coop WO RECET	1	
Harvey Valley pilot test	28	2.5 (1954 on) Coop Larson 50%
Extension H.V. program	17	
	64	

Other

Game-browse (Coop F&G) 1951 21 Project to Hubbard
Inve 1957

Susamsville Research Center

administration (1956-59) 15 —

36

Grand Total 100

E.J. Woolfolk Dir. chkd. 6/17 1955

R. Arnold Director July 1957

Harvey Valley Project

Labor Man months work by assistant

			Total
			F
1.0	1953		0
0.5	1954	Bell (modestive) Sanderson 2.5	2.5 1.0
	1955	" " 3.2	2.7 0.5
1.0	1956	Sanderson, Anderson 10 sssre	2.8 2.0
		Van Zandt	1.0
1957		Ratliff	3.0
		Jessop, Sanderson	1.5
1958		Caldwell Monroe	3.2
1959		Howard	1.5
		Ratliff	0.5

Period 6 Jan 1 1960 - June 30 1964

Mountain Ranges	Time	ALH %	Assists <u>(none)</u>
BSER studies (publication)	3		
Bitterbrush ecology - germination	20		-
Artificial reseeding	4		-
Harvey Valley studies			
Methods appraising results	17		-
Extension results (local)	6		-
Extension rest-rotation grazing			
NFA regions, BLM	<u>50</u>		-
Grand total		100	

Time ALH on Main Studies

1931-1964

Time

B Burgess Spring studies Research	Field	Office	Extension and administration	% of ave year	Yrs 1931-1964
	10.0	10.0	4.3	10.0	3.3
	Total			24.3	8.0

F Harvey Valley pilot test

Research

Field	6.0	2.0
Office	6.0	2.0
Extension and administration	6.2	2.0
Total	18.2	6.0

1928 Continuad

New personnel

C J Krabbel

C L Hill

M R Brundage } office of products

W C Lowdermilk

1929 Report

New personnel

H L Person Forest Insects Cooperator

E E Horn Biological Survey

Earl Morrow Feather River Br.

C P Oar State Board of Forestry

1930 Report

New personnel

H L Sandling Asst Silviculturist

A A Hesch " " "

I J Mason " Forster Products & Utiliza.

G R Strubbe Tech Asst Cooperating

1931 Report Mar 2-4

New personnel

V. A. Clements

H. L. Person

L. H. Reinke Conservation

G. M. Gann Fire

A. H. Brown "

J. R. Curry "

1932 January 18-20

New personnel

D. M. Ich

A. Lewis Typewrap

H. W. Talbot

F. G. Ranner

F. L. Conner Business

A. L. Hornay

Elsay Smith

J. D. Sinclair

P. B. Rose

First work in annual type to be in San Joaquin

Soothills - Congressional commitment

Objective proper management of grazing

to contribute most to livestock industry and
maintain and use resource

Pine ranges same general objective plus grazing
in timber types.

1933 Report Mar.

New personnel

W. Hollin

E. L. Hamilton

Pine project

Census Region - Station look for
work center in Eastern Lassen Co

Long Canyon Plots established 1931 by Plumas

Badger Mtn " " " by Modoc

Problems

Grazing - pure reprod tackle first

Bitterbrush proper management

Dry mountain manzanita " "

1934 June 20

New personnel

CC Buck

AC Coleman

JR Bentley

HA Fowells

Rossel Baker Herford Garland

Clark Gleason H. R. Josephson

Jerome Horton

P. Klugh

Herbert Jensen

Leslie Lloyd

Irwin Johnson

John Magee

Laurence R. Short

1934 Report Continued

SJER established by purchase of The
Liscomb Tract (private land) 3500 acres, on
May 17 Construction started Today after
purpose S.R. Survey

Foundation for long time grazing expts.
Survey in progress

Pine

BMT exclusives secured - Oct. 1933

Suggested - grazing management be directed
to grazing units (sagebrush, timber, meadow
types) not limiting resort too closely
to grazing - timber reprool.

1935 May.

BSEB established - Pine planted in fall

Assignment Talbot, Horner, Bidwell, Parker

SJER Facilities completed - Beginning grazing in fall

San Joaquin Range Survey about completed
- Field work. Short Bentley, Johnson, Megea
Romnes, short Hugh Johnson

1936 Report - and 1937 (combined)

(SJER First grazing also at 13SER)

13SER

1936

5627 seedlings (pine) germinated

436 survived a year later

Mortality drought, insects, frost.

1.06% killed by cattle only 0.73 by
grazing.

Talbot, Nelson, Bowell SJER

1938 - No comment ALH, JRB 13SER Summary results

1939 Pine ranges Febr 1940 SJER Biswell
13SER JRB

Effect forest regeneration on grazing

capacity - a problem.

Clear that an adequate problem analysis

not made to date Still grazing

Problems analysis urged in Jan. by region -

station group

1940 - Jan 1941

SJER Biswell, Bentley

13SER Horney

1941 Jan 1942

Season of use - results

Bitterbrush study needed.

Expand to include meadow types

Ldg history

Deer use measured (winter) Moltoc

1942 Jan 1943 ALH

Reseeding Dry Lake, Normal Flt

Bitterbrush Ldg history

AAA Coop ALH

1943 -

1944 - Feb. 1945

Bitterbrush utilization technique used in
interstate deer herd study - Study planned by
ALH

Post war planning job 3 months
(AAA assistance page 19)

Jan '46

1945 SJEB JRB

Imp.

(Artificial reseeding Started in August 1945
Turned over to Cornelius by Jan 1946

Hornay Activities F.S. research

- 1931 - Started work for F.S. Exp Sta Berle
- 1931-34 Annual type range studies
- 1935 Placed in charge perennial-type mountain range project
Established BSER and studies program - aimed primarily at developing proper grazing management methods
- 1937-38 In charge Western Range Survey
- 1940 Start bitterbrush studies
Range management techniques
a) Coop. Calif.-Oregon F.E.C.
Inter-state deer herd studies - 1943+
- b) Game browse - Ptman-Peterson 1952-1957
- 1941-45 Coop. AAA - utilization standards
annual type ranges
- 1945-46 Artificial range, mountain ranges - then to ARS
- 1948- } Developed theory RR grazing
1951 - } Set up H.V. pilot test.
- 1956-59 Custer Leader SPC
- 1960 - Extension RR grazing
- 1963-to date Intensive training F.S. 13217 others
in RR grazing management.

Assoc. Tappot Renner.
Fisher George Biswell
Johnson Hap Arnold Schultze
Jerry Rikay Klug, Dick Gano-Zumwalt
Ranger Bentley Oct 1933
Short. Oct 1933

Start SSR's.

{

Mar. 2/33

Bentley short to Clark
etc

Toured S.J. valley for survey
Range Survey previous.

Bentley
Short

Meyoea

Jan 10

Both crew

Short - Johnson -

Bentley - Meyoea

May 1934 Scouted MT Range for E Range
Halls 174 BMT.

135ER Locations established Aug 8 1934
Signed 18/35
May 17 1936 TW Daniel to BSER.

June 19 1935 Prodded Bantley and
Tiv Daniels arrived Halls Flat.
Started fence location BSER
Janes so was me.

July 3 1935 Bantley arrived Halls

Flat. Daniel and I

welcomed Sam Bulgar man of
that country.

Aug 3 1935 Short arrived Halls Flat
(BSER)

April 26/36

Gardner, Short arrived Halls Flat
to work for season

May 17/36 Tiv Daniels ^{water, soft roaches} arrived at

HF to work for season

Aug 20 Started Bantley on BSER
work Instrumentation BSER
Clipping Pt.

Grazing habits cattle
Bantley

Names 1936

William Gansberg }
Dohnon B. Gish }
Harold McRutt- }
Jane Warren }
Wayne Gray }
Temp
Field
Assist.

Ken Tabor

Sorenson F14

1937 → Richard Kluck
Moss
Marshal

Les Lloyd. FM.

Billy Fair (said poisoned)
Jan - Apr 18 Wash DC. std from
June 1937

Now picking San Benito
Divide to to Britt by 1941

I was on WRS. San Benito C

Studies.

July 27 1965

Date

Hornay

Started

Bitterbrush

1942 ✓ 1. Seed germination

1934 ✓ 2. Growth and reproduction BTH Excl.
and management

1935 3. " " " " " BSER

1931 4. " " " " " Portola
Plumas Long Canyon

1945 5. Scrubification plots Observations on side

Effect logging on grazing capacity

1935 1. BSER pasture 1. E. Change req.

1935 ✓ 2. BSER pasture 2 W. " "

1938 3. Long-square plots

Livestock

1944 ✓ 1. Accuracy cattle weights BSER, H.V.

1944 ✓ 2. Effect of moving cattle " "

1935 3. Trend cattle weights in relation plant growth

stage Management of grazing

1959 ✓ 1. Method of measuring trend H.V.

2. Method of measuring yearly
variations in herbage production HV

✓ 3. Method of appraising grazing
capacity - (range use) H.V.

Studies continued

1. Grazing on regrowth - related to species, plant growth stage and soil moisture.
2. Effect grazing on plant vigor and seed production - related to species
3. Predicting herbage yield prior to growing (grazing) season
4. Predicting plant growth stage
5. Effect litter in striking growth (monoculture)
6. Effect release of competition by spraying etc.
7. Use of wasted fields by wildlife
Plants - forage, cover.
8. Effect R.R. management on tree reproduction
9. Effect natural and mechanical "trampling", pitting, harrowing etc on raptor establishment.
10. Reason little Ei repeat in NET types.

Studies cont'd

- 11 How appraise grazing capacity from regulation - density of forage by veg. types - standard tables
- 12 Evaluation of sites for cultural practices
13. Viability and germination of native species
14. Yield of herbage per unit - native and other species - standard tables
15. Animal unit ratings - animal husbandry.

Notes Mt Range Project
(From diaries)

Jan 29, 1980

EAA

1953

June 9, 10, 11 Stakeed RC&T transects in Harvey

Valley with Shuman, Fontaine

June 18. Visited Starkay Exp. Range LeGrande
Oregon.

" 19 Reseeding Pt, browse on Boise Front
R. Holmgren, R. Casebeer T Murray - Idaho

Oct 12, 13, 14, 15 With K Shuman, Al Fontaine and

Chester "Zeb"?: established approx 90

RC&T transects on Harvey Valley and
Poison Lake Allotments. Took B&W
and color photos.

Dec. 1 Walt Wetzl died today

Dec 16 Observations on Gray Valley

1954

May 26 Established RC&T transects in H.V.
with Shuman & Fontaine

June 7 Weighed 73 head Poison Lake Allot.

weaner steers on Joffeau scales

at Butte Grade Ave wt 373 lbs/hd.

①

Notes Mt Range Project Jan 28 1980
G.H.

1954 Cont'd

June 8

Weighed Clayton cattle

June 10

Weighed and described H.V.
experimental cattle with T Clayton
Joe Flynn DR and "Archie" rider.

" 11

Renegad cattle

Located experimental enclosure
sites in H.V. with J. Flynn DR

" (18

Sta. Director

Jamison

on
trip

Met with Gamma Browse group at
Quarantine Station, Modoc (Tule Lake)
and discussed GB work at
Flukay Sprg. enclosure and Casuse Mt
To Doyle with group

19

20 J. Bell, student help, arrived BMT Br.

July

6-7 Visitors from India at BMT Br

Foresters Patil and Dabaghao

Oct 9 Weighed cattle at Jasfcoat
corrals

(2)

Notes Mt Range Project Jan 28 1980
(From diaries) Off

1955

June 18 Moran Wyoming at Western Asso. Game Commissioners Meeting. Field trip to Gros Ventre's drainage Teton NF see elk range problems. Enclosures

July 25 First float trip with E J Woolfolk -to BM Br. H.V.

July 31 Operated for appendicitis Riverton Hospital, Sewardville about midnight.

1956

June 11 Located and staked (DYU) line transects, Sanderson, Sherman, Fontaine " "

17 Woolfolk

June 19, 20, 21 Instructor Ranger School BM Br.

Oct 8 Cuskelly, Maw and Jacobs HV program on site

Oct 1-15 Establishment Sewardville Research Center

Notes Mt Range Project Jan. 28 1980
(From diaries) OTT

1957

- June 6 outlined H.V. field program to Bill Sanderson and Ray Ratliff.
- June 8 with DR Ralph Lassel located areas for spraying in H.V.
- May 21 Distinguished Service Award Wash. D.C.
- Sept 18 H.V. program to Hallie Cox Tropicana N.F.
Riaz Rahman Forester Pakistan, Davis Hayes N.O.

1960

- Nov 14 To Sequoia NF Porterville office
Discussed 5 day trip to see allotments
with Cooper Smith starting Nov 28
- Nov 15 Worked on report R-6 Oregon trip
Oct 12-14 /60
- Nov 17 Discussed Tucker allot problem with
Elmo Brough and Don Euler at
Dry Lake Guard Station Modoc
- July 22 End Oregon trip with Goo Leg Lakewin
after Silver lake stop with Reba Long

Note Mt Range Project

Jan 30 1980

Ott

1963

Aug 15 With E Angwin DR Mohawk Station
plumas located MC plot site (Pt steady)

1964

Sept 22-25 First BLM RR session

Elks Club meeting room Boise

1968

Aug 2 First trip to Dave Little (Indian Lake
Allotment)

Nov. 3, 1995

Hormay Chronology Range Management Research

Worked at The California Forest and Range Experiment Station Forest Service CA. Station renamed Pacific Southwest Forest and Range Experiment Station on July 1, 1926

Date Subject

Civil Service Examination

1926 July 1 California Forest and Range Experiment station established

1931 June 23 Took Civil Service Examination
July 1 Started working at the Station.

Sept 16 M W Talbot arrived to head the Range Division

August Plumas Long Canyon Plot Tree reproduction

Sept 1 Foothill Ranges

① Scout for.

Hornay Chronology

Date	Subject
1932	Plumas Long Canyon plots Foothill ranges
1933	Blacks Mt Exp Forest Tree reproduction Foothill ranges San Joaquin range survey
<u>1934</u>	<u>located BSER site</u> July plan. Construction management facilities. Pasture 1 fenced. Established study plots
1935 70 motion to Assistant Forest Technologist P.L. \$2600 a year	Jan Joaquin Range Survey <u>First measurements BSER</u>
<u>1936</u>	
1937	BSER Foothill Ranges Western Range Survey (WRS)
1938	BSER WRS
1939	BSER Problem Analysis Northeastern California, WRS.
<u>1940</u>	BSER Timber-Meadow study <u>(BSER timber - San Joaquin Valley meadow)</u> - <u>Bitterbrush ecology</u> 2

Harmay Chronology

Date	Subject
1941	Bitterbrush Timber-Meadow (Squaw Valley) Problem analysis BSER Foothill ranges
1942	Bitterbrush, T-M Squaw Valley Other
1943	Bitterbrush, T-M Other
1944	" " "
1945	T-M Squaw Valley Re-seeding
1946	Game Browse T-M Squaw Valley Re-seeding
1947	T-M Squaw Valley Re-seeding
1948	T-M Squaw Valley Clipping study Re-seeding Survey HV Pilot RIC demonstration

Hornay Chronology

Date	Subject
1949	BSELR clipping, phenology Dry year
1950	BSEL Clipping H.V. Planning
1951	Gass Valley Clipping Hawing, phenology dc
1952	Gano-Browse Holes Clipping HV Planning
1953	Gano-Browse HV Plots, transects
1954	Gano-Browse HV Plots, transects
1955	H.V. Operation ? " Transects cattle vs Gano-Browse
1956	H.V. Transects clipping Cattle Nts
1957	H.V. Gano-Browse

Hornay Chronology

Date	Subject
1958	HV Sams-Brown RR Extension, Training
1959	H.V. Other
1960	H.V. Other
1961	PT Blacks Mt. Other Extension Training Sessions
1962	Extension Training Sessions
1963	PT Blacks Mt., Thomas
1964	Extension RR Training Session - Regions 1, 2, 3, 4, 6, 8