UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

RR
Pine Ranges

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Some

STATISTICS

of

Pine Range Research

by

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Index

		Page
1.	Areas	
	Exposures of Pasture I, BSER	1
	Pastures of BSER	2
	Types of Eastside Region	3
2.	Cattle	
	Grazing periods on BSER	4
	No. and class on BSER	5
3.	Climatic instruments at BSER	6
4.	Clipped plants at BSER	
	1936	7
	1937	8
5.	Collections — BSER and vicinity	9
6.	Distances at BSER	10
7.	Distances from Black's Mountain	11
8.	Elevations on BSER	12
9.	Fences at BSER	
	Construction and materials	13
10.	Pine range research terms	14 to 15
11.	Pine range tracings	16
12.	Quadrats on BSER	
	No. Seeded	17
	Numbers and areas	18

Exposure Area

Pasture I. B.S.E.R.

	Acres	% Exposure of entire pasture
East	41.93	7.8
Southeast	237.89	44.3
South	125.11	23.3
Southwest	103.83	19.3
West	28.24	5.3
	537 acres	100.0

Areas of Pastures

B.S.E.R.

Pasture I		
(exclusive of meadow, lane, corrals, water exclosure and fenced plots)	535.6	
Lane, corrals, and water exclosure	2.5	
Fenced Plots (1 ch. sq. & 210 16½' sq. plots) approx.	1.4	
Meadow	11.8	
Pasture I		
(including meadow, lane, corrals, water exclosure and fenced plots)		551.3 acres
North half, enclosing random quadrats, (excluding lane, corrals and water exclosure)	268.8	
Pasture II		597.1 "
Burgess Spring Experimental Range		1,148.4 "

Area of Types

Eastside Region, California

Type	Acres
1. Timber	3,621,900
2. Other types combined (Sage, pinon, grassland, barren, etc.)	8,436,000
3. Lakes	586,500
Total	12,644,400
Timber and other types	12,057,900

Grazing Periods and Dates

B.S.E.R.

	1936	1937
Cattle entered	June 19	June 14
Cattle left	Sept. 25	Oct. 3
Length of grazing season	~~97~~ 99 days	111 days

Number and Class of Stock

B.S.E.R.

	1936	1937
Number of cattle	15	16
Class		
Yearling steers		4
Yearling heifers		4
2 year-old steers	15	4
3 yr.-old dry cows		4
Breed		
Hereford	5	16
Angus	5	
Shorthorn	5	

Climatic Instruments

B.S.E.R.

		1936	1937
Porous cup atmometer	evaporation	x	
Cattle Trough	evaporation	x	x
Max.- Min. Soil Thermometer	soil temperature		
	¼" depth	x	x
	3" depth	x	
	7" depth	x	
Max - Min. Thermometer	air temperature	x	x
Hygrothermograph	air temp. and humidity	x	x
Anemometer	wind mileage	x	x
Rain gauge	precipitation	x	x
Psychrometer	humidity	x	x
Soil Thermograph	¼" soil temp.		x

CLIPPED PLANTS
BSER 1936

Species	Unit	COLLECTION No.	Dates (1936)
		Clipped for total yield	
Festuca idahoensis	Large plant	524	July 24 – Aug. 12
" "	Small "	524	" " " "
Sitanion hystrix	Large "	567	" " " 7
" "	Small "	567	" " " "
Wyethia mollis	Fascicle	410	" " " 1
Lupinus calcaratus	Plant	703	" 13 – 19
Carex (rosea?)	Unit tuft	800	Aug. 11 – 27
Purshia tridentata	Current growth	79	" 21 – Sept. 30
		Clipped for residue of grazed plants	
Festuca idahoensis	Large plant	525	October 6 – 15
" "	Small	90	" "
Total individual bags collected		4789	

N.B.

Page 8 to be filled in

Titled:

CLIPPED PLANTS

B.S.E.R.

1937

COLLECTIONS

B.S.E.R. and Vicinity

	No. specimens	No. species	Year collected
Mammals	86	15	1937
Birds	44	28	1937
Plants	158	144	1936
		26	1937
Seeds		41	1937

Distances at BSER

Around Pasture I	3.78 miles
" " II	3.83 "
" Burgess Spring Experimental Range	5.98 "

Distance to salt ground (airline)

1936	.6 "
1937	.6 "

B.S.E.R. to Red Bluff winter range 80 miles

Distances from Black's Mountain Headquarters

BLACK'S MT. STA., BSER	via Harvey Valley	21 miles
" " " " "	Exp. Forest	——
" " " Pittville		25 miles
BLACK'S MT., STA., Berkeley	via Old Station, Manton, & Red Bluff	290 miles
BLACK'S MT., STA., Susanville		47 miles

Elevations at BSER

PASTURE I.

Minimum	5680
Maximum	6180
Difference	500

PASTURE II.

Minimum	5580
Maximum	6030
Difference	450

Burgess Spring Experimental Range

Maximum	6180
Minimum	5580
Difference	600

Fence Construction and Materials

B. S. E. R.

1935

Fence built

Around Pasture I.	296 ch.
Extra around meadow	22 "
Lane and water exclosure	20 "
Around large exclosure	4 "
Burgess Spring	12.5 ch.
	354.5 " or 4.4 miles

Rolls wire

Fence (exclosure of braces etc.)	71 ± 2
Brace wires and misc.	4
	75 ± 2

Fence staples

2.1 miles,	3 staples per wire	1.7 kegs
(4 strands) 2.3 "	1 staple per wire	.6 "
		2.3 "

Posts set

BSER	2,150
Big Springs	168

1936

Protected quadrats

Rolls wire	42
Miles fence (approx.)	2.6
Posts set	840

Terms Used in Pine Range Research

Areal Mean	The average value of a continuous record.
Balsamorhiza plant (logging)	Includes all fascicles not over 6 apart at ground level.
Balsamorhiza plant unit	Fascicle
Bare soil	Is that area on which no plant was growing (excluding rock) and which was covered by a negligible quantity of organic matter.
Burned litter	Is that burned organic material under one-inch in diameter which remained on the subplots after slash had been burned.
Burned slash	Is that burned or badly charred woody material over one-inch in diameter left on the area after slash disposal.
"Choice" or "preference"	A term used in measuring relative selection of forage species by cattle, one choice being one plant grazed by any one cow or steer.
Conspicuous species	These dominant in understory vegetation, coniferous species not considered.
Debris covered	At least 50% covered with slash or logging litter.
Disturbed litter	Is that old litter which has been disarranged from its former structure by skidding or other factors attributable to logging.
Flower stage	Lasting from the appearance of first flower until first fruit is formed in juice.
Inflorescence stage	Lasting from the time inflorescence is formed until the first flowers appear.
Large plant	Referring to a normal bunchgrass tuft 1 square-inch or less in area at the base.
Logging litter	Includes all needles, twigs and chips under one-inch in diameter which have fallen on the subplot as a result of logging.
Lupinus plant	Includes all stems not over 3" apart at ground level.

Terms Used in Pine Range Research

Moisture content %	$\frac{\text{Green weight} - \text{Dry weight}}{\text{Green weight}}$
Monardella plant	Includes all stems not over 3" apart at ground level.
New litter	Includes all needles or plant remains which have fallen on soil made bare by logging.
Seed (fruit) stage	Lasting from time first fruit is formed in juice until seed starts to shatter.
Shattered stage	From the time the last ~~sod~~ seed disseminates until the end of the season.
Shattering stage	Period starting when first seed shatters and ending when last sod is disseminated.
Skidded	Practically or entirely bare.
Slash	Includes all limbs, chips, or old wood over one-inch in diameter which have fallen or have been dragged onto a subplot as a result of logging.
Small plant	Referring to a normal bunchgrass tuft 1 square-inch or less in diameter at the base.
Stalk (bud) stage	Lasting from the time buds or stalks are apparent until buds or stalks open to form inflorescence.
Typing area (logging plot transect)	At least one-tenth foot wide at point of intersection with transect line providing type area is at least one square foot.
Typing unit (logging subplot)	One square foot or over.
Unit tuft	In Carex spp., a 3/4" diam. bunch.
Vegetative (vegetation stage)	Period in which only leaves are produced, terminating when stalks or buds are first apparent as a pronounced swelling either on twigs or in the "boot."
Wyethia plant (logging)	Includes all fascicles not over 6" apart at ground level.
Wyethia plant unit	Fascicle.

Pine Range Tracings

Title	Tracing No.	Pasture	Field work
Topographic Map, B.S.E.R.	1	I & II	1934-5
Location of Sample Units	2	I & II	1935
Corral and Water System	3	I	
Corral Plan	4	I	
Road Map of Black's Mtn., Sta. Experimental Areas & vicinity	5		
Salt Box	6		
Potter Pasture	7		
Distribution of Exp., Quads.	8	I	1936
Plot grid of Pasture I	10	I	
Topography, Pasture I	11	I	1935
B.S.E.R. Roads		I & II	
B.S.E.R. Roads & Grid		I & II	
Fence & Gateway Details			
Details of Rodent Exclosure			
Garbage Pit			
Cattle Guard			
Logging-Forage Plot & Subplots		II	
Sheep Trough			
Corral Gate			
Seasonal Trends of Exp. Factors, 1936			
Location and Quadrat Numbers I			1935

Ponderosa - Jeffrey Pine Seeding

B. S. E. R.

	Quads. Seeded	Seed Spots
November 1935	83~~4~~6	60,~~000~~200
November 6 - 14, 1936	1,28~~5~~6	64,~~250~~300
December 18 - 21, 1936	95~~7~~8	47,~~850~~100

Quadrat Numbers and Sizes

B.S.E.R.

	No. Quads.		Year Establ'd	Size	Method
Pasture I — Permanent Plots					
Exclusive of lane, meadow and climate exclosure	827		1935	3.3'x3.3'	Systematic
In lane, meadow, & climate exc.	19		"	" "	"
Fenced (excl. of " " ")	210		"	" "	"
Total in north 269 acres	443		"	" "	"
Fenced(" " ")	109		"	" "	"
Total quads. est. 1935		846	"	" "	"
Total quads. est. 1936		849	1936	" "	Random
Total quads. north 269 acres		1,292			
Total quads, Pasture I		1,695			
Plots est. around 1935 quads. if area contained any shrubs			1936	16.5' x16.5'	Systematic
Exclosure		1	1936	66'x66'	
Pasture I — Temporary Plots					
Clip Plots		101	1937	3.3'x3.3'	Random
" "		101	1937	.41' x 26.40'	"
Pasture II — Permanent Plots					
Logging - Forage		6	1935	2½x5ch.	Systematic
		305	"	1.65x6.6'	