Wilderness development and the Flathead River Basin

Jon David Schulman

The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd

Let us know how access to this document benefits you.

Recommended Citation

https://scholarworks.umt.edu/etd/8957

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
WILDERNESS, DEVELOPMENT AND
THE FLATHEAD RIVER BASIN

By
Jon D. Schulman
B.A., Dickinson College, 1970
B.S., Montana State University, 1974

Presented in partial fulfillment of the requirements
for the degree of
Master of Arts
UNIVERSITY OF MONTANA
1977

Approved by:

[Signatures]
Chairman, Board of Examiners
Dean, Graduate School

Date July 9, 1977
The study is a journalistic approach to the controversy over future uses of relatively wild lands in the Flathead River Basin and elsewhere. The choice is between protecting these lands for their value as wilderness or opening them to timber, energy, mineral and other types of development.

Several approaches were incorporated in the study. First, the Introduction provides an historical perspective of development in the Flathead and some of its known side effects.

Then a photo-essay provides direct visual information on wilderness and the effects of development on wilderness.

Finally, a "New Journalism" style essay provides some of the author's first-hand impressions and insights gained during the production of the two parts mentioned above.

It is not generally the function of journalism to draw conclusions or make recommendations based upon its findings, so no such editorial or advocacy statement is made directly.
# CONTENTS

THESIS ABSTRACT ............................................... ii

PREFACE ............................................................ iv

Section
I. INTRODUCTION ................................................... 1

II. SOUTH FORK, FLATHEAD RIVER ............................. 25

III. MIDDLE FORK, FLATHEAD RIVER ........................... 42

IV. NORTH FORK, FLATHEAD RIVER ............................. 52

V. FLATHEAD RIVER AND FLATHEAD LAKE ......................... 60

APPENDIX

I. NOTES ON THE PHOTOGRAPHS ............................... 88

II. IN RETROSPECT ............................................... 102

BIBLIOGRAPHY .................................................. 119
PREFACE

The laws of nature are different from the laws of people. I cannot say with certainty that Glacier Park will never be clearcut. But I can say with certainty that the land under Hungry Horse Reservoir will never again be wild. The development process is irreversible, and that is why decisions which terminate wilderness must be carefully considered.

It is easy to demonstrate that development of any magnitude injures or destroys wilderness—often from many miles away. But it is agonizingly difficult to demonstrate the value of wilderness—what makes it special in itself and to those who have experienced it.

I can sit here in City Park, Hometown, U.S.A., and if I turn my head no farther than this in either direction, all I can see are trees and rocks, this little stream and some bushes.

Wild.

But what are those sounds? A moose tearing grass out of the ground by the roots? The courting dive of a night-hawk? Car horns? A jack hammer?

What are those smells? Mountain sage? Juniper? Carbon monoxide?
Can I take off my clothes and sit in this stream? Only until a crowd gathers and the authorities come.

Dare I drink from this stream?

A bush shakes nearby; what could it be? A deer? Big mama grizzly looking for her cub (how fast can I climb a tree)? Giggling lovers? A man with a gun?

How can it be proven--or even argued--that there is more to the wilderness than just a bunch of trees and rocks and streams and unleashed animals? That there is a mood, or spiritual force--a something that infiltrates the human essence and continues to buoy it long after the scent of pine has been washed from the clothes.

This study may be likened to a primary education in wilderness and development, specifically but only coincidentally in the Flathead River basin in northwestern Montana.

The Introduction provides historical and scientific background for the photo essay which follows it.

It is my personal belief that photographs can express the sensual/spiritual nature of wilderness (and its demise) more accurately and effectively than words. Some people seem to feel uncomfortable with uncaptioned photographs so a section of notes on the photographs follows them.

The photographs fall into two very distinct categories: wild land (as it exists today) and land which has been touched or slapped by the hand of civilization.

The essay has been criticized for including wilderness photos; they are just pictures of trees and rocks and water.
But a discussion of wilderness and development must try to establish what it is that is being developed if that discussion is to be helpful in determining whether the process is forward or backward.

Admittedly wilderness can only be experienced in the flesh, so to speak, but hopefully the photographs will serve as a scrapbook for those who have experienced wilderness, if not as a travel folder for those who have not.

The development photographs are not a horror show, because development is more often in nibbles than in mouthfuls—insidious rather than dramatic. In fact, development does not have to fill the frame to dominate the landscape. The horsebridge over Meadow Creek Gorge doesn't affect just the land it rests on; it effects the land from as far away as it can be seen, in the same way that a car horn can affirm the cavernous difference between a city-park-feeling and a wilderness-feeling.

The photographs are arranged sequentially, the first three sections running from more remote, upstream areas of the Flathead's three forks downstream to more developed areas.

The fourth section, covering the main river and lake, includes some of Morton J. Elrod's photographs from the early 1900's, courtesy of the University of Montana Archives. Elrod was a biology professor at the University, and early environmentalist and an active explorer and lobbyist for Glacier Park. The captions with his photographs are provided by his wife.
Finally, following the notes on the photographs, the Retrospective drops any pretense of Journalistic Integrity and invites the reader to accompany the photographer on a quick jaunt to the top of Mount Aeneas in the Jewel Basin Hiking Area. After all, you deserve a break today.

For the land and the light,

Jon Schulman
SECTION I

INTRODUCTION

Among the Kootenai and Salish tribes that inhabited or frequented the Flathead basin, the wilderness quest for a guardian spirit was one of the most profound events of the individual's life. E.S. Curtis wrote the following about it:

The religious practices of the Kutenai [sic] had to do with the acquisition of supernatural power through the aid of supernatural beings. To them all things were the abode of the spirits, one or another of which, if rightly approached, would take pity on a suppliant and become his life-long guardian and helper. The effort to gain this much-desired power was begun early in life. At the age of six to ten years a child of either sex was compelled to go apart from the camp and spend the night in solitude, waiting for a spirit to appear while he slept... At rare intervals throughout childhood he was sent to solitary places to await the coming of a spirit.

In general the spirit appeared to the suppliant in the guise of a human being, but after singing, and imparting its wisdom, it melted into the form of the animal whose spirit it really was and vanished.¹

Salish custom was nearly identical, although as the spirit seeker grew closer to maturity his quests became longer in both time and distance from camp. Fasting for one or several days was also expected, presumably to show sincerity or encourage a spirit's sympathy.²

²Ibid., pp. 80-83.
Of course the above might be dismissed as the natural reaction of a primitive people who depended on the wilderness for their subsistence. The wilderness was their universe, and it seems only natural that they would look for explanations of the mysteries of that universe within the wilderness itself.

But apparently it was more than that. There is evidence that those who never attained a guardian spirit--whose quests were not answered by a spirit or vision--suffered a very real disadvantage in both day-to-day and crisis situations. The wilderness was more than their only source for physical needs; the wilderness inspired the Indians and apportioned their personal power.

In the many centuries before horses began appearing in the area, the tribes rarely stayed in one camp for very long. They moved with the seasons and the food supply over a large area, on foot or by canoe. Anything that moved with them was carried on their backs or packed by dog, whether hunting bison on the eastern plains, salmon in the western rivers or roots and berries in the mountains.

In other words, material "wealth" was only a burden to their nomadic lifestyle. This reinforces the importance of

---


4 Ibid.
"spiritual wealth", or personal power, in establishing rank among tribal members.

Intertribal warfare in the Pacific northwest was rarely more than a sort of sporting event—a method by which few were able to "count coups"—increase their personal status through feats of strength or daring.\(^5\)

But the personal power of the successful warrior or family provider was clearly considered the favor of his guardian spirit and directly related to the success of his wilderness quests.\(^6\)

In the late 1700s, before white men are reputed to have set foot in the Flathead, profound changes began to take place in the lives of the Flathead Indians. White settlements on the east coast forced the native Americans to compress their homelands westward. In the process the Blackfeet were backed up against the eastern face of the Montana Rockies—traditionally the bison range of the Kootenai and Salish. The loosely overlapping territories of the tribes were squeezed together, and it was increasingly necessary for them to define and assert their territorial rights.\(^7\)

At about the same time, wild horses began straying up the western side of the mountains from the south, where they had been introduced by the Spanish. The horse revolutionized


\(^6\) Ibid., pp. 191, 194, 208.

\(^7\) Ibid., p. 157.
travel, hunting and warfare; but, perhaps more important, horses brought the concept of materialism to the Indians. They [horses] had become each man's bank account and medium of exchange; his bride-"price" and gambling stake; his better half for races and parades; and a prime source of beauty and pride. Class distinctions became more sharply defined, for a man could be arbitrarily rated by the number and quality of the horses he owned.

As a pack animal the horse made it much easier to bring material comforts along when the tribes were migrating. Now when the Kootenai and Salish hunted bison on the eastern plains, the Blackfeet felt threatened territorially and by the hunting advantage the horse had given to their western neighbors.

The eastern tribes began acquiring guns from the white traders and the intertribal wars began. The wars were as much contests for the guns and horses now necessary for survival as they were wars over territorial rights. Counting coups was no longer measured by battlefield bravery alone; now it was accomplished by stealing horses, guns and scalps too.

---

9 Ibid., 101.
10 Ibid., pp. 157-158.
12 Johnson, Flathead and Kootenay, pp. 100-107.
In the early 1800s the Hudson's Bay and Northwest Companies began competing for fur trade with the tribes of the Pacific Northwest. Indians became dependent on trading beaver pelts for guns, tobacco and other newly acquired needs.\(^{13}\)

In 1814 the Northwest Company cleared 75,000 pounds sterling in profit from fur trading in the "Columbia [River] District." In 1828 its profit had fallen to 31,379 pounds, and by 1838, beaver pelts were so scarce that the trading companies left the fur business to the hearty, independent American trappers.\(^{14}\)

The Indians had lost their chief means of acquiring white men's goods and white men had made their first major impact on the Pacific Northwest's eco-system by drastically reducing the fur-bearer population.

Believing as the Indians did that all personal power is spiritually derived, the Kootenais and Salish concluded from the available evidence that the white men's spirits must be more powerful than the Indian's traditional spirits.\(^{15}\) As early as 1831 they began petitioning for the establishment of a mission.\(^{16}\)

\(^{13}\) Johnson, Flathead and Kootenay, pp. 98, 175.

\(^{14}\) Ibid., pp. 234-235.

\(^{15}\) Ibid., p. 278.

\(^{16}\) Ibid., p. 265.
In 1840 St. Mary's Mission was established in the Bitterroot Valley, and in 1858 St. Ignatius Mission was established in the Mission Valley. But between the time the missions were established and the time the Indians finally were persuaded to remove themselves to the Jocko River Reservation in 1891, the missions functioned as more than a spiritual headquarters for the tribes. They also acted as government habilitation centers, training the nomadic Indians to be farmers.

As nomads the Indians might have interfered with the white settlers who were trying to tame the west; as farmers, the Indians could be confined to specific areas, and out of sight is out of mind. Thus missions were called on to help the government and the white settlers moved the Indians to the reservations.

While the missionaries were training the Indians to be farmers, homesteaders were taking the best farmland. But within a generation after moving the Flathead Indians onto the reservation, the lands most suitable for farming elsewhere had all been claimed by the white homesteaders. Consequently, the reservations were opened to homesteading and

19 Johnson, Flathead and Kootenay, pp. 287-311.
20 Ibid., pp. 309-311.
whatever farmland had been reserved for the tribes was soon taken from them.  

It is, of course, important in itself that the white culture destroyed the Salish and Kootenai cultures, by changing their people from nomadic hunters to trappers to farmers, then depriving them of farmable land. But in the context of wilderness and development in the Flathead basin, there are other insights to be drawn from this sketch of how the west was lost.

First, it is important to note that the Native American's nomadic lifestyle was compatible with the wilderness because it took no more than the land was able to generate. Farming, on the other hand, usually demands more of the land than it can produce naturally, but the eco-depleting dwarfed by timber cutting, energy production, high population density and all the other trappings of modern civilization in the Flathead which demand more from the land than it can naturally produce.

Second, the introduction of materialism undermined and collapsed the innate mystery or spiritualism of the wilderness. For example, a dog may be looked upon as a working companion, friend, perhaps even as a guardian spirit--something which might be missed after it is gone. Or a dog might be thought of as so many pounds of dog meat, hide, bone or scrap--something which might be measured in a ledger once it

\[21\] Johnson, Flathead and Kootenay, pp. 350-357.
is disposed of. The two points of view might be said to parallel the ways Native Americans and white men respectively viewed the wilderness. When value came to be measured by visible possessions, the wilderness became more of a supermarket than a garden. A place to be bargained with (ransacked if possible) rather than something to tend and respect.

But if this begins to sound like a romantic fantasy, it should be quickly remembered that the nomadic life was far from idyllic. A man, on foot, hunting buffalo with a spear, is not to be envied.

Even if the land was capable of supporting all of the people now living on the planet—which seems unlikely—anyone who believes that a return to the Indian lifestyle by our civilization would be an improvement is ignorant of the facts. Still, where are things to be learned from the Indians, not the least of which is the spiritual nature of the land.

* * *

Geologically, the eastern edge of the Flathead basin, which is also the Continental Divide, is formed by the Lewis Overthrust Fault, which is;

basically an enormous slab, several thousand feet thick, of Precambrian sedimentary rocks which slid eastward a distance of about 35 miles across the much younger Cretaceous sedimentary rocks that underlie the high plains. The sliding movement seems to have happened about 50 million years ago. Normally geologists expect to find younger rocks on top of older ones; here the situation is reversed so that rocks
about a billion years old are on top of rocks less than 100 million years old.\textsuperscript{22}

The result is the rocky, mountainous regions of Glacier National Park and Bob Marshall Wilderness.

The western valley area of the basin is part of what geologists call the "Rocky Mountain Trench."

Ice deeply filled the Flathead Valley during the last ice age, as a massive glacier poured down out of British Columbia as far south as the area south of Flathead Lake. All of the valley floor is deeply covered by debris left behind when the ice melted about 10,000 years ago so the Tertiary valley-fill deposits are now buried. Numerous lakes owe their origin to the glacier in one way or another. The bigger ones occupy basins gouged out by the ice, then dammed by debris as the ice melted. Most of the small ponds are in places where large blocks of ice were buried in the glacial sediment and then later melted, forming sinkholes.\textsuperscript{23}

The Whitefish Range and the Salish Mountains form the western divide of the drainage.

There is evidence that the Flathead was inhabited as early as 7,000 B.C., "when the region to the north and northwest was still bleak with ice."\textsuperscript{24}

\* \* \*

History credits David Thompson of the Northwest Company with being the first white man to enter the Flathead; it was


\textsuperscript{23}Ibid., 0. 195.

\textsuperscript{24}Johnson, \textit{Flathead and Kootenay}, p. 39.
in 1807.\textsuperscript{25} He established several fur-trading posts in the Columbia River basin but none in the Flathead. American trappers followed.

Mineral strikes around the state brought prospectors into the area beginning in the 1860s. Some of them became permanent settlers, along with newly arriving homesteaders.\textsuperscript{26}

In 1891 the Great Northern Railroad built its line through the Marias Pass, much of it along the Middle Fork of the Flathead River. Rail construction required great quantities of timber. Whitefish, Columbia Falls and Kalispell all boomed by supplying the railroad with wood products. The completed railroad made the timber industry even more profitable by shipping western lumber to the Midwest.\textsuperscript{27}

The railroads also shipped wealthy vacationers west, where they discovered the excellent hunting and scenery of Lake McDonald and the surrounding mountains. Among the hunters was George Bird Grinnell, who lobbied Congress to establish a park in the area. In 1910 Glacier National Park was founded.\textsuperscript{28}

\textsuperscript{25} Johnson, Flathead and Kootenay, p. 167.

\textsuperscript{26} Ibid., p. 315.


\textsuperscript{28} Ibid., pp. 10-14 and visitor's map, Glacier National Park.
The Park covers 1,013,262 acres and is administered by the National Park Service, U.S. Department of the Interior.²⁹

(It should be pointed out that despite government efforts for 67 years, 730 acres within the Park are still privately owned by wealthy vacationers and land speculators. In other words, the right of eminent domain can be exercised by utility companies and highway departments for land acquisition, but the public's need for park land is not considered important enough for eminent domain treatment.)³⁰

West of the Continental Divide the Park is largely bordered by the North and Middle Forks of the Flathead River.³¹

In addition to Glacier Park, the federal government owns, in the Flathead, another 2,355,366 acres that are administered through the Flathead National Forest.³² National Forests are under the Department of Agriculture. In fact, 78 per cent of Flathead County, National Forest and river basin are not contiguous.)

Last year 219 miles of Flathead River became federally protected under the National Wild and Scenic Rivers Act,

²⁹Robert B. Lunger, Land Acquisition Officer, National Park Service, Personal Correspondence.

³⁰Ibid.

³¹Ibid.


along with 57,400 acres adjoining the river. Most of that land had already been protected, since "40 per cent of the entire river system flows through wilderness or roadless areas" and "24 per cent borders Glacier National Park." But those who wish to see the Flathead River remain unspoiled are not without problems. A Canadian company has proposed a large coal pitmining operation on Cabin Creek, a tributary of the North Fork eight miles above the U.S.-Canadian border. Pit mines are similar to strip mines, only they create more overburden and therefore more potential for erosion. The mine at Cabin Creek essentially would level two mountains. Other potential hazards to the Flathead from this operation include the city of from 3,000 to 5,000 that it would create in the wilderness (sewage and drinking water problems), as well as coal washing facilities, coal dust and road and railroad building to, from and within the site.

Residents of the Flathead have formed The Flathead Coalition to deal with the issue, but the international nature of the problem limits their recourse to that of lobbying the U.S. State Department, which in turn can do little more than negotiate with the Canadian and British Columbian governments to stop the project or ensure that the river

---

34 Dick Smith, Great Bear Study Team Leader, Interview.
will be adequately protected. The difficulty of this is increased because of the large number of U.S. projects that have polluted Canadian waters.\textsuperscript{37}

In addition to Glacier Park and most of the Flathead River itself, three other areas wholly or partly within the Flathead basin are federally protected wild lands under the Wilderness Act of 1964.

First and largest is the Bob Marshall Wilderness, which covers 950,000 acres and spans the Continental Divide.\textsuperscript{38} The Mission Mountain Wilderness Area includes 75,588 acres, and the Jewel Basin Hiking Area 15,349 acres.\textsuperscript{39}

Low grade (lignite) coal was mined in the Coal Creek area of the North Fork from 1936 to 1942 and intermittently since. Mining has been uneconomical there, primarily because of difficulties in transporting the coal out of the fairly remote region.\textsuperscript{40}

A notable sidelight is the confusing jurisdictional circles over federal control of mineral rights on federal lands. The bureau of Land Management, Department of Interior, is responsible for mineral leases on federal forest

\textsuperscript{37}Flathead Coalition, (Missoula, Montana, University of Montana), Flathead Coalition News, November, 1975, pp. 4-5.


\textsuperscript{39}Dick Smith, Great Bear Study Team Leader, Interview.

\textsuperscript{40}USDA Forest Service, Final Environmental Impact Statement (EIS), Oil and Gas Lease Applications, (Kalispell, Flathead National Forest, 1976), p. 50.
land, "the Forest Service for management of the surface resources on National Forest lands." and "the U.S. Geological Survey for technical administration of issued leases." And if that is not enough, the Wilderness Act of 1964 does not prohibit mineral exploration and extraction in federally protected wilderness areas.

Hungry Horse Dam, on the South Fork, was completed in 1953. The reservoir it created flooded 23,750 acres of land. It is skirted by 115 miles of road from which about 600 miles of additional service roads emanate, primarily for logging purposes.

The dam generates 285,000 kilowatts. It was built by the Bureau of Reclamation, Department of Interior; energy produced is marketed by the Bonneville Power Administration.

According to a former Flathead Forest Ranger, "at the time of construction, plans called for diverting a million acre-feet of water into this (Hungry Horse) reservoir from the Middle Fork through an 8-mile tunnel from Spruce Park.

---


42 The Wilderness Act of 1964, Section 4, provisions (d) (1) through (3).

43 USDI, Bureau of Reclamation, pamphlet, Hungry Horse Project.

44 Jim Seek, Hungry Horse Station, Forest Service Interview, February 2, 1977.

45 USDI, Bureau of Reclamation, Hungry Horse Project.
to somewhere near Devils Corkscrew Creek" to increase the electrical generating capacity of the dam.\textsuperscript{46} There is evidence, though unsubstantiated, that this plan has not been wholly abandoned, even since the Middle Fork has become a federally protected wild river.

In addition to the diversion dam project, the Federal Power Commission has identified one other potential damsite on the North Fork in a federally protected portion of the river.\textsuperscript{47}

Environmentally, Hungry Horse Dam has made it impossible for fish from the lake and lower river to use the South Fork for spawning. This includes the westslope cutthroat trout, which is listed as an endangered species under the Endangered Species Act. Above the dam there has been a decrease in the trout population and an increase in the whitefish population. Another side effect has been the increased human access, which affects both the land and wildlife.\textsuperscript{48}

A recent study of the basin by the state Water Quality Bureau reported the following about the effect of Hungry Horse Dam:

The discharge structure draws water from far below the reservoir surface, with the result that the


\textsuperscript{47} Wild and Scenic River Study Report.

\textsuperscript{48} Ibid., pp. 33-38.
South Fork below the dam is very much colder during summer months than the other forks of the Flathead River.

Stanford studied the stoneflies of the Flathead drainage. He concluded that these important fish food organisms were adversely affected both in rate of growth and in ability to hatch and reproduce, by the cold discharges from Hungry Horse Dam. Migratory fishes, such as kokanee, cutthroat and Dolly Varden, key on both flow and water temperature to trigger their upstream annual migrations. Artificially induced temperature variations have been observed to confuse these runs, and flow fluctuations have left spawning beds too dry along the shore.

Tibbs suggested that seasonal sediment loading may be important in settling nutrients and algae problems in the lake. Hungry Horse Dam settles natural sediments in the reservoir prior to reaching Flathead Lake, and may thus contribute to eventual eutrophication of the lake.  

(It should be remembered that fish are important in maintaining water quality, in addition to the sport and food they provide).

The availability of power from Hungry Horse Dam led to the building of the Anaconda Aluminum Reduction Plant in Columbia Falls in 1955.  

The plant employs almost 1000 workers.

Two studies have been completed (1971) on the environmental effects of airborne fluoride emissions from the aluminum plant. The following is from the "Follow-up study

49 Water Quality Bureau, Environmental Sciences Division, Montana Department of Health and Environmental Sciences, Water Quality Inventory and Management Plan, Flathead River Basin, pp. 36, 38.

50 Wild and Scenic River Study Report, p. 66.

51 The Missoulian, 21, February, 1977, p. 11.

Analysis of insect tissue in 1971 indicated insects are still accumulating excessive fluorides. Even though the Anaconda Company reduced Fluoride emissions at the aluminum plant in 1970, above-normal fluorides are still accumulating in vegetation up to 12 miles distant in Glacier National Park. This represents an area of 179,200 acre.\textsuperscript{52}

C.C. Gordon's report of his study, which was confined to Glacier National Park, contains the following:

The coniferous and broadleaf vegetation collected in the three zones in Glacier National Park are being exposed to excessive atmospheric fluoride and this fluoride is accumulating in the vegetation species. The increase in fluoride accumulation in juvenile animals collected in the Park adequately demonstrates that the fluoride accumulation in these young animals is primarily derived from the fluoride-polluted vegetation they are consuming.\textsuperscript{53}

The major significance of these findings is not the harm to insects and plants alone, but the poisoning of the food chains in which they are key elements. This was demonstrated in the young animals mentioned by Gordon and in findings by Carlson that lettuce samples from home gardens in Columbia Falls contained poisonous levels of Fluorides.\textsuperscript{54}

The Forest Service has estimated that about 1,100 acres of trees on Teakettle Mountain adjacent to the plant are


\textsuperscript{53}C.C. Gordon, 1971 Glacier Park Study, p. 7.

\textsuperscript{54}Carlson, Environmental Pollution.
dead or dying, presumably because of the fluoride emissions.\textsuperscript{55}

It is much easier to locate and measure the environmental effects of major developments--like those described above--than it is to assess the over-all impact of the many smaller, more dispersed developments.

A 1974 study showed a dramatic trend toward subdividing land in the Flathead, presumably for later use as recreational home-sites;

From 1891 to 1973, 8,237 acres have been filed and recorded as subdivisions and since 1969, 41,315 more acres have been subdivided by metes and bounds description.\textsuperscript{56}

It should be noted that the latter figure indicates an intent to subdivide while the former figure is land that actually has been divided by title and sold in the divided parcels.

The following are excerpts from the water-quality study cited above:

Land subdivisions, accompanied by clearing, development and influx of concentrated populations along shorelines of lakes and streams, can cause water quality problems. Most often, such problems are related to improper sewage disposal which results in bacteriological, organic and nutrient pollution in the adjacent waters. Such problems are more pronounced where the soil is too "tight" or rocky, the ground is too steep, or sewage disposal system is located in a flood-plain or high groundwater area.

Lakes are particularly sensitive to shoreline development. While it is uniquely difficult to prove a cause-and-effect relationship between algal problems (eutrophication) and shoreline development, the effects are quite graphic.

\textsuperscript{55} Robert Bigart, ed., Environmental Pollution in Montana, p. 50.

A number of non-point water pollution sources contribute sediment, nutrients and bacteria to waters in the upper Flathead drainage. ...95% of the Algae-stimulating nutrients originate from non-point sources such as livestock activities, logging and road-building operations, agricultural fertilization, and a myriad of other poorly defined sources.

The primary water quality concern from agriculture is related to livestock access to small streams, resulting in trampled banks, loss of protective vegetation, erosion and manure runoff to surface waters. ...nutrients from manure may cause algal blooms in downstream lakes or slow-moving streams.57

In other words, the most visible sources of pollution may only be a small part of the problem.

It should be obvious from the preceding that these lands are no longer just an obstacle between fairer lands on either coast. The Flathead is now in great demand by many people for many uses.

As demand and new uses grew, regulations and regulators increase in number, squeezing each other out, overlapping, confusing.

It should also be obvious that the Flathead is vulnerable to environmental degradation, and that pollution from any source can have far-reaching effects--in time, in space, in infiltration into the food chain. In fact, at this point it seems naive to think we can do anything that will not affect the environment.

One final case in point deserves attention here. It is the proposed Great Bear Wilderness Area, which lies between Glacier Park and the Bob Marshall Wilderness. This roadless,
wild land includes 362,421 acres, of which over 302,000 acres are in the Flathead National Forest. The area is now being studied for possible inclusion in the National Wilderness Preservation System.

If Congress acts to protect the area under the Wilderness Act, about 59,600 acres of commercial timberland, with a potential annual yield of 12,600 million board-feet per year, would be exempted from commercial inventories. Therefore, the timber industry opposed the wilderness designation and is actively lobbying against it.

Coal, silver, lead and copper occur in the area, but the deposits have been termed "submarginal" by the U.S. Geological Survey (USGS).

The potential for oil and gas in the area is termed good. The USGS's studies "indicated a production capability of as much as 6.3 million cubic feet of gas per day from reservoirs" underlying the area.

With national energy shortages what they are today, those potential reserves will be a strong argument against wilderness designation. The companies that have filed for

---


59 Ibid., pp. 2, 10-11.

60 Dick Smith, Great Bear Study Team Leader, Interview.


62 Ibid., p. 3.
exploration and development leases also are lobbying against classifying the area as wilderness.

(Exploration leases applied for in the North Fork area, the Bob Marshall Wilderness and the proposed Great Bear Wilderness total more than 400,000 acres.)\(^{63}\)

A utility corridor has been proposed to cut through the Great Bear, presumably for power lines to connect coal-fired electric generating plants in eastern Montana with the Bonneville Power Administration's grid for the Pacific Northwest.\(^{64}\) (Perhaps coincidentally, the proposed corridor is identical to the route that had been proposed to pipe water from the Middle Fork to Hungry Horse Reservoir and Dam on the South Fork.)

Surprisingly, wilderness designation precludes neither utility corridors nor mineral exploration/production (i.e., oil and gas above) if the President deems those used compatible with wilderness use or in the national interest.\(^{65}\)

An airstrip within the study area is used by hunters and the Forest Service. Although wilderness designation does not automatically close existing airstrips,\(^{66}\) there is precedent for closing them once the area has been classified as

\(^{63}\)Dick Smith, Great Bear Study Team Leader, Interview.

\(^{64}\)Great Bear Wilderness Study Fact Sheet.

\(^{65}\)The Wilderness Act of 1964; Section 4, provisions (d) (1) through (3).

\(^{66}\)Ibid.
Opposition to closing the airstrip has been voiced.\(^6\)

But there are arguments to support the Great Bear Wilderness as well.

Most of the 46.6 miles of the Middle Fork classified as wild run through the area.\(^6\)

The U.S. Fish and Wildlife Service has proposed designating the area as critical grizzly bear habitat. The grizzly is classified as "threatened" under the Endangered Species Act. The northern Rocky Mountain wolf has been sighted in the area; it is classified as "endangered," as is the Montana westslope cutthroat trout, which lives and spawns in the river and its tributaries.\(^7\)

The area includes key winter range for elk. Other species in the area include moose, mountain goat, deer, black bear, Dolly Varden trout, marten, mink, otter, wolverine and lynx.\(^7\)

Recreational use of back country has increased dramatically in recent years both locally and nationally. This includes hunting, fishing, hiking, camping, river floating,

\(^6\) The Wilderness Act of 1964; Section 4, provisions (d) (1) through (3).

\(^6\) "Great Bear Wilderness Study Public Workshop Summary."

\(^6\) Wild and Scenic River Study Report.

\(^7\) Fact Sheet, Great Bear Study Team.

\(^7\) Ibid.
ski touring, motorized off-road vehicles, nature study and other uses.\textsuperscript{72}

Glacier Park recorded 1,662,678 visitors in 1976--an increase of 5.8 per cent over the previous year.\textsuperscript{73} Parks and wilderness areas around the country are finding it necessary to limit the number of people allowed to use the back country-through permit and reservation systems.\textsuperscript{74}

It would be virtually impossible to give an accurate assessment of past or expected recreational use of the Great Bear, in large part because of the very nature of the dispersed type of recreation it is most used for. The study team's assessment of the recreation resource dwells mainly on national trends and needs and on the Great Bear's potential recreation uses.

One Forest Service study states "that it is obvious a large enough wilderness system to meet all future demands for recreation and other uses cannot be established," and "the supply of wild and unroaded mountainous country is unlikely to grow."\textsuperscript{75} The same study projected that the demand for dispersed camping would increase by 90 per cent by the year 2020.\textsuperscript{76}

\textsuperscript{72}Recreation Resource, Great Bear Wilderness Study," pp. 19-23.

\textsuperscript{73}Missoulian, Tuesday, 8, February 1977, p. 5.


\textsuperscript{75}"Recreation Resource," Great Bear Wilderness Study, pp. 24, 23.
The land itself is described as containing "a variety of terrain ranging from narrow to wide river bottoms and massive rounded landforms to large, rugged mountains extending above the timber line," and "lakes are fairly abundant and widely dispersed on the Flathead portion." The report adds that "wildflowers are abundant."77

Wilderness designation does prohibit the use of motorized recreational equipment, such as trail bikes and snowmobiles, but a spot survey conducted among users of the area indicated that only 6 per cent of the recreational use in the area involved these devices.78

The report also notes the existence of two "indirect" benefits of wilderness. First are the "undisturbed watersheds and scientific values obtainable from biologic associations of a kind which would not otherwise be available." And, The second subcategory of indirect values arises because some people's reaction to non-wilderness experiences are conditioned by the knowledge that some wilderness exists. This kind of value is sometimes identified as the vicarious benefits of wilderness. This value is also relevant for public policy because it has provided motivation for tangible action by the people--people who may never register as wilderness recreationists, but would like to know the wilderness is there and express this motivation to political institutions. These people, too, "use" the wilderness.

78Ibid., p. 12.
79Ibid., p. 1.
SECTION II

SOUTH FORK, FLATHEAD RIVER

c in pocket,
Pool and rock, Bunker Creek
SECTION III

MIDDLE FORK, FLATHEAD RIVER
SECTION IV

NORTH FORK, FLATHEAD RIVER

[Text continues from the previous page]
Near Bowman Lake, Glacier Park
SECTION V

FLATHEAD RIVER & FLATHEAD LAKE

tin pockets
1 The Flathead River & Bad Rock Canyon
APPENDIX I
NOTES ON THE PHOTOGRAPHS

South Fork

26-34 Wilderness Photographs

Should the trees and rocks be identified by their scientific, Latin names? Is it important that the argillites pictured were formed more than 600 million years ago or that female praying mantises literally make meals of their mates while they are mating? Such information may enhance one's enjoyment of the wilderness, but it is certainly not necessary.

Enjoyment. Is that it? Perhaps the wilderness photos are provided as condiments to help the medicine go down.

And why were photos used rather than words in the first place?

In the Wilderness Act of 1964, Congress defined wilderness as follows:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least
five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Can you put your feet up, close your eyes, see and feel the wild after reading this passage?

Words, certainly, can evoke the moods and sights of wilderness, but personally I feel that photographs can do that same thing more directly. Words require a sort of cerebral interpretation that photographs should not require. I can close my eyes and visually recall photographs I have seen, but the Shakespearian sonnet or passage from Thoreau builds the visual picture from a step farther away than a visual memory of a direct experience might recall.

For example, there are rocks that break apart with a very precise angularity and rocks that crack with precise circularity; somewhere there is verbal documentation to that effect, complete with Latin names and a structural analysis of why one type of rock breaks one way and one the other. Photographs 28 and 29 can prove the existence of such rocks directly; and they are also a step closer to the joy of stumbling (literally, sometimes) over such rocks in the wild. No cerebral interpretation should be necessary.

The photographs also provide a sense of the "before" contrary to the photographs showing developed areas. What are now city and rural developments once held the same beauty and intrigue that the remaining wildlands still hold.
No, that is not true. Today's wilderness is more beautiful and intriguing precisely because of the physical and cultural extent of development today. Although Native Americans found great spiritual forces and awesomeness in the wild, they needed a very sophisticated knowledge of the wild to survive; it is doubtful if the wilderness provided any escape for them or any romantic tickle. In the same way, cities will always be more mystifying to people reared on farms and vice versa.

And the photographs simultaneously recall that only the most rugged extremities of the planet remain wild. The gentler lands in the broad valleys and on the plains could never have been wild in quite the same way as these remote areas. In fact, Lewis and Clark reported considerably more game animals on the plains than in the mountains, including elk and bear, found almost exclusively in the mountains now, because life for most species is fairer on gentle land. The ruggedness of the lands that remain wild seems to make them just that much more wild.

So the wilderness photos are to show that, by and large, the lands that remain wild in the Flathead are remote, rugged, awe-inspiring, beautiful and more beautiful because of the intermission they afford.

By contrast, the photographs of developments will reveal that the wilderness is acutely fragile, too.

In photograph 27 specifically, is "the imprint of man's work substantially unnoticeable?" It would be hypocritical
to criticize the Forest Service for building this horse bridge that inspired me to cheer when I saw it, since there was no other way to cross the river. Yet from the vantage point of this photograph there is no mistaking this bridge for a natural wonder and no way that seeing it here can help but deflate the feeling that this is wilderness.

35-38 Timber cutting series.

Photo 35 shows the destruction inherent in the clear-cutting process. Note the "slash," or debris (roots, branches, damaged or short pieces); it will probably be burned. Several trees are left to seed the area and reforest it. Usually the land is "scarified" to help the seeds get into the soil; in practice this means a bulldozer runs over anything and everything that may have survived the cutting process. Scarifying breaks up the top soil.

Photos 36 and 37 show the earliest stages of recovery. Weeds and bushes usually dominate for the first five to ten years. Photo 36 also shows some of the effects of roads cut into hillsides; heavy erosion is evident all along the road edge with total washouts in the draws. Across the reservoir are squarish "meadows" left by previous cuts.

Twenty-three years have not made the forest in photo 38 comparable to the virgin forest in photo 34. It will be another 60 to 130 years before these trees are large enough to cut for use as commercial timber. Notice too that the ground is still littered with slash that has not yet decom-
posed. In the Southeast and parts of the Pacific Northwest, it takes only 20 years for trees to grow to cutable size. In other words, it takes the land at least four times as long to regenerate itself in the Flathead as it does in other parts of the country. This makes the land just that much more vulnerable to erosion and other hazards, and questions the wisdom of growing commercial timber on lands so uncompetitive in their productivity.

Photos 39 and 40, Hungry Horse Reservoir, has many campgrounds and boat launches for developed (non-wilderness) recreation. As noted in the introduction (p. 13) the area is heavily roaded; though most of the scenery on these roads is of clearcuts, the area is a haven for trailbikers and snowmobilers. Trailer camping, boating and fishing are popular here.

Photo 40 shows debris in the reservoir either from logging nearby or left over from the creation of the reservoir in 1953.

Photo 41, Hungry Horse Dam. Please refer to pages 13-15 in the introduction and to the two preceding paragraphs.

Middle Fork

43 Middle Fork within the proposed Great Bear Wilderness Area. This portion of the river is classified as wild under federal law. Note the snags or tall, dead trees dominating the ridges; according to a publication of the wilderness study team "approximately 75 per cent of the area was burned
between 1890 and 1929 (with) major fires.....in 1903, 1910, and 1919." Even if it is assumed that the trees pictured here were burned in the latest (1929) fire, then the photo shows that the forest has not regenerated to its previous height in the 48 years since the fire.

(But this is a wilderness photograph--see notes for 26-34.)

**44 and 45** The Skyland Creek (1971) burn resulted from a slash fire following a timber-cutting operation. Apparently the fire smoldered for several days after the Forest Service's supervisory crew thought it was out. A wind came up, rejuvenated the fire and spread it to the nearby hillside.

Despite what Smokey says, fire cannot be simply classed as either a good or evil force (the Forest Service has discovered this too.) The timber industry supports Smokey because no one makes a profit from trees that burn down.

But there is evidence that, in natural moderation, fires create rangeland for wildlife and can help control "epidemics" that kill forests in an even larger way.

The ambivalent nature of the destructive force of fire is most eerily evident in burned areas. The affected timber has a twisted, tortured look that is, ironically, extremely beautiful.

**46 and 47** Mount Grant, Grant Glacier and Tunnel Creek, within the proposed Great Bear Wilderness Area. See notes on wilderness photos, 26-34. Photo 46 shows one of the two
glaciers in the proposed wilderness; 47 shows both the tenacity and strength required of trees on high ridges. Tenacious for having eked a living rooted in bedrock, and strong for having been able to break and lift these large slabs of rock. Winds are always domineering forces in high places, but the wind which this tree (and others on the ridge) eventually yielded to must have been an exceptional one.

In the background are some high peaks in Glacier Park.

48 Intersection of Tunnel Creek and U.S. Highway 2. Somehow when the paths of roads intersect those of waterways the roads tend to come out on top. (Please note highway and trees at very top of bank.)

49 and 50 Middle Fork, U.S. Highway 2 and Great Northern Railroad bed on the western slope of Marias Pass. Both shots show extensive man-made cuts in hillsides and artificially built-up river banks, these two processes must have had affects on sedimentation, erosion, and flood plains for the river. Here the river is classified as Recreational. High peaks of Glacier Park backdrop 49.

51 Subdivision on the Middle Fork near West Glacier. The river bends back toward the houses just to the right of the photo and flows out of the scene to the left, between the farthest house shown and the hills behind it.

I do not have the information or expertise to comment on this subdivision specifically, but there is a problem with sewage treatment along the river, as described in the
95

Introduction (pp. 17 and 18), from "non-point sources" such as subdivisions. In cases where the houses are too close together, or sewer systems are poorly designed, inadequately treated sewage enters the groundwater, which eventually leads to the contamination of neighboring wells or the river itself.

North Fork

53-57 Wilderness photos; please refer to 26-34 above.

Vegetation (notably mushrooms) in 53-56 indicates a fairly wet climate here in the northernmost (U.S.) portion of the Flathead basin. These first four photographs were taken within five or six miles of Polebridge, Montana, which has a growing season of only 30 days, by comparison with a growing season of 135 days in Kalispell, roughly 40 air miles away. While Kalispell is dominated by Pacific weather, Polebridge is dominated by arctic weather.

Natural erosion shown in photos 57 and 62 is influenced by clearcutting upstream, because removing the trees from an area affects snowmelt and water runoff. An apple tree, for example, may evaporate as many as 150 gallons of water per day through its leaves, but trees also shade snow that is on the ground, moderating the speed of runoff due to snowmelt.

If the volume of water flowing in the river (streamflow) is charted before and after clearcutting upstream, results will indicate more extreme variations in streamflow following cutting due to faster runoff. When streamflow is charted against siltation (amount of sediment carried by the water)
it is discovered that, below flood stage, siltation in the water varies by an exponential factor of between two and three against linear changes in streamflow.

In English this means the more constant the streamflow the lower the overall erosion and siltation by a very substantial amount. Since clearcutting causes extreme fluctuations in streamflow, it dramatically increases erosion of the streambanks, particularly higher, less stable banks, such as the ones in photos 57 and 62.

Hydrologists and silviculturists are learning ways to minimize these effects through clearcut area designs and selective cutting methods.

(Information by Alan Tudor, Flathead 208 Water Quality Study.)

58 Big Mountain Ski Area, north of Whitefish, Montana, is another example of a developed recreation area. Ski runs had to be cut, chairlifts and lodge facilities built and, most important, a road and parking lot constructed. Recreation for many people is concentrated into a relatively small area so the impact is largely contained.

The wilderness counterpart is cross-country skiing or ski-touring, which is classified as "dispersed" recreations. Both forms of skiing are increasing in popularity.

59 Kastella's Taxidermy Shop kills two birds with one stone here. First it points out that there is wildlife in the Flathead, even though it is too fast (until it is stuffed)
for my tripod camera. Second, the photo reminds that wild-
life is more than an ecological grace; it is meat and trophies
to many.

Main River and Flathead Lake

61 The Flathead River flowing through Bad Rock Canyon
into the Flathead Valley. The work of glaciers and subse-
quent alluvial action in carving out the valley is evidenced
by the abrupt difference between the flat valley and the
steep hills surrounding it.

62 Natural erosion; please see notes for 57 above.

63 and 64 Power lines from Hungry Horse Dam through Bad
Rock Canyon, and the Anaconda Aluminum Reduction Plant. Both
the dam and the plant are discussed at length in the Intro-
duction ( pp. 13-17). Killer fluoride emissions from the
plant are visible in photo 64. Unfortunately, black and
white photographs do not reveal that the trees to the right
of the plant are brown rather than green.

65 and 66 Zoo and fly-tying shop along U.S. 2, which is
the main road to Glacier Park west of the divide. Such
tourist-oriented side-shows are common along roads traf-
ficked by vacationers in Montana; Otto Schultz, indicentally,
is worth visiting.

It seems ironic for people to travel hundreds--even
thousands--of miles to see the natural wonders of Glacier
Park and the Montana Rockies only to be taken in by commercial
tourist stops which own more billboard space than floor space,
especially when similar attractions can probably be found along the highways near their own hometowns.

(Personally, I have more respect for a person who shoots wild animals than I have for one who cages and exploits them. The driver of the recreational vehicle in photo 65 either agrees with me or has to make Pacatello by sundown.)

67 Kalispell, Montana; please see page 17 of the Introduction. Kalispell's economic bases are agriculture, timber and tourist related.

68-72 The O'Brien house and mill in Somers, Montana, both in the early 1900s (Elrod) and currently. Somers is at the head of Flathead Lake, where it is fed by the Flathead River; it has a population of 889 (1970). (For Elrod, see pp. vi and vii, Preface.

The O'Briens house has apparently fared better than their lumber mill (later known as the Somers Mill) which closed in 1948. But photos 71 and 72, taken at low water, show that environmental damage done by the mill persists. The mill's foundation remains (71, left) and even a majority of the docks, but the lower portion of 71 shows that much of the land is artificial fill, built up mainly from lumber mill ens (unsalable lumber--either too short or not fully dimensional). The instability of the land will be evident to anyone who tries to walk over it without breaking through the surface. Add to this a proposed condominium complex and the discussion of sewage disposal through unsuitable soils (pp.
17-18, Introduction) and it is easy to see why Flathead Lake is becoming polluted.

Photo 72 shows why the practice of floating logs to mills (as in 70) was outlawed. This portion of the bay, normally under water, is that covered by floating logs in photo 70. The ground here is composed of wood chips, bark and mill ends, still only partly decomposed nearly thirty years after the mill was closed.

73 and 74 Farms

A large portion of the lower Flathead Valley is agricultural land used for wheat, cattle, Christmas trees, seed potatoes and other products, not to mention the famous Flathead cherry orchards around the lake. Unfortunately, agriculture contributes its share of pollution, as discussed in the Introduction (pp. 17-18).

75 and 76 Bigfork, Montana. A comparison of Bigfork in 1908 (Elrod) against the present day (April, 1977). Bigfork is at the mouth of the Swan River into Flathead Lake.

77-79 Jewel Basin Hiking Area. Mount Aeneas is a lovely vantage point for collecting an overview of the Flathead (please see retrospective which follows notes). To the west is the lower Flathead Valley and Flathead Lake--divided, conquered and with a slight cough which may one day choke it. The lake is still beautiful, even more so from Mt. Aeneas, where most of the development around the lake is obscured by distance. Square fields of wheat and hay checkerboard most of the valley, with a hanging haze marking the town of
Kalispell--the haze a combination of road dust, car exhaust and industrial fumes.

To the east is Hungry Horse Reservoir, pock-marked with the square craters of twenty years of timber cutting. Now and then the tzttztztztztztztztztztztztztztztztztztztz of chainsaws, or the rasp of bulldozers and logging trucks, rides the wind to Aeneas' summit. On a clear day, the proposed Great Bear Wilderness is visible in the distance, with Glacier Park more to the north and the Bob Marshall Wilderness a little to the south.

But immediately to the north and south is the Jewel Basin Hiking Area, a semi-wilderness. Semi- because it is too small and surrounded to be a wilderness in itself and semi- because some corporation turkey beat the ecologists to the top of the ridge with his microwave building. Still it is a most lovely area, with strings of clear, high-mountain lakes, rocky peaks and ridges and a marvelous profusion of wildflowers--including the eternal knockout, beargrass.

Like most preserved wildlands it would not have been preserved if it had contained accessible timber of commercial quality or coal or precious metals or was farmable or grazable. The stamp of federal protection was not earned on the area's merits but conceded to it by default. When the lands surrounding Jewel Basin have been stripped of their commercial assets the sincerity of federal wilderness laws will be tested.
80 and 81 Campgrounds with connections for recreational vehicles on Flathead Lake. During the peak vacation months these can become rather high density land uses.

82 Cherry harvest at the orchards of J.W. Symonds on Flathead Lake. Two families of Mexican migrants have been harvesting for Symonds for many years.

83-86 Photographs comparing Dayton and Polson early in the century (Elrod) and in April, 1977.
APPENDIX II
IN RETROSPECT

(Trip #34)
(or maybe it was #43)

The camera cartwheels over the edge and out of sight. I listen to hear if it will stop sometime soon.

It does.

"They oughta do something about these damn mountains," I shout, then shiver at the truth that they are doing something. About the mountains and the river and the land.

The case is a little beat up, but the camera and lenses are unmarked. My breathing eases considerably.

The lake below is hard to separate from the mountains due to the haze, but the flowers on the hillside are already so brown around the edges that the shot can't wait for better weather—especially the way it's been this year.

Out comes the tripod, camera, lens—no, the ninety—focusing cloth, level, magnifying glass, filter, light meter. A little more to the left maybe. There. Now the film.

Damn; where'd that cable release go. Maybe Instamatics aren't so bad after all.

Pack it all up and head for Mount Aeneas, this time walking the old road they used to build the microwave station on the ridge. See if it's any easier than the foot trail
Anita and I took two weeks ago, the day I was apparently unable to read the light meter or see anything through the ground glass.

"You, you're the one,
That we've been lookin' for.
You, you're the one,
We've got it cookin' for."

On the old road, no more than fifty feet off the hiking trail, is a manhole guarded by a "DANGER: HIGH VOLTAGE" sign. This warning has obviously fought off attacks by numerous guns—not an unusual task for signs in Montana. The wilderness manhole—but the profs say irony is too dangerous a form of humor, because no one ever gets it.

But what can I call this thing, besides "A photographic study of wilderness and development in the Flathead River Drainage?"

Perhaps something from that terrific shouting match with the Exxon geologist who bought my '52 Willys wagon:

"Don't these God damn ecologists realize that the cities don't produce a damn thing? That they can't produce a damn thing. Don't they realize that it's up to the rural areas to provide all the materials to produce everything or the whole civilization will fall apart?"

The castle on the hill, sustained by miles and miles of serfs, owning nothing and owing everything. Working the land for the castle, which did what-was-it in return? Protect the land?
"In Montana,
We do it all for you."

Just two weeks and the beargrass has already gone to seed. The land is never the same twice. All these purple things weren't out before; now they're everywhere.

Man, doesn't this slope ever let up? My heart feels like it wants out. Another warning sign marks the trail, but this one passes a little slower than the other one.

Christ, I hope this thing works out. This project. The degree will be one thing, but if it can help the Flathead.

Jackson did it for Yellowstone. It was his photographs that the Congress voted to be the first national park. But photographs were a lot more special back then. They would have to be really something today. Really something. I wonder if anybody could pull it off anymore.

Federal protection under the Wild and Scenic Rivers Act will help the Flathead, but will it be enough? Classification protects only about a quarter-mile strip of land on either side. What happens on the North Fork, where there are already roads on both sides of the river, up to the Canadian border and beyond? What happens if the proposed coal mine goes through on Cabin Creek? At one time they were planning to truck the coal down the North Fork road.

Dust from that road must be affecting the vegetation already.

But coal dust?
On a road that reduces Winnebagoes to tin foil and petroleum by-products.

On a road where I apologize to my Subaru every fifteen seconds and pray for nothing larger than a VW to be coming at me from the next bend. To float a wild river, ocher from spoil bank runoff, and to the accompaniment of coal trucks, that would be, well, it wouldn't be wilderness.

"You're why we're always near, Close by, right on your way.
You're why we keep it clean,
Cause you deserve a break today."

And what about emissions from the aluminum plant killing trees and animals in Glacier?

And the lands being leased for oil and gas exploration in the North Fork area.

And the Hydroelectric dams waiting their turns to be economically feasible.

And the old homesteads being sub-divided into city-size lots.

And, perhaps most dangerous of all, the people who think a thousand Airstreams in a cow pasture is a back-to-nature trip; dangerous because they think they know wilderness, yet their concept of it does not provide more living space for wild things than a zoo or a greenhouse might. Self-sufficiency is only a human need for them.

Not to mention the loggers.
With all of those forces working against the Flathead, what chance has it? When the trees and metals and energy sources have all been stripped from the non-wilderness, will laws protecting the Bob Marshall and Glacier continue to be enforced? Not likely.

Christ, I have got to sit down. Any fool who would back-pack thirty pounds of camera equipment, particularly in the shape I'm in.

Beargrass is beautiful even after its flower stalk has dried up and turned woody.

Oh, and some mushrooms. Great year for mushrooms, on that trip to Bowman Lake in Glacier...it must be the horse-shit. Yeah, that must be why there are so many more mushrooms along the trail than off it. Well, chalk one up for development, anyway.

Red-topped mushrooms and yellow ones with sticky tops and luminous orange ones shaped like brains and whole communities of mushrooms as animated as Fantasia. They may not be the prettiest of flora but they are certainly among the most compelling and sensuous.

Hiking is like vacation driving, really. The beaten path may flash an occasional vista your way, as you press on toward itinerary stop number 52. But mostly it's the beaten path itself that you see—and gas stations. Scrap books never show enough gas stations.
But the vacation doesn't really start until you're sitting under a tree or cupping your hands in a stream. That's when the wonders start washing over you.

Well, that should be enough rest.

How the hell much farther is it, anyway?

"You, you're the one, shit" ...can't you sing anything else, Jon? Rocky Mountain High? Yetch!

"You're why our prices are low,
Cause you deserve a break today."

The North Fork. How am I gonna get in there for a shot of the river with the peaks in Glacier behind it. I don't even know if the land along the river can be walked. And with the infamous Giefer Creek grizzly\(^2\) out terrorizing the area I sure don't want to camp along the river by myself. He might think my camera is a can of beans and eat it. He might think I'm a can of beans, for that matter. And him with the power to bite open a tin can, or paw it open.

If I could float the river, but how would I shoot with my 4X5 from a raft. Who cares? What a great trip that would be. And everybody with their silly excuses. Tom and Sue.... "But we work six days a week." Really now.

Hey, isn't that the microwave building? Great. At least I've made it to the ridge; that's as far as Anita and I got, but it looked like it was really gonna storm on us that day. And what a letdown--even in a semi-wilderness area--a three-story cinderblock building painted in waves of
blue, grey and green. No doubt a camouflage scheme designed by some Thoreauvian scholar.

The wilderness microwave station.

How little it takes to break the spell of wilderness. Wildness. "The essence exuded by a natural system working," Bud Moore called it. But all the books, journals, poems that have been written; no words can approach the experience itself; the exhilaration and the fear, the peace and the wild.

Can photographs?

Up here the beargrass is at its peak--big clusters of tiny white flowers. And bluebells and the little purple stars and Indian paintprush and some others I've never seen before. Each square foot putting on its own little firewords display, hoping to allure the affections of the pollinators--wouldn't that be a lovely life's work?

Always something new, not to mention the joy of watching the seasons change with the altitude. Here the trees are gnarled and stunted by the unyielding wind, rooted in bare rock. More flowers growing out of the cracks. It looks like about a quarter of a mile along the ridge to the peak of Mount Aeneas.

They would put Aeneas Paul's place way up here--I mean who expected this place might ever attract visitors? Aeneas Paul Koostata, Big Knife, Chief of a band of Flathead Lake Kootenais who refused to move to the Reservation.
Arlee, on the other hand, got a town on the highway for leading his Flathead people to the Reservation. Then there's Lake McDonald in Glacier Park, named after the Irish fur trader from the Northwest Company; of course the Kootenais already had a name for it--Lake of the Sacred Dancing Waters, Anita tells me--but white men prefer to chisel their own names on whatever they find, rather than to let those what-evers make names for themselves.

I wonder how many tourists are disappointed to find that Lake McDonald is not the Disneyland of the hamburger industry?

There is laughter in the wind and I see some people coming back down the ridge toward me. They walk loosely, one or another stopping to take a closer look at something along the way, calling the others over to look. A woman raises her arms and turns in the wind.

One of them sees me and immediately they are a column of serious hikers.

Now only the sounds of the wind and quick glances as we approach each other.

"Hi."

"Hi."

"How you doin'."

"Great."

"Really."

"Hi."

"Hi."
They are gone. The air embraces me like the first wave of spring. My nose is dripping and my eyes are tearing from the chill of the wind. August was never like this in the city.

The peak must be just over this hill. No. Well, this next one then. The trail gets thinner with the soil and is bare rock now as often as not. Still another hill beyond this one. Make this one it, please.

It is.
Yes, it is. Thank you, Lord. My turn to do a three-sixty...
Oh, Anita; look what we missed. Sorry. Top of the world. One of Bud Moore's power places--that "lift you up or knock you over."

Well, get rid of the pack, you idiot! Get rid of the pack and sit down!

Whew.

Great.

Aeneas got the best place after all.

That string of lakes down the basin. The Picnics, I think. And over there must be Birch Lake and the farther one Crater Lake. Pretty. But what's that one?

It's too close to be... why do I always leave the maps in the car?

As I watch, a logging truck draws a curtain of dust around what is, after all, Graves Bay on Hungry Horse Reservoir.
That's it?

That's all the wilderness there is between here and there? That isn't enough space for an elk to hide. Or any self-respecting grizzly bear.

Take your pictures and let's go home.

"You're why we're always near, Close by, right on your way."

Logging trucks. How often have they stopped my heart on the South Fork Road. How can I treat logging in the project? How do I feel about logging?

Anita says they must never cut another tree. My heart agrees with her, despite all the jobs created by the timber industry in Montana and the need for lumber.


"Rolling down" 200-year-old larch because they'll never be big enough to log.

And the logger at Mamie Creek saying, "Clearcut? Oh hell, no; this here's a selective cut. Who told you this was a clearcut? You work for the Sierra Club?"

And the one at Felix Creek.

"Just a minute there. Whadaya think you're doing, taking pictures from the middle uh the road?"

"Oh, just takin' pictures."

"Yeah, well who you workin' for?"
"Oh, I'm just doin' a little project for the Journalism School in Missoula."

"Well, what are you taking pictures for? You work for the Sierra Club?"

"No. Now, I just told you. I'm working on a project for the school in Missoula. That's all."

He snarled and walked away. Journalism student found chain-sawed to death in the Reservoir. And the river. And the lake.

And the Forest Service sees these guys every day. They don't see backpackers or rafters or fisherpersons. Just loggers.

Pity the Forest Service.

But the trees do grow back, even though there's no mistaking an area that has been cut from one that hasn't.

Why does agricultural use of the land feel all right to me; feel positively good? Is agriculture that much more harmonious with the land?

And forest fires. The Skyland Creek burn is stunning. Tortured, flamelike forms that would nourish the most starved imaginations. Smokey is surely a logger in bear's clothing.

And after 23 years the Trout Lake cut still has little beauty and many scars. But it is growing back and it did provide some jobs and some lumber 23 years ago.

Then you get to a place like this on top of Aeneas and see the really tiny area of wild land left. Can't we spare it? Are we that poor?
Well, just two shots left to get on this trip. One of Jewel Basin without the microwave building and one with it, because once one sees the building in the second shot, he will always feel the building's presence in the first shot, even though it doesn't appear there.

Wilderness doesn't stop at the cabin door or even within sight of it. Wilderness stops where the cabin is no more than a possibility--an anticipation.

"You're why we keep it clean, Cause you deserve a break today."

Definitely tired. Time to head back. If just those two come out it will be enough for this trip.

Good Lord, it's getting late. I should've been off this mountain an hour ago. But two miles downhill isn't as bad as....

What was that?

WHAT WAS THAT? THE GIEFER CREEK GRIZZELL.

"YOU, YOU'RE THE ONE, WE'VE GOT IT COOKING FOR!"

Again that sound. Why is it just when I turn my head like this?

Because it's the sound of your collar against your pack, you idiot. Mr. Macho outdoorsman.

Still, maybe I should walk a little faster. I mean, it is getting a little chilly.

Leaving wildlife out of this thing is going to be one gaping hole. But 35mm would only draw attention to its own
coarseness next to the others. Still, grizzly are an integral part of the wilderness even if you never see one; just knowing they're around.

The grizzly scats Dave Smith and I was on the Grant Glacier/Tunnel Creek trip....No sweat. Let's not even go back down the road to refill our canteens. But two hours of bushwhacking through chest-high huckleberries was very tiring. And then two hours of climbing to the top of the ridge and another along the ridge to mid-afternoon and still a longer, steeper climb before the creek would even be in sight and only a thimbleful of water for our throats and so tired. We gotta go back.

Stumbling. Falling down. Cuts on my hands and forearms, shins and knees, falling down and falling down. My mouth like it was full of rubber cement and my lips like they were swollen double. My legs heavy to numbness each step. Falling down. The pack cutting heavy into my shoulders. Stomach turning, contorting. Sweat in my eyes; where was it coming from? I licked my lips only to taste dry salt.

How could you not be able to make it, all down hill?

Is it time to leave the packs yet?

No, I'm fine.

Falling down. I'm just going to leave my pack--my camera and lenses and film. And canteen. Oh, yes, that's a lot better. See? I'm fine now. Will you help me put it under this stump and I'll come back for it tomorrow.
Trying to take my turn at lead but bumbling it too slow. Lips now too heavy to speak clearly. Just keep Dave in sight. When did my hand start bleeding? Tripping over huckleberry bushes and huckleberry bushes and huckleberry bushes.

Huckleberry bushes and huckleberry bushes and huckleberry bushes.
The car.
Hurry.

A stream cold and running clear. Sitting in cold running water. Wet cold over feet and legs and face massaging out the ache and heat; blood washed away. A quart already? No. Are you sure? Well let's have some more.

Grant Peak, part of the proposed Great Bear Wilderness which may some day connect the Bob Marshall Wilderness with Glacier Park.

Only the Forest Service is recommending that certain parts be excluded. Parts where logging will be profitable.

Why am I bothering with all this? Why can't my thesis be another bit of esoterica for the library's darkest corner, like so many of the others?

My photographs can't sing like the land. Who would listen if they did?

And how can I maintain a proper journalistic distance from something which threatens the most vital part of life. Who else will argue against those who would mute the land--
those who would smash the instruments and tear at the vocal cords.

The car already.

Two hours of top forty and I'll be home. Well, let's hear who's on the old charts again.

"You, you're the one,
You are the only reason.
You, you're the one,
We take pride in pleasin'."
1. William H. Jackson (1843-1942). Since travel to Yellowstone would have been too costly and time consuming for members of Congress in the 1960s, they had to decide the merits of making Yellowstone the first national park on the evidence provided by Jackson's photographs of the area and its natural wonders. These were made on 11" x 14" pieces of glass which had to be sensitized, exposed and developed all within a matter of minutes by the "wet-plate" process. The portable darkroom, camera equipment and glass plates were carried by a mule named "Hypo."

2. Giefer Creek grizzly. Periodically the modus operandi of a particular wild animal will earn it both infamy and a name. The Giefer Creek grizzly seems to prefer canned goods to natural or organic foods and has broken into many cabins in the North Fork area to satisfy his habit. He can open cans with either his paws or his teeth. It is important to note that he only enters vacant cabins; the one time he entered an occupied cabin, he ran away as soon as he saw the occupant. Although he has been trapped and relocated several times in the past, all such efforts have been futile this year. (May, 1977--The Forest Service has announced that the Giefer Creek Grizzly was shot in Canada by hunters.)
3. Bud Moore, retired Forest Service employee now living in Montana. Bud has written several back-country journals.
SELECTED BIBLIOGRAPHY

Alt, David D. & Hyndman, Donald W., Roadside Geology of the Northern Rockies, Missoula, Montana, 1974, Mountain Press Publishing Co.


Darling, Pete, Hungry Horse Ranger Station, Hungry Horse, Montana, Interview.


Flathead Coalition News, November, 1976; February, 1976; August, 1976; and October, 1976, Student Action Center, University of Montana, Missoula, Montana.


___"Recreation Resource."
Dick Smith, Team Leader, Interviews.

"Timber Resource."


Lunger, Robert B., Land Acquisition Officer, National Park Service, U.S. Dept. of the Interior, Personal Correspondence.


Seek, Jim, Hungry Horse Ranger Station, Hungry Horse, Montana, Interview.


____ Final Environmental Statement, Oil & Gas Lease Applications, Exploration and Development R-1, 75-11, April, 30, 1976.


____ Office Records for timber production and related road building (Region One Office, Missoula, Montana).


____ National Park Service, visitors map to Glacier National Park, 1975.

Water Quality Bureau, Environmental Sciences Division, Montana Department of Health and Environmental Sciences, "Water Quality Inventory and Management Plan, Flathead River Basin, Montana (no date--1975-76).