ESTABLISHMENT REPORT

GOAT MARSH

RESEARCH NATURAL AREA

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Designation Order:

By virtue of the authority vested in me by the Secretary of Agriculture under Regulation 36 C F R 251.23, I hereby designate as the Goat Marsh Research Natural Area the lands described in the following report by J. F. Franklin and E. E. Smith dated February 28, 1974; said lands shall hereafter be administered as a Research Natural Area subject to the said regulations and instructions thereunder.

5-24-74
Date

per R A Yeale
Chief

ESTABLISHMENT REPORT GOAT MARSH RESEARCH NATURAL AREA

GIFFORD PINCHOT NATIONAL FOREST

Principal Distinguishing Features

The 1,195-acre Goat Marsh Research Natural Area incorporates most of a gently sloping mudflow surface located in a basin at 3,000 feet elevation on the eastern slopes of Goat Mountain, southwest of Mount Saint Helens. There are four distinctive biological units or communities on this youthful land surface: (1) the marshes, swamps, and open water in the center of the tract (442 acres); (2) xeric mudflow forest dominated by lodgepole pine on the eastern edge of the tract (388 acres); (3) a small area of superlative old-growth noble fir forest containing the record stand for total volume (70 acres); and (4) mixed true fir-hemlock forest on the steep, broken eastern slopes of Goat Marsh, an area constituting an important part of the marshlands watershed.

Justification

The Research Natural Area program in the Pacific Northwest has concentrated upon important forest and range types. Goat Marsh Research Natural Area is an area designed to bring better balance to the system by providing major representation of: (1) a mosaic of aquatic and semi-aquatic communities--mountain marshlands, swamps, and ponds; and (2) the xeric, non-commercial lodge pole pine forests which characterize youthful mudflow and glacial outwash surfaces found around Cascadian volcanoes. At the same time it will preserve the finest stand of noble fir known (based on volume) for scientific and educational purposes. The nonforested marshlands are particularly important additions to the Federal Research Natural Area system which has been justifiably criticized for the near-absence of such areas.

This tract was originally located by the Washington Intercampus Committee on Scientific and Educational Preserves in 1969 during a search program carried out in cooperation with the Pacific Northwest Natural Area Committee. The area was examined as a result of their suggestion which focused upon the noble fir stands, particularly around Blue Lake just northeast of the Research Natural Area. The impressive Blue Lake noble fir stands (although trees are somewhat younger and smaller than those within the Research Natural Area will be protected as a Botanical Area serving as a valuable scientific and public interest adjunct to those in the Research Natural Area.

The Goat Marsh Research Natural Area was evaluated by a team of scientists under the sponsorship of the Pacific Northwest Natural Area Committee including a zoologist, soil scientist, plant ecologist, and several foresters. They judged it highly suitable for a Research Natural Area and superior in almost all features to alternative candidate areas.

Location

The Goat Marsh Research Natural Area occupies approximately 1,195 acres on the Kalama River lahar (mudflow) and adjacent slopes to the north and west (see attached map). It is on the upper slopes of the mudflow about 2 miles southwest of its source on Mount Saint Helens in the southern Washington Cascade Range. The tract is located about 26 miles northeast of Vancouver, Washington, and is accessible by excellent forest roads on the east and north, specifically Forest Roads N 827 and N 859. Elevations range from about 2,800 to 4,965 feet (summit of Goat Mountain). The tract occupies essentially all of Section 23 and parts of sections 14, 22, 24, and 27, T. 8 N., R. 4 E., Willamette Meridian, Cowlitz County, Washington.

All of the area is Federally owned and administered by the Wind River Ranger District, Gifford Pinchot National Forest.

Boundaries

Boundaries are located on natural features and roads to the maximum degree possible. Beginning at the summit of Goat Mountain: north for about 0.1 mile and then east down a major spur ridge to the top of a rock escarpment at 4,400 feet; then northeast for nearly 1 mile along a line run at about 60° E. to Forest Road N 827; then east along Forest Road N 827 for about 3/4 mile to its junction with Forest Road and east and south for about 3/4 mile along Forest Road N 847 to its junction with Forest Road N 859; then southerly along Forest Road N859 to the south section line of Section 23; then west along the section line between Sections 23 and 26 to Goat Marsh Lake; then westerly along the east and north shores of the lake and beyond to the point of a spur ridge; then south up the spur ridge to the summit of the main eastern spur of Goat Mountain; and northwest and north for about 1-1/4 miles to the point of origin.

Boundaries along the roads are located 200' from the center line of the roads to allow for salvage. The boundary at Goat Marsh Lake is located 200' from the lake shore to allow for recreational use.

Community Types

Much of the vegetation can not be classified by SAF or Küchler types constituting as it does, a noncommercial or nonforested habitat. However, the major communities are identifiable as follows:

Community	Acres	Notes
Marsh, swamp, and ponds	442	
Mudflow forest (lodgepole pine dominated)	388	SAF Type ?
Noble fir forest	70	SAF Type 226
Clearcut	10	
Noncommercial True fir-hemlock forest on steep broken slopes	285	SAF Type 226 (?)
TOTAL ACRES	1,195	

Marshes, Swamps, and Ponds. The marshes, swamps and ponds occupy the central portions of the natural area between Goat Mountain and drier portions of the mudflow. This mosaic has obviously been created by a blocking of original drainage channels by the Kalama River lahar or mudflow; this mudflow cascaded from the slopes of Mount Saint Helens in the last several hundred years.[1/]

The marshes form a continuous strip along the eastern base of Goat Mountain broken only by some open water areas and grading through a shrub and scrub forest ecotone into xeric midflow forests on the northeast. No systematic analysis of the herbaceous communities was attempted but sedges, grasses, and other grass-like species dominate (Carex aquatilis var. altior, C. rostrata, C. kelloggii, Scirpus microcarpus, Eriophorum polystachion, Calamagrostis canadensis, Glyceria elata, and Juncus saximontanus). Two carniverous species were also encountered--Drosera rotundifolia and D. anglica. Buckbean, Menyanthes trifolium, was conspicuous in some shallow ponds. In some areas around the larger pond floating sedge mats are encountered.

The largest area of swamp is in the south-central portion of the natural area and appears to be largely a product of beaver activity. Open water forms a mosaic with shrub thickets, snags, and low vigor trees. Willows (Salix spp.) and Spirea are the most conspicuous of the shrubs.

[1/] Mullineaux, D. R. and D. R. Crandell. 1962. Recent lahars from Mount Saint Helens, Washington. Geol. Soc. Amer. Bull. 73: 855-870, illus.

Mudflow Forest. The western third of the natural area is occupied by an open, low-vigor forest in which lodgepole pine is overwhelmingly dominant. Typical heights and diameters of mature lodgepole on these sites is 20 to 40 feet and 6 to 10 inches d.b.h. A sparse understory characterizes these raw sites--Arctostaphylos uva-ursi is almost the only significant vascular plant--and an abundant ground layer of mosses and lichens.

A more diverse version of this forest is found on sites with a rootable substrate (which is less than a foot over much of the area) or a better moisture supply (as toward the edge of the marshes on the west or noble fir forests on the north). Douglas-fir and western hemlock or the most common associates. Subalpine fir, Pacific silver fir, noble fir, western white pine, and western redcedar are present but relatively rare. The understory also becomes richer on these more mesic sites including scattered larger shrubs such as Alnus sinuata, lower shrubs (e.g., Pachistima myrsinites), and herbs (e.g., Achlys triphylla). The ground layer of cryptogams is simplified to a few species of moss.

Lodgepole pine is the climax species over the majority of the mudflow giving way to Douglas-fir and western hemlock only on the richer areas.

Noble Fir Forest. The forests found on the toeslopes and lower mountain side slopes at the northern edge of the natural area are small in extent but superlative in development. These massive old-growth forests are dominated by noble fir and are unquestionably the highest volume stands of this species in existence. Dominant noble firs range from 60 to 80 inches d.b.h. and 240 to 267 feet in height. The largest individual measured was 89 inches d.b.h. and 261 feet at a point where the top, still of substantial (10 to 20 inches) diameter. Many other trees approached this size.

Major noble fir associates in these stands are Douglas-fir (which are as large or larger in d.b.h. but substantially shorter), western hemlock, and Pacific silver fir.

The understory is primarily herbaceous, very characteristic of the most productive subalpine habitat types--Abies amabilis/Streptopus roseus and A. amabilis/Oxalis oregana.[2/] Major species are Acer circinatum, Achlys triphylla, Vancouveria hexandra, Streptopus roseus, Tiarella unifoliata, Oxalis oregana, Gymnocarpium dryopteris, Coptis laciniata, Anemone deltoidea, Viola sempervirens and Cornus canadensis.

2/ Described in: Franklin, Jerry Forest. 1966. Vegetation and soils in the subalpine forests of the southern Washington Cascade Range. 132 pp., illus. (Unpublished Ph.D. thesis on file at Wash. State Univ., Pullman.)

This stand was selected for nondestructive biomass analysis in a cooperative U.S. and Japanese International Biological Program project as an example of maximum biomass accumulation in cool temperate and subalpine environments. Although the calculations are not yet complete it is clear that the standing timber volume and biomass present is far in excess of that known from any other subalpine stand. The timber volume, which approaches 300,000 board feet (gross), is, in fact, exceeded in only a few of the coastal temperate stands of redwood, Douglas-fir, and perhaps, Sitka spruce.

True Fir-Hemlock Forest. The forests on the steep broken east slopes of Goat Mountain has not been examined carefully. Although individual trees are large stand volumes vary widely with topography and average relatively low because of rocky outcrops, cliffs, etc. Noble fir and Pacific silver fir are the major species with some Douglas-fir and western hemlock also present.

These stands were included within the natural area because of their importance in providing and protecting an integral watershed for the marshlands. They were judged to have marginal commercial value.

Fauna

Amphibians known to be resident breeders include the Cascade frog (Rana cascadae), the western toad (Bufo boreas) and the rough-skinned newt (Taricha granulosa). The northwestern salamander (Ambystoma gracile), the long-toed salamander (Ambystoma macrodactylum), and Cope's salamander (Dicamptodon copei) are also likely to occur on the area.

Reptiles seen at Goat Marsh are the common garter snake (Thamnophis sirtalis), the northwestern gartersnake (Thomnophis ordinoides), and the northern alligator lizard (Gerrhonotus coeruleus).

A list of mammals which occur, or are likely to occur, at Goat Marsh is provided in Table 1. Goat Marsh is especially good habitat for late summer and fall populations of elk. Many elk beds and rubbing posts (sapling lodgepole pine) were noted in August. There was also abundant evidence of black-tailed deer and black bear use.

Several large beaver dams exist on part of the marsh. The area has been used by beaver for many years as evidenced by the relatively old age of some of the cuttings and lodges. These beaver colonies are of particular interest because of the increasing rarity of such dam-building, lodge dwelling colonies.

Goat Marsh provides prime habitat for several mammals with special requirements; including the marsh shrew, northern water shrew, and the Richardson vole. Eastern Brook and Cutthroat trout are present as introduced species.

Because of the highly varied habitat, many species of birds which are not commonly found in old-growth forests utilize the marsh and surrounding forest edge. Mallard ducks were seen on the ponds in August; and several species of migrant waterfowl, including canvas-back and pintail ducks, are likely to feed and rest here in the late fall. Kingfishers, chestnut-backed chickadees, pine siskins, gray jays, Clark's nutcrackers, song sparrows, red crossbills, and several other common forest species were seen on the area in August.

Impact on Other Resource Values

Timber

There is very little timber resource present on the tract. Only about 110 acres are considered to be occupied by commercial forest stands (the noble fir area, 80 acres, and 30 acres on the east, slope of Goat Mountain). The remaining area is either nonforested, noncommercial, or inoperable. Consequently, establishment of the natural area will have very little effect on timber production. It is calculated that the allowable cut of the Gifford Pinchot National Forest will be reduced by .47 M board feet per year. This is based on the calculated net annual growth of 427 board feet per year on 110 acres of commercial forest land in the St. Helens Ranger District (1969 inventory data). The reduction of the allowable cut is less than 0.1 of 1 percent of the average annual cut on the forest and will be incorporated in the next revision of the management plan.

Water

Establishment of the Research Natural Area is expected to have a neutral effect on watershed values. Disturbance of the area will be minimized.

Recreation

Recreational use of the area is confined to hunters and fishermen. To avoid potential future conflicts Goat Marsh Lake was excluded from the boundaries of the tract. Hunter use should be little or no problem so long as motorized vehicles are not utilized within the tract.

In general, the area is protected from casual or heavy recreational use by its nature--"uninteresting" dry pine forest or wet, mucky marshlands. The only area which could potentially be damaged by development or casual use is the noble fir stand and the nearby and very similar Blue Lake Botanical Area provides a superior alternative for public use.

Minerals

No mineral explorations are known within the Research Natural Area, nor are mineralized bodies known to exist there. The area will be withdrawn from mineral entry after research natural area establishment.

Protection and Management

The objective of management in the Research Natural Area will be to maintain natural conditions within the tract for scientific and educational study.

1. Roadside strip. Salvage of dead, down, and dangerous trees will be allowed along adjacent roads for 200 feet on either side of the road center line. Only these types of materials will be logged from the roadside strip in order to assist in maintenance of an undisturbed environment within the natural area. Logging within the roadside strip will be entirely by cable methods with the road used as the landing. Particular care will be followed in any salvage or road maintenance activities along the northern boundary of the tract to avoid any influences (siltation, windthrow, root damage) which would damage or reduce the vigor of the old-growth noble fir stand. Slash disposal will be completely hand piled and burn all the slash.

2. Maps. The area boundary will be shown on the multiple-use map for St. Helens Ranger District.

3. Signs. In accordance with R-6 standards, permanent boundary markers (metal signs) will be posted on the boundary of the Research Natural Area. The project will be the responsibility of the St. Helens District Ranger, and funds for the signing will be requested immediately after formal establishment of the area.

4. Public Use. No effort will be made to prohibit recreational use unless this use conflicts with the utilization of the area for research purposes or its maintenance in a natural condition.

Public Response to the Research Natural Area

Prior to establishment of the Research Natural Area general public comment on the proposal was solicited. Some exemplary responses are provided in the appendix.

Table 1.--Tentative list of mammals for the Goat Marsh Research Natural Area

Order	Scientific Name	Common Name
Insectivora	Scapanus orarius	coast mole
	Scapanus townsendi	Townsend mole
	Sorex trowbridgii	Trowbridge shrew
	Sorex vagrans	wandering shrew
	Sorex palustris	water shrew
	Sorex bendirii	marsh shrew
Chiroptera	Myotis lucifugus	little brown myotis
	Myotis yumanensis	Yuma myotis
	Myotis evotis	long-eared myotis
	Myotis volans	long-legged myotis
	Myotis californicus	California myotis
	Lasionycteris noctivagrans	silver-haired bat
	Plecotus townsendi	Townsend big-eared bat
	Eptesicus fuscus	big brown bat
	Lasiurus cinereus	hoary bat
Lagomorpha	Lepus americanus	snowshoe hare
Rodentia	Eutamias townsendi	Townsend chipmunk
	Tamiasciurus douglasi	chickaree
	Glaucomys sabrinus	flying squirrel
	Thomomys talpoides	pocket gopher
	Castor canadensis	beaver
	Peromyscus maniculatus	deer mouse
	Neotoma cinerea	bushy-tailed wood rat
	Phenacomys intermedius	heather vole
	Clethrionomys californicus	California red-backed vole
	Microtus longicaudus	long-tailed vole
	Microtus richardsoni	Richardson vole
	Microtus oregoni	creeping vole
	Microtus townsendi	Townsend vole
	Ondatra zibethicus	muskrat
	Aplodontia rufa	mountain beaver
	Zapus trinotatus	Pacific jumping mouse
	Erithizon dorsatum	porcupine
Carnivora	Ursus americana	black bear
	Procyon lotor	raccoon
	Martes americana	marten
	Mustela erminea	ermine
	Mustela frenata	long-tailed weasel
	Mustela vison	mink
	Spilogale putorius	spotted skunk
	Canis latrans	coyote
	Vulpes fulva	red fox
	Felis concolor	cougar
	Lynx rufus	bobcat
Artiodactyla	Cervus candensis	elk
	Odocoileus hemionus	black-tailed deer

Recommendation

It is recommended that the Forest Service Component of the Goat Marsh Research Natural Area be established on the lands described in this report.

2/28/74 — Submitted: [signature] — Timber Management Staff

3/11/74 — Recommended: [signature] — Forest Supervisor, Gifford Pinchot National Forest

4/5/74 — Recommended: [signature] — Director, PNW Experiment Station

3/28/74 — Recommended: [signature] — Acting Regional Forester, Region 6

5-22-74 — Approved: [signature] — Acting Director, Division of Recreation

5/23/74 — Approved: [signature] — for Deputy Chief, Research

5-24-74 — Approved: [signature] — for Chief

APPENDIX

LIST OF RESPONDERS

Name	Representation	Location
A.R. Kruckeberg	University of Washington Department of Botany	Seattle, WA
Thor C. Tollefson	Washington State Department of Fisheries	Olympia, WA
Mrs. Ellis Ogelvie	Self	Seattle, WA
Philip Dumas	Central Wash. State College Dept. of Biological Sciences	Ellensburg, WA
J.O. Sawyer	Humboldt State College	Arcata, CA
Myron Huckle	Consulting Engineer	Seattle, WA
Philip Briegleb	Self	Portland, OR
C.W. Richen	Crown Zellerbach	Portland, OR
Curt A. Wiberg	Central Wash. State College Department of Biological Sciences	Ellensburg, WA
Board of Commissioners	Skamania County	Stevenson, WA
Eleanor Heller	Mazamas	Portland, OR
Mrs. A.C. Siddall	Self	Lake Oswego, OR
Glenn Hawk	Forest Ecologist Oregon State University	Corvallis, OR
Michael Collier	Self	Seattle, WA
Glenn Juday	Department of Botany Oregon State University	Corvallis, WA
Kimball Erdman	Department of Biology Slippery Rock State College	Slippery Rock, PA
Joseph & Margaret Miller	Self	Bellevue, WA

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ROOM 115, GENERAL ADMINISTRATION BUILDING • PHONE 753-6600
OLYMPIA, WASHINGTON 98504

THOR C. TOLLEFSON
DIRECTOR

May 15, 1973

RECREATION

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WASHINGTON
MAY 21 1973
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Input

Gifford Pinchot National Forest
500 West 12th
Post Office Box 449
Vancouver, Washington 98660

Attention Mr. Ross W. Williams

RE: Proposed Research Natural Areas at Steamboat Mountain, Goat Marsh, and Butter Creek. WRIA-26 & 27

Gentlemen:

The Department of Fisheries has reviewed your letter of April 6, 1973, regarding the proposed establishment of the above "Research Natural Areas" in Gifford Pinchot National Forest.

These locations appear to be upstream from salmon migration. However, we would certainly be interested in and support any measures which could be taken to preserve water quality flowing downstream into anadromous fish-producing areas.

Thank you for the opportunity to comment on this matter.

Sincerely,

Thor C. Tollefson

Thor C. Tollefson
Director

TCT:GD:jal

cc: Department of Game
Department of Ecology
Management & Research - Stockley

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98105

Department of Botany

Phone (206) 543-1942

May 17, 1973

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FOREST SERVICE
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Forest Supervisor
Gifford Pinchot National Forest
500 West 12th
P. O. Box 449
Vancouver, Washington 98660

Dear Sir:

Please forgive my belated response to a request for comment on the establishment of three research natural areas in the Gifford Pinchot National Forest.

For a number of reasons, I have special and keen interest in seeing these natural areas established. For a number of years several of us fellow biologists at the state colleges and universities have been working towards establishment of a state-wide system of natural areas preserves. We discovered early on in our efforts that the U.S. Forest Service had already made a sound beginning in this direction. In fact, we were able to provide summer field assistance to the Forest and Range Experiment Stations personnel surveying potential natural areas. Members of our Inter-Campus Committee on Scientific and Educational Preserves all feel that these three areas are significant cells to be filled in the network of natural areas being set up throughout Region 6.

I therefore urge that the Forest Service take steps to ratify these proposals by inclusion into the research natural areas system.

Sincerely yours,

A. R. Kruckeberg
Chairman

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May 7, 1973

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Ross Williams, Forest Supervisor
Gifford Pinchot National Forest
West 12 Street
Vancouver, Washington

Dear Sir,

The proposed Research Natural areas at Steamboat Mountain, Goat Marsh on Mt. St. Helens, and Butter Creek adjacent to Mt Rainier National Park should be integral parts of the forest. Too much change has already been allowed in Gifford Pinchot. Logging is nearly as destructive as fire, because the original ground cover disappears. Wild orchids, lilies, ferns and mosses are gone. Perhaps Steamboat will demonstrate this, although so much adjacent logging already has occurred that climate may be altered now.

Thank you for an opportunity to comment.

Mrs. Ellis Ogdvie
5529 27 ave. NE.
Seattle, Washington
98105

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CENTRAL WASHINGTON STATE COLLEGE

DEPARTMENT OF BIOLOGICAL SCIENCES

ELLENSBURG, WASHINGTON

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May 1, 1973

Supervisor, Gifford Pinchot
National Forest
~~500 West 12th~~ Street
Vancouver, WA 98660

Dear Sir:

It has been brought to my attention that the U.S. Forest Service is contemplating the establishment of research natural areas at Steamboat Mountain, Goat Marsh, and on the headwaters of Butter Creek. I strongly urge the establishment of these natural areas.

The Gifford Pinchot National Forest is assuming more and more importance in the research and educational programs in the Pacific Northwest, and more particularly in the State of Washington. As you know, the Washington Office of the Superintendent of Public Instruction has established the Cispus Enviornmental Center on the Gifford Pinchot Forest south of Randle. This environmental center is becoming a much used and vital facility in the Environmental program and curriculum research being conducted by all levels of students from grade school throughout University graduate programs. In order for these studies to have more than passing validity, good baseline sites must be available.

The Natural areas as they are being developed by the U.S. Forest service are excellent sites for such baseline data. These three sites under consideration will form integral units with the already established natural areas for the work being based at the Cispus Environmental Center.

Sincerely yours,

Philip C. Dumas

Philip C. Dumas, Chairman
Department of Biological Sciences

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DEPARTMENT OF BIOLOGY

FOREST SERVICE
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VANCOUVER, WASHINGTON
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9 May 1973

Supervisor
Gifford Pinchot National Forest
Post Office Box 449
Vancouver, WA 98660

Dear Sir:

As an educator and plant ecologist I heartily endorse the addition of proposed Steamboat Mountain RNA, Goat Marsh RNA and Butter Creek RNAreas to the Pacific Northwest Regional system of Research Natural Areas. Their inclusion will enhance the quality and variety of areas for this system.

Not being aquainted with these specific areas, I cannot comment on them in detail. But knowing the high professional compentence and experience of Dr. Jerry Franklin, I would place a large degree of emphasis on his opinions concerning their quality.

I recommend that these proposed areas be formally included in the USFS Research Natural Area System.

Sincerely yours,

John Sawyer

J. C. Sawyer, Jr.
Associate Professor of Botany

4217 SW Agate Lane
Portland, Oregon 97201
May 1, 1973

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Mr. Ross Williams, Supervisor
Gifford Pinchot National Forest
P.O. Box 449
Vancouver, Washington 98660

Dear Ross:

I am writing in response to your April 6 invitation for comments on the three new Research Natural Areas proposed for establishment on the Gifford Pinchot National Forest: at Steamboat Mountain, Goat Marsh and in upper Butter Creek, the latter adjoining Mt. Ranier National Park.

As you know, I was Chairman of the Pacific Northwest Public Lands Research Natural Area Committee for several years. I have kept in touch with activities of the Committee since, and am thus familiar with the proposals you outline.

Search for such areas representative of important variations in forest and range types have been underway in the Pacific Northwest for a long time. These and alternative areas have been carefully considered by top-ranking ecologists and foresters, both within the Forest Service and outside, as well as by able representatives of the administrators of the lands involved. Compatibility with, and impacts on, other land uses have been carefully weighed.

It is not possible to state confidently today the ultimate full value that may be gained from the protection and study of these three tracts as Research Natural Areas. But it is quite possible that the knowledge obtained therefrom about the growth, decline, regeneration, and succession of the trees, the other flora and related fauna, together with changes that may occur in their physical environment, may exceed by many many fold, the value that could be obtained by direct commodity use.

And it is also predicted confidently that resource managers of the future, responsible for the protection and use of fragile ecosystems for man's continuing benefit, will need incomparably more background knowledge than is available to them today.

So I recommend that you now proceed with the dedication, protection and use of these three tracts as Research Natural Areas as rapidly as your proposed classifications can be processed in an orderly manner.

Very sincerely yours,

Philip A. Briegleb

Philip A. Briegleb
Consulting Forester

PAB/b

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April 27, 1973

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Mr. Ross W. Williams, Supervisor
Gifford Pinchot National Forest
P. O. Box 449
Vancouver, Washington 98550

Dear Ross:

We have studied your letter and description of the proposed natural areas at Steamboat Mountain, Goat Marsh, and Butter Creek. This kind of set-aside is very definitely in the long range public interest. It does not, of course, preserve these types. Rather it serves the purpose of insuring a certain kind of ecological succession, that which is associated with aging of the vegetation, windstorms, and lightning fires. This gives us a basis for comparing with natural succession the types of change which occur as a result of management by man, and in relation to man's needs. In this context, then, we may better judge whether the natural succession or the induced succession or parts of each are better for the long range good of man. Without such natural areas we have no basis for reaching this kind of judgment.

Very truly yours,

CROWN ZELLERBACH CORPORATION

Vice President
Northwest Timber Division

C.Z.Corp.-Portland
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CENTRAL WASHINGTON STATE COLLEGE | ELLENSBURG, WASHINGTON 98926
DEPARTMENT OF BIOLOGICAL SCIENCES

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May 1, 1973

Forest Supervisor, Ross Williams
Gifford Pinchot National Forest
500 W. 12th (P.O. Box 449)
Vancouver, WA 98660

Dear Mr. Williams:

I am writing to you in support of the proposed Steamboat Mountain, Goat Marsh, and Butler Creek Research Natural Areas.

It is particularly vital that these "bench mark" areas for research and education be established, and that they be established now while they are still available in a relatively undisturbed state.

We at Central are especially concerned with the establishment of RNAs in the Gifford Pinchot because of our increasing commitments to the Cispus Environmental Center located on the Randle District. Our intentions are to increasingly focus research and teaching efforts on the Cispus area using the Environmental Center as a base of operations. These areas (including the three RNAs already foresightedly established on the Gifford Pinchot) will be of inestimable value in studies aimed at understanding the ecology of the region.

Further, and far more important for ecosystem manipulation in general and for timber management specifically, it is essential that RNAs be set aside to function as baseline or control areas.

I hope to be visiting some or all of these areas this summer, and if I can be of any service to you, be sure to let me know.

Sincerely yours,

Curt A. Wiberg

Curt A. Wiberg
Associate Professor

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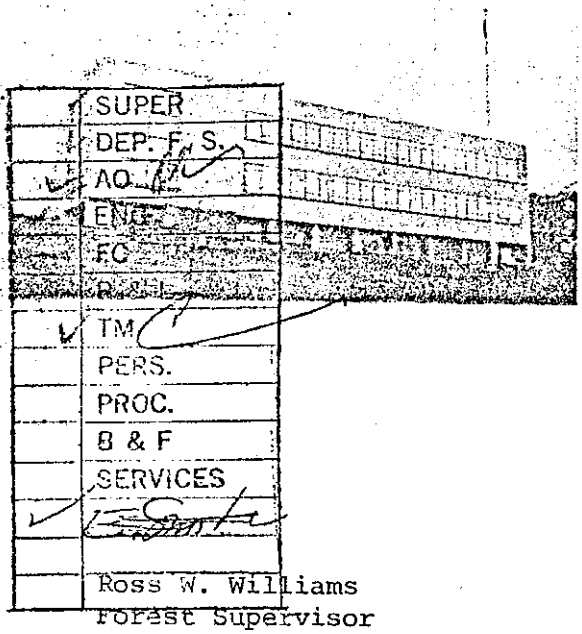

BOARD OF COMMISSIONERS

SKAMANIA COUNTY

Stevenson, Washington 98648

ROBERT J. HOLCOMB - District 1

DEAN O. EVANS - District 2 LYLE W. TERNAHAN - District 3

GIL TODD - Clerk

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WASHINGTON
MAY - 2 1973
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April 24, 1973

Ross W. Williams
Forest Supervisor
Gifford Pinchot National Forest
P.O. Box 449
Vancouver, Washington 98660

Dear Mr. Williams:

The Board of County Commissioners of Skamania County finds no objection to the establishment of the three proposed Research Natural Areas mentioned in your April 6, 1973 news release.

These Natural Areas should provide valuable forest research data and allow the public a wilderness type recreational experience.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS

Chairman

Commissioner

Commissioner

RJH/DOE/LWT/vij

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SERVICES

M A Z A M A S

909 N. W. 19TH AVENUE
PORTLAND, OREGON 97209

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WASHINGTON
APR 30 1973
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April 27, 1973

Mr. Ross W. Williams
Forest Supervisor
Gifford Pinchot National Forest
P.O. Box 449
Vancouver, Wn. 98660

Re: Proposed Research
Natural Areas

Dear Mr. Williams:

The Mazamas, since being organized in 1894, have supported mountain oriented scientific investigation. Therefore, it is with a high degree of interest that we view the proposal to create Research Natural Areas at Steamboat Mountain, Goat Marsh, and Butter Creek in the Gifford Pinchot National Forest.

The Mazamas find the proposal for the three Research Natural Areas to be commendable and deserving of our support.

Sincerely,

Eleanor Heller

Eleanor Heller
Chairman, Conservation Committee

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FOREST SERVICE
Gifford Pinchot National
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April 23, 1973

Supervisor, Gifford Pinchot National Forest
500 West 12th (P.O. Box 449)
Vancouver, Washington 98660

Dear Sir:

I should like to comment on your announcement that Research Natural Areas are to be established at Goat Marsh, Steamboat Mountain and on Butter Creek in the Gifford Pinchot National Forest.

I whole-heartedly support each of these and commend you for your efforts in establishing them. I would like to take exception to one line in your news release, however; namely "The three areas presently under consideration would complete needs presently foreseen for Research Natural Areas on the Gifford Pinchot National Forest." In my opinion there is yet another which should be considered, - The Lava Bed in the southeastern portion of the Forest. This request is made all the more urgent by recent attempts to establish a mining claim in this area.

To the best of my knowledge, The Lava Bed falls well within your guidelines as a Research Natural Area and does not duplicate any of the designated types of habitat. Within the lava bed itself can be found plants which I have not seen elsewhere such as beech fern and lonicera conjugialis, of which C. Leo Hitchcock says, "...fruits reputed red or reddish-black, appearing bluish to black in the herbarium...rarely collected in our range." Here also subalpine fir grow at 2000' adjacent to cottonwood.

Boundaries for a Lava Bed Research Natural Area should include not only the entire lava bed, south, middle and north portions, each of which are different, but also South Prairie and the beaver marsh on the northeast side. Here, in close proximity each with its own biota, are to be found marsh, prairie, old fir forest and lava. Further, virtually no timber would be withdrawn from the cutting cycle. This is not a good timber producing area.

Sincerely yours,

Jean Siddall

Mrs. A.C. Siddall
635 SW Atwater Road
Lake Oswego, Or 97034

1060

FOREST SERVICE
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VANCOUVER, WASHINGTON
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G. Smith

OREGON STATE UNIVERSITY
DEPARTMENT OF
BOTANY AND PLANT PATHOLOGY
CORVALLIS, OREGON 97331

Mr. Ross Williams
Gifford Pinchot National Forest
500 W 12th (P.O.Box 449)
Vancouver, Washington

Dear Mr. Williams:

I am pleased to take this opportunity to express my interest in the future establishment of Steamboat Mountain, Goat Marsh and Butter Creek areas as Research Natural Areas.

After having spent two weeks in these areas and other proposed or established Research Natural Areas in Washington, I was impressed with the need for the above areas within the RNA program. All three areas contain portions which exemplify specific habitat types as well as providing a diversity of niches for both flora and fauna. I am of the opinion that each has something unique to add to the system and should be incorporated as RNAs as soon as possible in order to maintain control over any further encroachment by industry or excessive recreational misuse.

I am particularly concerned about the Goat Marsh area since my last visit indicated to me that there has been excessive use of motor vehicles (bikes) along the trail system surrounding portions of the lake. I would hope that the aesthetic quality of this proposed RNA as well as that of the other two areas mentioned above will be maintained for the benefit of other scientists, naturalists, and the general public's use.

I would like also to thank you for your part in the excellent job that has been done thus far in the conservation of the natural areas of the Pacific Northwest.

Sincerely yours,

Glenn M Hawk

Glenn M. Hawk, Forest ecologist
Oregon State University

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April 14, 1973 4060

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WASHINGTON
APR 18 1973
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Williams
visor Gifford Pinchot N.F.
ox 449
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Dear Sir:

Thank-you for your notice concerning the 3 newly proposed Natural Areas in the Forest. I fully support this concept though sorry to say I'm unable to give you any interesting information on the proposed areas.

However I'm afraid I'll have to disagree with your statement that these 3 places complete the "needs presently foreseen for Natural Perennial [illegible] on the Forest. What about the lava caves? and I'm sure there must be many other ecologically unique places which deserve protection from development. Especially in the G.P. where so little of the Forest is in Wilderness.

Thank you.

Sincerely,

Michael L. Collier

Michael L. Collier

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OREGON STATE UNIVERSITY
DEPARTMENT OF
BOTANY AND PLANT PATHOLOGY
CORVALLIS, OREGON 97331

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April 18, 1973

Supervisor, Gifford Pinchot National Forest
West 12th Street
Vancouver, Wash. 98660

RE. New Natural Area Prop

Dear Sir,

I wish to congratulate the Gifford Pinchot National Forest Staff and yourself for being perceptive of and dedicated to an idea not yet well enough accepted by natural resource managers in general, that of biotic preservation. The proposed Steamboat Mountain, Goat Marsh, and Butler Creek Research Natural areas will be most welcome additions to a vital national and regional need.

I am a graduate student in plant ecology Dr. Jerry Franklin, who is coordinating the inter-ag Federal effort in this area, is on my doctoral commit I am engaged in the day to day workings of the ef to have natural areas more widely appreciated. I know I speak for many of my fellow stu conservation workers, and faculty (who are perhaps too busy or unaware of these particular areas) whe I say that it is most gratifying to see this meaningful response and effort by responsible public servants.

My heartiest endorsement of your pr

Patricia Tudas

4060

slippery rock state college

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DEPARTMENT OF BIOLOGY

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WASHINGTON
APR 13 1973
RECEIVED

10 Apr. 1973

Ross Williams, Supervisor
Gifford Pinchot National Forest
PO Box 449
Vancouver, Washington, 98660

Dear Mr. Williams:

I received recently the notice relative to the three new Research Natural Areas proposed for the Gifford Pinchot National Forest. I am a strong supporter of this program and urge establishment of the selected sites.

One aspect of the proposal puzzels me greatly. The discription of the Goat Marsh Research Natural Area implies that there is exceptional biotic communities there in the vicinity of which only 100 acres is being preserved. I certainly support the protection of marsh lands in the Research Natural Area program but I most seriously question whether a hundred acre tract of "the most productive subalpine forests known in the world" is really very adequate. I assume the rest will be sacrificed, or has been for timber. Surely you and others involved in this project realize that a 100 acre stand of timber is hardly representative of the ecosystem and even the forest service literature encourages a mimimum of 300 acres of forest land as a minimum. I would most strongly urge reconsideration, possible extension or separate designation of a larger site.

Sincerely

Kimball S. Erdman

Kimball S. Erdman, Ph.D
Professor of Biology

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FOREST SERVICE
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15405 SE 9th
Bellevue, WA 98007
April 15, 1953

Mr. Ross Williams, Supervisor
Gifford Pinchot National Forest
500 W. 12th
Vancouver, WA 98660

Dear Mr. Williams:

We wish to go on record as heartily approving the establishment of Research Natural Areas at Steamboat Mountain, Goat Marsh, and Butter Creek on the Gifford Pinchot Forest. While we do not have personal acquaintance with these areas, we have seen slides taken in them, and we believe them to be most worthy of addition to the federal system of Research Natural Areas.

We are convinced that the establishment and protection of such natural areas for research and education is one of the most important functions of the U. S. Forest Service. We have spent considerable time in the North Cascades in the search for a suitable western redcedar research natural area, and we know how priceless these remaining areas of natural vegetation untouched by man's activities have become. We trust the establishment of the Steamboat Mountain, Goat Marsh, and Butter Creek Research Natural Areas will receive favorable consideration.

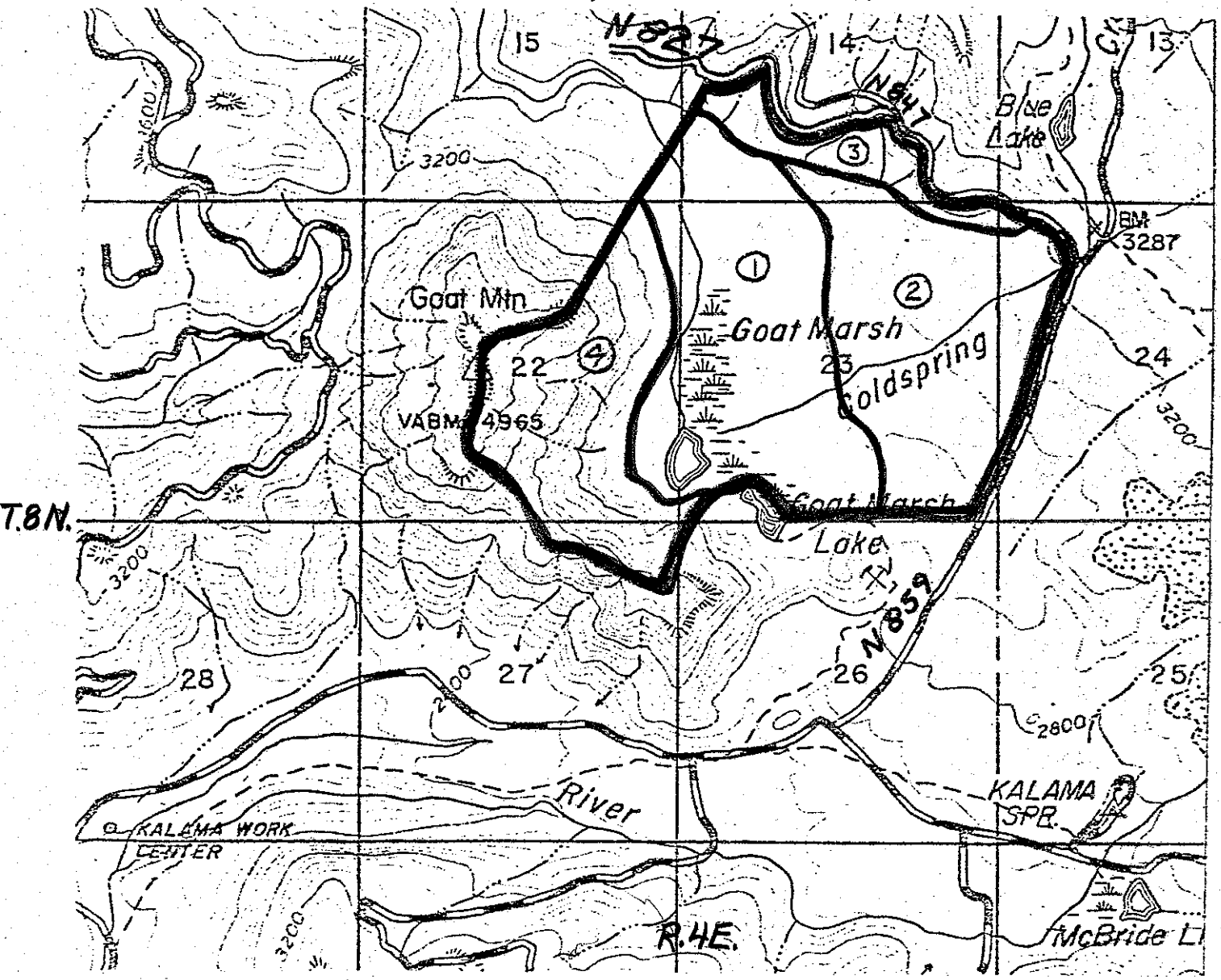
Most sincerely,

Joseph W. Miller

Margaret M. Miller

GOAT MARSH RESEARCH NATURAL AREA

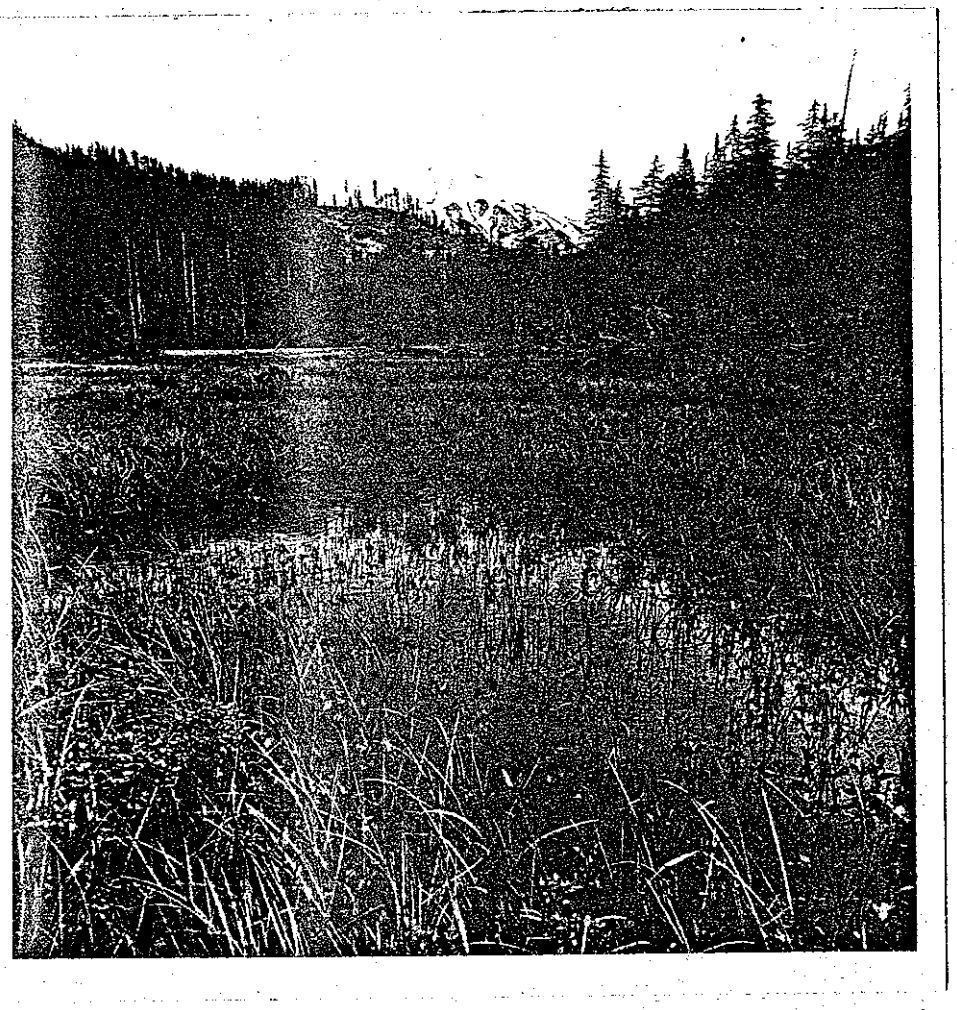
St. Helens R. D., Gifford Pinchot N.F.



Vegetation Types

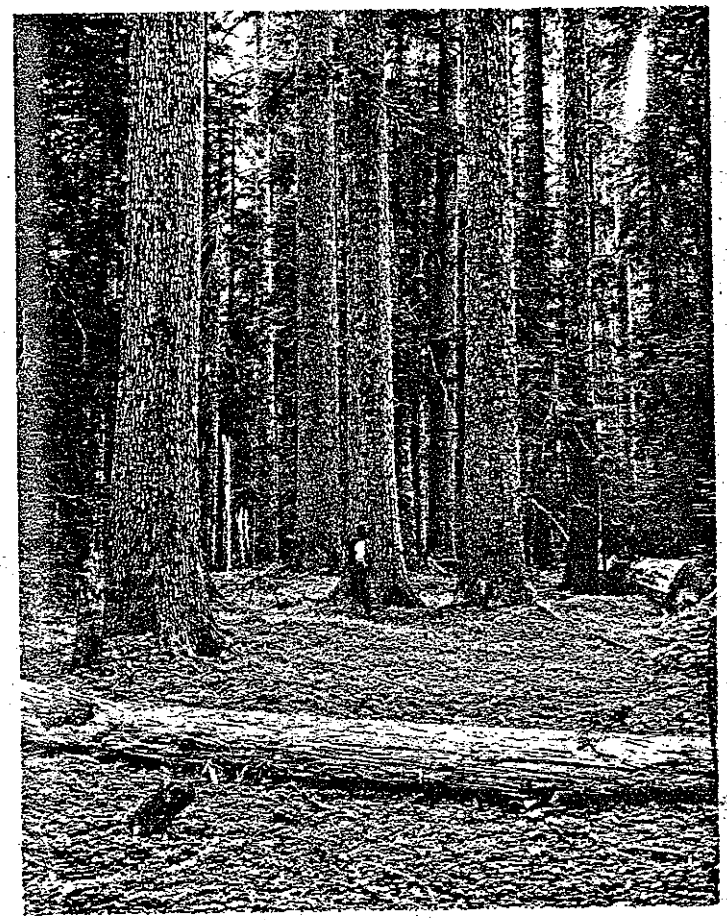
1. Marshes, Swamps, and Ponds
2. Dry Lodgepole Pine Forest
3. Prime Old-Growth Noble Fir
4. True Fir-Hemlock on Steep, Broken Slopes

GOAT MARSH RESEARCH NATURAL AREA



Typical marshy area dominated by rushes and sedges; pond in foreground contains buckbean, a distinctive aquatic plant.

GOAT MARSH RESEARCH NATURAL AREA



A small area (80 acres) of high-quality, old-growth noble fir stands of this type occur within the proposed research natural area.