

DIGEST OF IMPORTANT FINDINGS

(Resulting from a reconnaissance survey of rates of ecologic changes in back-country meadows of Sequoia-Kings Canyon National Parks in 1958, including recommendations)

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Paradise
Jct
South Domes

1. Rate of forest invasion, weed invasion, and of erosion of meadows under natural (unused) conditions. Practically nil.
2. Rate of forest invasion of meadows in problem areas. As result of overuse and erosion at altitudes about 6500-8000 feet invasion by lodgepoles can become variously completed within a period of from 20 to as little as 14 or 12 years. Paradise Valley Lower Meadow has in one very significant portion become completely invaded only within the last 12 years. Junction Meadow on the Kern has become fairly well overrun only in the last 12-14 years. These invasions are vigorously continuing. Along the borders of several meadows (Vidette, Scaffold tourist pasture, Hockett, Sand, and South Park Meadows) invasion abruptly initiated 58 to about 35 years ago could easily be provoked to begin rapid forward advance.
3. Rate of weed invasion of meadows in problem areas. False hellebore is the most important species in this regard. Rather complete invasion of meadow by this species can be attained in about 10-14 years (Castle Domes Meadow).
4. Rate of erosion of meadows in problem areas. Although this is a most difficult figure to come by without means of catching and weighing solids from measured areas during times of heavy runoff, this much can be said: (1) In a heavily used and trampled wet meadow (Charlotte Lake Meadow) a very rough estimate of some few but very important inches of topsoil loss for the meadow as a whole during the last 18 years may not be unreasonable; (2) in Sequoia-Kings Canyon National Parks the aggregate total of meadow trampled out of existence into mud by heavy use of trails through them during one wet season must in terms of acreage be very considerable (see miscellaneous recommendations).
5. Closely approximate time required for essentially complete recovery of meadow from overused conditions when meadow is closed to all grazing.

Meadows at	6000-7000 feet	altitude	6-8 years
" "	7000-8000	" "	7-10 "
" "	8000-9000	" "	9-12 "
" "	9000-10,000	" "	10-14 "
" "	10,000-11,000	" "	12-15 "

6. Condition of meadows in 1958 under the varying degrees of protection now being provided. (Including recommendations)

(1) Bubbs Creek Area

Vidette Meadow. No headway to improvement; on the contrary strongly deteriorating but as yet still intact. Apply and enforce more stringent restrictions on all grazing.

Charlotte Lake Meadow. (first meadow below Charlotte Lake.) In very bad state. Close immediately to all grazing.

Bullfrog Lake meadows. Close area around inlet to Bullfrog Lake to all grazing.

East Lake meadows. Adopt Sumner's recommendations to improve access to forage at Ouzel Meadow and institute restrictions on its use.

Junction Meadow. Close to all grazing until recovery, then open to limited use. Adopt proposal, already made by others, for a Charlotte Creek Trail.

Charlotte Meadow. Has completely recovered.

(2) Upper Kern Area

Junction Meadow. This meadow is in very critical condition, and prompt action is needed if we are not to lose it altogether in the next ten years. Close immediately to all grazing. Remove all lodgepole invasion. Pile trunks and slash on eroded banks.

Timberline Lake Meadow. In very bad condition. Close to all grazing.

Crabtree Meadow. In good condition.

(3) Rae Lakes Area

<u>Rae Lakes meadows.</u>	In fair to good condition
<u>Sixty Lakes Basin.</u>	" " "
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(4) Simpson Meadow Area

Simpson Meadow (including Goddard Pasture). In good condition

(5) Paradise Valley

Lower Meadow. In very bad condition. Close to all grazing. Remove lodgepole invasion (began 12 years ago). Effectively plug erosion gully situated at site of invasion.

Middle Meadow. Strongly deteriorated but not as badly as Lower Meadow. Close to grazing pending recovery, then restrict to and enforce limit of one-night stay.

(6) Roaring River Area

Scaffold Meadow tourist pasture. Has attained a moderate but still insufficient degree of recovery. Enforce the present grazing limit.

Grave Camp meadow. In good condition

Cement Table meadow " "

Big Wet meadow " "

(7) Dusy-Palisade Creek Area

Grouse Meadow. Shows in spots moderate recent invasion by lodgepole and falsehellebore, but body of meadow is in good condition.

Little Pete Meadow and Big Pete Meadow. Show in spots moderate recent invasion by lodgepole and falsehellebore, but are otherwise in fair condition.

Meadows in Upper LeConte Canyon. In fair condition.

Palisade Creek. Stillwater Meadow: practically all woodland now, but forage is in good condition where it exists. Deer Meadow: in fair to good condition.

Dusy Lakes meadows. In fair condition for the high altitude.

(8) Evolution Area

Colby Meadow. In fair condition only.

McClure Meadow. In poor condition owing to heavy use "too early in season". Meadow was flooded until about August 1st. Share more use with Evolution Meadow.

Evolution Meadow. In good condition.

(9) Woods Creek Area

Castle Domes Meadow. In fair condition but very large portions wholly overrun by rapid and vigorous invasion of falsehellebore within last decade or so. Remove, with mattock, roots of invading false hellebore.

Woods Lake meadows. In fair condition.

(10) Hockett Area

Hockett Meadow, Sand Meadow (and Mitchell Meadow).
All in fair to good condition.

South Fork Meadows. Decimated by floods of winter 1955-56,
but on intact portions forage is in good condition.

7. Miscellaneous recommendations

- (1) Relocate trails transecting meadows to positions which will avoid further damage. The meadows in most serious need of attention in this regard are: Charlotte Lake Meadow, Rae Lakes (meadow at foot of 60-Lakes Basin trail), Grasshopper Meadow (Cloud Canyon), Big Wet Meadow, Colby Meadow, Castle Domes Meadow.
- (2) Transfer, from Charlotte Lake, the place of residence of back country patrolling ranger to a point of trail more effectively situated for contact-duty and supervision of Bullfrog Lake Area.
- (3) Install 50x50-foot exclosures for determining rates of change in:
 - a. Paradise Valley Lower Meadow. (Place by lodgepole invasion unless invasion is removed.
 - b. Castle Dome Meadow. (At a site where falsehellebore invasion is imminent.
 - c. Sand Meadow or South Fork Meadows. (At outer periphery of lodgepole invasion.)