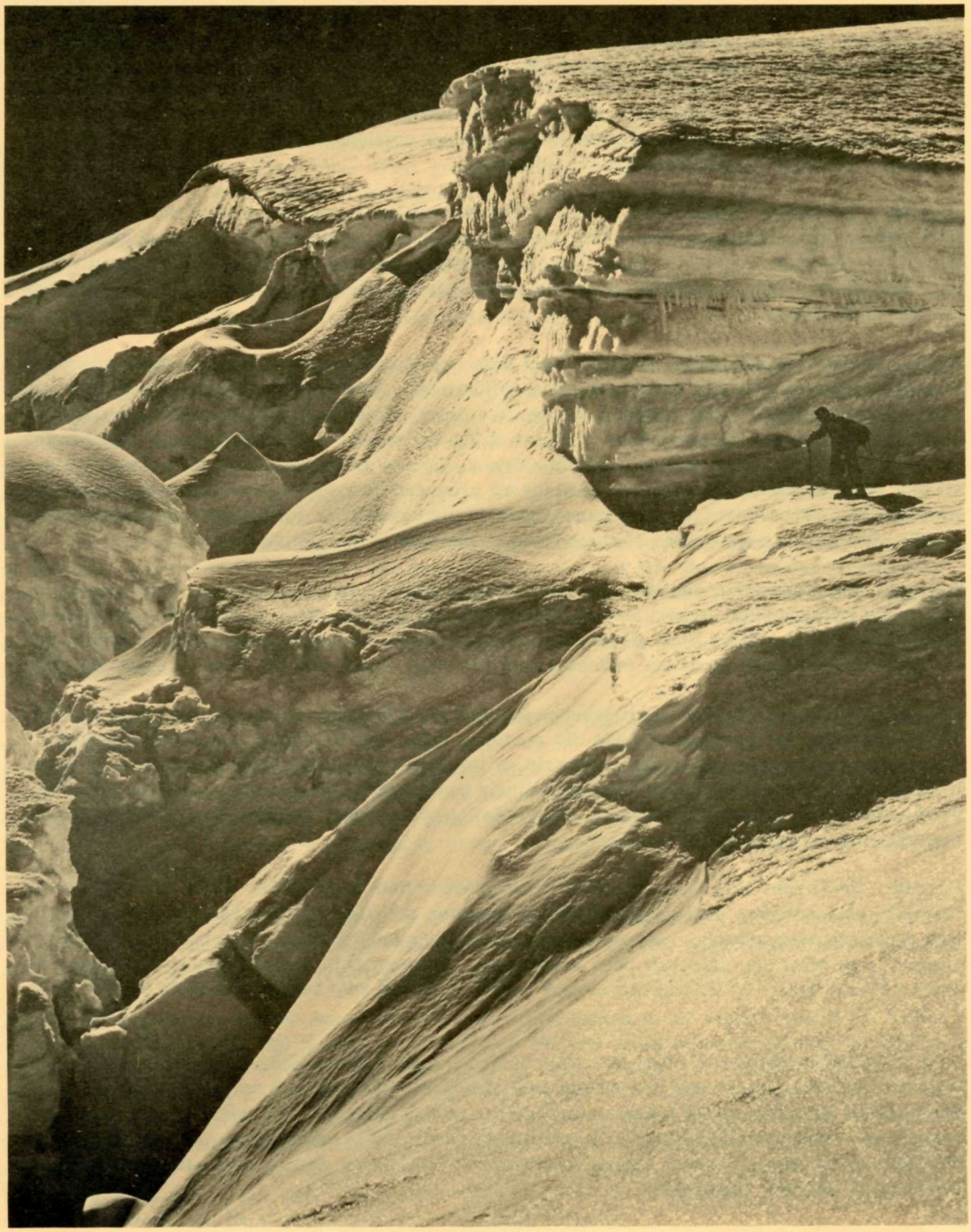
THE WILD CASCADES



April–May 1969

MORE (BUT NOT THE LAST) ABOUT ALPINE LAKES

We recently carried in these pages an article by Brock Evans, Northwest Conservation Representative, on Alpine Lakes: Stepchild of the North Cascades. Mr. L. O. Barrett, Supervisor of Snoqualmie National Forest, feels the article contained "some rather significant misinterpretations" and has asked the opportunity to respond. Following are Mr. Barrett's comments on portions of Mr. Evans' article, together with Mr. Evans' rejoinders.

Barrett: The Alpine Lakes Area is still wilderness quality in part because of the nature of the land, and in part because the Forest Service has managed it as wilderness type area since 1946. We will continue to protect it from timber harvesting, mining and excessive recreation use until Congress makes a decision about its suitability for inclusion in the National Wilderness Preservation System.

Evans: The wilderness parts of the Alpine Lakes region that are being lost are those which the Forest Service has chosen not to manage as wilderness. The 1946 date referred to is the date of the establishment of the Alpine Lake Limited Area. This designation granted a measure of administrative protection to a substantial part of the region; but much was left out. The logging in the Miller River, Foss River, Deception Creek, Cooper Lake, and Eight Mile Creek valleys all took place in wilderness-type areas which we proposed for protection which were outside the limited area. The Forest Service cannot protect its lands from mineral prospecting or, ultimately, from mining operations of some types -- because of the mining laws.

Barrett: The Forest Service was preparing for the public hearing process in 1963. However, the North Cascade Study Report and the Wilderness Act had the effect of postponing any recommendation on Alpine Lakes until all existing primitive areas have been studied and reported upon to Congress. Current progress indicates that all such areas will be reported upon by 1974.

Evans: The Forest Service was indeed preparing for a hearing on the Alpine Lakes in 1963. The Wilderness Act passage in 1964 did postpone this. But we did see some indication of the Forest Service thinking when the proposals of the North Cascades Study Team were released in 1966. It is this that we feel is "disappointingly inadequate", because the areas recommended by the Forest Service for wilderness classification were much smaller than what we recommended, and exclude most of the trees.

Barrett: The timber sale which resulted in the construction of the Miller River Road #2522 was carefully planned after analyzing the total recreation potential of the area. It was discussed with three representatives of outdoor groups during the planning stage. The protests of outdoor groups came after the sale had been advertised. As you know, we are now trying to provide more advance notice by making our 5-year action plans and sale notices available to F. W. O. C.

The Miller River sale was one of the first we made under the new landscape management policy. The small clearcuts are tucked back from the road on short spurs, and most recreationists are not even aware we harvested timber in this drainage. (In fact, Ranger Skeele received one letter complimenting him on the care exercised in constructing the road and asking that he use the same care in logging the timber. The letter was written after the existing timber sale had been completed.)

Cover Photo: Ice Fall on Glacier Peak by Bob and Ira Spring

Most of the roads are multi-purpose roads (recreation, administration, fire protection). In order to specify a location and construction standard that will protect all of the resources (soil, fisheries, water, timber, recreation and esthetics), we must include a certain minimum volume of timber in the initial harvesting (road construction) stage. We feel that small units scattered along the length of the road, with adequate scenic buffer zones, is both silviculturally and esthetically desirable. Other options would be to build a short stretch of high-standard road and clearcut larger areas; construct low-standard spur roads that would zig-zag erratically from unit to unit; or to use Congressional appropriations for forest access roads (as was done at Crystal Mountain).

Only the last option seems really viable, and that depends upon additional road funds being made available by Congress. User groups such as F. W. O. C. may wish to address themselves to this point by taking appropriate action within their means.

We are looking at the whole Alpine Lakes Area for lands suited to wilderness and/or recreation area classification. The existence of short stretches of road or harvesting units would not, in itself, be grounds for excluding such an area from classification. Roads can be put to bed, and harvesting units renew themselves in a few years.

Evans: Our objections to the Miller River Timber Sale were well known to the Forest Service before the sale was advertised. It had certainly been made plain in our discussion before the sale took place. The Snoqualmie National Forest, since at least 1967; has made a much greater effort to cooperate with us and give us advance notice of the sales, and we appreciate this. Our concern with the Miller River Sale was that it penetrated deeply into a wonderful area of de facto rain forest-type wilderness -- a very scarce resource in the Alpine Lakes. The road is a wide high-standard affair called by many in our organization a "wilderness freeway." We are aware of the logging in the clearcuts while smaller and "tucked away" portions of the area are still visible. Again, our quarrel is not so much how this particular logging was done (it is not as offensive as much of the logging in other parts of the North Cascades) but the fact that it removed a great chunk of wilderness in one sale. And it removed a great chunk of forest wilderness, at low elevation. This is something we have very little of in Alpine Lakes or anywhere else.

We are glad to hear the Forest Service say that the existence of short stretches of roads or cutting units is not ground for excluding areas from consideration for wilderness. The position of the Forest Service was the opposite when we attempted to advocate the addition of lands in the Whitewater Creek drainage to the Mount Jefferson Wilderness in Oregon. There, because of the existing logging road and clearcuts put in by the Forest Service, the response was that it couldn't be wilderness because of the existing roads. We are glad to see that the viewpoint has changed.

Barrett: The North Cascades Study Report indicates that the Alpine Lakes Area contains 77,000,000 board feet of commercial timber. (NCC Study Report, page 121.) There must be some productive soil along with all that "rock and ice."

Evans: Seventy-seven million board feet of commercial timber is not a great deal in the North Cascades. It is about 3,000 acres, of the total of 180,000 acres recommended by the Forest Service for protection -- 1/60 of the entire area, in other words, is covered by commercial forests. The best way to see what the Forest Service has done in its recommendations for an Alpine Lakes Wilderness is to look at the way the boundaries were carefully drawn to exclude areas which contained commercial timber, even though they had wilderness qualities. The most obvious examples of this are the valleys of Jack Creek, Dingford Creek, and Deception Creek. Why were these areas left out? The conservationist-proposed wilderness includes these and other forested valleys for a truly habitable wilderness complex.

Barrett: The Snoqualmie has no plans for extending roads into the Alpine Lakes Area. You apparently were looking at a transportation map, rather than a multiple use planning map. The transportation map shows all drainages where a road is feasible from an engineering standpoint. Many of the roads shown will never be constructed. The transportation map is just one of several planning tools used by the resource manager.

To reply to the specific roads you mention:

1. Miller Road River #2522: will not be extended, unless a quarter of a mile or so is needed to reach a better trail head-campground area.

2. Foss River Road #2622: will not be extended.

3. Tonga - Deception Creek Road: will not be extended.

4. Taylor River Road #2445: will not be extended.

5. Dingford Creek: will not be constructed.

6. Middle Fork Snoqualmie #241: will be extended (more correctly, improved) across the patented mining claims on Hardscrabble Creek. Parking area and trail access to alternate Cascade Crest Trail #2000 will be provided. These developments relate to the LaBohn Gap Mining situation.

Our plans call for wilderness-type management of the area proposed by the North Cascade Study Team. Adjacent areas of high public interest are being considered for roadless or recreation area classification.

Evans: I was looking at a transportation map, rather than a multiple use planning map. I am glad to know that many of the roads will never be constructed. The only problem is, that many of them will be constructed. The best example of this is the Eight Mile Timber Sale, which followed the road laid out on the existing transportation plan map. Another one which will be followed is the proposed road up Jack Creek, cutting the Alpine Lakes de facto wilderness in half. These roads referred to are in the Wenatchee National Forest.

We are very glad to learn that the other roads referred to, which were laid out on the transportation map, will not be constructed or extended by the Snoqualmie National Forest. We can commend them for this. We hope that they will change their minds about recreation or roadless area classification for the de facto wilderness involved, and agree with us to classify it as formal wilderness under the Act.

We do recognize the difficult position of the Forest Service. Certainly our relationship with the Snoqualmie National Forest has improved greatly in recent years, and there is a much better mutual understanding and trust. We hope that some day we may be able to say the same for other forests as well.

An Invitation To Join: Alpine Lakes Protective Society

Once upon a time The Mountaineers, the Sierra Club, and The Mazamas recognized the need for a task-force group that would focus concentrated energies on the North Cascades (meaning, the Cascades from the Columbia River to Canada) and provide leadership for supporting organizations with more diffuse concerns. Thus, with sponsorship of the three clubs, was formed the new and independent North Cascades Conservation Council.

Though the N3C and its allies continue undiminished activity and interest in the full length of the Washington Cascades, the need has arisen for a new group to act as the spearhead in gaining protection for the Alpine Lakes area, the backyard wilderness and mountain playground of the Puget Sound and Yakima Valley population centers.

So it was that on October 9, 1968, the Alpine Lakes Protection Society (ALPS) was incorporated at a meeting at Hyas Lake. The organizers include individuals from Ellensburg, Wenatchee, Yakima, and the Puget Sound area, people who know the country well from years of traveling the valleys and peaks.

The object of ALPS is to influence the United States Forest Service and the public in the establishment of a sound management plan for the preservation of the Alpine Lakes area. That area, as ALPS defines it, lies along and south of the Stevens Pass Highway, along and north of the Snoqualmie Pass Highway, along and west of the Blewett Pass Highway, and east of an irregular line between Mount Index and Mount Si. Involved are more than 800,000 acres, at least one-third of which are privately owned.

Due to the nature of the area, -- its size, its proximity to heavily-populated urban centers, and its complex development pattern -- a unique plan is proposed by ALPS. The idea is to promote USFS adherence to a single, wilderness core concept for the now-roadless interior essentially as proposed in 1963 by the N3C, The Mountaineers, the Sierra Club, and The Mazamas. Surrounding that core ALPS hopes that zoning can be developed in such a way that private owners will contribute to, not detract from, this unique, wilderness heritage situated at the very doorstep of millions of people.

The purposes of ALPS are defined under Article IV, Section 1, of the Articles of Incorporation:

> "To operate exclusively for the purpose of educating and informing its members and the public generally in all matters relating to the protection of the area commonly known as the Alpine Lakes Region in the Cascade mountain range in the State of Washington, and for the purpose of urging the preservation of the natural beauty of that region, its lands, air and waters, and all its living things, and for the purpose of taking all necessary action to assure that this unique and unspoiled region remains in its natural condition through all the years to come for the ultimate enjoyment of future generations."

At its meeting of March 23, 1969, in Ellensburg, Washington, the trustees of ALPS formally adopted the following dues schedule to be effective until superseded:

Membership Classification	Annual Dues Amount
STUDENT*	$ 1.00
REGULAR	3.00
FAMILY	5.00
CONTRIBUTING	10.00

*A "STUDENT" is defined as any person, 16 years of age or older, enrolled full-time in any accredited institution of learning.

The trustees further determined that only one vote accrues to any one membership; i.e., a "FAMILY" membership might include one's spouse and/or children up to 16 years of age, but only one of those so included would be eligible to vote.

ARTICLE III, Section 1, of the ALPS By-Laws states:

"Membership in the ALPS shall be open to those persons whose background, experience or interests indicate that they will support the purposes of ALPS. The board of trustees may elect any such persons at any meeting thereof, without notice, and may establish such fees and charges for membership and such classes of membership, as they may from time to time in their discretion determine."

Though the two organizations are entirely separate, N3C welcomes ALPS and intends to work closely with the new task-force toward gaining mutually-desired goals. N3C members with a special knowledge of, and a special interest in, the Alpine Lakes area are encouraged to join ALPS.

MEMBERSHIP APPLICATION

Alpine Lakes Protection Society
Kamiakin Ranch
Ellensburg, Washington

Sirs:

I endorse the purposes of ALPS as stated in Article IV, Section 1, of the Articles of Incorporation, and wish to apply for membership.

Enclosed are my first-year dues:

STUDENT ($1.00) _____
REGULAR ($3.00) _____
FAMILY ($5.00) _____
CONTRIBUTING ($10.00 or more) _____

Name (Please Print) _____ (Signature) _____

Address _____

_____

TO ALL ALPINE LAKE RECREATION AND WILDERNESS ENTHUSIASTS

COME ONE, COME ALL

TO A MEETING OF THE SEATTLE CHAPTER

of the

ALPINE LAKES PROTECTION SOCIETY

CO-SPONSORED BY THE UNIVERSITY OF WASHINGTON CONSERVATION COUNCIL

* * * * * * * * * *

TO SEE: THE ALPINE LAKES SLIDE SHOW * * * 7:45-8:15 P. M.

TO HEAR: BROCK EVANS, Northwest Representative
Federation of Western Outdoor Clubs
PATRICK GOLDSWORTHY, President
North Cascades Conservation Council
BEN HAYES, President
Alpine Lakes Protection Society (ALPS)
HARVEY MANNING, The Mountaineers, Editor of Wild Cascades
MICHAEL RUBY, Puget Sound Group of the Sierra Club

Moderator: ROGER ALMSKAAR, Past President
University of Washington Conservation Council

DISCUSS: "THE ALPINE LAKES: TODAY AND TOMORROW"

FIND OUT: What YOU can do to help protect this beautiful recreation-wilderness area.

* * * * * * * * * *

DATE: Thursday, JUNE 12, 1969

PLACE: University of Washington, Student Union Building (HUB)
(The room will be posted in lobby.)

TIME: 7:45 P. M.

LOOK OUT!
the miners are coming, the miners are coming.

by I.B.

Down in Olympia-land, our buddy Marshall T. Huntting, Supervisor of the Division of the Division of Mines and Geology, a province in the empire of Bert (King) Cole, Commissioner of Public Lands and merry old soul, continues to dream of a day when the State of Washington is one grand open pit all the way from the Columbia River to the 49th Parallel. Let's not be nasty; it's his job.

Marsh loves the dirty miners, but he also serves us birdwatchers well. The publications issued under his imprimatur often are invaluable to dispassionate (and passionate) students of the North Cascades. Everybody should be on his mailing list. Following are descriptions of three of Marsh's recent offerings. To obtain copies, write: Department of Natural Resources, P. O. Box 168, Olympia, Washington 98501.

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Chemical and Physical Controls for Base Metal Deposition in the Cascade Range of Washington, by Alan Robert Grant, Bulletin No. 58. $1.50.

This splendid 107-page book, with many maps, summarizes the current (1968) understanding of the relationship between geologic structures and the location of metals -- including the copper on Miners Ridge.

Here we reprint an essay the author appended to his study. By implication, he makes serious charges against the mining industry and warns the leaders to shape up or lose out.

Economic Geology and Land Utilization

For many years the Cascade Range of Washington, particularly the North Cascades, has been embroiled in public controversy over land management and utilization. This has been precipitated mainly because the Cascades include some of the finest alpine terrain in the United States. Recently, the problem has been highlighted by recommendations of a Federal Government Study Team suggesting the establishment of a North Cascades National Park and several satellitic wilderness areas as the best means of protecting the scenic resources.

The problems of public land utilization are numerous and complex. Conservationists advocate the concept of preservation of scenic resources, whereas the industrial interests promote the concept of multiple use. Each has a legitimate cause; however, these causes should be kept in perspective. Current studies have not fully revealed the mineral potential in the North Cascades, even though the U.S. Geological Survey and the U.S. Bureau of Mines are conducting a 3-year evaluation program in part of that area. On the other hand, several promotional groups have distributed information, based on little factual data, indicating the existence of enormous reserves of metal in the North Cascades. A reasonable approach to these problems must be found, hopefully, without emotional bias.

The proper utilization of these public lands poses both a problem and an obligation to the exploration geologist. In evaluating the area for mineral potential, he should conduct his exploration with realism based on discretion. Modern concepts and techniques should be applied. There is no justification for strictly promotional operations without heed to well-established principles of conservation and land management.

With the advent of a new era of mineral exploration in the Cascades, compliance with the above concepts is impera-

tive. Mining companies have recognized the great value of good public relations. Because most of their work is conducted on public lands, all public interests should be considered. It is to be hoped that in recent years the image of the mining industry has improved. However, mining still suffers from its past record when, in many instances, little or no regard was paid to land conservation.

The utilization problem has reached critical proportions in the Cascades, as shown by the current conservation battles. Those in the mining industry who desire favorable public opinion must take a stand for propriety and prudence. This can be accomplished by discouraging indiscriminate alteration of the landscape where such work is conducted for promotional purposes only; by standing against improper staking; by publishing factual data based on accepted scientific procedures when informing the public as to the evaluation of potential of contested public domain; and, finally, by securing competent personnel for directing field operations. This latter point may appear obvious, but the mining history of the Cascades, in common with that of other areas, is replete with so-called "professional" men who have been poor representatives of the mining industry.

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Mines and Mineral Deposits of Whatcom County, Washington, by Wayne S. Moen. Bulletin No. 57. $4.50.

Frankly, $4.50 is more than I personally want to pay just now, even though the 134-page book apparently contains enormous significant detail.

Following is an excerpt from the news release announcing the book. (What I noticed right off is that the entire 12.5 cubic miles of Twin Sisters Mountain is scheduled for removal from the landscape. There will be something to see -- a complete mountain torn down, rock by olivine rock. Do we care? Why, then, haven't we said so? Where, or where, are the Friends of Twin Sisters?)

> "Whatcom County ranks second among Washington counties in production of nonmetallic minerals," said Bert L. Cole.
>
> "Limestone for cement accounts for most of this mineral production," Cole said, "As Whatcom County is Washington's largest producer of portland cement."
>
> The olivine reserves of Whatcom County are the largest known in the United States, and offer a tremendous potential for mineral development in the county. This magnesium-iron silicate mineral constitutes almost all of Twin Sisters Mountain, which is 10 miles long and 3-1/2 miles wide. The bulk of the mountain is calculated to be 12.5 cubic miles and the amount of olivine is estimated to be 128 billion tons. Important uses of olivine are for foundry sand, refractories, blast sand, as a source of magnesium, and, when compounded with phosphate, as a fertilizer.
>
> Although the earliest mineral discovery in Whatcom County was of coal in 1852, mineral production figures for the county are available only for the years 1900-1965, and total about $46 million. Of this amount, about $43.5 million is for nonmetallic minerals, and $2.5 million is for metallic minerals. Thirty-two mines have produced metallic minerals, and 98 percent of their production was of gold. The remaining 2 percent was mostly of silver, copper, lead and zinc.
>
> Wayne S. Moen, author of the report and a geologist on the staff of the Division of Mines and Geology, spent two field seasons reviewing the geology and verifying the locations of almost all mineral deposits in the county. He has included in the report a geologic map, a mineral resource map and a map showing locations of test wells drilled for oil and gas in the county. The 40 other illustrations include photographs, location maps, and sketch maps of mine workings. Also included are analyses of many of the ores.

Directory of Washington Mining Operations, 1967-68, by Wayne S. Moen. Information Circular No. 44. Free on request.

This directory, latest in the annual series, summarizes everything the state knows (officially) about what's going on, mineral-wise. It is far from complete or fully accurate; partly because some miners operate in maximum feasible secrecy, partly because others seek the widest possible publicity but are not careful with the facts, and partly because the state doesn't spend any particular effort looking around. No mention is made of the pernicious business at La Bohn Gap or of several Cascade River prospects previously reported in these pages; one wonders what else is up that neither we nor the state knows about. However, there is useful information in the directory.

From it we learn the total value of Washington's mineral production in 1967 was slightly more than $82 million, about $7 million less than in 1966. As always, the leading "mineral" was sand and gravel, worth $27.5 million, followed by portland cement at $20.7 million and stone at $19 million. The total value of metals was less than $8 million, with $6 million of this being zinc. Virtually all the metal production came from the northeast corner of the state. However, 30 new metal operations (producing or prospecting) are listed, and some of these are in the North Cascades. Following are notes on "active" metal properties listed for portions of the North Cascades where we have immediate concerns.

WHATCOM COUNTY

American Smelting and Refining Co., Colville, WA

Limited exploration for silver and gold in Wells Creek area, on lower north slopes of Mt. Baker.

Glacier Mining Co., Seattle, WA

Exploration for copper and gold at Gossan prospect on Wells Creek, Mt. Baker.

Dead Goat Prospect, Everson, WA

Exploration for molybdenum at Dead Goat and Moly claims in Sulphide Creek area, on slopes of Mt. Shuksan. This is either just inside or just outside (I'm not sure) the North Cascades National Park, which the promoters vigorously opposed. In any event, the properties should be deep within the Park, whose boundaries here (as elsewhere) are ridiculous.

Western Gold Mining, Inc., Seattle WA

Exploration for gold at the New Light Mine in Barron Basin, just north of Harts Pass. This outfit long has been one of the most prolific garbage producers in the flower gardens of the Cascades, and is responsible for much of the desecration of a supreme highland on the border of the Pasayten Wilderness Area. (The entire basin should be in the wilderness.)

OKANOGAN COUNTY

Cominco American, Inc., Spokane WA

Exploration for copper at Billy Goat group in upper Eight Mile Creek, near border of Pasayten Wilderness Area. (I or out?)

Noranda Exploration, Inc., Reno NEVADA

Exploration for copper at Lesley group, "near Mazama." (Where?)

Eldorado by Franz Mohling

SKAGIT COUNTY

Thunder Mountain Mines, Inc., Lacey WA

Exploration for zinc, lead, copper, molybdenum, gold, silver, and pheasant under glass on the Viola claim in upper Thunder Creek, within the North Cascades National Park. The company president testified at the 1968 hearings. (See page 204 of the House hearing record.) If his statement were to be believed, the ore is so fabulous the stockholders could get rich just filling their pockets with samples and carrying them to the bank. His glowing description of the wealth reads like promotion brochures published about the Cascades in the early part of the century -- and in fact he quotes with approval and total credulity a 1908 report predicting the area would become one of the great mineral producers in the world. Rumors are going around (spread by Thunder Mountain Mines?) that Anaconda is interested in the property. We'd be amused, except these shenanigans are smack in the middle of the new National Park.

Valumines, Inc., Puyallup, WA

As described earlier in these pages, the company is carrying on development at the Diamond claim for lead, zinc, copper, silver, and revenues from sale of stock. Since this nonsense is near Cascade Pass, within the North Cascades National Park, our disgust is monumental. We will be very interested in whatever steps the Park Service may take to (1) curb certain questionable practices of the company; (2) query the legality of certain unpatented claims; and (3) get the operators out of there, by whatever means. Isn't there something we can do besides sticking pins in our Aspinall dolls?

CHELAN COUNTY

Midnite Mines, Inc., Wellpinit WA

Exploration for silver and lead at Lake Ann, near Rainy Pass and within the North Cascades National Park. Bah! Humbug!

American Exploration and Mining, Inc., San Francisco, CA

Exploration for copper and molybdenum at the old Red Mountain (Royal) Mine above the ghost town of Trinity, in the Chiwawa River valley. I believe this property lies partly outside, partly inside, the Glacier Peak Wilderness Area. I know for sure that seven years ago the entire town of Trinity, plus many adjacent mining properties, was offered for sale at a price of $100,000; no public agency had the wit to snap it up. What's needed here is not a mine and/or a vacation-home subdivision, but a respectful entryway to the Wilderness. What birdwatcher has 100 thou or so to invest in a gorgeous good deed? The upper Chiwawa should be, and someday will be, in the enlarged North Cascades National Park.

SNOHOMISH COUNTY

Bear Creek Mining Co., Spokane WA

Exploration for copper and molybdenum on Miners Ridge in the Glacier Peak Wilderness Area. We already know about that, don't we? Kennecott under any other name stinks as bad. Within a few months (hopefully), the Sierra Club will release a movie about Miners Ridge that will make the nation ashamed of Kennecott.

Banff Oil Co., Calgary, Alberta

Exploration for copper in the Silver Creek district, just south of Monte Cristo in the North Fork Skykomish River.

Brenmac Mines, Ltd., Vancouver, B. C.

Exploration for copper and molybdenum at the Sunrise and Rico properties in Sultan Basin, which is where the city of Everett gets its drinking water.

Kromona Consolidated Mines, Inc., Seattle WA

Limited production from the Kromona Mine of copper, molybdenum, gold, silver, and tungsten. In the Sultan district. Pretty limited production, I'd guess. Chances are, though, you could buy stock without a lot of trouble.

Copper Knob Prospect, Alderwood Manor WA

Exploration for zinc and copper in the Beckler River area, between the two forks of the Skykomish River.

KING COUNTY

Inland Copper Ltd., Vancouver, B. C.

Exploration for copper, molybdenum, and silver at Quartz Creek, tributary to the Taylor River, which flows to the Middle Fork Snoqualmie River.

Middle Fork Copper of Washington, Inc., Vancouver, B. C.

Intensive exploration (reported earlier in these pages) for copper and molybdenum on the Condor property, above Goldmeyer Hot Springs on the Middle Fork Snoqualmie River. No small-time swindle, this; conceivably we may be faced here, and soon, with an honest mine, perhaps the largest ever to operate in the Cascades. Development would have major implications for the Alpine Lakes Wilderness and Recreation Area. Let's watch it carefully.

New Directions Urged For Army Engineers

Izaak Walton, May 1969

REUSS BILL WOULD TURN CORPS INTO ANTI-POLLUTION BATTLE

A bill that would divert the energies of the Army Corps of Engineers from building dams of questionable value to the more pressing problems of water quality improvement has been introduced in Congress by Rep. Henry S. Ruess, D-Milwaukee.

"Instead of putting all its resources and skilled manpower into increasingly marginal navigation, flood control and power projects," says Reuss, "let us turn the Corps loose on building the sewerage systems and the waste disposal plants which the nation so desperately needs if we are ever to enjoy clean water again."

Reuss believes that one of the historic missions of the Corps, that of building dams, is now almost obsolete. "Nearly all the feasible dam sites on major rivers have already been used," he says. "Flood plain zoning is a cheaper method of flood control and more irrigated land merely results in more agricultural surpluses."

Federal Financing

While lauding the engineering achievements of the Corps the Congressman points out that its "passion for construction" threatens to destroy the ecological balance of some of our most beautiful rivers and estuaries."

His bill, listed as H.R. 10316, would authorized the Corps to build 100 percent-government- financed facilities to solve the sanitary sewer problems of our big cities; also to do research and development for new methods of sewage disposal.

"Like many old agencies," Reuss says "the Corps of Engineers suffers from hardening of the arteries. All too often its solution to a navigation, flood control or water quality problem is to build a dam, the bigger the better.

"Let the Corps of Engineers expend its research and development talents for water quality improvement. Let it go forward with pilot projects of the same massive scope and irresistible momentum as its high dams.

Sewage Fight

"Let the fight on water pollution become for the Corps the moral equivalent of war. Instead of fighting man and nature, let the Army Engineers fight the enemies of man and nature — sewage sludge, coloform bacteria, fertilizers and pesticides, industrial poisons and all manner of water-borne muck and slime."

"Let the Corps cease its big dam fetish and instead turn its talents and resources to the job it ought to be doing —an all-out attack on water pollution."

Reuss claims the Corps' pollution abatement program on the Great Lakes is mostly concerned "with abating pollution caused by its own dredging activities."

In introducing his bill, Reuss also emphasizes the inadequacy of the present water pollution control program, both in scope and financing. One of its worst features, he asserts, is the small percentage of funding allocated to cities and other local jurisdictions.

Need Funds

"The program is grossly underfunded," he says. "Although Congress has authorized $1 billion for fiscal 1970 for anit-water pollution grants, the actual budget request is a miserable $214 million."

He calls this level of financing totally inadequate to make a serious attack on the water pollution problem.

Chairman of the Conservation and Natural Resources Subcommittee of the House Reuss was co-sponsor of the Ice Age National Scientific Reserve in Wisconsin and the National Scenic Rivers System.

He is the author of "The Critical Decade: An Economic Policy for America and the Free World." He has been in Congress since 1954.

Springtime in Garbage Heights

Les Braynes
Garbage Heights, Wash.
Mid-April 69

Dear Irate,

There is robins singing all over the place and yellowbells growing in the yard and if spring ain't on the way then that ain't the brand new 1970 model Trail Tempest Termite with V-vroom Power parked alongside the jeep in my driveway. I don't know what they done with it, Irate, but that extra v in V-vroom has give it something that is hard to describe. Let's roll the snow back off them trails--and here I come!

The reason I take my pen in hand to report as your undercover agent on all the facts and things pertaining to our great outdoors is that recently I see by the paper that the Washington State Horsemen is to have a meeting in town to hear from the experts on horse use in the alpine areas. As you know, Irate, my oat-burner got permanently converted by a careless elk hunter and my present steed does its grazing out of a can, but I believe in keeping on top of what these bureaucrats tell us what we can do with our land, and besides we want to keep our lines of communication with the horsemen to break down their resistance to bike use so we can stand shoulder-to-shoulder against them lock-it-up-and-throw-away-the-keys boys when the showdowns come.

With these ample backgrounds to my thinking, I attended the meeting aforementioned. It was a dud, Irate. I though maybe there would be some fireworks. There was information but no sparks. They had lots of speeches from different agency people, and I wasn't the only undercover man there. I see a certain bald-headed guy from the N3C taking notes, and the president of the 4-wheel drive gang was there too.

The speechmakers? There was Mr. Wilkerson of the Trail and Pleasure division of the Washington State Horsemen. There was Ken Miller of Rainier Park, and Mr. Reitter of the State Parks, and Lloyd Bell of the Dept. of Natural Resources, and Mr. Green from the same outfit. A State Patrol Sergeant talked about horse trailer safety. Tom Griffith of the Naches Ranger District of the Forest Service was the only one who suggested there was any problems with horses by making some restrictive suggestions. Honest to Gosh, Irate, what happened to the land of the free? "Don't picket your horses, Don't construct things, Don't tie your horses to trees, Don't pollute, Don't proliferate fire circles, Don't leave your garbage, Don't pitch camps closer than 100 feet to trails or streams."

Everybody loves horses, though, even the F. S. Mr. Miller of Mt. Rainier loves them very much and says that there will be new facilities for horses like holding corrals at Nickel Creek, and the 300 miles of trails in the Park is waiting to welcome horses.

Also Mr. Wilkerson is elated that in the North Cascades National Park which we lost the battle on, Irate, they are lucky enough to have a long-time horseman for superintendant. His name is Mr. Contor, and he loves horses. Well, it seems everybody in every department does; they was all doing plenty of planning with horseriding in mind--Parks, Forests, Resources, BLM. The only fly in the horse ointment was them regulations stated by the F. S. to take the fun and freedom out of horse travel. Between you and me, there's enough spunk left in some of them horsemen to go right along as usual in the wilderness and let the bureaucrats make all the rules they want. They don't need no stuffed shirts telling them how to run their trips.

Well, I got to knock off because my best friend Ollus Dripps is coming over to see my new 3T with V-vroom Power. He'll have to get him one, or he'll never keep up with mee on them wilderness logging roads. Hey, how about the big news about building a lot of new roads through the forests to keep the trees from dying, ease the balance of payments, and build homes cheaper? Great news for us bike riders and all others who believe in Progress, Irate.

Informationally yours,

Les Braynes.

Drank lonesome water:
warn't but a tad then
up in a laurel thick
digging for sang;
Came on a place where
the stones were hollow,
something below them
tinkled and rang.

Dug whar I heard it
drippling below me:
should a knowed better,
should a been wise;
leant down and drank it,
clutching and gripping
the overhung cliv
with the ferns in my eyes.

Tasted of heart leaf
and that smells the sweetest,
Pawpaw and Spice bush
and wild Briar Rose;
must a been counting
the heels of the Spruce pines,
and neighboring round
whar Angelica grows.

I'd drunk lonesome water,
I knowed in a minute:
never larnt nothing
from then til today:
nothing worth larning
nothing worth knowing,
I'm bound to the hills
and I can't get away.

Mean sort of dried up old
ground-hoggy fellow,
laying out cold here
watching the sky;
pore as a hipporwill,
bent like a grass blade;
counting up stars
til they count too high.

I know whar the Gray foxes
uses up yander:
know what will cure you
of Tisic and chills,
but I never been way from here,
never got going;
I've drunk lonesome water
I'm bound to the hills.

Roy Helton

INTERMOUNTAIN
LOGGING
NEWS

Vol. 2, No. 10 Colville, Wash. 99114 Jan.-Feb. 1968

New Office Is Opened

COEUR D'ALENE, Idaho—Outdoors Unlimited has recently opened an Eastern Washington, Northern Idaho, Montana division office here, according to Diane Stocker, executive secretary for the organization.

The new office was opened as part of the organization's expansion program. Over three-hundred members now actively take part in a drive to "halt the advance of the nature fakers, advocating the selfish single purpose of use of Federal Lands in the Northwest and Rocky Mountain area."

"Outdoors Unlimited is dedicated, without apology, to the wise conservation of our natural resources and the maintenance of the Multiple Use principle in providing the maximum opportunity for the full and continued development of the economic progress of the northwest," Miss Stocker stated.

She went on to say that any persons interested in joining the organization should write to Intermountain Multiple Use Association, Inc., Box 244, Coeur d'Alene, Idaho.

Say You Saw It In THE NEWS

300,000 Homes

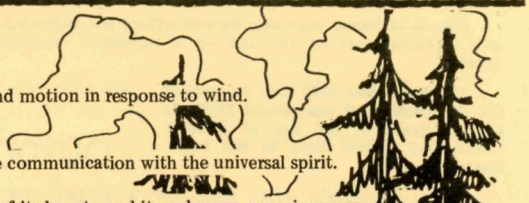
"The next essential is more housing — and more housing now.

"Surely a nation that can go to the moon can place a decent home within the reach of its families.

"Therefore we must call together the resources of industry and labor, to start building 300,000 housing units for low and middle-income families next year—three times more than this year. We must make it possible for thousands of families to become homeowners, not rent-payers.

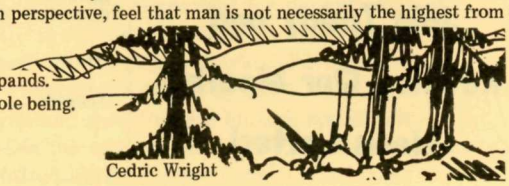
"I propose, for the consideration of this Congress, a ten-year campaign to build six million new housing units for low and middle-income families."

President Lyndon Johnson
State Of The Union Address
Jan. 17, 1968



Consider the life of trees.
Aside from the axe, what trees acquire from man is inconsiderable.
What man may acquire from trees is immeasurable.
From their mute forms there flows a poise, in silence, a lovely sound and motion in response to wind.
What peace comes to those aware of the voice and bearing of trees!
Trees do not scream for attention.
A tree, a rock, has no pretence, only a real growth out of itself, in close communication with the universal spirit.
A tree retains a deep serenity.
It establishes in the earth not only its root system but also those roots of its beauty and its unknown consciousness.
Sometimes one may sense a glisten of that consciousness, and with such perspective, feel that man is not necessarily the highest from of life.

Tree qualities, after long communion, come to reside in man.
As stillness enhances sound, so through little things the joy of living expands.
One is aware, lying under trees, of the roots and directions of one's whole being.
Perceptions drift in from earth and sky.
A vast healing begins.



Cedric Wright

THE ICE OF THE NORTH CASCADES (and elsewhere)

DISTRIBUTION AND VARIATIONS OF GLACIERS IN THE UNITED STATES EXCLUSIVE OF ALASKA

Mark F. MEIER
U. S. Geological Survey, Tacoma, Washington

SUMMARY

A cooperative program of investigations of the distribution of existing glaciers in the United States south of Alaska and the variations of these glaciers was instituted during the International Geophysical Year. Approximately 1,000 glaciers were found to exist; 77 percent of the glacier area occurs in the State of Washington. The total glacierized area is 513 km². Quantitative data on surface rise, advance of terminus, gross accumulation, late summer ablation rate, and measured precipitation were obtained for seven glaciers, and qualitative data were obtained on the condition of many other glaciers. These data indicate that during 1957 glaciers were generally thickening and advancing in Washington and perhaps in Oregon, were thinning slightly in Montana, and were retreating in California. The summer of 1958 was one of exceptional ablation and caused a marked volume reduction in all glaciers measured as well as a decrease in the numbers of glaciers advancing. The 1958-59 budget year was slightly favorable for the growth of glaciers but there is no indication that a cycle of advancing glaciers has resumed.

The existence of glaciers in the United States south of Alaska has been known for nearly a hundred years. However, an accurate count of the total amount of glacier ice has not been possible until recent years because of the large amount that occurs in relatively inaccessible and seldom-visited areas. Several attempts at a glacier census have been made (Russell, 1858; Wentworth and Delo, 1931). More recently, Field and others (1958) summarized existing knowledge on the subject.

With the advent of the International Geophysical Year, it seemed appropriate to (1) learn more exactly how much glacier ice presently exists and where it is located and (2) determine the present condition of these glaciers. A cooperative program to obtain this information was authorized by the Technical Panel on Glaciology of the U.S. National Committee for the International Geophysical Year. Several government agencies and universities cooperated by undertaking new projects or modifying existing projects so that the data could be interrelated. This article represents a preliminary summary of the results obtained during the International Geophysical Year, 1957-58, and the year following, known as International Geophysical Cooperation 1958-59. The objective of this article is to summarize the pertinent data that were obtained so they can be related with other results collected during the IGY-IGC observation period. No attempt is made to present a detailed analysis of these data.

This report could not have been possible without the excellent cooperation of several organizations and persons, who are mentioned as their data are presented.

1. DISTRIBUTION OF GLACIERS

New maps plotted by the Forest Service and the Geological Survey, new aerial photography by the Geological Survey, the Forest Service, and the University of Washington, and especially a study of the Northern Cascades by A.S. Post of the University of Washington, and the Geological Survey permitted compilation by the author of data on glacier sizes, numbers, and distribution. Data gathered by Dyson (1952) and Phillips on Rocky Mountain and Oregon glaciers, respectively, added greatly to this compilation. The sizes of all larger glaciers and more than half of the

smaller glaciers were measured by planimeter on the new maps. In order to portray the size-distribution of glaciers and to permit the more rapid sizing of the remaining unmeasured glaciers, an arbitrary scale of glacier sizes was defined. The average area of glaciers within each class was determined from a sample of 264 measured glaciers. The class limits and the measured average areas are given in table 1.

TABLE 1

Glacier size class limits and average areas

Class	Glacier area limits km^2	Average area within each class km^2
I	Less than 0.5	0.169
II	0.5 - 1	.73
III	1 - 2	1.42
IV	2 - 4	2.97
V	4 - 8	5.11
VI	More than 8	9.48

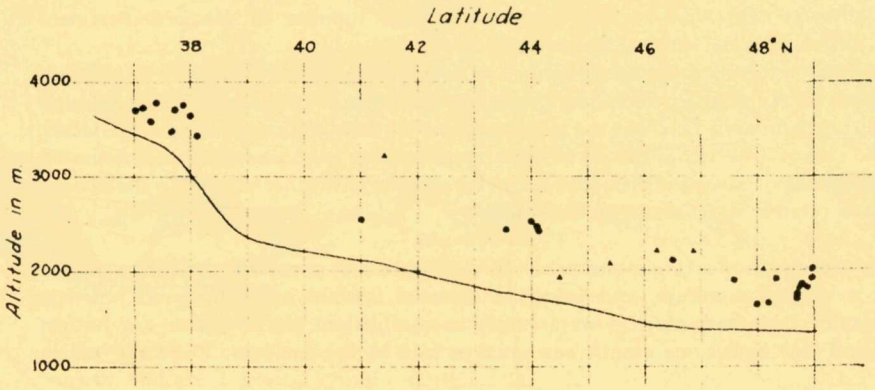
For each glacierized area in the United States south of Alaska, data are presented on numbers, sizes, and total areas of glaciers in table 2. Geographic variation in the mean altitudes of glaciers lends insight into the variations in climatic environment. However, in any given region it was found that the mean altitude of a group of glaciers was a direct function of the average size of the glaciers in that group. Because all glacierized regions contain Class I glaciers, mean altitudes of these smallest glaciers only are given in table 2. The locations of the glacierized areas are presented in figure 1. The latitudinal variation of mean altitude along the Cascade Mountains-Sierra Nevada system and the Rocky Mountain system are shown in figure 2. Locations of glaciers and geographic variations in mean elevation of the glaciers in Washington State are given in figure 3.

The total number of glaciers listed in table 2 is nearly 1,000, and they cover an area of more than 500 km^2. About 77 percent of this ice-covered area occurs in the State of Washington. By estimating reasonable average thicknesses for glaciers in each of the size classes and summing, we estimate a total volume of ice of 65 km^3 (53 $\times$ 10^6 acre-feet). Assuming that the average yearly ablation is 4 m of water, these glaciers contribute about 2,000 $\times$ 10^6 m^3 (1.7 $\times$ 10^6 acre-feet) of water to streamflow in the West during the summer months.

Most (79 percent) of the glaciers are tiny (less than 0.5 km^2) masses of ice nestled in protected cirques. These smallest glaciers aggregate 26 percent of the total area of ice, and but 10 percent of the estimated total volume of ice. Only in the Olympic Mountains, the Northern Cascade Mountains, on Mt. Rainier and Mt. Adams in Washington, and in the Wind River Range of Wyoming do glaciers larger than 2 km^2 in area occur. Most of these larger glaciers are of the valley type, but large cirque glaciers are not uncommon. The largest single glacier is Emmons, on Mt. Rainier, which is 6.9 km long and 10.7 km^2 in area. However, it is exceeded in size by the Carbon-Russell Glacier system (essentially a single trunk glacier fed by two tributaries) which is 9.7 km long and 13.0 km^2 in area, and is also on Mt. Rainier.

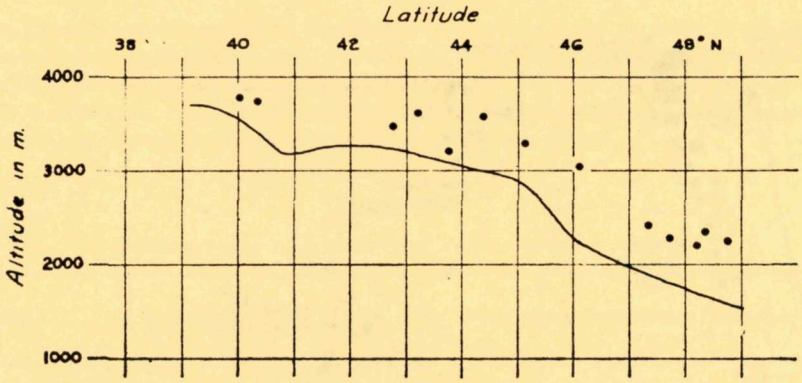
The geographic variation in mean altitudes shows a good qualitative relation to precipitation and latitude. Glaciers occur at the lowest altitudes in northwestern Washington State, where huge yearly precipitation totals (more than 5 m) are occa-

Fig. 1 — Map of Western United States, showing locations of glacierized areas. Dotted lines enclose those physiographic provinces which contain glaciers. Numbers are keyed to the glacier areas listed in table 2.



(a)

Fig. 2



(*b*)

Fig. 2 — Graphs showing mean altitudes of Class I glaciers as a function of latitude in the Cascade Mountains and the Sierra Nevada (*a*) and Rocky Mountains (*b*). Each dot or triangle represents the average altitude of a group of from 2 to 63 glaciers. Glaciers on the seven major Cascade Volcanoes are indicated by triangles, other glacier areas are indicated by dots. The solid line indicates the altitude of Pleistocene cirque floors, taken from Flint (1957, p. 309).

sionally recorded. Glaciers occur at higher elevations further south and further inland. In general present-day small glaciers occur at altitudes from 300 to 600 m above the altitudes of Pleistocene cirque floors. If the mean annual precipitation had not changed, this would imply that the present-day summer climate is of the order of 2-4 °C warmer than during the Ice Ages. Present-day glaciers occur only slightly above the Pleistocene cirque floors in the most southerly latitudes.

The vertical gradient in net accumulation (Shumskii, 1947) has been measured on only three glaciers in the conterminous United States. Values range from 15×10^{-3} (South Cascade Glacier, Washington) to 11×10^{-3} (Dinwoody Glacier, Wind River Range, Wyoming). These values indicate a relatively maritime climate. With the possible exception of glaciers in the Sierra Nevada, there is reason to believe that no highly continental-type glaciers occur in the conterminous United States.

2. Variations in the glaciers, 1956-59

Detailed regimen studies were made during the International Geophysical Year on Blue Glacier (La Chapelle, 1959) and South Cascade Glacier, both in Washington. Repeated topographic surveys provide data on the growth or shrinkage of four additional glaciers during the period 1956-59. Additional incomplete quantitative or qualitative data have been obtained on a large number of glaciers. Pertinent quantitative data are summarized in table 3.

An attempt has been made in table 3 to compare the relative intensity of ablation processes from glacier to glacier, by listing the measured or computed surface ablation rate in late summer. This was not measured on Nisqually, Grinnell, or Sperry Glacier, but the rate of lowering of the ice surface relative to sea level was measured. Ablation (V_a), lowering or raising of the ice surface (V_s) and the flow of ice normal to the surface (V_d) are related as follows (Meier, 1960) :

$$V_a = V_s - V_d$$

In this equation all components can be resolved either perpendicular to the surface or in a vertical direction, and velocities directed upward are considered positive. We assume that these glaciers were nearly in equilibrium ($V_s = 0$ over one budget year) and that V_d for one month was equal to 1/12 V_d for one year. The total yearly

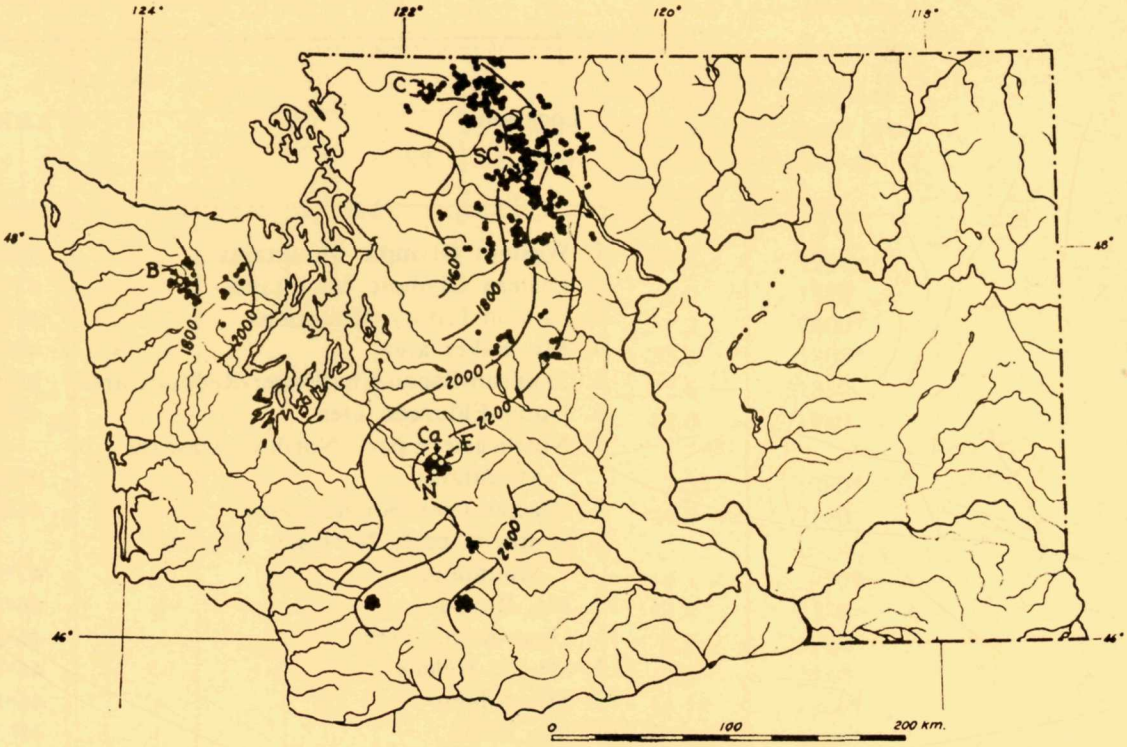


Fig. 3 — Location of glaciers in the State of Washington. Contour lines indicate mean altitude of Class I glaciers. Glaciers identified by letter are as follows:

B Blue Glacier
C Coleman Glacier
Ca Carbon Glacier
E Emmons Glacier
N Nisqually Glacier
SC South Cascade Glacier

ablation for each glacier was estimated, and 1/12 of this value was assumed to represent 1/12 of V_d and was added to the measured V_s during the month August 15 to September 15 in order to obtain V_a for this period. The corrections due to V_d were not large (see Table 3, notes 5 and 6).

South Fork Cascade Glacier by Charles Hessey

Distribution of glaciers in the conterminous United States, 1958

TABLE 2

Location	Latitude	Size Class I	II	III	IV	V	VI	Total number	Total area km²	Altitude Class I glaciers m
1. Western Olympic Mountains	47°50′	22	8	3	1	2		36	27.0	1710
2. Eastern Olympic Mountains	47°50′	23	1	1				25	6.0	1880
3. Salmon-Trinity Mountains	41°00′	2						2	.3	2600*
4. Mt. Baker area	48°47′	17	5	1	1	5	1	30	55.5	1800*
5. Shuksan-Bacon-Challenger-Redoubt area	48°50′	126	11	4	6			147	52.6	1850
6. Dome-Eldorado area	48°25′	94	21	11	2	6		134	82.0	1930
7. Northeastern part, Northern Cascade Mountains	48°40′	39	2	1				42	7.5	1980*
8. Glacier Peak-Bonanza area	48°06′	74	10	7	5			96	39.9	2100
9. Southern part, Northern Cascade Mountains	47°35′	62	7	1				70	14.2	1950*
10. Mt. Rainier	46°52′	18	3	5	7	5	3	41	87.8	2230
11. Goat Rocks area	46°30′	9						9	1.5	2100*
12. Mt. St. Helens	46°12′	17	4					21	7.3	2220
13. Mt. Adams	46°13	14	4	4		1		23*	16.1*	2500*
14. Mt. Hood	45°22′	4	3	5				12	9.9	2100*
15. Mt. Jefferson	44°41′	2	2	1				5	3.2	?
16. Three Sisters area	44°08′	15	5	1				21	7.6	2440
17. Mt. Shasta	41°25′	3	3	2				8	5.5	3200*
18. Yosemite National Park	38°00′	21						21	3.5	3590
19. Ritter-Minarets area	37°40′	4						4	0.7	3530
20. Abbot-Humphreys area	37°20′	8						8	1.4	3730
21. Goethe-Goddard-Palisade area	37°06′	36		1				37	7.5	3730
22. Wheeler Peak	38°59′	1						1	.2	3600?
23. Glacier National Park	48°45′	47	4	2				53	13.8	2280
24. Cabinet Range	48°13′	3						3	.5	2200
25. Flathead-Mission-Swan Ranges	47°40′	7						7*	1.2*	2430*
26. Crazy Mountains	46°05′	3*						3*	.5*	3050*
27. Beartooth Mountains	45°07′	34	5	1				40	10.8	3300
28. Big Horn Mountains	44°23′	2						2	.3	3600*
29. Absaroka Range	44°00′	4*						4*	.7*	?
30. Teton Mountains	43°45′	12						12	2.0	3200
31. Wind River Range	43°10′	45	6	5	5	2		63	44.5	3620
32. Rocky Mountain Park-Front-Range	40°03′	10						10	1.7	3800
Total number		778	104	56	27	21	4	990		
Area, km²		132	77	79	80	107	38	513		
Assumed thickness, m		50	75	100	150	200	300			
Volume, km³		6.6	5.7	8.0	12.0	21.4	11.4	65		

(*) These values represent estimates.

TABLE 3

Quantitative data on the variations of seven glaciers

Glacier	Surface rise in m			Advance of terminus in m			Gross accumulation in m of water		Ablation rate Aug. 15-Sept. 15 in cm/day of water		Measured precipitation in mm		
	1956 –57	1957 –58	1958 –59	1956 –57	1957 –58	1958 –59	1957 –58	1958 –59	1957 –58	1958 –59	1957 –58	1958 –59	Note
Blue		− 2.1	+ 0.1	Little change			3.5	2.8	3.4	2.0	3780	3560	1
Coleman	0.6	− 7.0	+ 0.3	+ 58	+ 49	0							2
South Cascade		− 2.7	+ 0.8				2.4	3.7	4.4	3.7		5330	3
Carbon				− 4.0	− 5.5	+ 7.9							4
Nisqually	+ 6.1	− 7.9	+ 5.5	+ 39	+ 42	+ 17.3			10.8	3.5	2612	3603	5
Grinnell	+ 1.1	− 2.9	+ 1.3	Little change					5.1	2.5	2470	3760	6
Sperry	+ 1.2	− 2.9	+ 1.5										7

Notes:

1. Data on gross and net accumulation and ablation rate obtained by E. R. La Chapelle (1959), University of Washington (IGY Project 4.3). Data on terminus advance supplied by the National Park Service (G. D. Gallison, personal communication April 1, 1960), Olympic National Park. Data on surface rise computed from measured net accumulation data assuming an area-averaged density at the surface of 0.8 gms/cm^3 at the end of the ablation season. Precipitation measured at 2100 m altitude.
2. Data supplied by A. E. Harrison (personal communications February 1, 1959, and April 1, 1960), University of Washington. Data on surface rise apply only to the area below an altitude of 2400 m, about 5 percent of the total area of the Coleman-Roosevelt Glacier system.
3. Data obtained by the U.S. Geological Survey (M. F. Meier). Data on surface rise computed from net accumulation data assuming an area-averaged density at the surface of 0.8 gms/cm^3 at the end of the ablation season. Glacier terminates in a deep lake, and the position of the terminus is controlled mainly by infrequent calving of large blocks. Precipitation measured at 1870 m altitude.
4. Data obtained by the National Park Service, Mt. Rainier National Park (Bender, 1958, 1959).
5. Data obtained by U.S. Geological Survey (Giles, 1958, 1959, 1960) in cooperation with National Park Service. Surface rise data apply only to the area below an altitude of 2100 m, about 17 percent of the total area of the Nisqually-Wilson Glacier system. Advance of terminus data refer to the present active terminus, not the disconnected stagnant ice which lies further downvalley. Ablation rate data computed assuming $V_d = -1.7$ cm/day, from surface rise data obtained on a cross profile at 1840 m altitude. Precipitation measured at 1692 m altitude.
6. Data obtained by U.S. Geological Survey (Johnson, 1958, 1960) in cooperation with National Park Service. Surface rise data measured along three radial profiles extending from terminus to near the headwall. Ablation rate data computed assuming $V_d = +1$ cm/day for 1/3 area and $V_d = 0$ for 2/3 area. Precipitation measured at an altitude of 1881 m.
7. Data obtained by U.S. Geological Survey (Johnson, 1958, 1960) in cooperation with the National Park Service, along one transverse and two longitudinal profiles from the terminus almost to the head of the glacier.

In the Northwest the 1957-58 budget year was characterized by an early spring and a warm summer that was unusually long. The high ablation rates in August and September are attributed partly to a high incoming energy flux and partly to the abnormally low albedo of the glaciers due to the length of the ablation season.

The 1958-59 budget year was characterized by a relatively heavy winter accumulation of snow, a cool and wet spring, and frequent storms during the summer.

The data in table 3 reveal that during 1956-57 the Coleman and Nisqually tongues grew while the Grinnell and Sperry Glaciers declined slightly. All of the measured glaciers showed an appreciable reduction in volume during the year 1957-58. During 1958-59 all of the glaciers showed slight growth. Note that the data on advance of the termini do not correlate well with the overall volume change data. This is principally because the dynamic adjustment of valley glaciers (e.g. Carbon and Nisqually) to climatic change appears to take place by the development and propagation of kinematic waves (Weertman, 1958). These waves may arrive at the terminus several years after their initiation. There are suggestions in the 1959 survey data that two of these waves (Giles, G.C., personal communication April 18, 1960) may have been in progress on Nisqually Glacier.

It is perhaps surprising that the ablation rate data from the different glaciers are not markedly dissimilar, after allowing for some differences in the locations of sampling points. The similarity of local climatic environment is also suggested by the precipitation data. Thus, Grinnell Glacier appears to be in almost the same type of local climatic environment as Blue Glacier. Blue Glacier is but 52 km from the Pacific Ocean (a principal source of moisture-laden air), and occurs near verdant rain forests. Grinnell Glacier is 800 km from the ocean, and is separated from it by vast expanses of semiarid land.

Qualitative data on the variations of glaciers in the Northern Cascade Mountains, Washington, have been summarized by LaChapelle (1960). He reported on about 26 glaciers. During the 1956-57 budget year, 18 of these were actively advancing and 4 were retreating. During 1957-58, 9 were advancing and 5 were retreating. During 1958-59, only 4 were advancing whereas 12 were retreating.

Only three glaciers on Mt. Rainier, Washington, were observed during this period. Data on two of these are presented in table 3. Emmons Glacier, on the same mountain, advanced continuously from 1956 to 1959. On Mt. St. Helens, one glacier is known to have advanced at least until 1958, another was apparently retreating during this period, and no others have been studied. Few, if any, of the glaciers on Mt. Adams show evidence of reactivation, thickening, or advance; many show evidence of thinning and recession.

The lowest extremity of Eliot Glacier, on Mt. Hood, Oregon, has thinned continuously since before 1956; a profile at a higher elevation showed no appreciable change from 1955 to 1957 but the ice became thicker in 1958 and 1959; and points further up the glacier showed increases since 1957 ranging from 1.5 m to 6 m per year according to K.N. Phillips (personal communication to J.B. Case, September 29, 1959). Several other glaciers, as far south as Three Sisters, showed evidence of renewed activity in 1957.

Lyell Glacier, in Yosemite National Park, California, thinned 0.57 m from 1956 to 1957, according to surveys along a cross profile by personnel of the National Park Service and the Geological Survey (Gallison, et all 1957). Further south in the Sierra Nevada, O. Kehrlein (personal communicated to W.O. Field December 10, 1959), reported that Palisade and Powell Glaciers also were retreating in 1958, but Howell Glacier was holding its own.

Arapaho Glacier, Colorado, was probably retreating from 195[illegible] to 1959, according to H.A. Waldrop (personal communication February 2, 1960)

It appears that the recent advance of glaciers discussed by Hubley (1956) was largely confined to the States of Washington and Oregon, possibly extending to Mt. Shasta in California (O. Kehrlein, personal communication to W.O. Field, December 10, 1959). Glaciers in the Sierra Nevada have apparently continued to waste away, whereas those in Glacier National Park, Montana, have remained very close to an equilibrium condition. The most spectacular advances occurred in the Cascade Mountains from Mt. Rainier north to the Canadian border, especially on Mt. Baker and on the Eldorado massif.

This advance was slowed appreciably by an abnormally heavy ablation season in 1958. Although conditions slightly favored glacier growth in 1958-59, all indications suggest that the recent cycle of advancing glaciers has not yet resumed and may be near an end.

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The Forgotten Father Of North Cascades National Park

THE SEATTLE TIMES, SUNDAY, MARCH 16, 1969

By WILLIAM R. HALLIDAY

NEWSPAPER accounts of the recent birth of the North Cascades National Park gleefully related the "whooshing" through Congress of its authorizing legislation. As most Times readers knew, the seeming ease of creation was impressive tribute to the accumulated momentum of a decade of dedicated effort by the North Cascade Conservation Council, The Mountaineers, the Sierra Club and other conservation groups, not to mention the dogged determination of Washington's legislative delegation in both House and Senate.

Nor did the effort begin only in the 1950s. Three decades ago, conservationists urged an even greater national park in the North Cascades, extending south to link with Mount Rainier National Park; a dream kept alive by a handful of citizen-conservationists until the coming of the N3C, as the North Cascades Conservation Council soon was abbreviated.

Almost forgotten is the ill-fated Mount Baker National Park proposal, widely hailed a generation still earlier. And forgotten even by the most dedicated Northwest conservationists is the man who first strove 63 years ago for a great national park in the North Cascades: Julian E. Itter, Seattle artist.

* * *

Today, accustomed to driving deep into the North Cascades in an hour or two, modern Seattleites can scarcely comprehend the barriers to nearby mountain travel at the turn of the century. Even the foothills seemed an impenetrable green jungle of devil's club, alder and rock-massed cliffs.

Natural log jams blocked Indian canoeists, not to mention more sophisticated craft. Blowdowns discouraged all but the hardiest explorers. The North Cascades were a closed door to all but the most hopeful prospectors and equally close-mouthed railroad surveyors.

The struggle of merely getting to what is now the Mount Baker ski area almost caused the collapse of the 1906 annual outing of the famed Mazamas, the Portland-based mountaineering group.

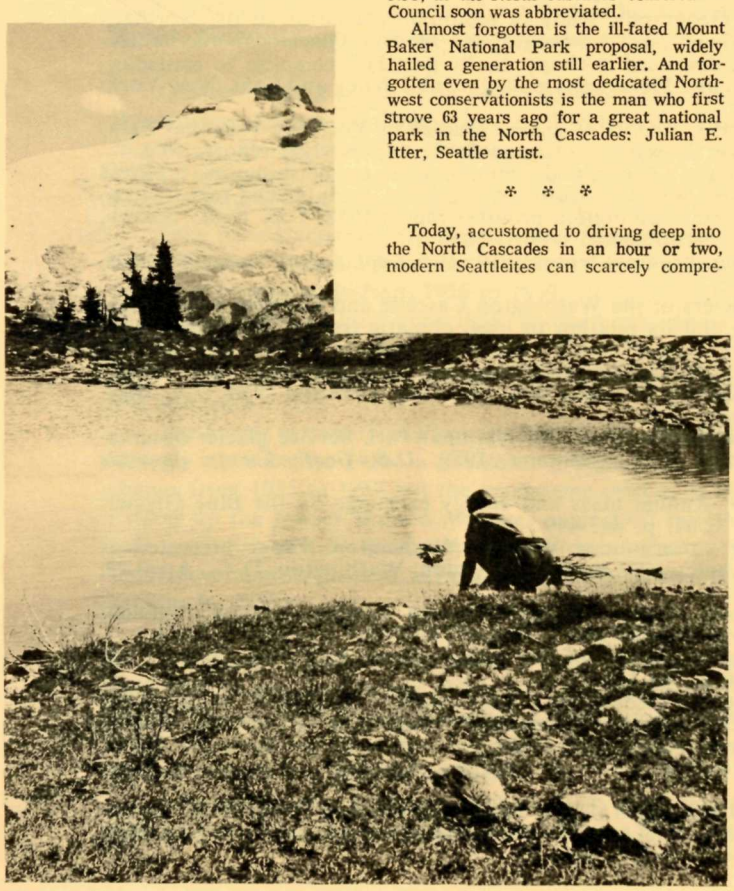
Only a single easy route led into the heartland of the gleaming mountains — the incredible sapphire waterway of Lake Chelan. From its glacier-trenched head at Stehekin, comparatively dry, brush-free east-side valleys led invitingly to glaciered splendor beyond imagination. But it took time — a lot of time — to get to Stehekin and the alpine meadows beyond.

You could travel from Seattle to the Columbia River by plush railroad, but the up-river boat had a mighty current to breast for seemingly endless miles. Then you had to go ashore, hire some form of tired transportation up the steep canyon-side to the high-perched lake and transfer to one of the little lake steamers for several more hours. To Seattleites, Skagway seemed less remote than Stehekin.

Entranced at each changing vista, the Mazamas explored the Lake Chelan region in 1899. Some members of the Mazamas lived in Seattle and talk of the natural splendors of the Stehekin country began to spread. A little.

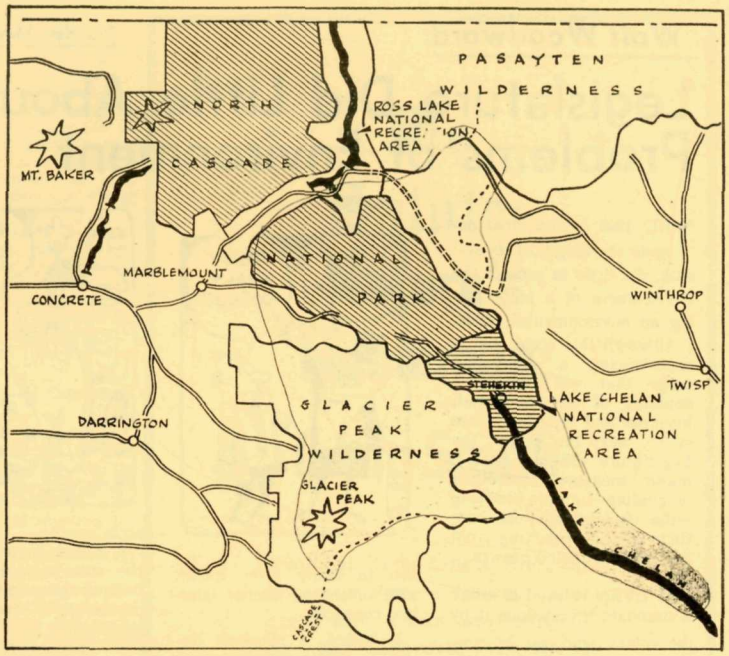
Already familiar with much of Alaska, Canada and the eastern United States, an adventurous young Canadian artist, Julian Itter, came to Seattle in 1904. Outdoor-oriented and encouraged in youth to travel "out of all ordinary routes," he soon set out for Lake Chelan and the Cascade Crest. Enchanted by the compelling natural beauty, he devoted the summer of 1905 to painting the greatest glories of the mountain remoteness.

In January, 1906, Itter opened an unheralded exhibition at Seattle's old Butler Hotel. Word spread rapidly of the extraordinary scenes he depicted in a strong, eager style. His courteous, general—yet forceful — personality made it easy to overlook an inevitable youthful immaturity of professional finish. The Times devoted an entire page to the exhibition. Itter became a pop-



Mt. Challenger by Charles Hessey

Dr. William R. Halliday, one of the Pacific Northwest's better-known mountaineers and explorers, is an outstanding authority on the subject of speleology—the scientific exploration and study of caves. He is the author of "Adventure is Underground" and "Depths of the Earth," as well as a technical report on "Caves of Washington." But he also has his head in the clouds as well as in caves. Through some diligent research into the back files of The Times, he has come up with this report on "The Forgotten Father of the North Cascades National Park."



The blue section shows the park as proposed by Julian E. Itter.

ular Seattle figure virtually overnight and every painting sold.

Contrary to legend, conservation sentiment was strong in the Puget Sound region. The spectacular beginnings of The Mountaineers founded in part "to preserve by the encouragement of protective legislation or otherwise the natural beauty of Northwest America" was only a few months away. Such Seattle leaders as Thomas Burke were friends of the national park movement.

Undoubtedly, other friends of the virgin mountainsides sought out Itter's company. Their private conversations have been lost in the mists of time. Within six weeks, however, idealist Itter was on his way to the nation's capital, a herald about to propose to conservationist President Teddy Roosevelt a full-fledged national park.

Since Itter knew nothing of the Skagit Gorge of the stark Picket Ranges of Mount Baker and Mount Shuksan and Twin Lakes, nor the then-virgin lower west side valleys, his dream park included none of these areas. Yet in his evaluation of the splendors he had seen, his artist's eye was unerring.

Aside from a strip of lower Lake Chelan, long ago devastated beyond hope of rehabilitation, later conservationists unknowingly fought to preserve every square inch of the area he delineated — and saved most of its heartland.

To date, less than half of Itter's proposed park has been incorporated into the North Cascades National Park. Yet the great bulk of his park-that-should-have-been today is within a superlative scenic resource complex. Half a national park, most of the magnificent Glacier Peak Wilderness Area and the Lake Chelan National Recreation Area bear witness to the vision of this forgotten painter.

Obviously Itter had quiet support from the leadership of Seattle. In short weeks, he gained the approval of the Seattle Chamber of Commerce and other influential groups. Yet Itter's name stands alone in this conservation milestone. Therein lay the initial enthusiasm and later despair.

En route to Washington, D. C., Itter paused in Spokane where he received notable acclaim and many promises of support. He discussed the situation with the executive secretary of the See America First movement who happened to be visiting in Spokane. No record is known of their conversation, but it must have dealt with political realities; Itter immediately changed his plans.

Rather than continuing to Washington, D. C., Itter launched into a whirlwind campaign, seeking the broad local grass-roots support essential for politicians to risk their prospects of re-election in any cause.

Resolutions of support poured in and success seemed near. But Itter's idealism left him "out of touch with the commonplace," in the phrase of an admiring contemporary. A bitter, slanderous attack by anti-park mining interests achieved its purpose. Itter faltered in his one-man blitz. Despite assistance by The Times, which then as now favored the national park, his support wilted almost visibly.

Under the circumstances, it could hardly have been otherwise. Even with a vigorous local organization to support the Mazamas' ill-fated 1909 proposal for a Mount Baker National Park, eight years' efforts were necessary to advance that proposal through one congressional committee—its high point.

Heartsick, Itter dropped his one-man campaign and concentrated on his profession. In 1909 or 1910, he traveled to Paris for two years' advanced instruction. There he was hailed as the most promising American painter in 25 years. In 1912 he revisited the Northwest and produced additional canvasses of the Stehekin country which reflect his advancing technique. Then he returned to Europe and dropped out of Northwest history.

As far as is known, he never again after mid-1906 publicly urged his farsighted proposal.

Yet the manifest destiny of the North Cascades had been set in motion. When Itter returned to the Stehekin country during the summers of 1906 and 1907, others were following his lead.

Another artist, M. L. Oakes, and such professional photographers as Portland's F. H. Kiser, A. C. Pillsbury of San Francisco, Lawrence D. Lindsley and Frank Palmer soon also brought the splendor of the North Cascades to an ever-widening audience. Never again could the Northwest overlook the hidden magnificence so near at hand.

In the successful campaign for our new park, many distinguished names hold places of honor. A veritable monolith in crisis after crisis, Dr. Patrick Goldsworthy long served as president of the N3C. In the final decade, Harvey Manning served brilliantly as editor, author, satirist and general morale-builder.

Mrs. John P. (Polly) Dyer, a housewife; Richard Brooks, a businessman; Grant McConnell, a political scientist of Stehekin and Chicago; Dr. Warren Spickard, who lies buried near the North Cascade peak which today bears his name; these are only a few of the dedicated citizen-conservationists who properly have received public acclaim.

In Congress, Representative Thomas M. Pelly strove virtually single-handed for the park until President John F. Kennedy became interested; President Lyndon Johnson first made the park an administration goal.

Outdoorsman and governor, Dan Evans broke the back of the anti-park opposition when he supported a traditional national park, with strict protection of a much larger area than Congress proved willing to authorize. Senator Henry M. Jackson served as chief obstetrician for final passage through Congress, with vital assistance by Congressman Lloyd Meeds, whose district includes most of the park.

Magnificent in informing the public were The Times' Walt Woodward and cartoonist, Alan Pratt, who brought comprehension of the need to hundreds of thousands.

In so distinguished a group, it has been easy to overlook Julian E. Itter. Yet it was he who foresaw much of today's need, glimpsed the opportunity and courageously championed the solution modern America has adopted so tardily and so incompletely. It was he who lit the torch.

Truly, Julian E. Itter is the father of the North Cascades National Park.

Walt Woodward: Thursday, May 15, 1969 The Seattle Times

Legislature Did Little About Rising Problems of Environment

THE 1969 Legislature, despite the length of its session, did little to protect the environment of a state facing an environmental crisis.

Although this state now is experiencing a population surge that will require a doubling of its residential, business and industrial base in the next few years, the Legislature did not pass a major measure controlling or guiding—or even studying—the obvious land-use conflicts already resulting from this unprecedented growth.

IT EVEN refused to enact a mandate thrust upon it by the voters, who last November approved a constitutional amendment authorizing the Legislature to protect open-space land from confiscatory taxation.

The Legislature's record of missed opportunities in environmental matters is also marked by this depressing list of legislative gravestones:

1. Killed, a measure to study and classify salt-water shorelands where, particularly around the rim of Puget Sound, the greatest conflict exists among industrial, commercial, residential and open-space uses.

2. Killed, a similar measure to study river banks also subject to intense land-use conflicts.

3. Killed, a measure declaring that land designated as a park is inviolate to other uses.

4. Killed, after only a one-hour hearing, any measure controlling the use of DDT and other long-lasting, deadly chlorinated hydrocarbon pesticides.

5. Killed, a constitutional amendment declaring that "the right of the people to clean air, pure water, freedom from excessive and unnecessary noise, and the natural, scenic, historic and esthetic qualities of their environment shall not be abridged."

6. Killed, a bill to control strip mining.

7. Killed, a coordination of the state's water- and air-control agencies into one department of environmental quality.

8. Inoperative, a solid-waste-disposal measure which the Legislature did approve. The measure is worthless, however, because the proposed new environmental quality department was to have administered it.

YES, THE Legislature did do a few things for the environment:

1. Approved, an air-pollution measure that gives local agencies the right to enact stronger controls than the state demands and which provides for civil as well as criminal penalties.

2. Approved, a weak marine-oil-spillage measure giving the state the right to clean up messes and collect costs, plus civil penalties up to $20,000, from the spiller, but only if the spill is not "accidental."

3. Approved, a measure that gives the State Game Department the right to protect and manage any bird or animal population, thus giving possible protection to some small species heretofore not protected.

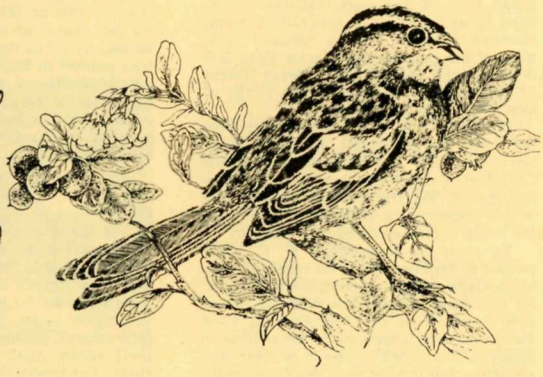
4. Approved, a legislative study of Cypress Island, one of the few remaining large, mostly uninhabited San Juan Islands that yet could be preserved in a natural state.

THE STATE'S first full-time "livability" lobbyist, Prentice Bloedel, executive secretary of the new Washington Environmental Council, is charitable in assessing the Legislature's record. He says:

"Some of these environmental measures were before the Legislature for the first time. Most of them got considerable consideration. We think the Legislature will do better the next time."

MAYBE SO. But others think the kindest excuse for the Legislature's sorry record is to say legislators did not know how to solve the environmental problems.

Less charitable observers feel the real reason is that too many legislators either are dullards with little or no comprehension of the state's growth problem or special-interest spokesmen deliberately unwilling to protect the public.



"Sorry, folks, there's no more woods."

The Portland Oregonian, May 13, 1969

JACKSON ASSAILS U.S. CONSERVATION

Washington Senator Finds Planning Inconsistencies

By JOHN C. DEVLIN
Special to The New York Times

ST. LOUIS, April 26 — "Inconsistencies and contradictions" in the planning and spending by Federal Government agencies came under the annual convention of the National Audubon Society.

The complaint was made to 1,200 conservationists by Senator Henry M. Jackson, Democrat of Washington, chairman of the Committee on Interior and Insular Affairs, and sponsor of a bill to establish in the office of President Nixon "a properly stafed Council of Environmental Quality Advisers" assigned to press for a "consistent" national policy on environment.

He said .President Nixon's present advisers, including Secretary of the Interior Walter L. Hickel, were opopsed to the Jackson bill on the ground that Mr. Nixon had proposed the establishment of an emergency council of his own. However, Senator Jackson said:

"It is my view that what is needd is an impartial, objective, fulltime Council on Environmental Advisers in the Executive Ofice of the President. The inner agency council the President is considering would be useful for implementing action proposals, but the President also needs independent advice as to what action to take."

Example From Jackson

As an example of what he called the present inconsistency in Federal planning and spending, Senator Jackson cited the establishment of the Everglades National Park in Florida under the administration of the National Park Service, while the Corps of Engineers was authorized to establish nearby a flood control project that threatened the park's water supply and ecological balance in the park.

Further, he said, the Federal Aviation Administration, in connection with agencies of local government, has planned a large jet airport near the park that "would have a detrimental impact on the park's water supply," would cause air and water pollution, create a maize problem and encourage commercial development.

He said a similar example involved the Atomic Energy Commission, which "maintains that it has no authority to consider environmental quality as a factor in the licensing of nuclear power plants, and this situation exists despite a general recognition of the critical environmental problems of planning to meet electrical energy demands."

The Senator said: "A properly drafted Congressional statement of national environmental policy would provide all agencies and all Federal officials with a legislative mandate and responsibility to consider the consequences of their action on the environment."

An Agricultural Example

One spokesman for the society said another example of Federal inconsistency in planning and spending involved the Government's spending of $3-milion on one hand to warn the public against smoking, but on the other hand, the spending of $32-million to encourage farmers to grow tobacco.

The keynote speaker, Dr. Barry Commoner, director of the Center for the Biology of Natural Systems at Washington University, said:

"The time has come, because of atomic fallout and the effects of insecticide poisonings, to forge a great alliance in this nation: among scientists, conservationists, and the public at large."

"We all now know that if we are to survive, the environment *must be maintained as a balanced* harmonious whole. We must all work together to preserve it. If we fail, we shall abandon the place where we live—the thin skin of air, water, soil and living things on the planet earth—to destruction."

Mr. Commoner said that DDT had been barred in Sweden and in this country in Michigan and in Arizona.

He paid tribute to the warnings of Rachel Carson in her hook. "Silent Spring," against the use of certain insecticides, and said that time has shown that she was correct and her critics turned out to be wrong.

He said he thought it would be appropriate at this time if "some suitable group—let us say the chemical industry, or the farm chemical magazines—were to make a public apology to the memory of Rachel Carson."

The convention continues through Wednesday.

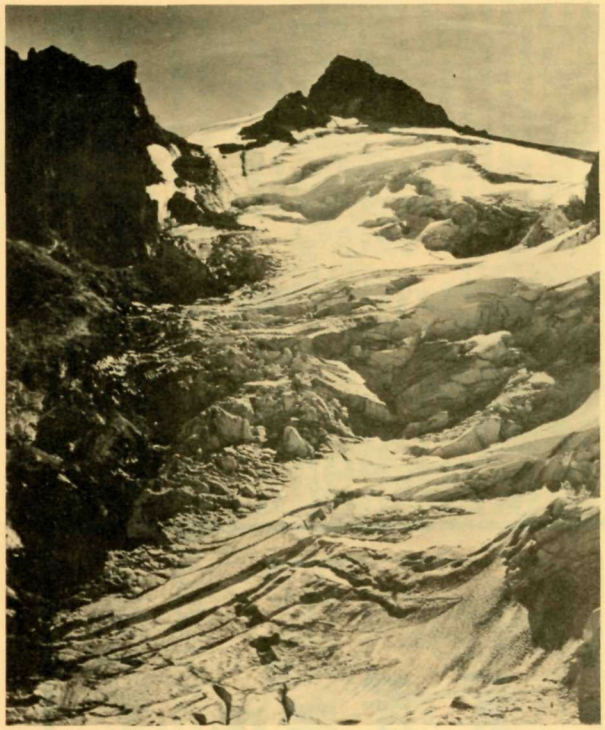
Next year it will be held in Seattle from May 19 through May 24.

We Salute: Nature's Nobleman: Craig Smith

Why not drop him a line, up there in Prince George, and give him some suggestions on what to do with that gun of his?

Feb. 15, 1969-Fishing & Hunting News-PAGE 11

CRY WOLF! Craig Smith says hunters in British Columbia are crying wolf during February and March. During these months the big animals like the one Smith displays here are on the move in areas like the Nation Lakes area. From Prince George hunters fly up Lake Stuart then northward to the Nation Lake chain which is a chain of lakes, including Indata Lake, Tchentlo Lake and Witch Lake, which empty into the Nation River. Popular way to hunt them is to fly in and spot from the plane. This is a sport that is just becoming popular. Smith guides for these trips and can be reached by writing to him at 1522 Cedar St., Prince George, B. C.



Scimitar Glacier on Glacier Peak by Ed Cooper

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