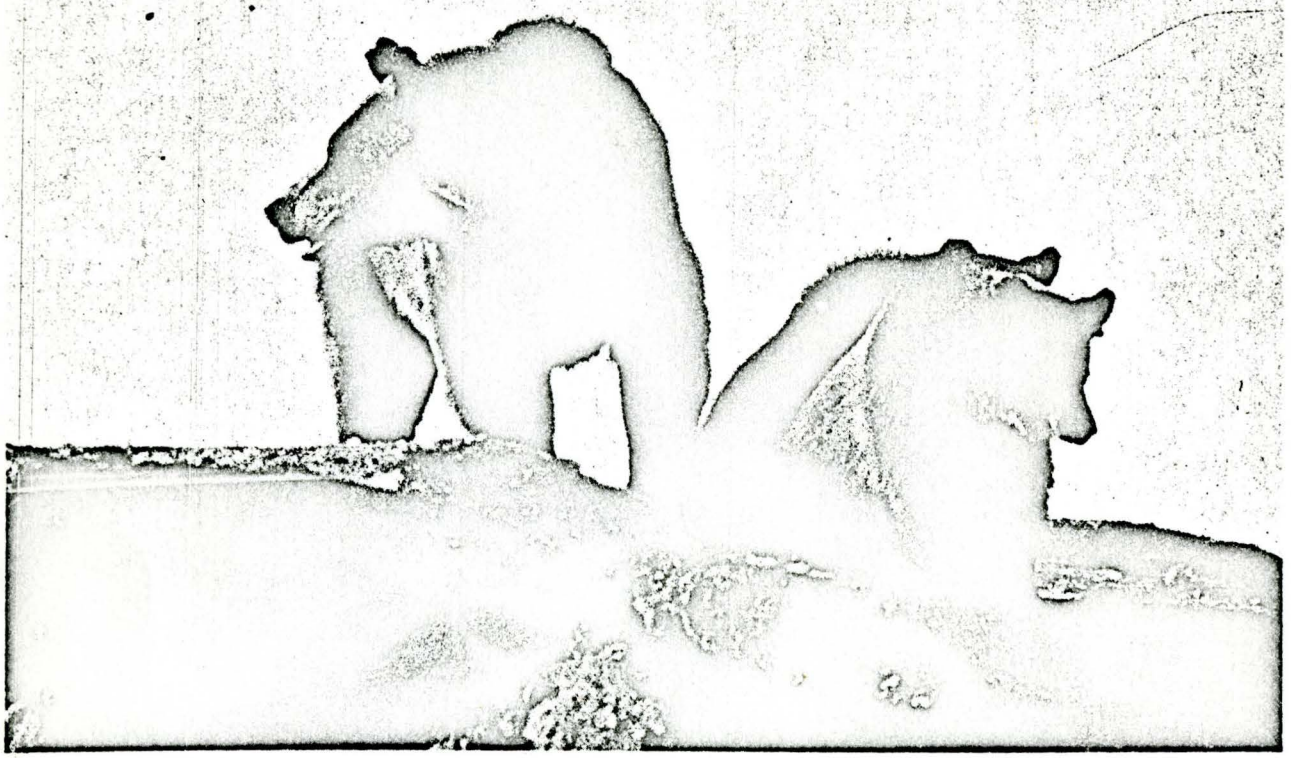
Glacier Incident

Date	From	To	Subject
Dec. /68			Moment's article in BioScience
March 69			Letters to BioScience
May 69			Caras - Audubon
May 69		Sports Illustrated articles	
5/23/69	JJC	Sports Illus.	Answer
6/2/69	FCC	Sports Illus.	Answer
6/11/69	Parratt Att'ny.	JJC	Park Service
6/2/69			Letters to SI
6/11/69			Ditto
6/8/69	Albright	JJC	Park Service response
6/17/69	JJC	Albright	Answer
1/13/69	WRU	Supt. of Doc.	Request for Glacier Report
2/24/69	WRU	Nielson	Ditto
4/1/69	JJC	Nielson	Grizzly Research in Glacier
4/3/69	Nielson	JJC	Grizzly and Park plan
5/3/68	JJC	Nielson	Grizzly
5/13/69			NPS Bear Mgmt. Plan - Glacier

Bears: The Need for a New Sanity in Wildlife Conservation



Courtesy National Parks Service

Gairdner B. Moment

Recurring death and injury from bears in National Parks have underlined the need to re-evaluate some of the policies and procedures of our National Park Service. Probably more important, these ugly events have made it evident that a re-examination is in order for some of our dogmatic, if well-intentioned, philosophies of wildlife conservation and the public relations based on them.

Specifically, the problems of bears in National Parks merit close scrutiny because, with the possible exception of the redwoods, bears form the most conspicuous point of contact between the general public and many of the issues of wildlife management. Every summer over ten million people visit parks where bears occur. Feeding and photographing black bears at the "bear jams" along the roads in Yellowstone has become a national pastime. Bears have required much thought and untold man-hours of physical work by the Park Service. Virtually all the millions who enter the parks have some contact with the Park Service, its literature, its exhibits, and personnel. A large percentage of them attend the illustrated evening lectures given by the Service. Interest in bears is always high. Clearly, here is an unexcelled opportunity for conservation education and also a heavy responsibility. Views and actions not scientifically valid will not only mislead, but they could easily backfire to the detriment of the cause of conservation itself.

Consequently, this mix of people, bears, and the Park Service presents a challenge to all who love the natural world and have a concern for the maintenance of the best possible habitat for the human race. Therefore, we must help in every way to make sure that the wildlife conservation taught and practiced is indeed scientifically based, that anthropomorphic and misleading ideas about animals are not encouraged, that extremist views about man's moral obligation to all species of animals are avoided, and that intelligent discrimination is exercised at all times.

In short, we must all — scientists, general public, and Park Service — face up to the facts, pleasant and unpleasant, ecological, behavioral, economic, and political. Hard choices and baffling

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problems of great complexity confront us. A sense of wonder in the presence of Nature is a fine thing but it is not enough. As Lawrence Slobodkin (1968) has well said, solutions to the manifold problems of ecology "require more than a good heart."

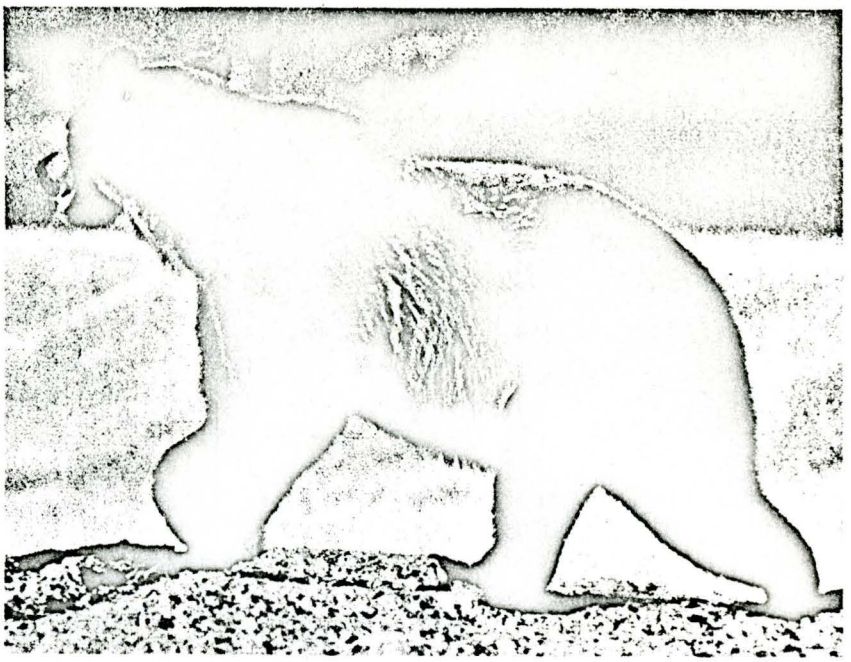
Bears: The Myths

Bears today enjoy a privileged position in American folklore, evidently because of long continued and persisting mis-education. Most of us were raised with teddy bears in our play pens. Over TV our children receive weekly indoctrination by the self-termed "Gentle Ben." For adults, there are the ubiquitous posters of Smokey the Bear. Peering out from under his authoritative Ranger hat, he looks the very embodiment of sturdy dependability. Few people realize that even his slogan, "Only you can prevent forest fires," is misleading since a very large proportion of them are set by lightning. Remember the story of Goldilocks where the child is cast as a juvenile delinquent and the three bears as injured innocents!

An attractive silhouette of a mother bear with cubs adorns many of the official leaflets handed out to visitors entering National Parks. The special folder on grizzlies, which the Park Service prepared for distribution during the summer of 1968, features on its cover a photo of a museum exhibit showing a mother grizzly tearing open a dead log to find grubs for her half-grown twins. The emblem of the National Parks Association, carried on the masthead of its magazine, is a mother grizzly followed by two cubs. The handsome colored brochure issued by "the Yellowstone Park Company of Yellowstone National Park" features drawings of friendly bears handling your luggage, driving your car, and providing you with map information. One comes to feel that to be critical of bears is tantamount to denouncing man's best friend or perhaps taking a stand against motherhood.

Bears: The Facts

Injuries from black bears are an almost daily occurrence during the tourist season in the Great Smoky Mountains National Park and in Yellowstone. These injuries range from deep scratches which have to be sewed up, to mangled hands which require amputation. On several occasions early in the summer of 1967 grizzly bears chased up trees people who were fishing along the shores of lakes in Glacier National Park. Later that summer two campers were pulled from sleeping bags, dragged off into the woods, and killed by grizzlies. One was partly eaten. A young man was so badly mauled that he had to be flown out by helicopter to undergo three hours of surgery. In a Forest Service campground along the Sun River about 100 miles southeast of Glacier, two sleeping boys were attacked by bears. One required prolonged hospitalization. Across the border in the Canadian Rockies, two children were dragged off by bears and one, an 8-year-old, killed and eaten.



Courtesy National Parks Service

There is nothing at all new about grizzly bear attacks. Within the past few years the U.S. Government has paid out $100,000 in damages on two different occasions because of grizzly bear injuries of a particularly horrible nature sustained within National Parks.

The actual nature of the grizzly, *Ursus horribilis* (*U. arctos*), has long been well established. A booklet entitled, "Mammals of Glacier National Park," by R. R. Lechleitner, published "in cooperation with the National Park Service," and sold in the Park last summer, flatly states of the grizzly that "its presence is incompatible with human occupation." This is not surprising for a carnivore weighing up to over 800 lb. and so fast that only a horse or an antelope can outrun it. Half a century ago, E. W. Nelson, then Chief of the U.S. Biological Survey, wrote in his *Larger Mammals of North America* that the grizzly is "America's fiercest and most dangerous big game" and went on to record that "even experienced hunters have been killed by them" and that "they stalk cattle by night, seizing their prey by the head, usually break its neck, but sometimes hold and kill by biting." These methods of attack were used by both grizzlies in the fatal cases in Glacier Park.

The highly dangerous character of the grizzly has been amply confirmed by the magnificent studies of Frank and John Craighead (1966) on the grizzlies of Yellowstone. By placing radio transmitters in collars on these bears, they have been able to follow the wanderings and life histories of about 400 individuals over the past decade. Among other things, they have found that grizzlies habitually make shallow "day beds" from which they strongly resent being disturbed. The Craigheads also report that it is "extremely hazardous" to approach a place where a grizzly has hidden food. Furthermore, "if jumped or startled at close range, a grizzly is about as likely to charge as to run." Peter Mathiessen (1959), in a book widely hailed as a bible of conservation, ends his chapter on bears by admitting that the grizzly, "monarch of the wild," and man do not mix.

Park Service Solution

On June 10, 1968, the National Park Service issued, over the signature of Superintendent Keith Neilson of Glacier, a long list of "Bear Management Responsibilities" for Park personnel, evidently based on an earlier "Bear Management Plan — 1968." In addition, there is the newly prepared folder, mentioned above, entitled, "In Grizzly Country," for distribution to Park visitors. The contents of these documents, once you grant their basic assumptions, make good enough sense. "Whatever you do, try to remain calm." "Wear bells or put pebbles in a tin can to rattle as you walk" but remember that "noise is not a foolproof way of avoiding bears." Speak to a threatening bear in "soft human monotones" while "looking for a tree to climb" because "a human can never expect to outrun a bear." If attacked, don't move. "Lying still under the jaws of a biting bear takes a lot of courage," the leaflet tells you. It continues by assuring you that such an act may prevent your death. But it is also clear from the record of recent years that "lying still under the jaws of a biting bear" may not.

The detailed instructions to Park personnel set forth in the directives of June 1968 are certainly useful, but the striking overall fact about them is that, except for several special items, there is nothing very different from what is contained in the directives respecting bears issued in July 1960 or subsequently. The assertion that menstruating women are in special jeopardy is new and may very well be true. Two of the people killed during 1967 were such young women. However, two cases hardly form the basis of a firm scientific conclusion, especially when other victims have been men and boys. Certainly lack of menstruation, or the lack of the deodorants and cosmetics mentioned, are no more foolproof protection than rattling pebbles. New, and certainly all to the good, is the emphasis on packing out all trash and garbage and the issuance of plastic bags for this purpose.

But otherwise the proposed measures seem variations of the same old procedures which the Service has been unwilling or unable to implement and enforce. The 1968 instructions to Park Naturalists tells them to "mention that bear feeding is prohibited not only as a matter of safety but also to preserve the natural scene." All Park personnel and especially Rangers are to admonish visitors not to feed bears and are given extensive duties in reporting incidents of bear molestations and closing trails and campsites after bear "incidents." The 1960 directives were more stringent, at least on paper. They specified "an aggressive program of bear warning" and "an effective law enforcement program aimed at the prevention of bear feeding." Rangers in jeeps equipped with "bull horn" loud speakers were supposed to break up "bear jams."

This 1960 procedure was evidently not feasible. As recently as 1967, with my wife and two of our children, I entered and re-entered Yellowstone, Glacier, and other parks where bears are found. We hiked the spectacular 8-mile trail from Logan Pass on Going-to-the-Sun Highway to Granite Park Chalets and together or separately explored many other trails. At no time were we made aware of a bear-warning program. "Bear jams" occurred many times a day on the roads of Yellowstone while tourists fed and photographed black bears. There was no attempt at remonstrance, much less "an effective law enforcement program." One of the "attractions" at the chalet was to watch grizzlies eat garbage every evening. This was all the more puzzling because the 1960 directives plainly stated that "to tolerate infractions of the rule which prohibits feeding is a disservice both to the animals and the visitors," and the official Report of the Advisory Board of Wildlife Management (the so-called Leopold Report) to Secretary of the Interior Udall said several years ago that "Fed bears become bums, and dangerous." One looks in vain for anything in the 1968 instructions which will make them more workable than the 1960 instructions.

Warning signs are called for in the new as in the old procedures. Nevertheless, none was evident at the chalet the day before the attack. Near the beginning of most trails we did see signs which included very general warnings about bears more or less buried among many other items of interest. They were unobtrusive signs and commonly one had to step well off the trail to read what they said. Hardly part of "an aggressive" program!

The standard procedure for dealing with the bears themselves remains basically the same, namely, trap and remove to another part of the Park the so-called "problem bears" *after* they have become problems. Some of the specifics have been changed. For example, bears are now to be divided into back country bears and those frequenting roads and campsites and treated somewhat differently. A grizzly at a camp site can be trapped and removed "immediately upon a sighting" or even destroyed, except for bears trapped and tagged during a previous year. These shall be trapped and removed to a distant part of the Park. On the other hand, except in unusual circumstances, a back country grizzly should not be trapped or disposed of until after it has molested campers at least twice. The tragic inadequacy of the "problem bear" policy has become only too evident.

Temporary closing of trails after serious bear "incidents" is repeated in the new instructions. One of the troubles with this closing-the-barn-door-afterward policy is that it can be extremely difficult to implement just when needed most. For example, after the fatal night attack at the Granite Park Chalet in Glacier, the trails in were closed the next morning. Nevertheless, several hikers arrived at the chalet for breakfast. Quite innocently they had begun the trek in very early before the Rangers had had a chance to close the trails.

Basic Assumptions

The purpose of the Park Service Plan, as stated in the 1968 document, is "To preserve and maintain natural populations of bears while providing for the safety of Park visitors." Clearly, it is the double nature of this objective which, to a very large extent, creates the problem. The reason for adopting an objective with a built-in self-contradiction lies in two assumptions. The first concerns a special view about man's relation to the rest of the animal kingdom. As put by R. M. Darnell (1967), "The dramatic need of our time is for an extension of the Golden Rule to cover man's relations with all living creatures." He explicitly declares that we have a "moral obligation" to eliminate "genocide" as applied to animal species. Others have written in a similar vein. H. G. Cassidy (1967), for example, tells us that we must learn to regard our environment not as "It" but as "Thou."

Despite such references to Martin Buber and other theologians, I find my-

self, as a zoologist, left a bit dizzy by what seems to be a new interdisciplinary field, biotheology. Would not such an extension of the Golden Rule make us all vegetarians? What could the Golden Rule really mean in terms of an alligator, or an aphid? Would not the personification of nature be the basis for a prescientific anthropomorphism? At least I can find no directive in the Ten Commandments or even in the New Morality of situation ethics requiring that every species be saved from extinction.

More to the point, in the science of biology there is no categorical imperative that all species must be preserved. The science of biology merely asserts, in Dollo's law, that extinction is a terribly final thing and that the extinction of species has been a regular part of the order of nature for hundreds of millions of years.

The dramatic need of our time is for the intelligent control of our environment, not its personification. A strong sense of stewardship for our wildlife heritage is indeed much needed in our own interests and those of generations yet unborn. But to acknowledge such a need should make it easier not to succumb to a mindless absolutism claiming that every species should be preserved and no discrimination is possible. The Carolinas are less colorful today because of the extinction of their native parakeet, and the world is poorer because of the loss of many species. However, any zoologist could draw up a list of animal and probably plant species that we would be better off without: the common rat, the fire ant, certain species of sharks, the tse-tse fly, the malarial organism. Of course, each of these species possesses ecological, physiological, evolutionary, and other aspects of considerable scientific interest. That isn't the point. So does every other species. Removal of any one would result in some change in the intricate web of nature. The upper Mississippi valley is not the same without the passenger pigeon. But this kind of thing has been going on all through the course of evolutionary history. The point is that to abdicate the use of human reason is to throw away the most powerful and unique tool *Homo sapiens* has. Why can't we discriminate? If a species like the grizzly, which is on the endangered species list, can be saved, all well and good. But there is no scientific basis for the dogmatic assertion that the Park Service or anyone else is obligated to save it or any other species without regard for the human cost in money, lives, or health.

The second assumption, which appears to underlie the Park Service Plan, is that the Service must attempt to preserve every species within every park without any thought for the familiar biological principle of specialization of functions and the division of labor. Consequently, Yellowstone, which boasts some of the most spectacular wonders in the world of geology, is supposed to serve also as a preserve for what is admitted on all sides to be our most dangerous carnivore, even though it is a species with a range extending for thousands of miles outside that park.

Newer Possibilities

Once it is admitted that intelligent discrimination is possible both in the amount of effort to be expended in saving different species and in the use and development of different parks, then other solutions for these questions of wildlife conservation become possible. The morning after the fatal grizzly attacks in Glacier, the Park Naturalist on duty ably guided the 60 or so people, who had spent the night either in the chalet or in the nearby campsite, down to Going-to-the-Sun Highway. It was a very diverse group in age, sex, nationality, and occupation, but the reaction to the events of the previous night was virtually unanimous. The Park Service should make up its mind whether it wants to run a park for people or for bears! An over-simplification? It did not seem so at the time.

Sober later thought indicates that it would make perfectly good ecological as well as common sense to designate certain parks, such as Yellowstone and Glacier, as areas primarily devoted to people for hiking, certain types of camping, and similar activities, but above all for viewing those stupendous geological sights which form such important parts of our heritage of natural wonders. Old Faithful is unique to Yellowstone, bears are not.

If it seems important to conserve the grizzly, there are other suitable habitats. This past year thousands of acres in the Northwest were newly set aside for the benefit of waterfowl. A similar action could be taken in some of the many mountainous regions already under government control and sanctuaries set up for grizzlies.

It sounds attractive to talk of maintaining "a natural population" of animals in National Parks but when the species concerned is admittedly our "fiercest and most dangerous" carnivore, such a project cuts directly across the praiseworthy efforts, described by Jack Hope (1966), to get Park visitors out from behind their windshields and onto the trails. Furthermore, neither the black or the grizzly bears have formed natural populations for many years. For one thing, they have been consistently fed. Certainly as long as man and his works are present, the habitat will be modified and intelligent control and discrimination necessary.

It is reassuring that the Leopold Report, already mentioned, most emphatically takes this kind of realistic stand. Says the Report, "Management (of National Parks) may at times call for the use of the tractor, chainsaw, rifle, or flame-thrower but the signs and sounds of such activity should be hidden from visitors in so far as possible. . . . A reasonable illusion of Primitive America can be retained or recreated using the utmost in skill, judgment, and ecological sensitivity." Certainly the continued presence of grizzly bears in every park where they once lived cannot be held as essential to that happy illusion, nor are we under any "moral" obligation to maintain every species without discrimination.

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Letters

Bear Facts

Prof. Moment's article on bears (*BioScience*, December, 1968) will undoubtedly serve to initiate further discussion of the relationship of the National Parks to people. Unfortunately, he has lumped together problems of control of black and grizzly bears. Black bears cause nuisance in the Parks but are by no means as dangerous as grizzlies, as witnessed by the almost daily observation of tourists petting and feeding black bears without experiencing any harm. "Bear jams" are only a problem to those who are using the Park roads to speed to a destination, a use for which the Park roads have not been designed. Concerning grizzlies, I would like to point out the following: 1) Research on grizzly populations is not sufficiently complete to permit any of the conclusions he draws, as I am sure John and Frank Craighead would be the first to admit; 2) In terms of the amount of damage they cause to humans, grizzlies in Yellowstone and Glacier are probably of minor importance when compared to the automobile; 3) No one can be certain what will happen to the balance of nature when any species is removed as witnessed by the overpopulation of elk in Yellowstone as a result of the elimination of the wolf in the 1930's; 4) There are probably not thousands of acres in the West other than Yellowstone and Glacier in which the grizzly could be established and it would be virtually impossible to do grizzly bear research in other places with the same efficiency as it can be done in Yellowstone; 5) Currently Yellowstone is not especially dangerous for the off-road traveler, as witnessed by the fact that I and my associates have been carrying out field research for about 5 years now in an area within 2 miles of one of the main garbage dumps of the Park (Rabbit Creek) without ever meeting a grizzly face-to-face. By all means let us continue to discuss the grizzly bear question, but let us do nothing irreversible until more facts are in. There is no current danger of decimation of our Park visitors, and alarmist cries to the contrary will only serve to confuse the issue.

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There are many parameters which science cannot measure. For this reason it is difficult to scientifically attack Gairdner Moment's tenet that man need not try to save all the species that he is pushing toward extinction. Conversely, there are many ecologists in the world today who would probably agree that one of ecology's most important messages is that man is a part of, not master and judge of, the world ecosystem.

Moment's article promotes the Judeo-Christian idea of man's dominance over all things natural (*Science*, **155**: 1203[1]). It is this attitude that endangers the quality of man's environment (not measured in economic terms), and indeed, man's long term survival on this planet.

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[1] White, Lynn Jr. 1967. Historical roots of our ecological crisis. *Science*, 155: 1203-7.

The Editors of *BioScience* are again to be congratulated for opening their pages to the expression of what to most biologists nowadays are surely unconventional remarks, advocating the elimination of elements of the biosphere that compete with Man for food or space (Gairdner B. Moment on "Bears: the Need for a New Sanity in Wildlife Conservation", *BioScience*, **18**(12), 1105-1108). Certainly, Moment is right in saying that not every park need contain every species: indeed, it is universally recognized that parks cannot be called upon to support all sorts of recreational activities as well as to conserve rare ecosystems. However, he is perhaps not fully aware of the pleasure that wild animals, particularly formidable ones, give to the multitude of people who flock to see them. But he deals altogether too glibly with the issue of Man's responsibility to the biotic world. Many knowledgeable people are concerned at the rising rate of destruction of biota consequent on the population explosion and the use of evermore powerful mechanical and chemical extensions of the human hand, and it is surely not unreasonable of them to promote an ethic of responsibility as a weapon in the fight to preserve the biosphere as a self-sustaining cradle for Man.

Does the "New Sanity" extend to the elimination of the car and the cigarette?

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I agree fully with the title of Gairdner B. Moment's article (Bears: the need for a new sanity in wildlife conservation) in the December, 1968 issue of *BioScience*. However, I do not think Dr. Moment's discussion fulfills this need. It would be unfortunate if the implications of this article were accepted and acted upon by the U.S. National Park Service and other government agencies involved with wildlife management and conservation.

Although Dr. Moment rejects the notion that all species must be preserved, he does recognize the need for ". . . a strong sense of stewardship for our wildlife heritage . . ." (I consider these opinions at least partially incompatible) and suggests that bears in National Parks provide ". . . an unexcelled opportunity for conservation education. . . ." This, to me, indicates that Dr. Moment himself has made a case for the importance of conserving bears without succumbing ". . . to a mindless absolutism claiming that every species should be preserved and no discrimination is possible."

The statement that there are suitable habitats, other than National Parks, which can be established as grizzly sanctuaries is, perhaps, true at the present time; I would heartily endorse such bear sanctuaries. But to suppose that sanctuaries can be readily established is unrealistically optimistic. Only very large areas would be adequate to support, grizzly bear populations, and the pressure against establishing bear sanctuaries by natural resource exploiters would be severe. As numbers and mobility of people increase, even areas remote from from human occupation would encounter, sooner or later, the same problems of man-bear incompatibility stressed by Dr. Moment.

Perhaps the best solution, though admittedly not the easiest, is to implement and enforce the procedures recommended in the National Park Service "Bear Management Plan—1968", and to institute additional measures if necessary. Dr. Moment points out that the National Park Service has not carried out fully its own proposals. Until these "bear management" procedures have been strictly applied and tested, it seems premature to imply that bears should be eliminated from the few National Parks they occupy.

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I just read your excellent article in the December 1968, *BioScience*, which might be entitled "The Bare Facts about Bears." I have not been west on a camping trip with the family since 1958. By that time the children had grown big enough that they had other interests in the summers. However, in the ten years preceding 1958 we made three trips west and I was certainly impressed with the hocum and silly propaganda that one constantly encountered about the bears. I had not realized how ingrained it was in our culture not even connecting the teddy bear for children until I read your account. In that period, a constant problem was to combat the propaganda and try to teach the children that all wild animals were like the farmer's bull — totally unpredictable.

I also remember picking up some mimeographed literature when entering one of the big National forest areas in the Montana-Idaho region, in which the statement was made, as I remember, that 98% of fires were caused by lightning. Of course this was an unusual area, a wilderness area, in which the rangers pretty well knew who was in and where they were, and the origin of fires could be more easily determined.

In this period of tremendous problems of psychology, it is very refreshing to read a common sense discussion such as you have presented.

Your paper also serves to point up the generalization of the usual discrepancies between popular propaganda in any field and the relation of that propaganda to actual facts. It is remarkable how educated people can try either to produce a mythology or to condone the existence of it on any subject. Congratulations for an excellent paper.

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Gairdner B. Moment's article, Bears: The Need for a New Sanity in Wildlife Conservation, was almost an echo of my own thoughts. I, too, have some questions regarding the juxtaposition of bears and people in the National Parks.

I have a strong feeling, however, that before we consider eliminating any bears we look at measures, both possible and in practice for protection of "visitors" from bears. In my opinion the Park Service has been practicing the substitution of pamphlets and clichés for action in this area.

My own experience has been as follows: On 6 June 1967 I began service as a seasonal Park Ranger (General) at Mt. McKinley National Park. I was stationed at the Toklat Campground, 55 miles from headquarters over a gravel road. Erratic communication with headquarters was via a two-way FM radio that was for the major part of the summer totally unmanned after 5 PM (between five and twenty-four hours of daylight remaining, during which visitors were active).

About 15 July 1967 I was advised, via radio, to empty garbage cans in Polychrome Pass twice a day instead of once a day. The Chief Ranger replied to my question of why with, "Because I said so!"

I was informed one week later that the reason was because "unruly or surley" bears had been reported feeding in the cans and threatening visitors. I made complaint of this disregard for my own safety by not informing me immediately, in my monthly report.

At 7:00 PM, 8 August 1967, a visitor reported that his car had been chased by a bear which was, when last seen, running toward the campground about a mile up the road. I decided to investigate (was unable to contact HQ via radio) and took my personal vehicle since wife and kids did not want to stay alone at the cabin with a bear acting up (and I didn't relish the idea of being out alone in case I needed assistance).

Sighting three bears which did not appear to be the ones in question, I decided to check the area out more carefully and walked over to the area in which I had seen the bears. At a distance of about 400 yards I again saw the bears and it became apparent that instead of three adults they were a sow and some large (apparently third summer) cubs. The sow detected my movement and circled, with the cubs, about 180 degrees around me until she was downwind and about 200 yards distant. Any move to retreat on my part during this circling was immediately followed by a short charge by the sow, which she stopped when I "froze" in position.

Upon getting my scent the sow charged from 200 yards with a brief hesitation only when she was about one or two feet from me. This was followed by a lunge which knocked me down.

My response was to "play dead." When I heard the teeth grating on my skull I covered my head with my arms and did succeed in transferring some of her attentions to the arms.

It took nine hours to reach the hospital where I needed over 500 stitches to close the wounds and fifteen days to recover to the point that I could be dismissed.

I was unarmed since the rifle that I had been promised for the cabin did not arrive and I had been forbidden, by the Chief Ranger, to uncase or carry my own rifle in case of a bear attack. When I asked then what I should do in case of an attack or "incident" I was told not to use my imagination so much and worry about it when it happened.

The Park Service has taken measures to prevent a recurrence of this incident. I was advised to seek employment in a Park outside of Alaska when I applied the spring of 1968. I was denied compensation for hospital bills until I wrote my Congressman and explained the details to him.

In my opinion bears will retreat from "rattle cans full of stones," or loud shouts or soft human monotones or whatever when they don't want to attack but when they cover 200 yards in a matter of seconds and pay no attention to the amenities it takes some persuasion to change their minds.

I have spent many hours thinking about this and have a few testable ideas. One is to let visitors and require Rangers in bear country to carry adequate firearms. People must be allowed to protect themselves and the problem of detecting and convicting violators is the Park Service's responsibility.

Devices such as flares with an extended flame of four or five feet might also help in repelling bears. Chemical deterrents such as those used on college students (MACE, etc.) might be adapted for hikers and campers to carry in the parks (issued and returned to the ranger, perhaps). Aerial patrols to locate and report on bears and hikers might be attempted and if necessary bears could be "chased" away from areas where hikers and campers are.

The idea that the Park Service is to decide whether to run the Parks for the people or the bears is my idea as well. If the hours of pleasure and excitement my family enjoyed hiking in the Park are ended because we cannot be protected from the bears and my wife refuses to chance again having to lead me to the road in mangled condition (not to mention herself or the kids) I am for getting rid of the bears so that I can enjoy the Park, BUT, I do not think this is necessary. With proper measures the bears can stay and I can hike and camp as well. If the Park Service response to bear problems is simply to get rid of trouble-makers like myself, it's high time that organization was scrutinized a little more carefully.

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It is encouraging to find so much concern for conservation. The resulting discussions should result in more soundly based and more effective programs for the preservation and improvement of our habitat. Meanwhile, let me try to sort out and comment on the positions taken by those who differed, in whole or in part, with my article on bears and conservation (*BioScience*, Dec. 1968).

1) Concern for the preservation of the grizzly as a species is one I share. Note that the grizzly was not on my black list of species to be exterminated and that I suggested establishing special refuges for it. My position is similar to that of the recent Leopold Report on Wildlife Refuges which advocates a large measure of specialization of function for the different areas set aside. In other terms, I would advocate the preservation of the alligator as a species but not in the same ponds where people are encouraged to swim. "Old Faithful" is unique to Yellowstone, grizzlies are not.

2) True, it may be difficult to set up special grizzly refuges but it is certainly not impossible either ecologically or politically. This species once roamed the entire West from the Pacific shore to the eastern limits of the great plains. It does not have the fastidious environmental requirements of a Kirtland's warbler. Politically, many knowledgeable people were profoundly discouraged about the possibility of establishing extensive refuges for ducks but it was recently done, and the federal government still owns well over 100 million wild acres. In any case, extinction of the species is not here at issue since there are flourishing populations in Alaska and northwestern Canada.

3) The claim that to remove the grizzly from Yellowstone or Glacier National Park would be hazardous because of the danger of unforeseen and perhaps disastrous upsets in the ecosystem is hard to follow. The fact is that we do know what the Rockies are like without the grizzly because there are thousands of square miles of Rocky Mountains where grizzlies once lived but where they have been absent for many decades.

4) To argue that grizzlies should be maintained in Yellowstone for their research value is to close one's eyes to the fact that in one very important parameter they do not form a "natural" population. They have been regularly fed at the park garbage dumps. Thus any research, no matter how conscientious or spectacular, respecting their diet or population structure must be suspect. The sad case of Zuckerman should stand as a sharp warning. It will be recalled that his studies of primate populations under artificial conditions betrayed him into several very serious errors which were widely accepted until present-day investigators began looking at truly natural populations.

The problem of hibernation in an age of space travel is an important one, but the inaccessibility and savage nature of the grizzly do not make it the species of choice for research on this phenomenon. The far more available and more easily handled black bear or common woodchuck are clearly preferable, or perhaps the hummingbird which hibernates every night with lowered body temperature and metabolism.

5) It is hard to see how anyone can maintain that the grizzly is not a highly dangerous species. Certainly the situation of unarmed campers who are urged by the Park Service to "get out from behind their windshields" and hike the back trails (an admirable objective) is very different from that of two armed and experienced men specifically looking for grizzlies. The actual number of people killed and injured by grizzly and black bears combined is indeed trifling compared with the deaths and injuries from either cars or cigarettes. However, I should think that rationality, new or old, would indicate that remedial measures be taken against all of these hazards. Statistically the number of people who fall from the top of the Washington Monument is negligible, yet the Park Service puts up guard rails.

6) For black bears I suggest some informed, imaginative, and well planned experimentation with something like the ha-ha fences which George Washington used at Mt. Vernon to restrain cattle without anything that even looked like a fence. Properly placed, constructed, and used, ha-ha fences might provide a safer means for the public feeding of black bears and thus offer the National Park Service, which does so many things so superbly well, a way out of the dilemma present as far back as the original 1872 Act of Congress which established Yellowstone as a "pleasuring ground for the people" and also a place where the "natural wonders" would be preserved for their enjoyment.

7) The philosophical basis of conservation is too vast a subject to discuss in any depth here. However, I would like to suggest that it is possible to be an effective conservationist and still remain within the Judeo-Christian tradition. It puzzles me that anyone would take the statement that "ecology's most important message is that man is a part of, not master and judge," of his environment to mean that we must see to it that all species, without discrimination, are preserved from extinction.

A lifetime of reading in ecology leads me to agree that man is a part of his ecosystem just as inevitably as he is bound by Newton's laws of motion. It also leads me to believe that the sheer fact of living for any organism, whether earthworm or man, means manipulating the environment to a greater or lesser extent. Merely to exist, man must exert some control over his environment, precisely because he is a part of the ecosystem. Depending on local characteristics, removal (or addition) of certain species will produce catastrophic effects, removal of others moderate changes, while the disappearance of others only slight ones. The task of ecology, according to this view, is to provide knowledge so that our inevitable action upon our habitat will be as intelligent and discriminating as possible. To admit that knowledge can never be wholly complete and that action in ecology, as in medicine, must sometimes perforce be taken on somewhat less than total understanding seems not only more honest but much less likely to damage the cause of conservation than extremist views which deny even the possibility of discrimination.

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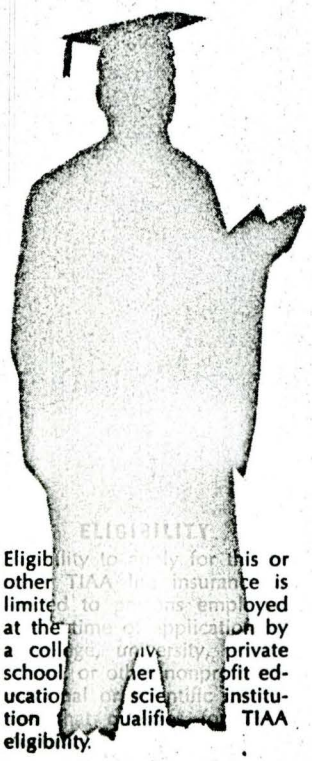

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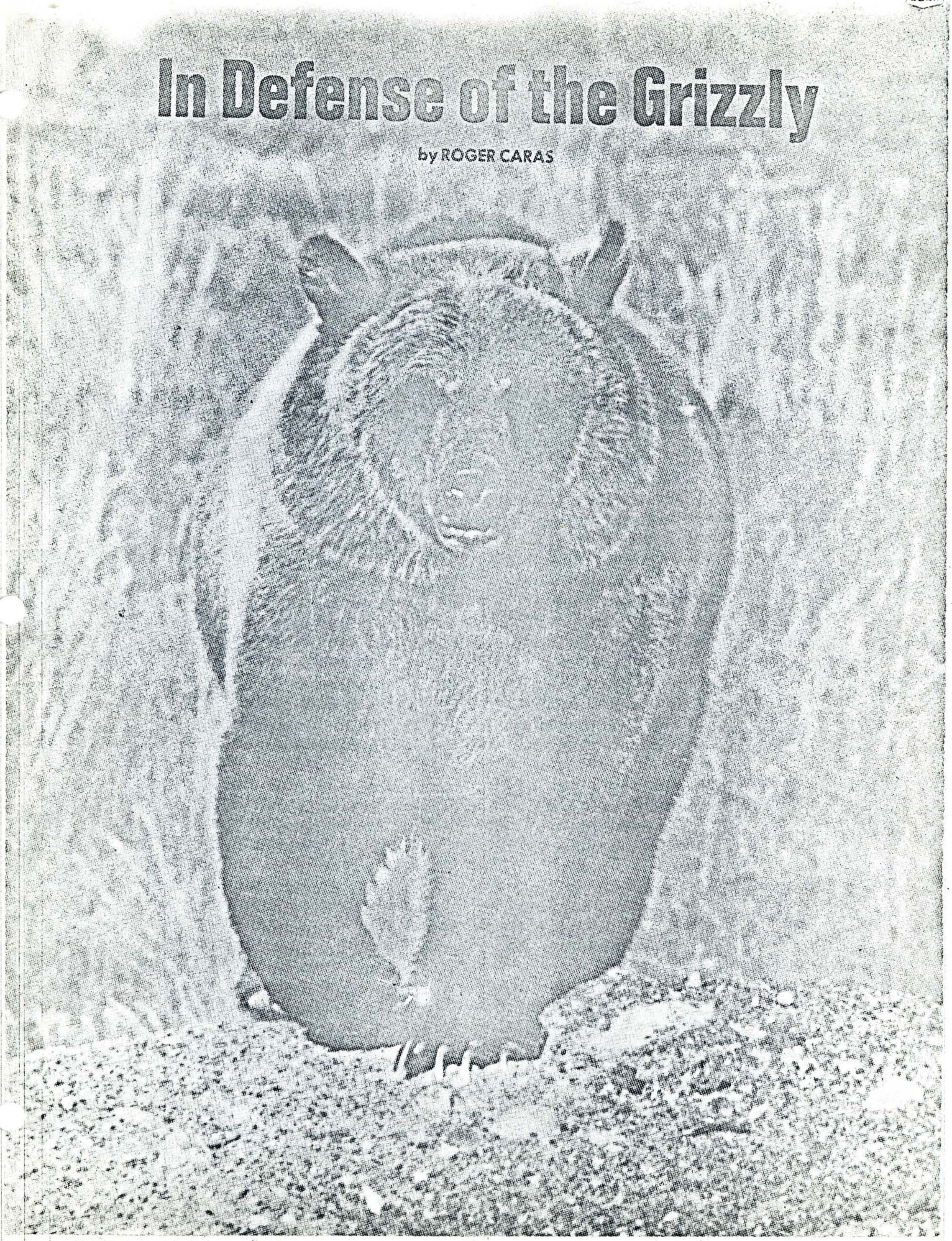
In Defense of the Grizzly

by ROGER CARAS



THE PAGES—FOUR OF THEM—of *BioScience* for December 1968 contain a provocative discussion on bears in our national parks. The article—"Bears: The Need for a New Sanity in Wildlife Conservation" by Dr. Gairdner B. Moment of Goucher College—is controversial at best. If it had gone no further than *BioScience* and had been left to rattle its way to oblivion in professional and paraprofessional literature, little comment would be required. But the widely viewed *National Observer* exercised its editorial prerogative and reprinted the article in the weekly newspaper's issue of February 24, 1969. The views of Dr. Moment now demand public scrutiny. Because of his unimpeachable credentials, as a highly placed zoologist and author of widely used textbooks, his highly suspect conclusions could come in time to have the air of authority.

The article does some rather startling things with logic. It almost seems, as you read it, that it leans over backwards to keep truly pertinent information from leaking out where the reader might spot it. As an example, the opening words are *"Recurring death and injury from bears in National Parks have underlined the need . . ."* If the thought that followed had something to do with park rangers keeping a first-aid kit handy there would be little need for statistical data. However, since Dr. Moment goes on to propose the *elimination* of bears from at least some of our parks, the immediate requirement is for hard facts, not generalizations. But Dr. Moment seems to prefer the latter.

For the record, a record studiously avoided by the article, our national parks were free of bear-caused fatalities for 93 years of their 97-year history. In those remaining four years five people died. Let it be noted that five deaths since 1872 do not statistically constitute *"recurring death."* The odds against a *gratuitous* injury caused by a bear are so ridiculously high as to make the matter barely worthy of consideration.

Sixteen of our parks and national monuments have bear populations. Dr. Moment mistakingly states that *"over ten million people"* visit parks where bears occur each tourist season. I say *mistakingly* advisedly because the figure is so very far off. Admittedly the number of visitors is *"over"* ten million, but not even a British publication should be permitted *that* kind of understatement. The figure in 1968, according to the National Park Service, was *37 million* people. (The number of visitors to all parks in 1968 was 150,835,600.) Of these 37 million people (a figure equal to the combined populations of Bolivia, Cuba, Denmark, Greece, Ireland, Malta, Israel, New Zealand, Uruguay, and the Maldive Islands) 38 people were injured by bears, but only one suffered his misadventure with a grizzly.

Further, there were *no* bear fatalities in 1968, but 151 people did die in the parks in other kinds of accidents. If all 38 bear injuries were the results of random, unprovoked attacks and had nothing to do with the behavior of the people injured, the odds *against* even that kind of injury would be nearly a million-to-one! However, since many of these attacks (if not just about all of them) were caused by foolish and even illegal behavior on the part of the people involved, the actual statistical danger to a sensible person shrinks to an almost unrecognizable figure. This, surely, is why statistics are conspicuously missing from Dr. Moment's article. (Dr. Moment is chairman of the faculty of science and *mathematics* at Goucher.) The statistics provided by the Department of the Interior of 38 injuries as the *combined total for sixteen bear-populated areas* fail to substantiate Dr. Moment's generalization that "Injuries from black bears are an almost daily occurrence during the tourist season in the Great Smoky Mountains National Park and in Yellowstone."

Playing with statistics when the subject is human life can be tricky. It can sound very much as if the discourser were callous to suffering and held life in little regard. We shall disclaim that point of view and recognize that five human lives lost represent five tragedies. A mutilated child, a factory worker with one hand missing, these, too, are tragedies. But before an action is taken that affects matters of importance to the entire population now and in the future, the available data must be put into some kind of context. A population of 200 million people is a very large context indeed.

Five people killed by bears in two national parks (Yellowstone and Glacier alone have had this kind of accident) in the last 97 years—how does this compare with other causes of mortality?

In 1968, 14,000 people died in industrial accidents. An additional 1,500 people died from inhaling excessive industrial dust. The accidental death rate for lumber workers exceeds five per thousand. That means that for each one thousand men working in the lumber fields next year, more will die than all visitors who have been fatally attacked by bears in our national parks since 1872. Perhaps these figures, although they are not connected with bears, will help to put five deaths into a frame of reference.

Now, back to the national parks for even more revealing figures. In the years 1958 to 1968, 286 people drowned in our national parks. In 1967 alone two people were killed by powerboat propellers. Shall swimming and boating be forbidden in the parks from now on? If there is a shred of justification for Dr. Moment's proposal, then surely the death of 286 people in a decade is grounds for swift, radical action. In those same years 341 automobile fatalities were recorded within our parks. Surely, cars will have to go! (None of these figures includes park or concession personnel—only visitors are being considered.) In the calendar year 1967, seventeen people were killed while climbing mountains in our national parks, and five more died from exposure. In 1968 fifteen persons died in falls and ten from exposure. In those two years, then, 47 people were killed in accidents connected with their seeking high ground. Should park visitors be restricted in the future to the lowlands or at least to subalpine slopes where falls are impossible?

As a last bit of statistical data, let it be noted that in 1967, the year during which two concession employes were killed by bears in our national parks, 35 visitors drowned, 33 were killed in automobile accidents, eighteen in falls, one from burns, five from exposure, two by being struck by falling objects, one from asphyxiation, and six in plane crashes—a total of 101. (*No visitors* were killed by bears.)

What all of these figures clearly add up to is that Dr. Moment's claim of "Recurring death and injury from bears

LEONARD LEE RUE III

in National Parks . . ." is a gross exaggeration, out of context, unsubstantiated by the actual statistics. It is an emotion-laden suggestion that something is so when in fact it isn't—that there exists continuous mortal peril from bears to sensibly behaving, law-abiding visitors to our national parks. In truth, *bear-watching in an area administered by our National Park Service is one of the safest things a person can possibly find to do on a vacation.* Flying, driving, swimming, boating, baseball, football, home carpentry, and taking a shower are all more dangerous.

The really insidious thing about Dr. Moment's article is that it sets out to establish a perfectly valid premise and then, while the reader's intellectual back is turned, pops in a highly reactive and totally illogical conclusion. Like all overreactions, it momentarily seems to satisfy an emotional need engendered by the premise. That premise is that men who know what they are doing in the wild have failed to communicate with those who do not. They have failed to convince the novices in our wild places that wild bears aren't big, happy teddy bears. The conclusion drawn is that the bears must go. No reasonable statistical justification for this startling proposal is offered.

When Dr. Moment suggests that a reeducation job is needed vis-à-vis our surviving ursines, he is certainly right. Smoky the Bear, as an image, is misleading, and some knowledgeable people suggest he should be phased out. However, our parks do not need people who break the law and they should be phased out as well—by embarking on an intensive campaign to educate those who would meddle with bears. It is, indeed, a misdemeanor to feed, touch, or disturb park bears in any way. It is also hazardous. The public must be made to understand that bears, under natural conditions, are solitary animals, quite shortsighted, distinctly short-tempered, and although occasionally comical in appearance, very unfunny at close quarters. Bears are by nature erratic, cannibalistic, unpredictable cranks. Once this is clearly understood by park visitors, even the few injuries that do occur will taper off. Park visitors are and will continue to be able to observe our most impressive terrestrial carnivores in a reasonably natural setting. The trouble starts when people think they can play with bears, feed them, or treat them as domestic animals—something no bear can ever be.

I once watched a group of eleven bears feed at a garbage dump in Ontario's Algonquin Provincial Park. (Canada has the same bears and the same problems we do.) A tourist, so typical it was painful, suddenly appeared in Hawaiian sport shirt, Bermuda shorts, Polaroid camera, and all. He walked down *among* the bears to get a "good shot" of two cubs tussling over a tunafish can. The man placed himself directly between the cubs and their mother and then turned his back on the alarmed sow. Fortunately, she was a sensible old animal (far more sensible than the photographer) and she *woofed* once, sending her cubs up a tree. She moved around the man in a wide arc and called to the cubs to come down the other side and follow her into the brush. She had had enough of garbage dumps and park visitors for one day. The man came within inches of being a statistic. Dr. Moment suggests that kicking the man out of the park or educating him is not the solution—while the elimination of bears is.

I spoke with one park official some years ago who, earlier that day, had talked a ranger out of quitting the service. The ranger had come upon a man photographing his wife and eighteen-month-old son. The woman was holding their son on the back of a bear they had lured up onto the road with the offer of a candy bar. Tragedy was probably seconds away when the ranger arrived. He was so enraged that he began to doubt his capacity for dealing with the public and tendered his resignation. (Since almost all injuries involving bears also involve either food or people trying to photograph bears—why not eliminate food and cameras from our national parks?)

DR. MOMENT TAKES a whacking good crack at something he calls *"biotheology"* which can be roughly defined by what he calls *"extremist views about man's moral obligation to all species of animals."* This, he says, is something that must be "avoided." He says, further, "At least I can find no directive in the Ten Commandments or even in the New Morality of situation ethics requiring that every species be saved from extinction." He points out that we would be better off without common rats, fire ants, certain shark species, the tsetse fly, malarial organisms—and bears in parks. There are, on the average, fifty unprovoked shark attacks a year reported from around the world. A high percentage of these are fatal. The tsetse fly makes a vast area of Africa virtually uninhabitable. The malarial organism has killed millions upon millions of people down through history. Rats cause losses to man that run into the billions of dollars every year, spread innumerable parasites and infectious diseases, start thousands of fires, and attack scores of sleeping children. Bears have killed five people in our parks since 1872. Parallelism is not to be found—ergo the suggestion of a comparison is invalid. It is difficult to believe that it isn't *purposely* misleading.

The article raises a very interesting point and one worthy of literally years of consideration by zoologists and philosophers. Does man have an obligation to try to save all species of wildlife left on Earth? Such obligation, if it does exist, is as much to future mankind as to present wildlife. Frankly, I don't know the answer although my first reaction to the question is "Yes, we do." Dr. Moment does not think we do. In fact he says my reaction is an *"extremist view."* Perhaps he is right, but I cannot be quite as glib when dealing with a proposition that profound. I find myself wanting to think and think very long and hard since the decision, were it mine to make, would affect this planet for all time. It would be a decision that not only I but all the people who will ever live on Earth—or visit it—will have to live with. The extinction of a species of plant or animal is a permanent alteration of the cosmos. That is fact, not religion.

Roger Caras' most recent book is Monarch of Deadman Bay, *the personally researched life story of a giant brown bear on Alaska's famed Kodiak Island. It is the author's third selection by the Outdoor Life Book Club, and has been published in several foreign countries. Caras also wrote* Dangerous to Man, *further qualification for this rebuttal to a noted zoologist's proposal that bears be exterminated from America's national parks.*

Dr. Moment points out that extinction is a natural process and has always gone on and always will. He fails to point out, however, that the *planned* extermination of species ordered by a few individual men at a given point in history because of their own self-established interests is something quite new and frightening. Carried to its only possible conclusion, of course, given different men, different interests, and different points in history, everything living would one day be gone. You can make a case against any plant or animal you want.

Dr. Moment is apparently far too well informed about the ultimate truths of time, life, and the cosmos—the life adventure—for me to offer further contention on this point. I have had no such revelations, no such visions, no such fantasies about my own capacities for determining the future of this planet or this cosmos. I abandon the point to such incredible wisdom. But he scares me!

Dr. Moment's decision that the bears must go, and his determination that there are species that can with impunity be declared obsolete, inevitably leads us to the problem of selection. Several cases come to mind.

- There are about 160 Asiatic lions left alive in a natural environment. These are what are left of tens of thousands that once roamed the subcontinent of India. They all live in the Gir Forest region. The people who live in the vicinity are on a marginal survival economy. They say they are starving while the lions kill the stock they have license to graze there. They are demanding the right to eliminate the remaining Asiatic lions in the world. Have they not this right by Dr. Moment's standards?
- Although I find the figure troublesome on a number of counts, it is suggested with quite good authority that about 40,000 people a year—worldwide, of course—are killed by snakes. Can there be any doubt that *all* venomous snakes must be sought out and destroyed in a concerted program of extermination? If five deaths in 97 years justifies Dr. Moment's proposal, 40,000 deaths every year is an international emergency. What we shall ever do with the rodents when we are done I cannot imagine.
- One Sumatran tiger, three years ago, accounted for seventeen human lives between the time it turned man-eater and when the Army finally got him by blowing up half a hillside with TNT. Throughout the tiger's range this is a recurring problem. It was so in the Sundarbans of East Pakistan when I was there in 1967 and is almost an annual problem in one part of India or another. The three largest of the Old-World cats—the tiger, the lion, and the leopard—do turn to man-eating often enough to be of more than statistical concern to the people who live within their range. Their extermination has often been proposed. Since the victims of these cats when they do on occasion go bad do not have the option of whether or not to visit a national park but must live where the cats range, I gather that Dr. Moment would sympathize with any movement to exterminate the large wild cats.
- A number of ranchers and fishermen on Alaska's Kodiak Island have been clamoring for years for the right to slaughter the remaining 2,000 Kodiak bears—the world's largest surviving terrestrial carnivore. How can their wishes be denied?

There are dozens of other such cases that can be cited. What I am trying to demonstrate, of course, is that the suggestion is preposterous. It presupposes an unavailable human wisdom. Dr. Moment suggests that there exists a yardstick for selection that can never be found. It would, if heeded, open a floodgate permitting every kind of private interest group to demand its own special privileged extermination selection. They could all point to the United States Government for their precedent. There should be no mistaking the fact that it is only a special interest group that would benefit from the elimination of bears from our parks—a group whose individuals are unable to comply with park regulations, who are incapable of sensible behavior, whose interest in the wild is to look at a living scenic postcard, and who find a denuded shell of an ecosystem enchanting. No one suggests that our national parks represent intact ecosytems. But the sixteen areas left to the management of the National Park Service where bears survive are certainly richer for their presence. They do add to the scenery which Dr. Moment seems to feel is the parks' chief attraction.

Dr. Moment has failed to understand the fact that "danger to man" must be measured on two entirely different scales. If he has not failed to understand it, he has failed to present it to his readers and thereby muddled the issue. The first of the two danger scales I call "The Phone-Booth Scale." With what animals is it dangerous to be locked in a phone booth? The answer is "most wild animals—and certainly with bears." However, that is not the scale one uses in selecting a course of action, except in deciding to stay out of phone booths. A second scale is the critical one—it is, of course, the "Health/Statistical Record Scale." We have given that scale a number of times already—97 years, hundreds of millions of visitors, five deaths.

DR. MOMENT FEELS that sentimentality *(biotheology)* has no place in the decisions affecting conservation, ecology, or the other contemporary religions of biologically sophisticated man. I suggest that he is in error. Whether or not America has national parks maintained and expanded, clean air and clean water, national forests and monuments, and a fauna worthy of the name does not depend on Dr. Moment or his colleagues. The eventual law which makes the manufacture and use of DDT illegal will not be passed by America's zoologists. Only public awareness and concern can make these things happen. Only when conservation is a national purpose will it really work. America has 200,000,000 people. Our national parks play host to more than 150,000,000 visitors a year. The most conspicuous memory for 37,000,000 of last year's visitors is undoubtedly the only large wild predator they have ever seen in a seminatural state—the bears. On the other hand, 38 individual people have bad memories. I therefore disagree most vigorously with Dr. Moment's confusing suggestion that the continued existence of bears in our national parks will work against the best interests of wildlife conservation.

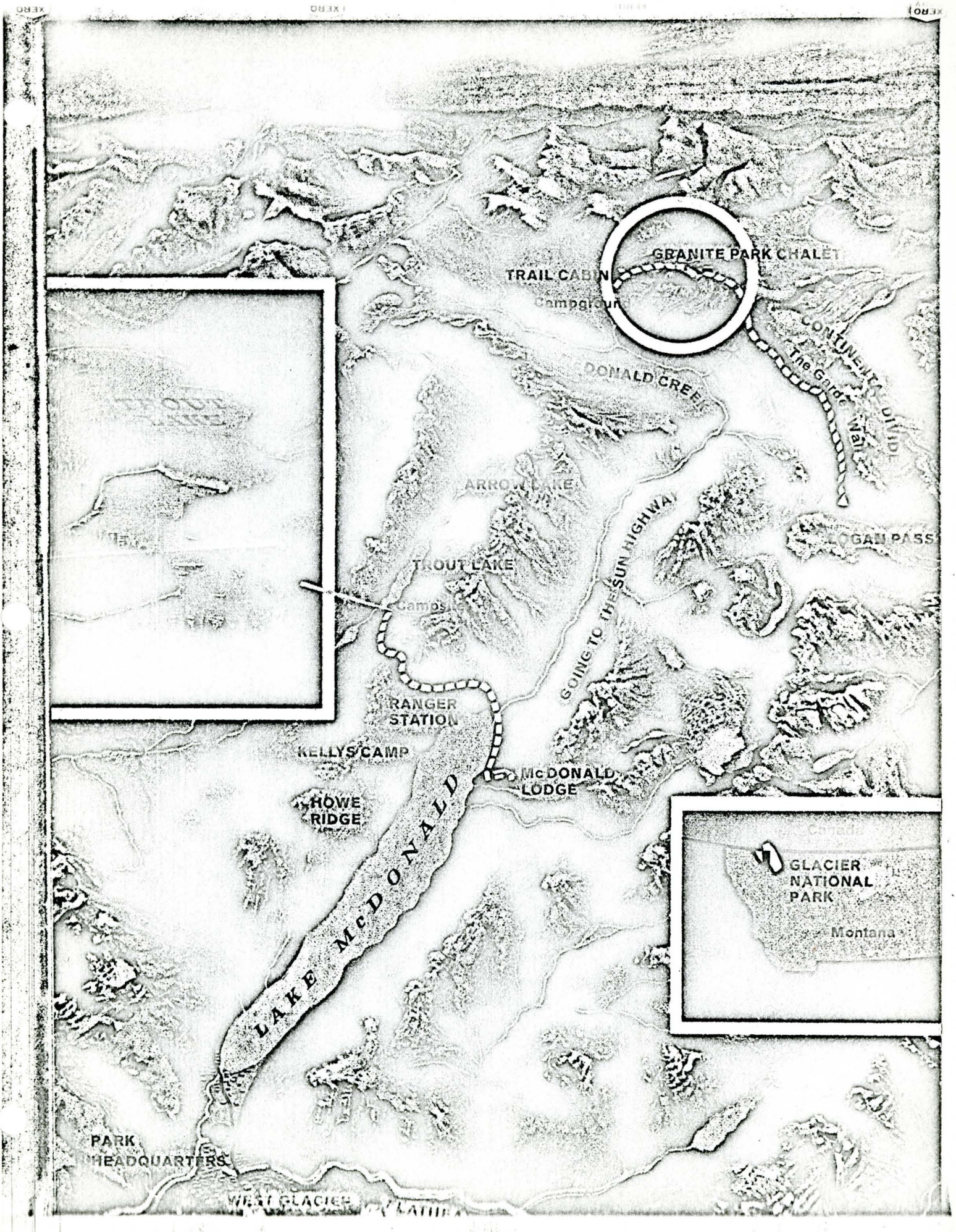
Let Dr. Moment become aware of the fact that just as the best way to a man's heart is through his stomach, the surest way to his wallet and his legislator is through his heart. To affect this situation one has to change the nature of man—not kill off the bears. ■

THE GRIZZLY – ENEMY OF MAN

Must he be exterminated ?



XERO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GLACIER NATIONAL PARK
Montana
PARK HEADQUARTERS
WEST GLACIER

THE GRIZZLY BEAR MURDER CASE

by JACK OLSEN

Death lurked on the trails of Glacier National Park in the hot summer of 1967. A bitterly debated question—can man and bear peacefully coexist in a shrinking environment?—was about to be answered. After the fearful events of August a determined effort was made to obscure that answer. Now Jack Olsen, in a three-part series growing out of intense personal investigation, tells what happened, why it happened—and who was at fault

The 1,600 square miles of Glacier National Park, tucked into the northwest center of Montana, spill over on both sides of the Continental Divide. It is magnificent country. Naturalist John Muir called Glacier Park "the greatest care-killing scenery" on the North American continent. He could not have been more truthful.

In the deep interior of the park much of the land is above the timberline. There are jagged and severe mountains, as broken in their contour as the outlying mountains are smooth, and high on their slopes hang the 50 or 60 glaciers that give the place its name.

Below the timberline Glacier Park is teeming with animal life. One sees specimens that would be minor miracles if they were spotted outside the limits of the park. There are places near Sperry Glacier where it is a rare day when mountain goats are not visible. Around Many Glacier a small herd of Rocky Mountain bighorn sheep is usually grazing and elk may be seen along the middle branch of the Flathead River. Other species —though rarely seen—are also there: the Rocky Mountain wolf, the mountain lion and the wolverine. And there, within the confines of the park, the largest of all American carnivores, the grizzly bear, is making one of its last stands.

The observer may prowl the backcountry of the park for weeks without spotting a grizzly, but then suddenly a broad expanse of silver and brown will stir in the bushes ahead, rise to its full height of seven or eight feet, shake its great shaggy head from side to side, and disappear into the forest at a speed that belies its quarter ton of sinew, fur and muscle.

Anatomically the grizzly is a magnificently designed machine with heavy, powerful muscles and a collection of joints that are loose and flexible—similar in principle to the universal joints of an automobile, enabling the animal to function from almost any position. The teeth are canine, and the molars are larger than life, equipping the grizzly for both cutting and grinding. The jaws are powered by two massive muscles that enable the bear to crunch through almost anything softer than steel.

The grizzly's hearing is about equal to man's, its eyes markedly inferior, its nose one of the sharpest in the animal kingdom. Since the bear stands alone at the top of the North American peck order, it is not in the least reluctant to approach anything that moves. Sometimes this approach is made at top speed, and many a hiker in places like Glacier Park has had the wits scared out of him by a grizzly that seemed to be charging downwind on him but at the last second whirled around and *continued*

THE SCENE at Glacier Park. Dotted lines ... routes taken to Trout Lake and Granite ... Chalet by the groups of young campers.

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ran upwind twice as fast. Some park officials attribute most grizzly "attacks" to the bear's poor eyesight and limitless curiosity. Not frequently, but often enough to keep the hiker honest, the bear will keep right on coming and bowl his victim over. This is part of the animal's vast reservoir of unpredictability, an unpredictability that is the quintessential nature of the beast.

In the first 30 years of the park's existence, only one human being was harmed by grizzlies. John Daubney hiked into Piegan Pass in 1939 and was slashed by one of a trio of bears that attacked him. The next attack did not come until August 1956, when a man named Tobey Johnson was bitten by a grizzly while sleeping in the open at Stoney Indian Pass. In the next 10 years there were nine more attacks. The mystery was not that there were so many attacks —but so few. Tens of thousands of visitors were now sifting into the farthest reaches of the park, moving into the bears' territory. But despite this intense pressure the administrators of the park could report at the beginning of 1967 that in its long history not a single life had been lost to the world's largest carnivore. Apparently the Park Service's improvised policy of shooting or transplanting troublesome specimens was working successfully.

Admittedly there were a few mysterious deaths on the books of Glacier Park, people who had left the trails and never been seen again. But the fact remained that not a single documented death could be blamed on the embattled grizzly as the long, hot summer of 1967 began. To park officials, who deeply admired the bears and did not want to shoot them in the first place, this was the most comforting statistic of all. To some it was, perhaps, too comforting.

A few miles inside the southern edge of Glacier Park are two lakes—McDonald and Trout—both glowing with the intense blue-green common to deep glacial lakes all over the world. Trout Lake, so named for its good supply of fish, is the smaller of the two. It is two miles long and shaped like a tadpole. Lake McDonald, 10 miles long and two miles wide, is the largest lake in the park. Between the two lakes rises a rugged 2,000-foot steep called Howe Ridge.

At the northern end of Lake McDonald, in a fern-filled mossy copse, a small collection of cabins called Kellys Camp traces its existence back to the years before Glacier Park was founded. Today the camp is owned by descendants of the homesteaders who settled the area and refused to sell it to the government, thereby retaining possession even though they are completely surrounded by publicly owned land.

In the season of 1967 one of the first to arrive at Kellys Camp was Joan Berry of Ephrata, Wash., a schoolteacher descended from the original homesteader. With her three children, ranging from 6 to 16, Joan Berry moved into her customary dwelling, "the big house," largest of the cabins on the property. Her husband, Don, would commute back and forth to his radio station in Ephrata.

It was shortly after the middle of June when Mrs. Berry first saw the bear. She glanced out the back window of the house toward a little indented area where garbage and trash barrels were kept, and saw an animal that puzzled her. Joan Berry was no stranger to grizzlies after a lifetime of summers in Glacier, and this bear was plainly a grizzly, with its dished-in face and conspicuous hump just behind the head. But she had never seen so ragged a bear. One expected grizzlies to be somewhat mangy and dull in the early summer, after a winter of hibernation, but this bear's physical appearance was markedly worse than average. The hair on the mane behind the hump, usually luxuriously thick, was short and thin, and when the animal leaned over to dip into the Berry family's trash barrel, Mrs. Berry could see bald spots along the line of the backbone. The head was long and narrow, almost misshapen. The animal had the frame of a large bear, upward of 500 pounds, but the body was so emaciated and scrawny that Mrs. Berry doubted if it would weigh half that much.

'Night of the Grizzlies'

This series will be published soon in expanded form by G. P. Putnam's Sons.

The strange bear was as different from other grizzlies in action as in appearance. Mrs. Berry would look up from her housework in the primitive cabin and see the animal digging into the trash barrels in bright daylight, and when she would make tentative noises to frighten the bear away, it would stand and look at her unabashedly, or even take a few menacing steps in her direction.

Soon the bear was visiting the garbage cans behind the big house every three days, almost as though it were on a schedule. After only a few visits, the bear seemed to become acutely annoyed by motion inside the house, and it would charge the walls or slap at the tiny windowpanes. The Berrys had disciplined themselves to remain inert when the bear was around, but they could not discipline their German shorthair. If the dog barked when the bear was outside, the result was an instant attack.

One night as Joan Berry lay in bed she heard the familiar noises from the garbage cans. The bear was right on time; it had been exactly three days since its last visit. Mrs. Berry jumped out of bed and ran to get the dog, but the big pointer had heard the noises himself and raced into the kitchen barking and growling. Almost in the same second there was a thump and the back door started to buckle inward. Mrs. Berry held her breath as the bear crashed into the door once again, and she pulled and shoved the dog into another room and locked him in. The next time she looked out the back window, the bear was calmly selecting foodstuffs from the cans as though nothing had happened to disturb its equanimity.

A few days after this incident, Kellys Camp was noisy for a change. The day was bright, and the camp was full of vacationers and multiples of their children running about. Up on the porch of cabin No. 2 a feast had been laid out on a big table. A good time was going to be had by all, for this June 29, 1967 was the 57th birthday of one of the most popular of the camp's regular guests: W. R. (Tete) Hammond, a kind and gentle man who, with his wife, had been spending summers at Kellys Camp since 1955 and had long since come to be regarded as the unofficial marshal of the place. It was late in the afternoon when the guests began arriving, and soon there were nine on the wooden porch. They were singing *Happy Birthday to You* and other tributes that embarrassed Tete Hammond no end, and then somebody served a few drinks. One of the birthday celebrants strolled to the end of the porch and looked down the steep flight of eight or 10 roughhewn steps that led to the forest floor and saw a bear standing there taking it all in. Somebody shouted, "Get the food inside!" Tete

rushed to get a look at the bear before could run away. It was the scrawny, mangy grizzly. As Tete watched from the head of the stairs, the bear calmly began walking toward the cabin. Tete shouted at it and made a few threatening gestures, but the grizzly continued on a straight line toward the foot of the steps. When the animal reached the bottom and began climbing, Tete shouted for everybody to get inside and picked up a heavy bench about four feet long. The animal was halfway up the steps when Tete lifted the bench and sent it crashing down. The edge of the bench hit the bear's foot, but the animal showed neither pain nor panic. It backed down the stairs, stood up on its hind feet and snorted, then dropped down and walked slowly into the brush.

Once again the party was resumed, but only a few minutes had passed when Tete heard screams from the south end of the camp. Someone was hollering, "Get a gun!" Tete went to his cabin and picked up his old lever-action .25-35 and hurried toward the noises. (Firearms, barred in Glacier Park itself, were permitted at Kellys Camp, since it was private property.) On the way he met his 9-year-old grandson and a girl of about 14 walking rapidly along the dirt road. Just as they reached Tete, the boy said in a loud whisper, "Don't run, but walk as fast as you can!" Tete looked down the road and saw the bear coming toward them at a range of about 60 feet. While the children rushed toward a cabin, Tete levered a cartridge into the chamber, clicked off the safety and drew a bead on the hurrying animal, and when it was clear to him that the grizzly was not going to slow down, he fired a warning shot into the dirt about three feet from the bear. The animal stopped short and rose to its hind feet in the classic position of attack. Tete cocked the gun again and raised it to his shoulder. He held the grizzly's head square in the sights and was about to begin a slow squeeze on the trigger when the animal dropped down and circled around the back of a cabin. Tete waited, and a short time later he heard a scream from the big house. He rushed over with his rifle cocked, but the bear had dashed to another part of the camp. Tete ran to his telephone and called park headquarters for help. An hour and four phone calls later, the bear was still foraging around the camp and no ranger had arrived. It was almost dark when the frightened citizens of Kellys Camp heard the sound of a vehicle driving up and two armed rangers got out. They explained that they were sorry it had taken them so long, but they had been attending a first-aid course. They told the people not to worry, that they had seen the bear scurrying up the ridge toward Trout Lake as they had driven toward the camp.

"I don't claim to be an authority on bears," Tete Hammond spoke up, "but I'll tell you one thing for sure. That bear wasn't acting right. No, sir, that was no normal bear."

A few days later a ranger executive arrived in Kellys Camp on a routine visit, and Joan Berry, who had been away from the camp on the bear's most recent intrusion, took him to one side and said, "We've got a sick bear, a crazy acting bear around, and I wish you'd do something about it."

The official asked for a description of the animal and Mrs. Berry told him that it was a dark grizzly with a big, emaciated frame and a thin, elongated head. "I'm sure that he's dangerous and somebody's going to get hurt," the schoolteacher said.

The ranger said, "Well, when his illness makes him go berserk, we'll do something about him," and made it plain that the matter was closed. His attitude made Mrs. Berry seethe. In all the decades since her family had homesteaded on the north shore of Lake McDonald, they had rarely reported a troublesome bear; they preferred taking their chances on coexistence. Kellys and grizzlies had been living together amicably since the 1800s, and Mrs. Berry felt that the ranger ought to know that and ought to have taken her complaint more seriously.

The next weeks were spent in a state of tension. The grizzly came back periodically and the residents of Kellys Camp drove about with rifles and shotguns on the seats of their cars and kept careful watch on their children and their pets. Several times rangers arrived with guns, but they were always a few minutes behind the wary animal.

When Aug. 1 arrived, the inhabitants of Kellys Camp recapitulated the bear's pattern: since the middle of June it had visited the place some 15 times, starting at first in a cycle of every three days, extending this to four and now arriving every fifth day. But then a ranger dropped by and told some of the residents, "You shouldn't be having any more trouble. Your bear's at Trout Lake tearing up camps." For the first time that summer, Kellys Camp relaxed; both danger and notoriety had now passed by. Before the season was over, the crazy bear was to become known as "the Trout Lake bear."

To get to Trout Lake from Lake McDonald the hiker had to hit the trail not far from Kellys Camp and climb 2,000 feet in two miles, a rate that quickly eliminated any but the most serious of hikers (but hardly warmed up a bear). Once on top of the ridge, it was an easy 1,500-foot descent through the forest to the lush stand of vegetation that made the place popular with another sort of wildlife: bears, both grizzly and black. There was hardly a spot in Glacier Park where more grizzly sightings had been made—in fact a trio of visitors to Trout Lake once reported being treed by no less than five grizzlies simultaneously, something of a record for the National Park Service.

The lake lies in a bowl rimmed by mountains that tower thousands of feet above and duplicate themselves almost perfectly in the clear blue-green of the water. Camas Creek flows in the north end and out the south, and at the lower outlet several hundred huge tamarack trunks are crunched together into a logjam that will support a man's weight almost all the way across the water. To one side of the logjam a small clearing has been hacked out of the spruces and thick bushes that march down to the water's edge; in its center the Park Service has installed an iron grating for cooking, and the spot is popular with campers, who pitch their tents, drag a few cutthroat trout out of the lake and enjoy an epicure's feast in the forest.

The campsite was also popular with bears, especially with the Trout Lake bear. Although no physical contact was made between man and bear, there were times when the peculiar animal would follow campers for hundreds of yards, always staying 20 or 25 feet away, and scare them half to death. Almost always the victims of such encounters berated themselves later, the tenderfeet for not knowing that grizzlies are relatively harmless and the oldtimers for realizing it and still being afraid. There was something about this persistent grizzly that alarmed even the most knowledgeable. Grizzlies had been snooping in and out

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of the campsites of North America ever since the first primitive man had pitched the first camp, but they had not made their intrusions while the campsites were occupied—and certainly not while people were in the middle of meals and other activities. The oddly shaped grizzly did not seem to know fear. It stormed into camps and bowled over fire tripods, tents and packs. It stayed exactly as long as it wanted to stay. It ignored the shouts and screams, and sometimes the rocks, of annoyed and displaced campers.

The rules of the National Park Service specify clearly that such a bear must be shot, but somehow the skinny animal managed to remain alive. Now and then an ashen-faced camper would make a report to the rangers in person, and others would scribble capsule comments on the trail registers. But no one was reading the trail registers (they were to be gathered at the *end* of the season and studied) and no one seemed to be listening to the first-person reports.

Eight or nine crow-flight miles from Trout Lake, but separated from it by the 9,000-foot cliffs and spires of the Livingstone Range, a stark and colorless mountain chalet hunkers down against the winds and snows of winter and opens its doors for guests only two months of the year. The place is called Granite Park Chalet, and it stands at the confluence of several busy footpaths which lead, like the spokes of a wheel, in all directions. Four miles down one of the trails is Going to the Sun Highway; that is the closest one can get to the chalet on anything but foot or horseback.

The bulky old building has endured half a century of winter's buffetings. By January or February of each year it is usually all but buried under snow and ice, and the last patch does not melt away until July or sometimes August. But in the short warmth of summertime, the chalet lies in spectacular surroundings, like a speck of common sandstone set in a ring of diamonds and rubies. The building itself is nothing more than an oversized blockhouse, an inflated version of a Swiss mountain hut. Except for a few additions and small outbuildings, the structure is a 48-foot square, two stories tall, with a heavily timbered roof and fieldstone sides. The chalet lies just below the timberline, at 6,600 feet, in an area where trees and brush and flowers lead an ephemeral existence. The mountainside is like some of the deserts of the Southwest, drab and almost without color for nine or 10 months of the year and covered with a brilliant carpet of flowers in the summer.

In this timberline setting several species of fauna somehow manage to thrive. Columbian ground squirrels are common and occasionally one sees a golden-mantled ground squirrel. Now and then an elk will shoulder its way through the region, but the big-antlered animals are not common here. Of the larger mammals, only the grizzly appears with absolute regularity. The bench some 500 yards below the chalet is alive with some of the *pièces de résistance* of the grizzly cuisine, and in certain seasons of the year the soil of the bench is pockmarked from the busy, nocturnal diggings of the hungry bears. In the middle of this ursine happy hunting ground, to the great relief of the concessionaire, B. Ross Luding, the government had established a public campground.

For years Luding had been complaining about the hikers who laid out their sleeping bags on the porches and breezeways of his chalet, used the toilet facilities, dumped their trash in the chalet's containers and contributed nothing to the exchequer. Such activities would have been a minor irritant to any resort operator, but they were major to Luding. He was not a rich man, his profit margin was narrow, and every last scrap of tin can and aluminum wrap and pop bottle that appeared on the premises had to be carried out on muleback at high expense. Luding had found himself and his employees spending half their time cleaning up after the squatters.

The concessionaire's loud and justified complaints finally brought action in 1964. A trail boss hiked into the area, observed the wooded flat bench several hundred yards below the chalet, and dubbed it The Granite Park Campground. Luding directed all future campers down to the bench, where they could sleep out under the stars. Soon the campground was being used regularly, but not by anyone who knew better.

When Tom Walton and his wife Nancy accepted the summer job at Granite Park Chalet, they had only the vaguest idea of what they were doing. For four previous summers the 23-year-old Walton had worked as a fire fighter, but this new opening at the remote and isolated Granite Park Chalet would offer him and his wife 24 hours of togetherness minus the dangers that came from roaring fires. So they accepted, and late in June 1967 they found themselves picking their way up the snowy trail on horseback. The chalet was half buried in drifts, even at this late date, but they were surprised to find no grizzly tracks. One of the ranger executives at headquarters had told them that he had made a few flights over the chalet earlier in the spring, and there had always been grizzlies around—once he had seen six on the chalet roof. Walton, a gentle person despite his fireplug build and his experience as a football lineman, was just as glad the bears were absent now.

For several days the Waltons worked almost around the clock, readying the chalet that they would help to manage all summer, along with Mrs. Eileen Anderson. The Waltons would take care of the guests, and Mrs. Anderson, a middle-aged woman from Minnesota, would boss a crew of girls who attended to everything else: kitchen work, bedmaking and general housekeeping. It fell to Tom Walton to fire up a small incinerator the Park Service had installed the year before for burning garbage. The park engineers had purchased the gas-fired incinerator with the hope that its use would halt the bad publicity resulting from the dumping of garbage near the chalet. Garbage attracted bears, and this violated the No. 1 canon of normal park management: Do Not Feed the Animals. The government had spent a mere $84 on the device; the firebox was only as big as four or five shoe boxes.

The 1966 season was not very old when the chalet staff found the incinerator was not only too small, but the clouds of stench that curled into the rooms of the guests made many of them threaten to abandon the premises for good. The perturbed Ross Luding had thrown his hands in the air and told his kitchen help to do the best they could with the incinerator and throw the remaining leftovers out on the old garbage dump.

"It wasn't so bad," Luding commented later. "All day long you'd see the squirrels out there eating the stuff, and the birds would come, and once in a while you'd see a deer and they would clean up most of the stuff during the daytime. Then the bears'd come in at night and clean up the rest. Why, my goodness, there was nothing so new or dan-

gerous about it. Why, when I first took over the chalet 14 or 15 years before, the grizzlies came in every day and nobody ever got hurt."

Tom Walton found that the incinerator had not grown any over the winter. It would barely burn away the garbage of the eight or 10 members of the chalet staff. Walton told his wife that as soon as the guests began arriving another system would have to be figured out. The Waltons had been told to avoid dumping too much garbage in the gully behind the chalet because that would attract grizzlies and grizzlies would be dangerous to the guests.

The young couple had given little thought to the big bears in the general busyness of their first two or three days in the lonely place. Everyone had told them that they would see grizzlies galore during the summer; indeed, grizzlies were the main attraction at the chalet and everybody for miles around knew it. They also knew why: the grizzlies came for the garbage. When tourists would check in at the visitors' centers at St. Mary and Rising Sun and Logan Pass and the ranger headquarters on the west side, they would soon find out that the most exciting trip in the park was the one to Granite Park Chalet to see the grizzlies.

But after several days the Waltons began to wonder, and a few members of the housekeeping staff, mostly young girls, began to worry. "Tom," one of them said one night, "we haven't even seen a sign of a bear. Maybe they're not gonna show up this summer."

By the third night the chalet staff was intact and everything was in readiness for the guests who would begin arriving shortly after the official opening on July 1. It was nearly midnight. Two of the girls were sitting around downstairs drinking a final cup of coffee, and the Waltons were almost asleep in their room just above, when the door to the outside began banging. A very annoyed Tom Walton climbed out of bed to secure the lock. He opened the door momentarily and flicked his flashlight beam down the backstairs and picked up the bright orange eyes of a big animal. He realized that he was looking at a grizzly, standing on top of a snowdrift not 20 feet away, and he slammed the door and locked it. "Don't go out there!" he shouted through the cracks in the floor. "There's a grizzly outside!" The girls' response was to jump up, run out the door and begin searching for the animal. Luckily, it had fled.

By the middle of July the hot summer sun had sliced several feet off the snowdrifts around Granite Park Chalet. Soon the trails were completely clear and visitors were arriving by the dozens. Mrs. Anderson, a stickler for cleanliness, was frantic about the garbage. Each night there was more of it and the little incinerator could no longer handle the load. Tom Walton punched holes in the side of a 50-gallon drum and tried to burn garbage that way, but each morning he would go outside and find that the bears had arrived and knocked over the drum to dine on the unburned residue. He talked the problem over with Mrs. Anderson and Ross Luding, and soon the garbage was being handled in the old manner—dumped in the gully. As though they had been waiting in the wings for their cues, the bears began to show up regularly just after dark. For awhile the *dramatis personae* changed from week to week, and the Waltons suspected that they were being visited by nomadic bears that had just left hibernation and were on the road. Two small buckskin-colored grizzlies stayed around for a few days, but they soon gave way to others. In those middle weeks of July there was only one constant: each morning there would be the fresh tracks of a big bear and two cubs.

Then for a few days another consistent pattern developed. A large buckskin grizzly and an equally large dark bear would slowly walk up the narrow trail and begin to pick at the food with great dignity shortly after dark. While they were dining, sometimes backing off to woof and threaten each other, a small light-colored bear would run at top speed up the draw and catapult itself into the garbage area like a character out of the animated cartoons. Word of the remarkable bear show had spread around the tourist centers and soon the chalet was groaning with 65 guests every night, absolute capacity. There were daily hikes in from Logan Pass, led by ranger-naturalists. The parties would walk the scenic seven-mile trail along the Continental Divide and arrive at Granite Park Chalet footsore and weary. After dinner the revitalized visitors would sit in the chalet's main dining room and sing songs. Almost without fail Tom Walton or one of the chalet employees would arrive in the middle of the third or fourth song and

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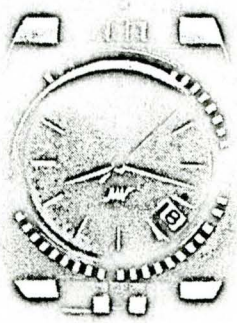

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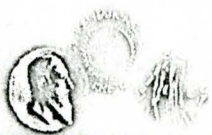

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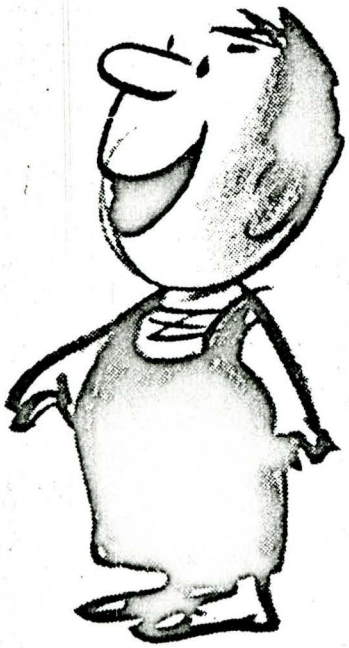

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make the announcement about the bears, and 60 or 70 people—usually including their ranger-naturalist tour leader—would run outside to watch the animals growl and frolic and enjoy their evening repasts not 50 yards away. Walton soon learned from longtime visitors that such bear shows had been going on nightly at Granite Park Chalet for decades.

One evening the slop in the garbage pail included two pounds of spoiled bacon, and that night Walton noticed that two big bears squared off in a knockdown fight complete with loud grunts and ferocious swings and several near-decapitations. The guests clapped and applauded, and a few of them tried to creep down the gully to get closer to the grizzlies for pictures, but Walton quickly grabbed them and told them they were endangering their health. He found one man who had hidden behind a tree near the bears and ordered him back to the safety of the chalet.

After the night of the first big fight, Walton heard that any delicacy like a slab of spoiled bacon or a ham rind would cause the big animals to circle and threaten each other and sometimes trade blows, and since this seemed to go over big with the tourists and the bears did not seem to be concerned about anything but themselves, he was not worried. Once or twice, when the bears had been acting too docile to stir up the crowds, Walton slipped a few pieces of bacon into the pail and the bears reacted by fighting. One night, in fact, the battle broke out again after all the visitors had gone to bed, and for several hours the screams and growls continued intermittently in the night.

The ranger-naturalist who had led that afternoon's hike managed to sleep through all the noise, but a few days later he was ordered by park headquarters to provide a full report on "the bear fight at Granite Park." The chagrined ranger came back to Walton for a fill-in, and when Walton asked how park headquarters had found out about the incident, the ranger told him, "It filtered back. Everything that happens up here filters back." Walton guessed that the park had a complete dossier on every event of the summer, including the abandonment of the faulty incinerator and the resumption of the nightly feeding schedule, but he did not see any reason to worry. Six or seven ranger-naturalists had regularly watched the bears feed, and several other rangers, including a few executives, had spent the night at the chalet and witnessed the ritual and only one person had expressed the slightest hint of criticism. A high official of the park had said, "Tom, don't you feed those bears anymore."

"O.K.," Walton said.

"And you better start burning all your garbage in the incinerator we got for you," the ranger executive said.

Rather than argue, Walton nodded agreeably, but later that night told his wife that the instructions did not sound serious to him, that he was willing to bet that this particular ranger official enjoyed watching the feeding bears as much as anyone and was merely going through the motions of admonishing him. He discussed the matter with Luding, and the veteran concessionaire told him that there was nothing to worry about, to continue putting out the scraps. "It's against the rules," Luding said, "but I don't know what else to do and neither does the Park Service."

By early August the Granite Park Chalet's official two-month season was half over, and the grizzlies' visits to the garbage dump had become a big talking point in the park, but the Park Service's public position was that animal feeding was strongly prohibited by several dozen rules and regulations and therefore it must not be going on. Rangers and naturalists who took in the nightly display of grizzlies went along with their superiors. Most of the rangers had filed protests, written or verbal, at one time or another, to one executive or another, but when they saw that the ritual appeared inevitable, they ceased fighting city hall and said nothing more. High park officials would deny that so much as a single scrap of food was being put out for wild animals anywhere in the park. If such illegal activities were going on, they said, they would be the first to know about it.

Meanwhile, business at the chalet was booming. Some nights every bed would be taken and eight or 10 more customers would stretch out on the floor in their sleeping bags. If there had ever been a sliver of a chance that the small incinerator could handle the leftovers, it was gone now.

The innkeeper consoled himself with the fact that the bears' behavior had seemed to become more consistent as July had turned to August. There were

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two of them now, regular nightly visitors, although tracks and other signs indicated that a sow and a pair of cubs were coming in late at night, long after the chalet was asleep. The two "regular" bears had learned to live with the powerful flashlights that were shone on them and with the monotone of awed conversation that came from the chalet 150 feet away, where a throng of guests watched in hushed excitement.

Walton and the chalet staff had not gone to the extreme of naming the bears, as others had done in the past. They were simply called No. 1 and No. 2. No. 1 was a big silvertip, a handsome animal with dark brown fur and great dignity. Sometimes the flashlights would catch No. 1 just right and its fur would take on a ghostly luminescence, and an admiring gasp would come from the onlookers. Naturalists guessed the big bear's weight at 500 pounds.

No. 2 was smaller, with a shoddy coat and long claws. Probably the bear was old, with worn teeth; certainly it was crotchety, and it soon was playing the nightly role of villain in the little backyard tableaux. No. 1 would arrive from the direction of the trail cabin just after dark and a few minutes later No. 2 would come up the same path and start the trouble. Sometimes the massive silvertip would see the grouchy bear coming and simply move into the brush to wait. Then No. 2 would stuff itself with garbage and leave by the same route.

The summer of 1967 was unnaturally hot, and visitors were coming from all over to sit on glacial ice and turn their noses into the Alpine winds. Headquarters rangers frequently found themselves called from their normal duties to battle the persistent fires that broke out in the dry brush. The Park Service personnel were stretched thinner and thinner, and only a handful of skilled men were left to cope with the record crowds. In such an atmosphere, no one had time to keep track of bears, either black or grizzly, much less to keep records on the increasing number of face-to-face meetings between grizzlies and man, particularly in the remote places called Granite Park, Granite Camp and Trout Lake.

What no one was noticing, the contacts between man and bear were nearing a moment when something would have to give. The moment came on Saturday, Aug. 12.

The Kleins, Robert and Janet, had not been married long enough for major arguments, but now they were having a major disagreement. Janet had heard about the bears of Granite Park Chalet, and she announced that there was no force on earth, including her handsome 6′ 7″ husband, that could get her to sleep out on the campground that night. For his part Robert still was not convinced that the presence of a few bears should change their plans for a night underneath the limitless vault of the sky. Janet stood her ground like a wolverine and finally announced that big brave Robert could sleep outside if he wanted to, but she was going to scrape together $12.50 and sleep in the chalet.

They were told that the young man in charge of the rooms was in the back burning trash, and the Kleins walked around the big log and stone building and introduced themselves to a sturdily built, bearded man who told them his name was Tom Walton. By now it was late afternoon, and Walton said that he was sorry but every bed was booked.

"Tell us frankly, what's the bear situation around here?" Klein asked. "That seems to be all anybody talks about."

Walton told them that two grizzlies had been coming in on a regular basis for two or three weeks now, that they came in from the trail that led down toward the trail cabin and the campground and returned by the same route.

"And they head down toward the campground?" Klein asked.

"In that general direction," Walton said. "But I wouldn't worry about it. Hundreds of people have camped there this summer and the bears haven't eaten anybody yet." The two men laughed, but Janet Klein gulped and told herself that the campground was out so far as she was concerned.

About 6:30 Robert and Janet, still at the chalet and still undecided, met a 20-year-old hiker from Paradise, Calif. named Don Gullett. Janet noticed Gullett's pack and sleeping bag and asked him how he could entertain the idea of sleeping out in this grizzly-infested area. Gullett told her that he was not worried about the bears and he had staked out a nice flat spot in the shadow of the trail cabin. Robert Klein asked Gullett how far it was from the trail cabin to the campground. "Oh, several hundred yards anyway," Gullett answered, and the three agreed to walk down the trail and take a look.

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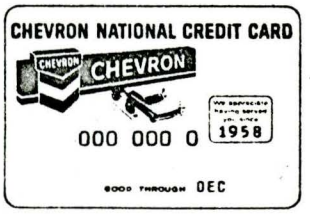

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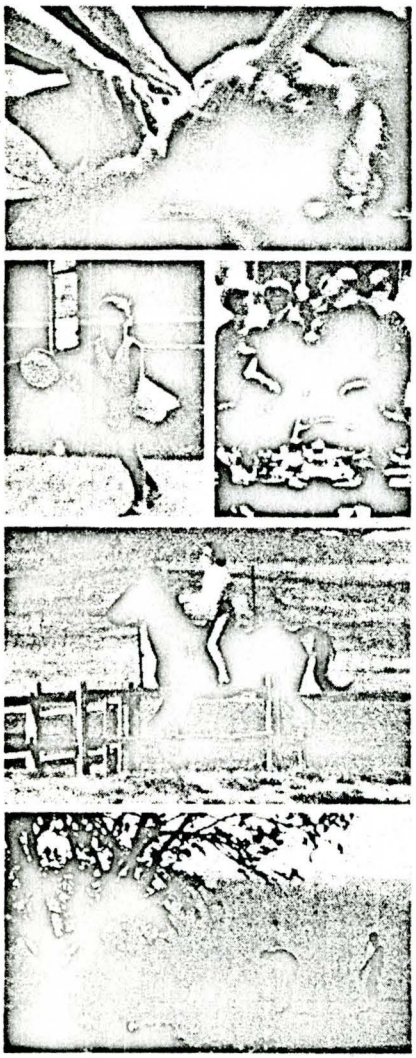

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Janet Klein was wondering if she were not overreacting and threatening her husband's enjoyment unreasonably. The trail cabin site was charming. A tiny stream tinkled alongside and there were big patches of purple asters and red monkey flower. Off to the southwest one could make out the general area of the campground, but it seemed a safe distance away. Janet announced bravely that the site met her approval. The Kleins made camp some 20 feet from the uphill wall of the cabin, and Gullett laid his bag alongside the lower wall.

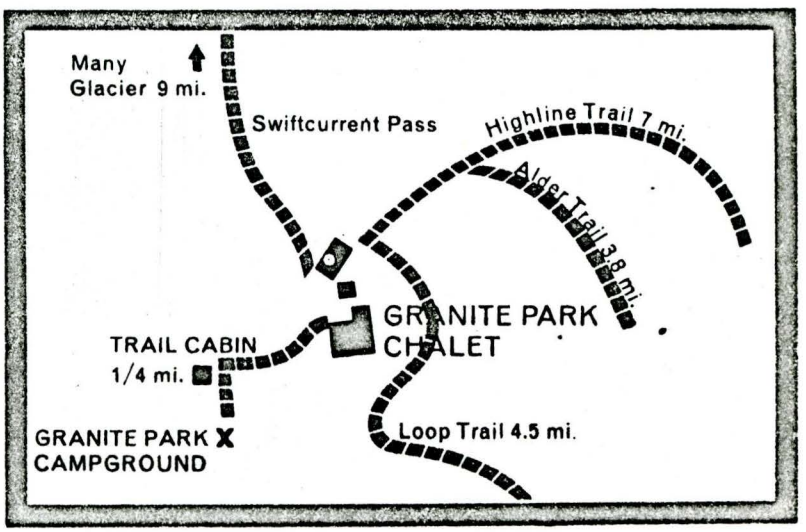
"Now let's forget about bears and enjoy ourselves," Robert Klein said, and he and Janet began getting supper while Gullett busied himself about 30 feet away. The Kleins were preparing to eat when a teen-aged couple arrived and asked where the campground was. When Klein pointed off to the left, the boy, who called himself Roy and looked to be about 18, said, "Well, if the campground's over there, why are the three of you camping here?"

"If you want the truth," Janet Klein said, "we're afraid of bears."

The younger couple laughed. "Oh, that's nothing to worry about," the boy said. His companion, an attractive girl of about the same age, laughed again as though the subject were a joke, and they bounced away toward the campground. The Kleins finished their dinner and carried all their refuse up to the chalet trash cans, hung around to talk and returned to their camp to watch the spectacular sunset. Then they covered their provisions with plastic and hauled them to the top of a medium-sized sub-Alpine fir and climbed into their sleeping bags. "Now tell me again," Janet said, as the two of them lay under the bright moon and stars and tried to get to sleep, "what do we do if a bear comes?"

Robert Klein had carefully placed the flashlight and their boots within arm's reach. "We grab these," he said, "and we go up the side of the cabin to the roof." Not long after, the Kleins heard Don Gullett come back down the trail and prepare to turn in, and by 10 or 10:30 they were all asleep.

Except for the fact that they were an exceedingly handsome young couple, there was little to distinguish Roy Ducat and Julie Helgeson from the 850 other students who worked for the park concessionaires as waiters and busboys and cooks and clerks and at other assignments befitting their tender years and their willingness to work cheaply. If all these young people had one characteristic in common, it was the brashness of youth. Early each summer the park rangers would give lectures about the park and its dangers, and attendance was compulsory for the young employees, but none of them seemed to learn much from the lectures—or so the older rangers grumbled. It was a fact that the death and accident rate was high among the youngsters. Nobody kept



THE CHALET lies nearly four miles from the nearest access road. The Robert Kleins and Don Gullett camped near the trail cabin. Roy Ducat and Julie Helgeson stayed at the campground.

score, but Mel Ruder, the newspaperman who edited the *Hungry Horse News*, kept a studious eye on the park from a range of 15 miles away, and once estimated that an average of one employee per year did not return home alive. They died on mountain climbs for which they were not prepared, on narrow roads they refused to respect and in high-altitude lakes that were 20° colder than the lakes back home. "But thank God none of them ever died at the hands of grizzlies," Ruder said, "and maybe this is why the kids would yawn and close their ears when the rangers would tell them about the danger from bears."

Roy Ducat, working for the summer as a busboy at East Glacier Lodge, was a cut above most of his young colleagues, both intellectually and physically. At 18 he was already a sophomore in biology at Bowling Green State University, not far from his home in Perrysburg, Ohio. He was not overpoweringly strong, but he could hold his own on an all-day hike; he had worked as a lifeguard and he kept himself in shape.

His companion, Julie Helgeson, was a lovely slender girl with brown hair and blue eyes and a deep interest in nature. At 19 she was two years out of high school, where she had been a pompon girl, a singer in the school choir and a class leader. Now a sophomore at the University of Minnesota, she kept up her active life in the church. Her father liked to describe her in a short phrase: "a beautiful, bubbling girl." Julie had been in Glacier Park for two months, working in the laundry at East Glacier Lodge, before she felt ready for her first overnight hike into the wilderness. A few days earlier she had said goodby to her parents, who had headed back to Albert Lea, Minn., after a two-day visit in the park.

The two youngsters had filled their packs with camping gear and goodies, picked up sack lunches from the kitchen of the lodge and hitchhiked the 20 miles to Logan Pass, jumping-off point for the seven-mile Highline hike to Granite Park. It was 7 p.m. when they arrived at the chalet and talked to Gullett and the Kleins, and 8 p.m. before they had looked around and finally settled on the official campground for their headquarters. Back at the chalet getting their packs, they noticed table scraps behind the back wall, but Roy had already heard about the bears that visited

continued



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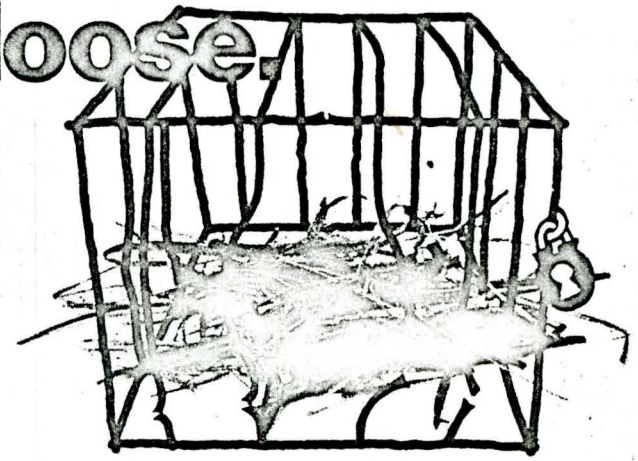

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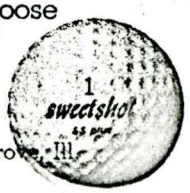

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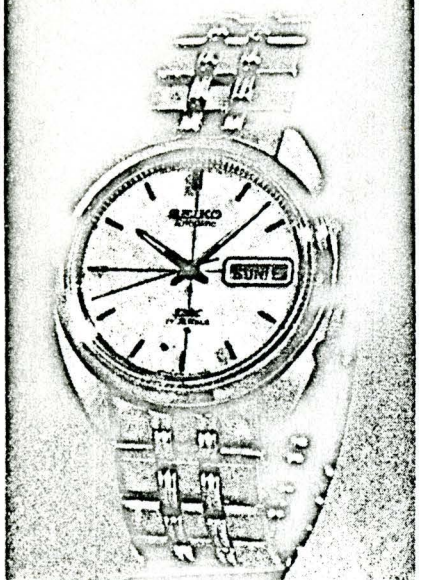

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the place and he was not especially worried. They would be sleeping 500 yards away. Just before they started down the trail for the night, a woman asked them where they were headed. "To the campground," Roy said.

"But that's exactly where the bears come from," the woman said. "Aren't you afraid?" The two young people laughed and said they were not afraid.

They laid out their sleeping bags and nibbled at their sack lunches and enjoyed the sunset. Just before dark Roy carried the dinner leftovers to a log about 200 yards away and cached them underneath. Snuggled into their soft sleeping bags, they were warm and contented, and they chatted for a while as the last slivers of daylight faded down the mountain. Then they were asleep.

Earlier on that same broiling Saturday, Aug. 12, a party of youngsters had pushed up and over Howe Ridge, the 2,000-foot-high barrier separating McDonald and Trout lakes, some 10 miles south of Granite Park. Only the puppy, Squirt, a mixed breed with oversized feet that suggested a trace of German shepherd, had tired once or twice. When he did, one of the strong young people would carry him like a baby until he had recovered his breath. They were all in a hurry—they had got off to a late start and wanted to reach Trout Lake in time for some fishing and a relaxed outdoor meal. They had never heard of the ragged grizzly with the oddly shaped head or of the trouble earlier in the summer at Kellys Camp on Lake McDonald.

There were five in the party, all of them employees of concessionaires, and all but one of them veteran campers in the backcountry of Glacier National Park. The exception was a 16-year-old boy, Paul Dunn, who had arrived in the park three weeks earlier on a visit with his parents and promptly accepted a summertime job as busboy in the East Glacier Lodge. When the boy was asked if he would like to chaperone two couples on a weekend camp-out near a place called Trout Lake, he happily accepted. He had heard nothing in particular about grizzly bears around Trout Lake; indeed, he had barely heard of the lake itself, since he was stationed on the opposite side of the park, across the Divide. Before his parents had gone home, they all had listened to an orientation lecture by a park ranger. About all Paul remembered from the talk was the information that a grizzly will not attack you if you do not attack it, and if you see one just climb a tree. Oh, yes, there was one other point that the ranger had made: "Never take a dog on a trail." The ranger had said something about a poodle or some kind of dog being mangled by a bear the year before and that dogs and bears were natural enemies.

Now Paul and the two young couples were starting on the trail down toward Trout Lake, and assuredly there *was* a dog with them, but Paul Dunn was not particularly worried. The flop-footed Squirt was under human control and no one in the party equated him with danger. Red-haired Denise Huckle, a 20-year-old summertime room clerk and wintertime college student, had befriended the sick and weakened puppy after he had been abandoned in the park, and before setting out on the hike she had looked high and low at Lake McDonald Lodge for a leash, finally settling for a strong cord. Now the young animal alternately strained at the cord and begged for attention, and the hikers took turns obliging.

The two other young men in the party were brothers: Ray and Ron Noseck of Oracle, Ariz. Ron was 21, a waiter at East Glacier Lodge and Denise's date for the overnight trip. Ray was 23, a service-station manager near Lake McDonald Lodge and the other girl's date. Both the Nosecks were attending dental school at the University of Louisville.

The other girl was Michele Koons, 19, a frail and beautiful young lady who came from San Diego and was about to begin her second year at California Western University. She was working in the gift shop at Lake McDonald Lodge, where the manager of the shop described her as "a blessing, a girl with a zest for life." Michele's zest for life had taken her to Trout Lake several times before. Unlike Paul Dunn, she was aware that grizzlies frequented the area.

It was just before 5 in the afternoon when the hikers reached the broad patches of berry bushes and looked down on the blue-green waters below. As they neared the logjam camp where they intended to spend the night, the hikers could see circles dappling the water, the cutthroat trout were already feeding on their evening diet of flies and it would not be long before the skillet would be

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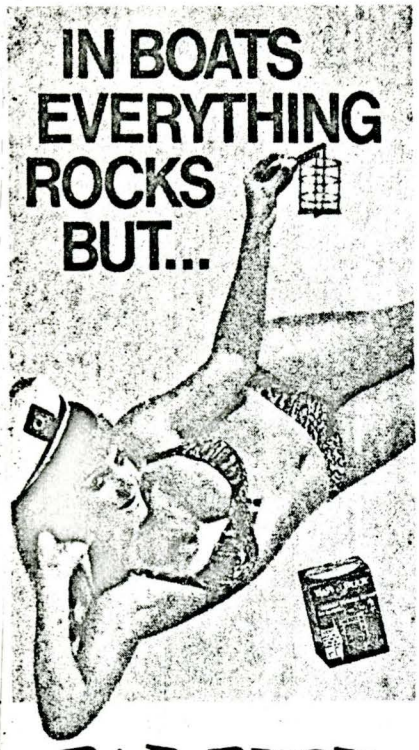

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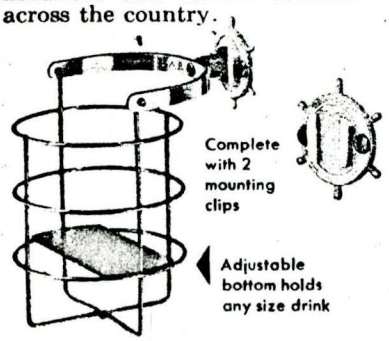

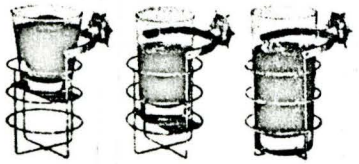

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popping and crackling and the fragrant aroma of frying fish filling the air.

Setting up camp alongside the logjam took a matter of minutes. The hikers were so eager to catch their dinner before nightfall that they did little more than drop their packs and head for the lake, stopping only to cram their food into a single bag and haul it high into a tree. Michele Koons elected to stay behind while the others were gone. She could watch the dog and tidy up the camp, and when the others returned with their catches they could get right down to dinner with a minimum of delay. The girl and the dog stayed together for two or three hours, then the others returned. Paul Dunn had a single cutthroat, and he began to prepare it. Michele gave him a supplementary hot dog, and the 16-year-old boy laid both the fish and the frankfurter on top of the fire grate. Soon they were sizzling, and a thin wisp of aromatic smoke followed the gentle off-lake breeze and curled up the hill toward the berry patch.

Michele, weary from her preparations for the dinner, was sitting at the edge of the campsite on a stump when she looked into the darkening woods in the direction of the smoke and saw a large shadowy form about 10 feet away. She jumped up and screamed, "Here comes a bear!" Ron Noseck untied the dog's leash, grabbed the animal in his arms and joined the others in a headlong flight up the rocky lakeshore away from the logs and campsite. All five of the campers came to a stop about 50 yards away, and they watched as a scrawny brown grizzly descended upon their campsite and went to work. The bear strolled from dish to dish, taking big gulps and salivating generously and licking its chops with a long tongue. Inexplicably, the lean animal grabbed a pack in its mouth and ran a few yards up the hillside with it, but just when the evicted campers were hoping that the grizzly was gone for good, it returned to the camp as suddenly as it had left and resumed eating. When 15 or 20 minutes had passed and darkness was coming on, someone suggested that they abandon the old camp and spend the night where they were. Denise cradled Squirt in her arms while the other four gathered wood for a new fire. When the fire was ignited, the campers saw the grizzly saunter off in the opposite direction and disappear over the logjam.

Now they hurriedly discussed the situation. Someone suggested that they dash over Howe Ridge to the safety of the Lake McDonald ranger station, but it was already dark and they had only one undersized flashlight. Anyway, the bear had disappeared in the general direction of the trail, and the group decided to stay as far as possible from the peculiar animal. Someone else suggested a flight in the opposite direction, along the lake trail to the Arrow Lake shelter cabin, but then it was remembered that the cabin was jammed full of weekenders and a two-mile hike to Arrow Lake would force the refugees to depend on the inadequate flashlight to illuminate a trail through some of the thickest brush in the park.

After the bear had been gone for several minutes, the group regained courage and fell back, once again, on the notion that nothing would happen so long as they gave the bear a wide berth. Paul and the Nosecks went down to gather up the sleeping bags and a sack of cookies and a package of Cheezits that the bear had left, and returned within a few minutes to the new camp at the water's edge. As a double deterrent to the bear, the campers decided to keep the fire roaring all night and erect a kind of log barrier between them and the old campsite. When a stack of wood had been positioned, the five nervous hikers arranged their sleeping bags in a semicircle around the fire and turned in. Denise looped Squirt's leash over a log next to the fire and patted the dog into place between herself and the log. While the two couples and the boy from Minnesota whispered away in the general direction of sleep, the girl from Arizona kept a gentle hold on her pet. It was a comfort to both of them. Now and then one of the men would get up and throw a log on the fire, and soon the little camp was as still as the camp below Granite Park Chalet where the climbers Don Gullett, Roy Ducat and Jake Helgeson slept.

NEXT WEEK: A NIGHT OF HORROR

The stillness of the mountain night was soon to be shattered, and the memory of the macabre events that followed would haunt the survivors all their lives.

NIGHT OF HORROR *continued*

Lying in his uncomfortable bed in Granite Park Chalet on the night of Aug. 12, Dr. John Lipinski laughed to himself as he thought about the situation. Thirteen years before, he and his wife Ann had grown tired of the increasing congestion in the city of Chicago and decided to head for the Wild West, where they could indulge their love of nature and spend day after day hiking on wilderness trails. Lipinski was a surgeon and his wife was a nurse, and when they had set up practice in the lumber town of Kalispell, Mont. the demands on their skills had been so incessant that it had taken them four years to find the time to make their first overnight hike: into Sperry Chalet, to see the mountain goats. Now, eight years after that momentous occasion, they were on their second overnight hike, into Granite Park to see the bears. With them were their daughter Terese, 16, and their two sons, Robin, 5, and Karl, 4.

Dr. Lipinski drifted off to sleep, but Ann pitched and tossed. Now and then she would hear a brief snore from her husband, but her mind raced. Slowly her thoughts became more and more indistinct, blessed sleep on its way at last. Just then she heard a muffled scream. It seemed to come from the direction of one of the outside bathrooms, and it occurred to the nurse that someone was being attacked. She shook her husband.

"John!" she said. "There's a lady in trouble! John, did you hear the lady scream?"

"Now why in the world would a lady be screaming way up here?" Dr. Lipinski asked thickly.

Outside, the wall of silence fell again. Not a whisper of wind disturbed the night and Ann Lipinski let her head fall back on the mattress. She was absolutely certain she had heard a female scream, but for the life of her she could not figure out how to communicate the fact to her husband. She was pondering the problem when an unmistakable, distinct scream shattered the night. Both Lipinskis were on their feet instantly and rushing out to the balcony. As they did, they heard a far-off woman's voice cry, "Get out! Get out! Get away from me!" As the doctor and the nurse peered into the dark night, trying to pinpoint the sound, the voice came clear and terrible across the stillness from below: "God help me, he's stabbing me!" There were a few seconds of silence, then: "God help me! Somebody help me!"

Terese was the only member of the Lipinski family who was dressed. Her parents sent her downstairs to awaken the management. Now they knew beyond any question that something was wrong. Ann Lipinski thought she had it figured out, and she told her husband, "My Lord, we've got a murder on our hands." Her husband did not disagree.

Terese banged loudly on the first door she came to, and in a few seconds a young woman appeared and asked what was the trouble. Terese recognized Joan Devereaux, the ranger-naturalist who had guided them into the place. Terese blurted out that someone was screaming and could be heard from the balcony above. The ranger said gently, "You've been dreaming. Nobody's cried out. Now just go back to bed." Although Joan was only 22 years old and barely out of college, she had a great sense of responsibility and leadership. It was natural for her to try to calm the (as it seemed to her) nervous fear of a child.

But Terese insisted and several minutes went by before she was able to convince the drowsy naturalist that something was amiss. Wearily, Joan agreed to go upstairs and see what she could hear. When one of the kitchen workers came into the room to find out what was happening, the naturalist told her to get the chalet's packset radio and turn it on, just in case. Then she finished lacing her boots, turned to Terese and said, "Let's go."

Innkeeper Tom Walton and his wife Nancy were sound asleep in their upstairs room when a loud banging on their door awoke them both. Tom looked at his watch; it was 12:45. Hastily yanking on a pair of old Levi's, he walked out to the balcony. He recognized Joan Devereaux and the Lipinski family and a few others standing quietly, listening to the silence.

"I heard screams and so did my husband," Mrs. Lipinski said.

"From what direction?" Walton asked.

"Straight down," Dr. Lipinski said. "What's down there?"

"A campground."

"Well, somebody's in trouble down there."

Tom Walton still did not agree, but when Dr. Lipinski suggested that someone holler in the direction of the noises and ask if everything was in order, the young innkeeper said he could see no harm in that. Dr. Lipinski cupped his hands and shouted: "Is everything O.K.?"

From a point to the right of the campgrounds, and more from the direction of the trail cabin, a barely discernible male voice floated back on the still night air. "No!" the voice answered.

"What's the trouble?"

The voice answered, "Bear!"

Near the trail cabin 500 yards below the chalet, Don Gullett was lying in his sleeping bag looking at his watch and wondering what had awakened him. He heard a noise but thought he was dreaming, and was surprised when he rolled over on his side to see someone standing at the foot of his sleeping bag. As he watched sleepily, Gullett saw the dimly outlined figure slump to its knees, then fall flat. Gullett looked closely into the eyes of a teen-aged boy and recognized Roy Ducat. Young Ducat was alternately giggling and babbling, and Gullett realized that he was in shock. "A bear got ahold of me," the boy was saying. "I tried playing dead, but it didn't help. He dragged her off. You have to go after her! Oh, please, forget about me! The bear dragged her away."

Everything had happened in seconds, and Gullett was still not entirely awake. He slid out of his sleeping bag and said to himself, "This guy can't be real." To the boy, he said simply, "You've got to be kidding me." But then he saw the boy's arm was dangling and bloodstains were creeping along his upper pant legs. All at once Gullett was wide awake and running toward the chalet for help.

"Wait!" the younger boy shouted. "Come back! Don't leave me here. Take me to the others!"

Gullett helped the boy crawl and lurch toward the Kleins' camp about 30 feet away. All the way along the painful journey, Roy kept repeating, "The bear got the girl! It got the girl! Somebody has to help her! The bear dragged her away!" He repeated words like these when the two of them reached the Kleins.

By now there was no doubt in Gullett's or the Kleins' minds about what had happened or about the fact that a dangerous bear was loose in the area, and everyone headed for the safety of the trail cabin. It was securely locked. Gullett wrapped the wounded boy in

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his own goosedown bag and laid him gently on the level ground.

Robert Klein, who had been gathering up clothes and boots and a flashlight, came puffing up to the cabin and helped his wife climb the jutting logs to the tin roof. "Aren't you coming up?" Klein asked Gullett.

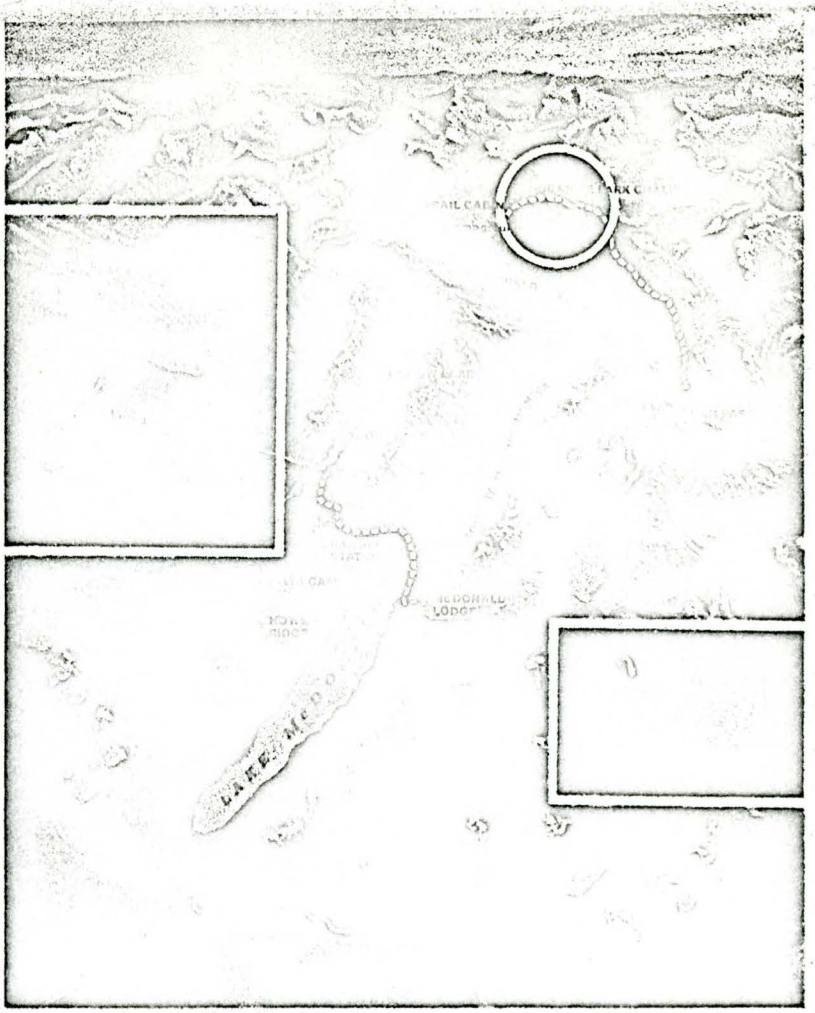
"No," the 19-year-old Californian said. "If the bear comes back, I'll be down here with Roy. You can be signaling for help."

On top of the cabin, Robert Klein remembered that danger signals come in threes, and he began blinking the flashlight toward the chalet. It seemed no time at all before the beam grew weak, along with the couple's hopes. Robert flashed the light around the area a few times, but there was no sign of the bear. Once the beam caught Gullett and the wounded boy, lying just beneath the wall. "How is he?" Robert asked.

"Bad," Gullett said. "He can't walk now."

"If nobody's awake to help us," Janet Klein said softly to her husband, "he'll die from loss of blood." Hardly had she uttered the words when they began to see flickerings of light from the chalet. Someone was up and around, and Klein flashed frantically in triplicate. Soon a voice came booming down the mountainside, asking, "Is everything O.K.?" Klein shouted back with all his strength, "No!"

As the little group waited for the help that they now knew was on its way, Roy Ducat slipped in and out of panic but never out of consciousness, and he remembered clearly what had happened. He had been sound asleep when all at once he heard Julie Helgeson, lying nearby, calling to him to play dead. While he was still trying to figure out what she was talking about, a single blow from a huge paw knocked him five feet away from her. Roy had landed on his stomach, but he could see Julie out of the corner of his eye. Then he felt something bite deeply into his right shoulder, and with a tremendous exercise of his will, he neither cried out nor moved. The biting stopped, and Roy opened his eyes long enough to make out the shadow of a bear standing on all fours above the helpless girl and biting into her body. He shut his eyes tightly in time to feel the bear return, plant its feet firmly in the small of his back and begin chewing on his left arm and the backs of both his legs. Still he remained silent, and once again the bear lost interest and returned to the girl.



Bears—grizzly and black—abounded around camps at Trout Lake and Granite Park Chalet.

Now Roy could hear bones crunching, and Julie screaming out, "It hurts!" and "Someone help us!" He realized that the girl's outcries were receding down the hill and he thought the bear must be carrying her off. When the screaming stopped, he jumped to his feet and ran uphill as fast as he could, unaware of his own pain, and slumped alongside Don Gullett's sleeping bag. All Roy Ducat could think of was Julie Helgeson, and her helplessness and his own helplessness in the face of the attack.

Tom Walton counted 13 besides himself as they headed down the rocky, shaly path that led from the chalet to the trail cabin, where a light seemed to be blinking. First came Walton and two girls from the staff and behind them he recognized Father Connolly, a Jesuit, with his companion, Steve Pierre, an Indian; two doctors named Lipinski and Lindan; the ranger-naturalist Joan Devereaux with her two-way radio; a strong young man from Montana named Monty Kuka; and several other guests. Steve Pierre knew that there was only one thing on earth that would frighten a crazed bear and that was fire. With Father Connolly and several helpers, the Indian had grabbed up a galvanized metal tub, filled it with scrap wood, set it blazing and dragged it with them. From the instant the rescue party rounded the last bend and came upon the scene at the trail cabin, the place exploded into action and confusion. The sight of Roy Ducat, pale and bloodstreaked, dispelled any feeling of lighthearted adventure.

In the flickering light Dr. Olgierd Lindan asked for a first-aid kit. A few seconds later he was applying makeshift compresses and tourniquets to the boy's gaping wounds. The surgeon, John Lipinski, stood by, ready to take over the case as soon as the first aid was completed. Like everybody else, Lipinski had heard Roy Ducat beg them to find the girl, but he knew that the search for the other victim would have to wait.

"Find something to carry him on," Dr. Lindan said over his shoulder, and Monty Kuka and one of the girls ran to the trail cabin and began pounding on the door. When it gave, young Kuka

ripped down a set of bedsprings that had been nailed across the window to keep out the bears. Several of the men took handholds on Ducat's sleeping bag and lifted him gently to the springs. The weakened boy kept asking about the girl. "Where is she?" he said. "Did you find her yet?" Dr. Lipinski told him to rest and save his strength, and a small party of stretcher bearers under the surgeon's direction began climbing up toward the chalet. The boy was taken inside and placed on one of the dining-room tables. Dr. Lipinski rolled up his sleeves to go to work.

About half of the original rescue party had remained below at the trail cabin, some of them in the expectation that they would start searching for the girl, others simply to give aid and comfort to Joan Devereaux, who was frantically trying to raise headquarters on her pack-set radio. Joan remembered that the headquarters call number was 720, and she said over and over, "Seven-two-oh, seven-two-oh, this is Granite Park Chalet. We have a bear emergency here." When this brought no response, she began repeating the park's emergency code: "Code three emergency! Code three emergency! Bear attack! Bear attack!" Again there was no answer, and the excited young naturalist regretted her lack of familiarity with the equipment she had never expected to have to use.

Suddenly a clear "10-four" crackled across the still night air in response. The speaker identified himself as Ranger Bert Gildart, said he was on his way over the Divide in his patrol car, and instructed Granite Park Chalet to stand by while he made contact with headquarters and tried to put the two in touch with each other. Minutes later another voice, deep and calm and reassuring, came through the speaker. It was Fire Control Officer Gary Bunney, speaking from the park's fire headquarters and asking what the problem was.

"A mauling! We had a mauling!" Joan shouted hysterically.

"Ten-four," the calm voice returned. "You had a mauling. What do you need?"

Now the nervous girl seemed to calm slightly, and, spacing out her words but still almost shouting, she said, "We-have-a-doctor. We-do-not-need-a-doctor. We-need-medical-supplies."

"Ten-four," the calm voice answered. "Tell me exactly what supplies."

Dr. Lindan took the microphone and began listing what was needed. When the medical information had been transmitted, Naturalist Devereaux informed headquarters that there was a possibility that another person had been dragged away by the bear, and Bunney told her that help was en route.

"All right," Dr. Lindan said to the group when the radio again fell silent, "now we go and find the girl."

Tom Walton said, "Wait a minute, let's think about it."



Roy Ducat was badly mauled by a grizzly.



Brave Julie Helgeson died of her wounds.

Everybody looked toward Joan Devereaux. She was a slip of a girl and barely out of college, but she was wearing the dark green uniform of the National Park Service and therefore she was *ipso facto* the leader. She thought for a moment and announced flatly that no one was going to head into the black night and look for the girl—they were going to return to the chalet and wait for professional help. Dr. Lindan said he did not understand. "We *must* save the girl," he said. The ranger-naturalist replied that it would be a foolhardy move when they did not even know in what direction she had disappeared.

Hurried conversations broke out. Father Connolly sided with Dr. Lindan. "There's no time to stand here arguing," the priest said. "The girl might be bleeding to death while we talk."

The naturalist said that there was no point in risking anyone else's life when help was already on the way. She prevailed and the group trudged back to the chalet.

Nancy Walton had been sitting on the balcony with some of the other women, listening to a strange sound in the night. It sounded like a low moaning. Someone had suggested that it might be an owl, but someone else pointed out that owls were rare around Granite Park. It was only later that Nancy and the others realized they had heard the moans of the grizzly's victim.

While the two doctors were looking Roy Ducat over, another man came out of the darkness and introduced himself as a physician from Malmstrom Air Force Base. When Joan Devereaux heard the news, she breathed a silent prayer of thanks. Not only were there three doctors in attendance but Dr. Lipinski's wife was a registered nurse, and except for the fact there were almost no medical supplies on the premises, there was every chance to hope for the boy's recovery.

Dr. Lindan had stepped back as the surgeon, Lipinski, had taken over the medical procedures, and at the quiet approach of Father Connolly, Dr. Lindan reported softly that the boy was going to survive and he would like to begin on the rescue of the girl as quickly as possible. Father Connolly agreed and went to round up others. In a few minutes a party of eight or 10 would-be rescuers was ready to depart, but Joan Devereaux intercepted them and told them that a rescue helicopter and an armed ranger

continued

two of them now, regular nightly visitors, although tracks and other signs indicated that a sow and a pair of cubs were coming in late at night, long after the chalet was asleep. The two "regular" bears had learned to live with the powerful flashlights that were shone on them and with the monotone of awed conversation that came from the chalet 150 feet away, where a throng of guests watched in hushed excitement.

Walton and the chalet staff had not gone to the extreme of naming the bears, as others had done in the past. They were simply called No. 1 and No. 2. No. 1 was a big silvertip, a handsome animal with dark brown fur and great dignity. Sometimes the flashlights would catch No. 1 just right and its fur would take on a ghostly luminescence, and an admiring gasp would come from the onlookers. Naturalists guessed the big bear's weight at 500 pounds.

No. 2 was smaller, with a shoddy coat and long claws. Probably the bear was old, with worn teeth; certainly it was crotchety, and it soon was playing the nightly role of villain in the little backyard tableaux. No. 1 would arrive from the direction of the trail cabin just after dark and a few minutes later No. 2 would come up the same path and start the trouble. Sometimes the massive silvertip would see the grouchy bear coming and simply move into the brush to wait. Then No. 2 would stuff itself with garbage and leave by the same route.

The summer of 1967 was unnaturally hot, and visitors were coming from all over to sit on glacial ice and turn their noses into the Alpine winds. Headquarters rangers frequently found themselves called from their normal duties to battle the persistent fires that broke out in the dry brush. The Park Service personnel were stretched thinner and thinner, and only a handful of skilled men were left to cope with the record crowds. In such an atmosphere, no one had time to keep track of bears, either black or grizzly, much less to keep records on the increasing number of face-to-face meetings between grizzlies and man, particularly in the remote places called Granite Park, Logan Pass and Trout Lake.

While no one was noticing, the contacts between man and bear were nearing a moment when something would have to give. The moment came on Saturday, Aug. 12.

The Kleins, Robert and Janet, had not been married long enough for major arguments, but now they were having a major disagreement. Janet had heard about the bears of Granite Park Chalet, and she announced that there was no force on earth, including her handsome 6′ 7″ husband, that could get her to sleep out on the campground that night. For his part Robert still was not convinced that the presence of a few bears should change their plans for a night underneath the limitless vault of the sky. Janet stood her ground like a wolverine and finally announced that big brave Robert could sleep outside if he wanted to, but she was going to scrape together $12.50 and sleep in the chalet.

They were told that the young man in charge of the rooms was in the back burning trash, and the Kleins walked around the big log and stone building and introduced themselves to a sturdily built, bearded man who told them his name was Tom Walton. By now it was late afternoon, and Walton said that he was sorry but every bed was booked.

"Tell us frankly, what's the bear situation around here?" Klein asked. "That seems to be all anybody talks about."

Walton told them that two grizzlies had been coming in on a regular basis for two or three weeks now, that they came in from the trail that led down toward the trail cabin and the campground and returned by the same route.

"And they head down toward the campground?" Klein asked.

"In that general direction," Walton said. "But I wouldn't worry about it. Hundreds of people have camped there this summer and the bears haven't eaten anybody yet." The two men laughed, but Janet Klein gulped and told herself that the campground was out so far as she was concerned.

About 6:30 Robert and Janet, still at the chalet and still undecided, met a 20-year-old hiker from Paradise, Calif. named Don Gullett. Janet noticed Gullett's pack and sleeping bag and asked him how he could entertain the idea of sleeping out in this grizzly-infested area. Gullett told her that he was not worried about the bears and he had staked out a nice flat spot in the shadow of the trail cabin. Robert Klein asked Gullett how far it was from the trail cabin to the campground. "Oh, several hundred yards anyway," Gullett answered, and the three agreed to walk down the trail and take a look.

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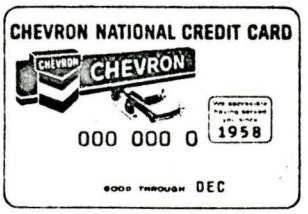

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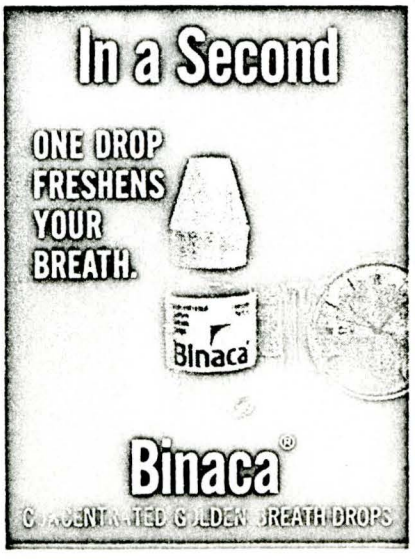


would be on the scene within minutes and ordered them to wait. She and Walton hastily impressed about 20 chalet guests into duty preparing a landing site. It was ready when the throbbing lights of the helicopter appeared over the mountains to the south.

The helicopter began settling down for the landing, the four corner fires blazed high into the sky and a wide circle of guests pointed flashlights upward to outline the area. As the aircraft came within the range of the fires, embers swirled into the night air. Then, with a gentle bump and a whoosh of settling air, the helicopter was down. Even before the rotor had stopped turning, a man in ranger uniform opened the door and jumped out, cradling a rifle in his arms. Willing hands reached into the aircraft for the medical supplies, which were rushed into the improvised operating room.

Still in Don Gullett's blue sleeping bag, Ducat was lifted to the seat alongside helicopter pilot John Westover and whisked away in the night. All this was completed in 10 or 15 minutes, and at last Joan Devereaux turned to her superior ranger and said, "Now we've got to go find the girl."

Gary Bunney said, "You stay here and handle the radio. I'll take the men and go down."

As the posse of searchers disappeared on the trail to the cabin below, the weary naturalist went inside the chalet dining room to put the radio back on the air. Dr. Lipinski told her, "Let me know when they bring in the girl," and disappeared in the direction of his room.

There was no way in which the news of the tragic events at Granite Park could reach the five sleeping campers at Trout Lake. They lay undisturbed until, sometime between 2 and 3 in the morning, Denise Huckle found herself awake and listening intently to a splashing sound that was coming from the shallow water alongside the camp. Her dog Squirt pushed himself up on his front paws and peered into the night toward the sound, and when a low growl began to issue from the puppy's throat, Denise grabbed him and stuffed him under her sleeping bag. She thought she could make out the silhouette of a bear and she did not want Squirt to antagonize the animal. When the sounds seemed to move away, Denise woke the others and told them what she had heard. After a few minutes of silence, the Noseck brothers scrambled out and rebuilt the fire, by now only a bed of dull embers. They set a sack of cookies on the edge of a driftwood log, fanned up the fire once again and returned to their bags. Within a few minutes they all saw a bear walk to the edge of the camp, grab up the cookie bag in a huge paw, and disappear. The five frightened campers decided to lie awake, feed the fire and wait for dawn. It was 3 o'clock. Once again the bear began splashing in the shallow water below the camp, and almost simultaneously a woofing sound seemed to come from the woods above. For a few minutes the companions of the night discussed whether bears attacked in packs or couples, and finally decided that they did not. By 4 a.m. the noises had stopped and most of the campers had pulled the bags over their heads and gone back to sleep.

It was 4:30 and the fire had fallen to embers again when Denise heard a splash and narrowed her eyes to peer into the night and saw a bear coming at a lope straight from the shoreline toward the center of the camp. When the bear was four or five feet away and she could make out its head and upper body clearly, Denise pulled the sleeping bag over herself and Squirt just as the dog began a high-pitched squeal. Lying perfectly still inside the warm bag, the terrified girl heard a ripping noise that sounded like shredding canvas, but then there was a silence broken only by the deep breathing and grunting of the grizzly.

Paul Dunn woke up to see the huge form of the bear standing next to him. Noiselessly, the boy slithered back into his bag and tried to remain absolutely still. He heard the bear making more sniffing sounds, and suddenly he realized that the sniffs were getting closer. Then something crunched into the bag and took a firm grip on his sweatshirt. Instinctively the boy threw back the flap and scrambled to his feet, slamming into the bear in the process and shouting to no one in particular, "The goddam bear tore my shirt!" When the grizzly reared up as though to attack, Paul dashed to a tree and climbed 30 or 40 feet in a matter of seconds, ripping and cutting his chest and his legs on the desperate ascent. When he reached the safety of the top, he looked down and saw the bear circling lazily below.

Lying in bags side by side, Denise and Ron Noseck saw the bear amble over to Paul Dunn's tree, a few feet outside the semicircle of campers, and Ron decided that the time had come to run for trees of their own. Noseck told Denise to run, and when she did not move he yanked her from the sleeping bag and gave her a shove. The couple ran about 50 yards in the direction of the original camp, and as they ran they heard Paul Dunn shouting down from his treetop. They reached a slight incline and stopped, gasping for breath, as the puppy came bounding up. Ron boosted the girl up a tree, threw the dog to her, then shinnied up a tree of his own.

From his observation point almost directly above the camp, Paul Dunn saw everything that happened within the small circle of reddish light thrown off by the dying fire. He saw Ron and Denise run down the shoreline, followed by the puppy, and then he saw the grizzly walk toward Ray Noseck's sleeping bag and begin sniffing rapidly. When the bear turned momentarily toward Michele Koons' bag, Ray came out of his own as though shot from a gun and headed down the lake toward Denise and Ron, shouting as he ran, "Get out of your bag and run for it!"

Paul hollered at Michele, "Get out! Get out! Unzip and get out!"

The bear clamped its jaws on the side of the sleeping bag and Paul heard the girl scream. When the animal raked the bag with its claws, Michele cried out, "He's ripping my arm!"

"Michele!" Paul shouted. "Get out of your bag! Run and climb a tree!"

"I can't," the girl screamed. "He's got the zipper!"

Then the defenseless girl shouted, "He's got my arm . . . my arm is gone! Oh, my God, I'm dead!"

Paul Dunn saw the bear lift the sleeping bag in its mouth and drag it out of the circle of fire and up the hillside into the darkness. He shouted down the lake to the other three, "He's pulling her up the hill!" and then, "She's dead! She's dead!"

In the hysteria of the moment, it seemed to the 16-year-old boy that he must get dressed and join his friends, and when he figured that the bear and its helpless bundle were at least 50 yards up the hill he scrambled down the trunk and slipped on his trousers. Then he sprinted along the lake to the others and climbed another tree, and the four

continued

survivors of the attack comforted one another and waited for the dawn.

It came at 6 a.m., an hour and a half after the attack, and while Ray attended to Denise and the dog, the two younger men ran back to the campsite and gathered up shoes and jackets. They did not walk into the dark woods to search for Michele. From somewhere up the hill in the direction the bear had taken, Ron was sure he could hear the sound of bones being crushed. The four campers yanked on their shoes and ran down the trail toward the turnoff that led up and over Howe Ridge. Denise thought she saw the bear in the brush as they ran, but she said nothing, and two hours later, after running and stumbling four miles up and down the 2,000 feet of hill, the campers burst out on the road that ran from Going to the Sun Highway along to the northern edge of Lake McDonald to Kellys Camp. A fisherman and his wife had parked at the trail head and were just starting to hike in, but they took one look at the panicky group coming out and urged them into their car. When they pulled up at the path that led to the lake and the small ranger station, the four refugees from Trout Lake asked their benefactors to keep the dog in the car. Then they rushed off to tell their story to the ranger.

Fire Control Officer Gary Bunney and his rescue party had begun their mercy mission at 2:45 a.m., almost exactly two hours after the attack in the Granite Park campground. Since they were not sure exactly where Roy Ducat and Julie Helgeson had been camping, the rescue party decided to go straight down the path to the trail cabin and try to fan out from there in the general direction of the campground. Bunney was in the lead, a powerful miner's lamp strapped to his forehead and his finger lightly touching the safety of his .300 Winchester Magnum. Right behind him were Steve Pierre, Tom Walton, Robert Klein, Father Connolly, Dr. Lindan, Monty Kuka, Don Gullett and six or eight others. They had not gone more than 100 yards down trail when they had to step over bear droppings, fresh and steaming in the cool night air, and Gary Bunney slowed the pace for a short consultation. He adjusted his head lamp so that it would shine directly on the sights of his rifle and said: "If the bear comes into sight, we'll be in a tough spot. There's only one chance, and that's for you to shine your lights right on him and *keep* them shining on him, because I can't hit him in this darkness and, whether you know it or not, a grizzly can move. And remember this: stay back! Don't go moving out ahead of me, because if you do, we'll just be one big jumble of bodies out there. I won't know where I can shoot and where I can't, and a lot of people could get hurt."

As the group continued toward the trail cabin, stepping gingerly across more fresh sign, Walton focused his five-cell flashlight out ahead of the ranger, but even this powerful torch was dimming after several hours of use. Behind Walton there was a small amount of diffused reddish light coming from the fire tub dragged by the priest and fed by some of the others, but not enough to shine more than a few feet into the bushes of the timberline area.

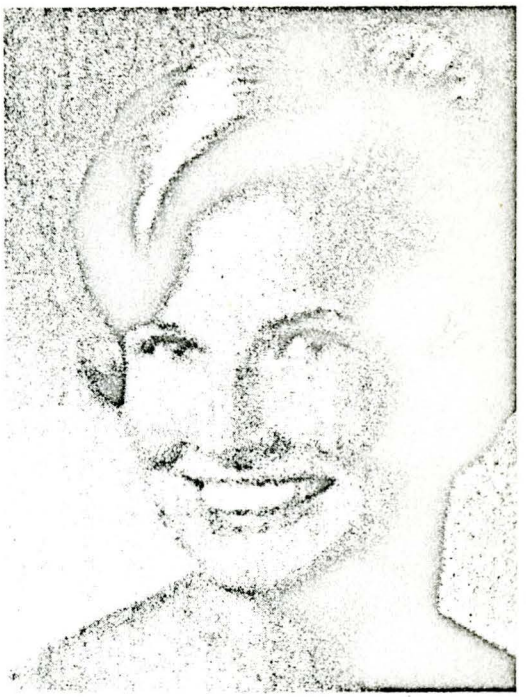
The little camp that Roy and Julie had used turned out to be in the middle of the cleared area where the park service had hauled in material for tables and toilets and benches but had not yet put them together. Sleeping bags, shoes and camp gear were strewn about. There was an indistinct trail of blood leading up the hill toward the trail cabin, and a pool of blood soaked into a trampled patch of false hellebore a few feet down the hill. "Didn't the boy say he came uphill all the way?" Steve Pierre asked Don Gullett.

"Yes," Gullett said.

The Indian and Bunney reached the same conclusion at once. "This must be the girl's blood down here," the ranger said. "The bear must have carried her downhill."

The group spread out and began to move haltingly down the mountain. They were calling, "Julie, Julie, where are you, Julie?" But the fact of the bear's existence was uppermost in all their minds. Some of the men were banging on pots to add to the noise, and Father Connolly and an assistant continued to drag the fire tub along the ground, while others ran around trying to find scrap wood to keep the blaze high. No one wanted to be alone, but neither could they stay in a big mass and hope to find the missing girl. So the line expanded and contracted with the courage of the men and the menace of the night.

Now the Indian called out that he had found a trail of blood specks along the asters and the glacier lilies, and the group knotted up behind him. Within a few yards he leaned over and picked up a bloody purse, empty except for a single dollar bill. The Indian increased his pace down the slope. The men followed the Indian far down the mountain, out of sight of the chalet light, and then the bloody trail disappeared. "I'm sorry," Steve Pierre said, "but it's gone. We'll have to spread out again."



Michele Koons was a victim at Trout Lake.

The searchers had traveled the length of a football field from the campsite. There were neither trails nor cleared areas nor further bear sign to guide them, and they moved apart reluctantly and began creeping down the slope trying to come across the trail of blood again. The line of search had dropped down another 20 yards when an alien sound began to intrude itself into the interstices of the noisemaking. "Quiet!" Bunney begged. Slowly the group brought itself to order. From off to the left and slightly further down the slope, they heard a muted cry for help. The strung-out searchers reacted as a single person. They dashed headlong, tripping over logs and bushes, toward the small weak voice.

Bunney, Tom Walton and Steve Pierre were the first to reach the scene. The

continued

girl lay on her face in a hollow. Her body was ripped and torn, and she was covered with blood. To the first observers it appeared impossible that she could be alive. But when Dr. Lindan came running up and dropped to his knees over the prostrate form, the girl began to move her lips, and then everyone could hear her say, "It hurts."

"Get something to carry her on," Dr. Lindan said over his shoulder, and Monty Kuka and Don Gullett and a few others dashed back toward the trail cabin, 250 yards away, to rip off another bedspring. Dr. Lindan examined the girl. Somehow she had managed to roll her blood-drenched blouse into a ball and slip it under her head for a pillow. She wore cutoff jeans and there were puncture holes and long rips in the back of her pant legs. Her hair was matted with blood and dirt, and a foam of blood was oozing from holes in both left and right thorax regions.

Dr. Lindan recognized these "sucking wounds" as an immediate threat to the girl's life. One lung was already collapsed, and the punctures made it impossible for her to breath normally. Her facial and neck muscles were contorted and throbbing as they worked to replace the oxygen that was hissing out of the holes in her chest faster than it could be replaced. Quickly Dr. Lindan placed compresses on the holes and bandaged them as tightly as he could. He started to turn the girl over gently, and she said, "Cold, cold." Dr. Lindan ripped off his shirt and covered her.

When the slow procession of shouting men appeared to be approaching up the mountain, Joan woke Dr. Lipinski. As soon as Julie Helgeson was transferred from the bedspring to the table, the doctor gave her an intramuscular shot for pain and began removing the first-aid bandages that covered the severe sucking wound of the left thorax. The puncture was about an inch and a half wide. Dr. Lipinski placed his hand across it and realized that there was no way to improvise a perfect seal. Indeed the surgeon doubted that the problem could have been solved in the operating room of a major hospital; too much time had passed. As he hurriedly applied a dressing to the wound and tried to cover over each pinpoint of air leakage, he saw that the girl's body was calling on the last reserves of respiration: muscles in the neck and the intercostals between the ribs were standing out clearly as they tried to assist primary muscles of respiration—the diaphragm and the abdominal muscles—and still there was that terrible suck-suck of the air being lost through the hole.

Lipinski ordered his teen-aged daughter Terese to hold the flashlight close while he began a cutdown to try to find a vein in the girl's ankle, but no matter how deeply he probed, he found nothing but chalky white flesh. The surgeon abandoned the ankle and cut into the wrist, and after much effort he succeeded in finding an uncollapsed vein and inserted the needle. The plasma bottle was hung from a rafter high above, and

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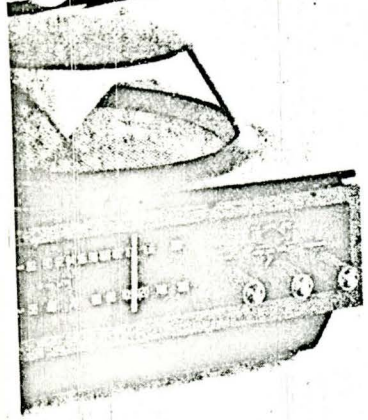

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the precious fluid began seeping into the girl's circulatory system.

Tom Walton had been standing on the outer fringe of the medical team, but there seemed nothing that he could contribute to the operation so he headed out to help keep the fires blazing for the incoming helicopter. As he left, Walton saw the priest take up a station at the end of the table and begin whispering to the girl. He spoke to her of God's love and concern, and the girl, momentarily at rest, seemed to respond. "The doctors are doing everything that can be done to take care of you," the priest said softly, "and you know that God will watch over you and take care of you."

Weakly, the girl said, "Yes, I know He will."

Father Connolly looked down the table at Dr. Lipinski and without saying a word asked the surgeon if the girl was going to live. With the merest side-to-side motion of his head, Dr. Lipinski told the priest that the end was very near. "Can you get some water?" the priest asked Ann Lipinski, and the nurse rushed away toward the kitchen. When she returned she cautioned Father Connolly not to let the patient try to sip the water, but simply to wet a rag and let her suck at it. The priest said he wanted the water for another purpose.

"You know that God loves you, don't you?" he said gently, but the girl was no longer able to speak—she squeezed his hand with the lightest of pressure. He asked if she had been baptized, but she did not answer and he told her that he was going to baptize her conditionally. While the doctor watched, the priest traced the sign of the cross on the girl's forehead and whispered, "I baptize you in the name of the Father and the Son and the Holy Spirit." He gave her absolution for her sins, and when he said the Act of Contrition they all saw, to their amazement, that the girl seemed to be trying to follow with her lips. Then suddenly her breathing became loud and shallow; she hiccoughed once or twice and lay silent. It was 4:12 a.m.

Not long afterward the helicopter took off from the improvised pad behind Granite Park Chalet and blinked away in the night with the body of Julie Helgeson strapped to its right landing tray. Most of the participants in the long ordeal returned to the dining room, where coffee and hot chocolate were still being served by Mrs. Eileen Anderson and the kitchen staff. For a while nothing was said, but then the busy ranger-naturalist, Joan Devereaux, entered the room and said she had an announcement to make. She told the hushed group that in the morning around 9 breakfast would be served, and as soon after breakfast as [illegible] hike out of Granite Park Chalet to Logan Pass along the Loop Trail. She said this was not an order—people could stay or go by themselves if they wished, but she emphasized that there was safety in numbers.

Just before dawn on this Sunday morning the radio traffic finally quieted in the ranger station near the head of Lake McDonald, and Ranger Leonard Landa dozed off to sleep. No matter what had happened, he would still have to arise at 8 a.m. and begin to attend to the thousand natural shocks of a busy Sunday in the park, and not merely his own thousand natural shocks, but several others' as well. At 8 o'clock he jumped up to the sound of his alarm and began going through the motions of dressing and bathing and stuffing a few crumbs of breakfast into his mouth. By 8:10 he was going into the cramped office alongside his bedroom, still rubbing his eyes and thinking about the radio reports of the tragic events at Granite Park Chalet, and then he heard the sound from down the lake. Somebody was hurrying along the flat stones behind the station. Landa prided himself on being able to read these familiar clattering noises with almost perfect accuracy. This time he told himself that there were several people on the stones. He opened the door of his office and fell back as four young people in extreme states of disarray tumbled inside and began talking simultaneously.

"Wait," Landa said. "Wait!" He pointed to one of the three boys. "You talk!" he said.

With frequent disorderly interpolations from the others, Ray Noseck told Landa a rambling story about a bear coming into their camp at Trout Lake and chasing them up trees. As Noseck spoke, Landa remembered issuing a fire permit to the group the day before, but it seemed to him that someone was missing now. Yes, there had been two girls the day before, one tall and one shorter, and now there was only the tall one, shivering and shaking as the man ram-

continued

one deux tres vier

Four tips on how to become an unforgettable American memory.

1. Stop, look and listen. That's the easiest way to encounter a foreign visitor. (And, if you don't encounter one, what will he, she or perhaps they have to remember you by?)

2. Prepare to jump a hurdle. What sort of hurdle? Well, let's say you've just stopped, looked and listened in a bustling bus terminal. Your alert eye catches the tentative movement of someone who takes a quick step forward. An even quicker step back. Then stands stock still, looking lost. You've spotted one! Your foreign visitor. And he (or perhaps she) is lost, but too shy to ask directions. And you're just about to offer help. But, suddenly, you can't? You're too shy too? Then that's your hurdle. Jump it. Or simply step across.

3. That's not your hurdle, but you've just run into another? Your English-speaking visitor doesn't understand your answer to his question, even though it was direct and exact? It's probably his ears. Perhaps they're long attuned to British English, or Australian English, or Irish English, and they find your rapid-fire American English difficult to catch. So repeat your answer, slowly.

4. You have no trouble communicating, you just don't know the place he seeks? Take a moment to glance around. And another to dig into your memory. Chances are you do know a Tourist Information Center, or Travelers Aid, or Chamber of Commerce Office and you could take him there.

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bled along with his story. "Wait!" Landa said once again. "Where's the other girl?"

"She's still up there," Noseck said. "The bear dragged her away." An involuntary shudder went through the young ranger's body, and he was not sure he was wide awake. Events shaded into events. He had gone to bed musing about the Trout Lake bear and then sat up all night listening to the crackling suggestions of a deadly bear attack at Granite Park over the radio. Now it seemed like the whole process was about to repeat itself. "All right," Landa said, trying to pull himself together. "All right! One of you has got to go back with me so I can figure out what the situation is. You can show me where you last saw the girl. She might be O.K. She might be waiting up a tree for us."

"She's not up a tree," one of the boys said.

"We'll find out," Landa said. He picked up the phone and called headquarters. "Chief Ranger's office," a voice answered, and Landa explained that a girl was missing and he was going in to Trout Lake to look for her.

"Another girl?" the man at headquarters asked incredulously. "It looks that way," Landa answered.

"Take your rifle," the man said, "and be careful!"

Landa loaded his .300 H&H Magnum, then he pointed to the two younger boys and ordered them to accompany him. "You take the girl back home," he said to Ray Noseck, who was comforting the distraught Denise Huckle. Landa, Paul Dunn and Ron Noseck rode in the Park Service pickup half a mile to the Trout Lake trail head. Then they moved on foot up and over the ridge. When they reached the logjam and saw the ruins of the original camp, the ranger still entertained the hope that the girl would be waiting for them in a treetop perch. But then maybe she would not. Maybe another bear had chosen the same night to kill. It would be extraordinary after 57 years without a single death, Landa told himself. "All right," he said to Paul and Ron, "what was her name again?"

"Michele," the boys said.

The party spread out a few feet and began walking through the brush, calling the girl's name softly. When they reached a point about 50 yards along the lakeshore, Paul Dunn pointed to the earth and said, "This is where she was."

Slowly the four searchers worked their way up the bank and into the shadowy woods, with Landa and his cocked rifle in the lead. When they crossed the trail, the ranger's eye was caught by a speck of white lying on the path, and almost without thinking he leaned over and picked it up. It felt like a piece of human flesh. He took a closer look and saw that he was holding an ear. The realization came as a shock, and Landa said to himself that a human ear does not look like a human ear when it is detached from the body. There was no blood and no raggedness to the edge—it was as though the ear had been neatly dissected in a laboratory. All at once Landa felt sick. "Here's her ear!" he blurted out.

They had gone only a few feet farther when they came across the remains of the girl's sleeping bag, and from there up the slope a trail of feathers marked the direction of the bear's travel. Soon they came to a lightweight blue poplin jacket decorated with flowers, and a blouse; both were soaked with blood. Landa was studying them when one of the boys called down, "Here she is!"

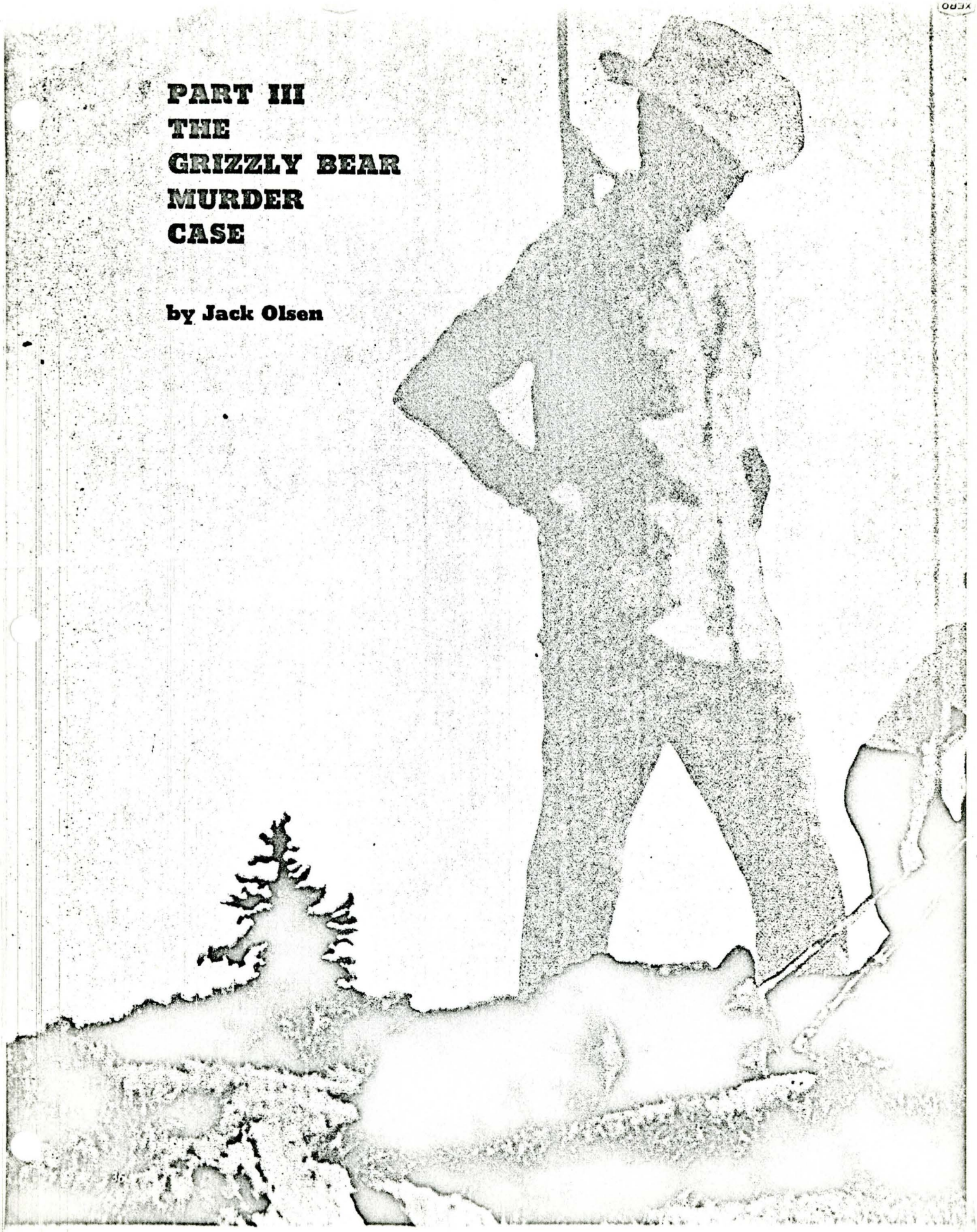
The ranger dropped the clothing and rushed up the hillside, almost tripping over two large logs before coming to a depression in the earth that marked the spot where grizzlies or humans or both had once buried food and garbage. The sky was almost shut out by a canopy of spruce trees. There was squawhair lichen, "grizzly hair," everywhere and some of the trees were losing their purchase in the thin soil and beginning to angle down toward the earth, mingling their upper branches with the tops of thimbleberry and mountain ash bushes. Inexplicably, Landa found himself thinking how peaceful the scene was, and then he reached the boys' side and looked down at the remains of Michele Koons. The girl was on her back and mutilated beyond recognition. Landa could hardly tell she was a female; her abdomen was gone and the hair was missing from her head. The ranger covered his face with his hands and backed down the hill. It took him a few minutes to pull himself together.

NEXT WEEK

Were the deaths of Julie Helgeson and Michele Koons murder? Jack Olsen answers that question and others in his concluding chapter.

PART III
THE GRIZZLY BEAR MURDER CASE

by Jack Olsen



END—OR BEGINNING?

When the suspected killer bears of Glacier Park were hunted down, the immediate problem was solved. But an ominous question still loomed: Where and when would the next attack come?

BY 10:45 on the morning after the bear attacks at Granite Park Chalet the last guest had been fed, and Joan Devereaux, the young ranger-naturalist who had directed rescue operations, asked those who were going out of the park with her to assemble at the back of the chalet. Sixty people gathered for the trek. The mass exodus had hardly begun before the hikers encountered four park personnel coming up the trail toward them. Three were carrying rifles. Joan recognized the fourth as Francis Elmore, the park's chief naturalist and her boss. He was breathing hard but staying abreast of his juniors. Before anyone else could speak, two men in the departing group ran up to the four and begged them not to hurt the bears. "They were only acting naturally," one of the men said. "It was the kids who were at fault." The park officials brushed by without comment and disappeared up the trail, and the others continued their long downhill hike under a relentless summer sun.

It was almost 2 in the afternoon before the 60

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hikers, stopping often for the benefit of the older members, reached the trail head at Going to the Sun Highway and found a newly strung sign: "Trail Closed by Order of Park Superintendent. Dangerous bear. August 13, 1967." Another hour passed before the last guests had been shuttled back and forth to their cars, most of which were parked five miles away at Logan Pass, and at last a semistuporous Joan Devereaux found herself seated alongside a park employee and on the way to her trailer near the St. Mary entrance on the east side. "What did you say?" she asked, dimly aware that the driver had made a comment.

"I said there's been another bear incident," the man said. "They're checking on it now."

Joan Devereaux told herself that he must be talking about the Granite Park incident; he must have heard about it on the radio and become confused. The man would find out soon enough and she was too tired to explain to him.

About an hour after they passed the motley group of hikers headed down the Loop Trail, the search-and-destroy mission of park service personnel reached Granite Park Chalet. Each of the four men had his own attitude about the assignment ahead, which was to kill every grizzly that frequented the Granite Park area. Francis Elmore was relieved that his part would consist only of tape recording the reports and measuring distances and describing the various venues of the attack. The other three carried high-powered rifles, and there was no doubt in any of their minds that they were to use them. Robert Wasem, an experienced park biologist, was more or less in charge of the killing group, and the assignment did not sit comfortably on him. A mild, soft-spoken Ohioan, Wasem had the dedicated biologist's tendency to think of the park as a closed receptacle full of life forms which must be allowed to live as normally as possible. In such a setting man could be the only disruptive influence. Although Wasem had hunted grouse a few times, he did not enjoy killing.

Cliff Martinka was a newly hired research biologist. He had just completed 2½ years with the Montana Fish and Game Department and had come to his new post in Glacier Park only two weeks before. Martinka had no compunctions about eliminating bears, provided, of course, that there were no alternatives. As he explained later, "I preferred to be involved. I felt competent enough with a rifle, and perhaps other less experienced people might not have been able to handle the situation." The fourth member of the execution team was a seasonal ranger and wintertime high school teacher named Kerel Hagen, a short, wiry Montanan. Still in his 30s, Hagen was able to hike nonstop from one end of the park to the other and he handled horses and rifles like a typical Montanan.

The four men arrived at the chalet just before noon and sat down for a quick lunch. The atmosphere was uneasy in the big stone and log building; usually there were dozens of giddy dudes milling around and occupying space at the tables, but now there was only the chalet staff.

Wasem asked Tom Walton, the chalet resident manager, to describe the bear situation, and the young man from Idaho said that as far as he knew there were only two bears: a big silvertip that came around 9 or 9:30 at night and a smaller brownish bear that arrived later and chased the silvertip away. The rangers told Walton that both bears would have to be killed.

While Francis Elmore went to work with his measuring tapes and his camera and his recorder, the other three men took their rifles and reconnoitered the area around the chalet. For several hours they saw nothing out of the ordinary, but at about 4 o'clock a grizzly and a single cub were picked up in the binoculars at a range of almost two miles. Tom Walton took a look and said that he had never seen this pair before. The hunters glassed the animals off and on

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JOAN DEVEREAUX, WAN AND PENSIVE, RESTS BEFORE LEADING HIKERS FROM THE PARK

ntil 6:30, when they disappeared into the scrub.

By 8:30 that night the three hunters were staked out under the clotheslines behind the chalet waiting for the silvertip, which was known as Bear No. 1. The garbage dump had been baited with a gallon glob of bread dough laced with half a pound of bacon. Walton and Ross Luding, the concessionaire, stood by with powerful flashlights, and several times they focused the beams on the dump so the hunters could twist their scopes in. The range was about 50 yards; the men had comfortable shooting stances in canvas chairs and no one doubted what was going to happen to each bear that appeared.

Shortly after 9, someone came running out the back door with the news that the aggressive smaller bear—No. 2—was down at the bottom of the draw that led from Granite Park campground and appeared to be headed up to the dump. Minutes passed, and the rangers pushed their safeties off and on nervously, but no bear arrived.

By now it was dark except for a slight glow from a quarter moon tinted yellow-orange by a thin film of smoke from distant fires. The men sat quietly, their rifles in their laps. At a few minutes after 10 a large silhouette lumbered into the gully and began scrambling up toward the dump. Instantly Walton and Luding caught the animal in their big flashlights and were surprised to see that it was not the small grizzly, No. 2, but the beautiful silvertip, No. 1. Wasem whispered, "One. Two. Three!" and each man fired. The bear staggered and fell to the ground, and another volley of bullets slammed into its body. The animal thrashed about for a few seconds and lay still, its eyes gleaming like bright red reflectors in the direct beams of the flashlights. From the balcony above a young girl began to sob violently.

About 15 minutes later the firing squad could hear a snorting sound from below the dump, and Walton whispered, "That'll be No. 2." When they were sure the animal had reached the bread dough, Walton and Luding switched on their high beams and caught the smaller bear in a cross pattern. The animal looked up briefly and resumed eating—performing in the glow of spotlights was not a new experience. This time Hagen barked out the count. On "two" the bear looked up again, and on "three" the rifles sounded and the animal catapulted into the air and came down heavily. The three men fired again and now both bears lay side by side in death.

"That's it?" Wasem asked.

"That's it," Walton said, and the men ran across the ravine. They found that Bear No. 1 was a female of about 350 pounds; No. 2 was also a female, but it weighed about 100 pounds less than the silvertip. Martinka and Wasem poked flashlights into the bears' mouths and spread their claws looking for signs of guilt, but there was not so much as a speck of flesh or blood on either of them. The biologists opened the stomachs and looked for human hair or strips of cloth or skin, but all that was visible was the half-digested remains of leaves and berries. The team returned to the chalet to report their kills. Everyone was asleep by 11 o'clock. Shortly afterward the newspapers and wire services received the word from ranger headquarters. It was a positive—but absolutely unsubstantiated—report: the killer bear of Granite Park was dead.

On Monday, Aug. 14, seasonal Ranger Bert Gildart was ordered to report to headquarters. He had no doubt about why. Sometime before he had executed a troublesome bear on instructions from his superiors and now he could guess what the new job was and why Leonard Landa was to be his partner. Landa knew the Trout Lake area; it was part of his responsibility to patrol Trout and Arrow Lakes. Gildart knew bears and guns and how to track and kill. The two of them formed the logical assassination squad for the Trout Lake bear, and so they showed up at headquarters at 8 a.m. Monday, Aug. 14, fully armed.

The two young rangers checked in with the chief ranger's office and waited for instructions. At 9 a.m. they were still waiting. By now all available ranger executives had arrived and they kept walking back and forth past Gildart and Landa at high speed, saying nothing.

Now it was 10 and the two men had been curbing their impatience for two hours and still no one was paying any attention to them. The pace in the handsome new headquarters building had become more frenetic. High officials dashed in and out of the offices of higher officials, and vice versa. Telephones jangled and secretaries raced up and down the long hall to whisper in their bosses' ears. Gildart and Landa began to get the impression that no concrete steps would be taken until orders came from someone outside the park headquarters, perhaps someone as far away as the Department of the Interior building in Washington, D.C. It was after 11 when they were finally instructed to hike into Trout and Arrow Lakes by way of the Lake McDonald Trail and to kill every grizzly bear they encountered.

The two rangers got into their pickup truck, already loaded with camping gear, and roared down the road toward the Trout Lake trail head. They were on the way over Howe Ridge by noon, moving slowly and methodically, studying the terrain. Sometimes they made wide detours to specific vantage points, but after four hours of silent stalking and glassing every square inch of visible territory, they had seen neither grizzly nor sign. It was 4 p.m. before they dropped down into the Trout Lake area and found their first bear scat. It was still fresh and in the middle of it was a tiny white bone. Gildart took a closer look and saw that the bone was from a small mammal, perhaps a ground squirrel or a chipmunk.

The two hunters poked holes in several cans of salmon and walked around the logiam campsite distributing the aromatic juice on the ground. Then they spread bits of the delicacy near the fire grate and the open beach where the hot sun could do its work. Gildart and Landa waited expectantly for the bear to come out of the underbrush, as it had so many times before. But when the grizzly did not appear after several hours, Landa suggested that it might make more sense to search around the area, returning from time to time to the campsite to see if the bear had showed up, and the two men thus occupied themselves until early evening. When the sun dropped behind Rogers Peak they decided that the bear might have moved uptrail toward Arrow Lake, and since they intended to camp at the Arrow Lake shelter cabin that night they began a slow hunt toward the north, always staying near the narrow trail that ran through high walls of berry bushes and trees. They had gone about a mile up Trout Lake when they began to notice fresh bear tracks and scats at almost regular intervals, but they had mistimed their departure. All at once night closed down

continued

on them. There could be no more hunting in the darkness. They were hit with the chilling realization that they had inadvertently switched roles with the killer bear and now they had to get to the shelter cabin as quickly as possible. There was no doubt in their minds that the bear had fled in this direction and no doubt that it would attack human beings, and the two young rangers broke into a jog, stumbling into bushes and stopping occasionally to probe for the lost trail with their flashlights.

The shelter cabin was empty; the trail had been closed by order of the park superintendent and the two men had the 20-by-10-foot room all to themselves. They brought in a supply of water from the stream just down the bank, one of them doing the carrying while the other stood guard with a rifle, and after a short snack and a radio report to headquarters describing their futile day, the two men went to sleep.

Shortly after dawn on this same Monday biologist Cliff Martinka was studying the carcasses of the two bears at Granite Park when he realized that the bread dough and bacon strips were gone from the dump. At first he thought that there must be thousands of hungry ground squirrels and other small mammals around the area, but he discarded the idea almost as quickly as it came to him. Only a big animal could have done away with so much food in just a few nighttime hours. Once again he asked Tom Walton if there were any other bears that came to the garbage dump and once again Walton said that there were no others. Earlier, when there had been snow on the ground, the tracks of an adult bear with two cubs had been seen often but, Walton said, there had been no trace of this bear family for several weeks.

Shortly after 2 p.m. the tall, redhaired Dave Shea came up the trail carrying a rifle. He was listed on the park records as Wasem's assistant, and headquarters had ordered him to interrupt an elk research project on the Belly River and join his boss at Granite Park. When the young seasonal ranger-biologist saw the two bear carcasses lying behind the chalet, he said, "Where are the other ones?"

"What other ones?" Wasem asked.

"There's a sow with two cubs that comes late at night," Shea said. "Bert Gildart and I saw them here last week."

Martinka and Wasem exchanged meaningful glances, and after dinner the firing squad, now augmented by Shea, again took up its position behind the chalet. There was no garbage at the dump, but the bodies of the two dead bears lay redolent in the moonlight, and now and then Luding and Walton poked their light beams around to see if anything had begun to gnaw at them. Nine o'clock passed, and 10, but Dave Shea had said the sow and cubs had not arrived until nearly midnight the week before, and if they came at all it would probably be an hour or so later. A few of the hunters went to bed and left instructions that they be called at the first sign of the bears. At 10:30 a woofing sound came from the draw below the chalet and the alarm went out to awaken the riflemen. For a few seconds cubs could be heard squealing, but then the squealing turned into bawling and bawling into the woofing grunts that grizzlies make when they are ready to fight. The woofing and bawling sounds continued, but now they were plainly moving away.

Just before 1 a.m. Shea thought he heard a shuffling sound coming from the path that led from the trail cabin to the chalet. He strained to hear and made out a low cough. He slipped back inside the chalet to awaken the crew. For a few minutes there was no sound except the breathing of the men. Then a large shadowy form began to infiltrate its way across the open gully between the chalet and the dump, and Elmore and Wasem flipped on their lights. They picked up the outline of a medium-sized grizzly about five feet from the dump, and Hagen snapped, "One! Two! Three!" and all the guns sounded together. The bear spun around wildly and began to bawl at the cubs. The lights stayed sharply on the adult bear and another volley sent it sprawling and flopping to the ground.

When the last reverberation had come back from the surrounding mountains and died away, another sound could be heard from the hillside above the dump. The two cubs were running away, whimpering and bawling.

Everyone rushed across the ravine to inspect the latest kill. Martinka dropped to his knees and examined the bear's paws. There was a reddish substance that looked to be blood matted in the hairy spaces between claws. A pad hung from one of the hind paws like a loose edge of half sole, and the biologist realized that the old injury must have kept the bear in constant pain. Quickly he ran the salient facts through his brain: the bear apparently was in the habit of coming to the dump after the chalet had closed for the night, at about the same time that Julie Helgeson had been killed; the bear was a sow with cubs and this was the most volatile kind of grizzly; the bear's ripped foot would have kept it in an angry mood and the bear was bloodstained. Kneeling alongside the carcass, Martinka looked up at the others and said, "We got her. This is the one." Wasem cut into the stomach and found undigested bread dough, and pictures were snapped and measurements taken. Twenty-four hours after the word had gone out that the killer bear was dead, the killer bear *was* dead. Or was it?

At the Arrow Lake shelter cabin, Gildart woke up at 4 a.m. on Tuesday, and he shook Landa. Both men peeked through the door into the black night. They agreed that there was nothing to be done until daylight, and for two hours they lay on their cots refining their hunting plans for the day. Just before 6 Gildart opened the door of the cabin and took a few paces toward the stream that ran just in front, and out of the shadows to his right he thought he detected movement. The young ranger stopped and turned his head slowly toward the north. At first he could see nothing; night and day were still a blend, and visibility was slight. But as he peered toward a bend in the trail about 30 or 40 feet away, he made out what appeared to be an expanse of fur. Then a grizzly bear, humped and unmistakable, padded out of the brush toward him. "Bring the rifles out!" he shouted to Landa. "Here's the bear!"

At the sound of the human voice the animal halted, made a few shuffling movements with its front feet as though it were going to continue and then slipped sideways into the thick brush that grew along the steep banks of Camas Creek.

Landa thrust the .30-06 into Gildart's hands and said, "You're not kidding around, are you?"

"No," Gildart said. "There's a bear right out there."

The two men stood side by side facing the place where the stream bank dropped six or eight feet straight down. Neither man spoke and there was not a

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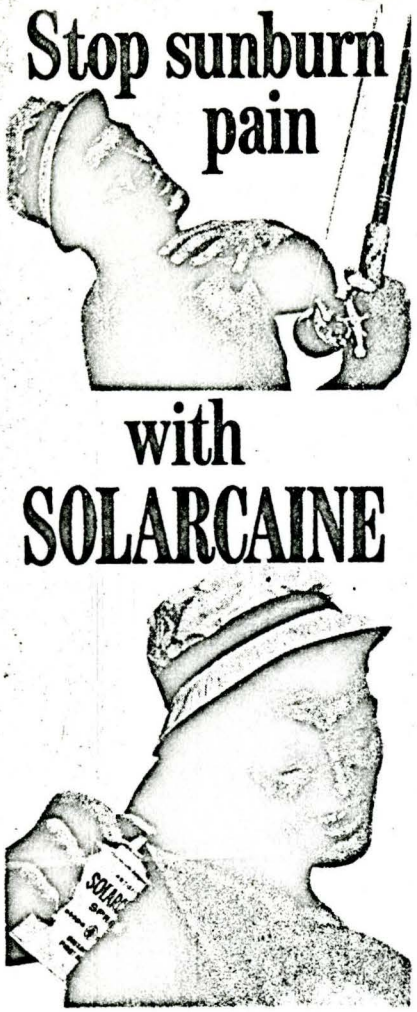

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sound, not even the rustle of a leaf. The busy stream seemed muted. Two or three minutes passed, and then Gildart said softly, "There he is!"

Landa squinted into the half-light, saw the grizzly and said with awe: "Look at that head!"

The bear had worked its way downstream until it was underneath the bank directly in front of the shelter cabin, and now it was looking over the edge of the bank, reconnoitering, turning its head slowly from side to side as though trying to pick up a scent. Once the animal seemed to be trying to brace itself for a push up and over the bank, but then the head and shoulders slipped back out of sight and Landa said, "Let's don't let him get away!"

Seconds passed, and inch by inch the head began to rise again above the bank. When its eyes were in sight, the bear made a sudden upward thrust that exposed its neck and shoulders, and Gildart took a step forward to shorten the range. At this motion, the bear slipped quickly from sight again and Gildart backed off. More seconds passed, then the bear was in violent motion, hauling itself up and over the bank to charge. Gildart fired at a range of less than 20 feet. Almost in the same split second Landa's .300 H&H Magnum went off and the bear did a giant back dive and fell heavily into the bottom of the gulch.

Gildart rushed across the clearing toward the stream and Landa followed him down. Instantly the two experienced hunters knew the bear was dead. There were two jagged holes seeping blood, one in the chest and one in the head; either would have been fatal. Gildart dropped to his hands and knees and saw that the bear was a brownish-colored old sow with worn-down molars and a thin scrawny body.

After they radioed headquarters that they had killed a bear, the two men sat in the little shelter cabin and wondered whether they had shot the right grizzly. Gildart said he was sure they had.

"What makes you so sure?" Landa asked.

"Well, what do you think she was doing around the cabin this morning?" Gildart said. "She was stalking us. And that's not normal for a grizzly."

The rangers at Granite Park Chalet maintained *their* watch through the rest of the dark hours of Tuesday morning, on the off chance that there was still another bear coming into the dump at night, but they heard nothing except the soft sighing of a light breeze and the occasional distant bawling of the cubs. Wasem drew the final shift, from 4 to 6 a.m., and he heard nothing whatever. He sat on the upper balcony and wondered where the cubs had gone and what would happen to them now their mother was dead. He was thankful that no one, in the wild excitement of the shooting, had pegged a bullet at the young bears. By now they were eight or nine months old and weaned to a normal diet, and there was reason to believe they had a chance for survival.

With his assistant, Dave Shea, Wasem started down toward the trail cabin at about 7:30 to get some rope to drag the carcasses away. The two men had gone a short distance when Shea heard a bawling noise and spotted the cubs on some rocks about 150 yards below the chalet in the draw that led to the campground. Shea turned toward the chalet and saw Cliff Martinka several hundred yards away. As Shea and Wasem ran across the rocky ground near timberline, shots rang out. Both men looked up and saw that Martinka was taking aim for another shot at the young bears. Now the cubs headed for the far edge of the bench and the underbrush that ran down the hill on the other side. Martinka fired a few more times, but soon the bears were gone. In the bushes not far from where Julie Helgeson had been killed, Wasem and Shea found fresh spots of blood and they knew that one of the cubs had been wounded.

Just before noon a helicopter arrived at Granite Park Chalet with two cases of lye. The park service wanted to hasten the complete eradication of the carcasses of Bear No. 1 and Bear No. 2 before other grizzlies were attracted by the smell. The carcass of the third bear, thought to be the killer, was stuffed into the cabin of the helicopter, and Martinka, Elmore and Hagen climbed inside with it for the return to headquarters. Later in the day Martinka was ordered to fly into Arrow Lake and examine a bear shot by Bert Gildart and Leonard Landa. The pilot landed about half a mile away, and Martinka had to bushwhack his way to the shelter cabin. He found the grizzly lying where it had been shot; he removed the head and paws for evidence and took a single slice

continued

into the dead animal's stomach. Undigested matter oozed out and in the middle of it was a ball of hair.

By Wednesday morning, four days after the double killings, Wasem and Shea were the only representatives of the National Park Service at Granite Park Chalet, and since no grizzlies had been sighted after Monday night, they decided that the mission had been accomplished. Wasem radioed the chief ranger's office, learned the trails into the chalet were closed and received permission to hike out via the Alder Trail to Logan Pass. Before the two biologists departed, they sprinkled lye on the carcasses of the dead bears. The bawling cubs had been hanging around the corpses and apparently would not leave until both grizzlies had been converted into dust. At 10:15 a.m. Wasem and Shea tightened the hitches in their packs and said goodby to the overwrought staff of the chalet. The two men had not gone far along the trail when they came to a high point, and they stopped to take a last look at the wooded valley below. "There they are!" Wasem said, pointing to a narrow stream far down the slope. The two cubs were running along the banks, and every few minutes one of them would dip its head in the water and shake it vigorously from side to side. Shea pulled out his binoculars for a better look. He saw that part of the cub's jaw had been shot away. "Let's go," he said to Wasem, and the two saddened biologists resumed their long walk back to civilization.

For weeks after the killings Glacier National Park remained in a state of shock. The unthinkable had happened; the impossible had become possible and the wondrous world of glaciers and limber pines and water shrews and wolverines and grizzlies now had new and indefinable dimensions.

At ranger headquarters for months afterward the slightest mention of the case was enough to send executives dashing from office to office for consultation, preening the files by the hours, and repeatedly dialing Washington for guidance. The press, along with the general public, was barred from the venues of the tragedies, and the facts that were hand-fed to newsmen seemed to be carefully selected by ranger officials for their irrelevance. Eventually it was learned that the Montana Livestock Sanitary Board had examined the brains of all

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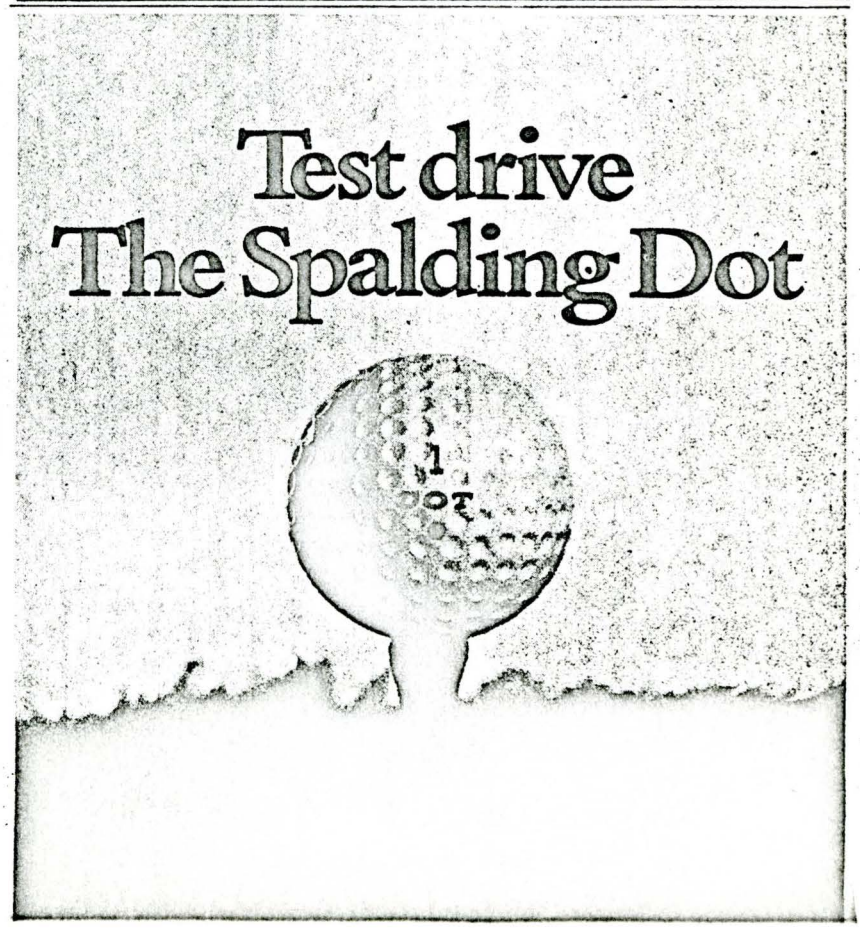

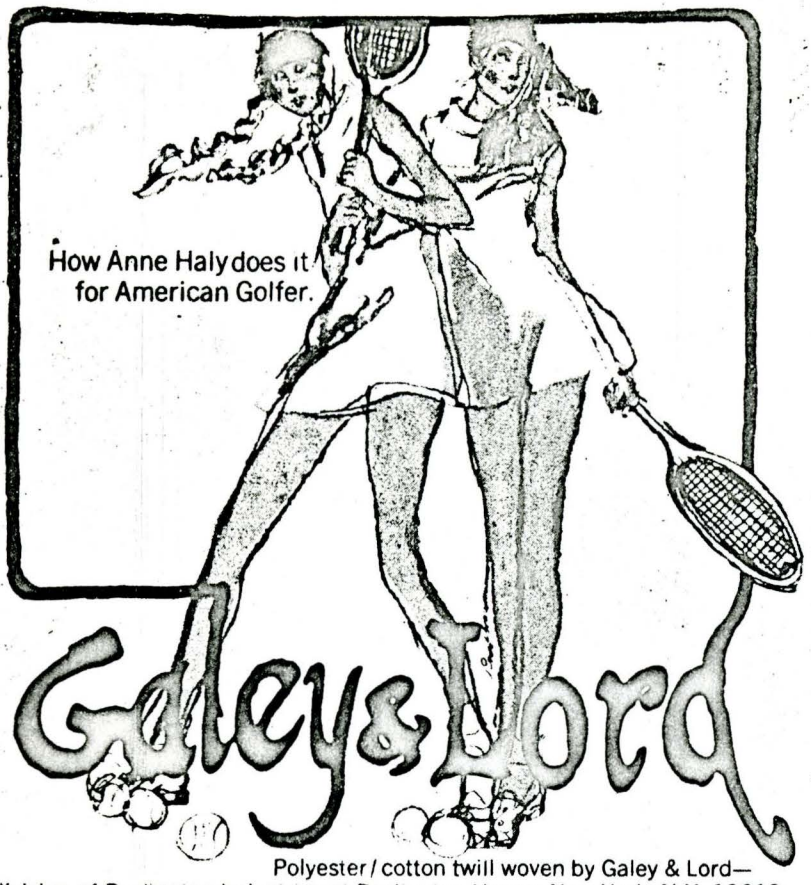

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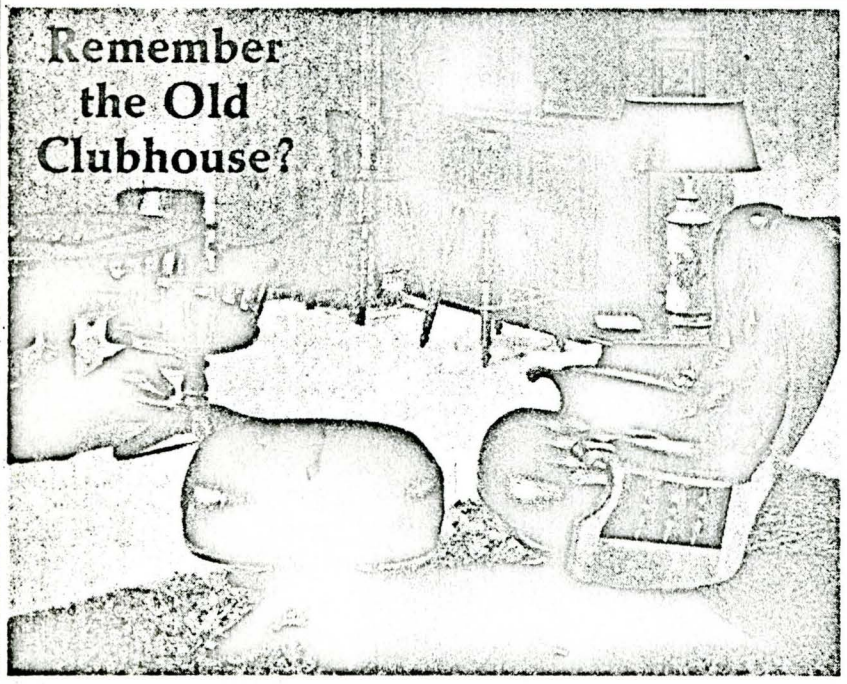

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END—OR BEGINNING? *continued*

four dead bears and reported that none was rabid and that the blood around the claws of the Granite Park bear had been tested by the FBI and had proved to be of nonhuman origin. Nor was there any other physical evidence against the old sow. The FBI reported that the Trout Lake grizzly had in her stomach "65 light-brown to dark-brown head hairs of Caucasian origin ranging from 3/4 to 5 1/8 inches," leaving no doubt as to that bear's guilt.

If facts were rare, theories were cheap and the news wires hummed with them. Early in the theorizing an official of the park had told a journalist that the 100 or so lightning strikes less than two days before the killings might have crazed the bears and the report turned up in many newspapers. An interoffice memo in the park files congratulated the official on his theory: "It was a lucky shot in the dark," the memo said, "and it looks like the public is accepting it."

The import of messages flowing out of park headquarters by the dozen was that somehow "the people" had caused the bears to attack, and "the newspapers" had blown the stories up. From this safe philosophical perch the park service was able to ignore such demanding editorials as this one in the *Sunday Missoulian*.

"Was bear feeding allowed last summer by park officials near the Granite Park Chalet in Glacier National Park?

"Were persons allowed to camp near the trails used by bears going to and from this feeding place?

"If feeding was not supposed to be allowed, why was the ban not enforced?

"If there was no ban, why not?

"It is understandable that park officials now are full of advice on how to avoid trouble with bears after the awful events with grizzlies last summer.

"What is unanswered is why a dangerous practice was permitted before one of the grizzly attacks."

The questions remained unanswered. When individual ranger officials were backed into a corner they would insist that there was no feeding of bears at Granite Park, that most of the garbage was incinerated and the rest buried or taken out on muleback. When that story crumbled in the face of reports from eyewitnesses to the rule violations, the ranger executives reverted to another story: that there might have been a small amount of feeding, but it was done fur-

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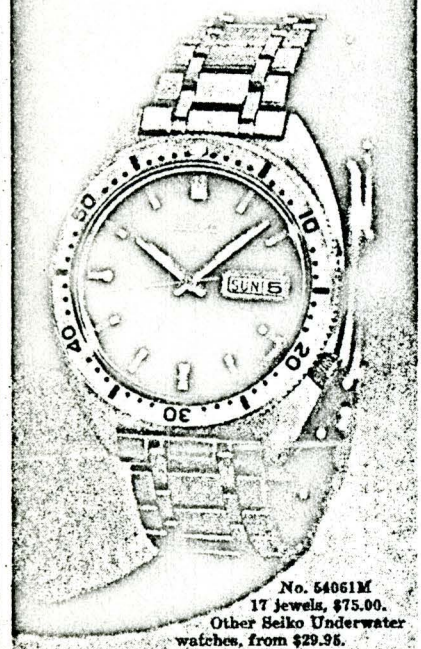

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tively, without the knowledge of the National Park Service. "I couldn't believe it," said G. George Ostrom, a prizewinning columnist on the prizewinning weekly, the *Hungry Horse News*. "Here I was asking a high-ranking ranger to describe the feeding and he told me that, honest to God, he couldn't describe it because he didn't even know it had been going on. He said, 'So help me I knew nothing about it or I'd have had it stopped right away.' But everybody in the state of Montana knew about the feeding! Why this ranger himself had been up there in the summer and watched it from the back balcony and so had a lot of other park personnel, including all the different ranger-naturalists who were in there every night."

These same rangers who now knew nothing about the bear shows at Granite Park also knew nothing about the campground that was located in the middle of a foraging area for grizzlies. Diligent research uncovered only the information that the campground had somehow established itself and the materials for it had appeared out of nowhere.

Almost a year went by before the park service issued its own report on the incidents, and by then the facts had been so obscured that the public was ready to accept anything. The unsigned report managed to convey the impression that a combination of curious events had caused the deaths of the two girls. The report admitted offhandedly that grizzlies had been known to dine on table scraps in the park and that the Trout Lake bear "had obtained food several times earlier at the same location," but these two most significant of all facts were buried under thousands of words of supposition about lightning strikes, cosmetics, atmospheric pressures, menstrual cycles, availability of natural food, bear psychology and other extraneous matters. Nowhere in the report was there an admission that the National Park Service had countenanced summer-long feeding at Granite Park, had established a campground in an area that had been frequented for decades by feeding grizzlies and had allowed a marauding bear to terrorize campers at Kellys Camp and Trout Lake for three months.

Another question remained: after nearly six decades of relative innocence, why had *Ursus arctos horribilis* chosen a four-hour period on the morning of Aug. 13, 1967 to kill *two* 19-year-old girls? Immediately a statistician began punching away on a computer and reported that the odds against one such killing on a single night were 1 million to 1; the odds against two in the same night were 1 trillion to 1. But a computer is only as accurate as the information fed into it, and the primary statistic fed into this particular computer was the 57-year record of no deaths from grizzlies. The phrase "zero out of 57" is arithmetically meaningless, of course, and can only lead to mathematical mischief. Had the computer been fed *all* the data, including the facts concerning the events of the summer of 1967, it would not have posted such long odds. As it was, the machine only compounded the mystery of the two attacks.

To understand the simultaneity of the incidents, it is better to begin with ancient history rather than modern mathematics. Man and grizzly had been on a collision course for tens of thousands of years. At the precise second when the first man stepped onto the North American plains and the first grizzly looked up from his grazing to try to catch the scent of the pale, upright intruder, the biological alarm clocks were set. But why did two of them go off on a *single* night eons later? There are two reasons: by 1967 man, with his hated smell and his bumbling manner, was pushing harder and harder on the grizzly, and the National Park Service chose that summer to present the annoyed and harassed bears with engraved invitations to strike. It is pure coincidence indeed that two grizzlies chose a few hours of a single night to take two victims who seemed to have much in common, but it is no coincidence at all that the year in which this happened was 1967 and the place Glacier Park.

Consider the grizzly's ways and his insular nature. The grizzly abhors the very idea of man's companionship, and it has taken refuge in the farthest reaches of frontier Montana and Wyoming simply to get away from him. For a few decades the situation was tolerable, but after World War II the great bear began to lose its freedom again. Hikers were beginning to march at it from all directions, and the grizzly retreated farther and farther into the dark recesses of the two great parks where he was concentrated: Yellowstone and Glacier. Relief came somewhat easier in Yellowstone, although bears have killed three

continued

END—OR BEGINNING? *continued*

people there in 97 years. Yellowstone is not essentially a trail park and there are vast areas where no human beings set foot. But as the postwar years went on, almost a million tourists were showing up each season at Glacier Park and a goodly number of them were taking to the beautiful trails that led straight into the domain of the grizzly and were camping out in areas the bears considered their own. Now the grizzlies were seeing humans wherever they turned—and seeing them again when they fled. And into this high-density area bears were being lured by table scraps with the tacit consent of the National Park Service. No wonder someone was killed.

At Trout Lake the situation was only slightly different. Almost every visitor to the lake during the hot summer of 1967 reported coming upon other humans, and this in an area that demanded a 2,000-foot climb up and another 1,500-foot climb down, or in the alternative, a slight uphill walk of more than seven miles along the Camas Creek drainage. The berry crop was lean that year and the grizzlies had little choice but to mingle with the numerous people at Trout Lake. There were few other places where berries were available in quantity and there were few other places where grizzlies could get away from people anyway. And so they tried to abide the unpleasant man smell, and out of all their numbers a single aging specimen took the process one step too far. It became contemptuous of man, and even came to covet the smell and flavor of its only living enemy.

One may argue that the rangers should have seen the problem coming, and indeed there are bits and pieces of evidence to show they did. Still, they took no action, and on the face of it their negligence appears to have been almost criminal, almost a case of bureaucratic manslaughter. But on closer examination one finds that the rangers were only adhering to a few of the most hallowed rules of human behavior, the most fundamental of which is: "When in doubt, do nothing." Certainly park officials were in doubt; bears had not killed in the entire history of the park—why would anyone have assumed they would kill that summer?

Less than three months went by before the next attack in the region of Glacier Park. A burly 47-year-old Californian named Robert Gilmore was hunting on the north fork of the Flathead River just outside the park boundaries when a male grizzly jumped him and inflicted deep cuts on his face and head. The bear was still clawing and chewing on Gilmore when his companions dispatched the animal with eight shots.

The next spring a schoolteacher-naturalist named Robert Hahn was on a one-man hike near Siyeh Creek in Glacier Park when he spotted a grizzly sow and her cub at a range of several hundred yards. The 30-year-old amateur photographer began filming the animals and he became so engrossed in his work that he failed to realize that the bears were coming dangerously close. They were, in fact, only 65 feet away when Hahn stood up to signal his presence. The cub retreated, but the sow charged instantly. Hahn had barely started up a tree 15 feet away when the bear's jaws gripped his leg and wrenched him to the ground. The embankment was steep and covered with snow, and the two combatants rolled and tumbled 200 feet down the slope before Hahn grabbed another tree and managed to climb out of the enraged sow's range.

Hahn recovered without difficulty at Cardston Hospital across the international border in Canada, and from his bed he issued a request that the two bears not be hunted down and destroyed. "It was my fault," he said. "I was intruding in her territory and I had no right to be there." Glacier Park officials closed the trail for a week, found no sign of the two grizzlies and reopened it. But despite the relatively happy ending to the story of this attack, ranger executives were shaken to their boottops. The killings of the year before could no longer be viewed as "flukes," as one-in-a-trillion shots that would never happen again. Twice in the intervening months, once inside the park boundaries and once just outside, grizzlies had again committed the unthinkable.

When Glacier Park opened for the summer season of 1968, rangers and staff biologists had laid down the most rigorous system of bear control in National Park Service history. Grizzlies were placed on the strictest probation: If a bear bothered human beings more than once, it was to be shot summarily. Rangers had the authority to kill instantly any bear that showed aggressive tendencies near developed areas. When a griz-

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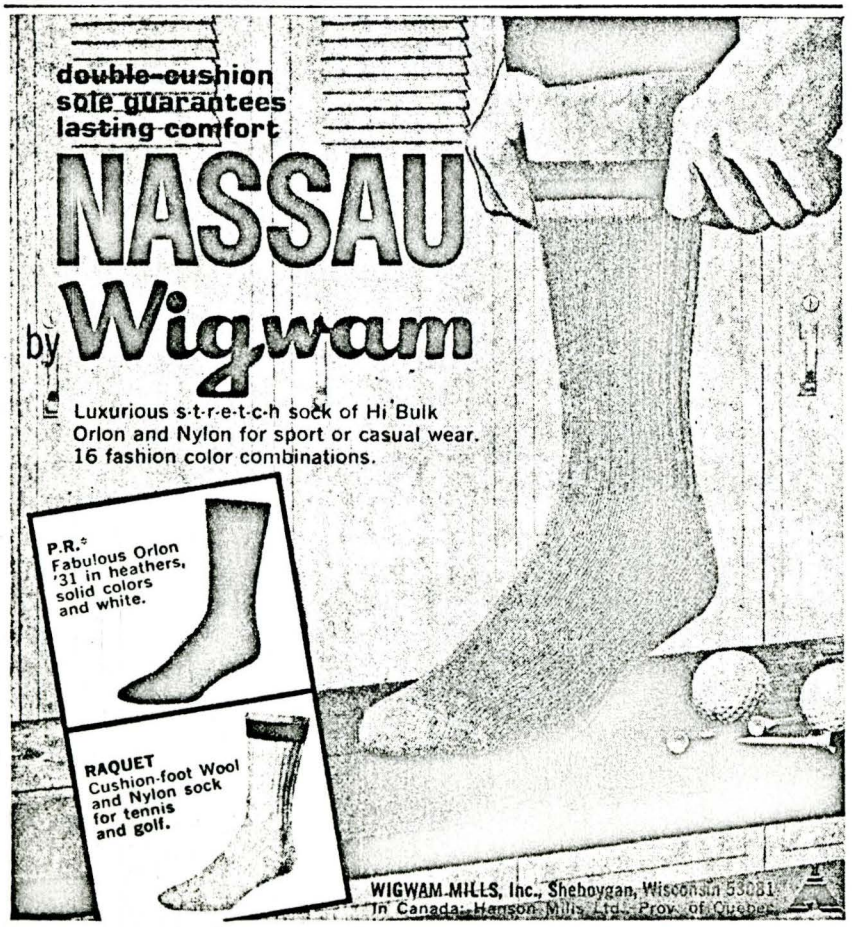

END—OR BEGINNING? *continued*

zly tore the seats out of a car parked near Kintla Lake, it was tracked down and killed with no further ado.

Dozens of other steps were taken. Trails were closed at the first sign of a grizzly. Campsites were shut down and reopened only when foraging grizzlies had moved away. Warning signs were posted everywhere, and information about bears was placed at every trail head. A strict "pack in, pack out" policy was initiated; hikers had to haul out their empty cans and other trash, and one ranger was placed on permanent horseback patrol throughout the park to see that the rule was obeyed. A new incinerator—large enough to handle all the chalet's garbage—was installed. All unnatural sources of food, such as the dumps at Polebridge and Granite Park, were cleaned up and the park service's long-standing rules against feeding bears were strictly enforced for the first time in anyone's memory.

Ironically, the stern program of 1968 seemed to have a more telling effect on the park's relatively harmless black bears. Twenty black bears were put to death, or about three times the summertime average. But the grizzlies seemed to sense that a crackdown was on, and relatively few sightings were made. The only grizzlies to be executed were the one at Kintla Lake and the cub that had been wounded the year before at Granite Park. Early in 1968 the young bear was seen near Many Glacier. It was in poor physical condition, unable to feed properly with its shattered jaw. A ranger put the pathetic creature out of its misery.

To many these killings were insufficient. For the first time in history a substantial body of public opinion called for the formal annihilation of *Ursus arctos horribilis* in the continental United States. To be sure, the pro-grizzly sentiment outweighed the anti-grizzly sentiment, but no one could remember a time when so many people were willing to stand up and demand that the animal be put to death.

Defenders of the great bear answered by quoting the National Park Service's mandate: "The animals indigenous to the parks shall be protected, restored if practicable and their welfare in a natural wild state perpetuated." The park might be for the people, but it was also for the grizzlies and wolverines and all the other animals which had

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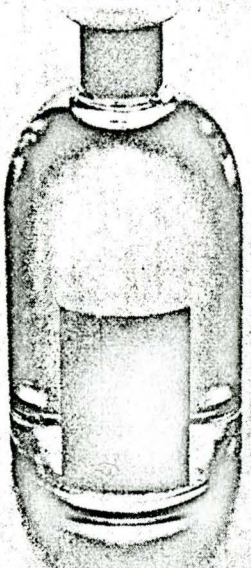

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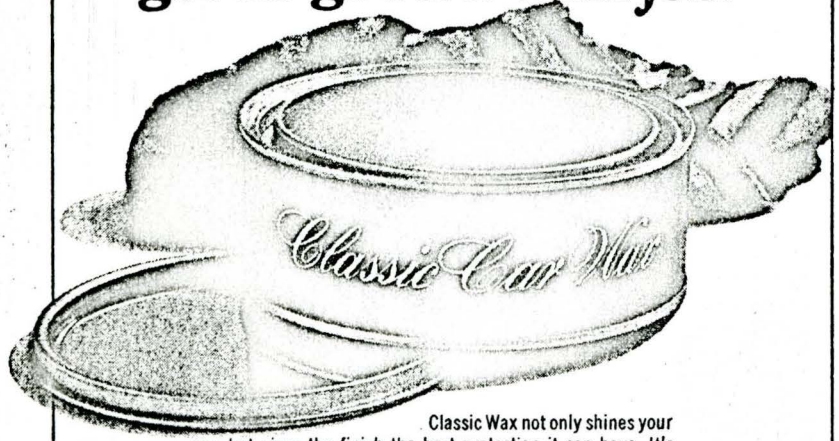

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lived within its borders for centuries.

All well and good—but the grizzly needs space, and the continental United States no longer has the space to give him. If he is denied running room, and the human animal continues to bump against him in ever-increasing numbers, the grizzly will again maim and kill. The National Park Service does not seem certain of this fundamental fact nor does it seem to realize that America's last frontier was eliminated on the morning of Aug. 13, 1967. After all the lessons of that long and dreadful night, the park service still was able to report a year later that "bear incidents and management actions during 1968 continue to support the hypothesis that increases in visitor use are not reflected by increases in the number of bear incidents." In other words, bears and humans, like whiskey and water, may be mixed in all proportions. This is the romantic approach, the approach of many professional wildlife managers who feel that all nature can be manipulated by their hands, who deeply admire the grizzly and do not want him harmed and are frenziedly flailing about for rationalization of their viewpoints. The fact is that grizzlies and humans are *not* compatible in large numbers in any circumscribed area, and a program that assumes the contrary is doomed to tragic failure.

So long as the National Park Service continues to permit more and more humans to flow willy-nilly into all the nooks and crannies of Glacier National Park, tragedy is inevitable. A summer or two, perhaps three or four, may pass without serious injury. But standards will slip, complacency and human error will return, and along will come another grizzly that is peculiar, like the one at Trout Lake, or another grizzly that has been baited into proximity with humans and lost his respect and his fear, like the one at Granite Park. Then more human life will be sacrificed, almost as certainly as tamaracks lose their needles and beavers eat aspen bark.

Then the grizzly will go like Arthur of the legend, who retired to a cave with his knights to wait for the world to grow up to his stature and ask him to return. The grizzly, in his own way as noble a king as Arthur, will not return; he will be lost forever, along with the wild frontier on which he lived his final few years as the mightiest animal of the North American wilderness. **END**

A.D.

May 23, 1969

Ms. Gay Flood
19th Hole
Sports Illustrated
Time-Life Building
New York, New York 10020

Dear Ms. Flood:

Jack Olsen has done a remarkable and courageous job of reporting the tragedy of that August night in 1967 in Glacier National Park. He has managed to research much closer to the truth than did the anonymous National Park Service investigative team. In spite of his pessimism as to the ultimate fate of the grizzly bear, he nevertheless has done the National Park Service and the American public a great service. Unfortunately, his in-cold-blood adherence to gory detail will create an image of the grizzly bear that may take years to erase from the public mind. The aberrent behavior of the two marauding grizzlies no more reflects the general behavior of the species than the behavior of Adolph Hitler reflects the behavior of humans in general.

After ten years of intensive research on the habits and behavior of grizzlies, I believe that grizzly bears and man can co-exist in our great wilderness national parks. In coming to this conclusion, Dr. Frank C. Craighead, myself, and our colleagues captured and handled over 500 grizzlies in Yellowstone and radiotracked and closely observed many more. The studies involved thousands of man days of observing what grizzlies do and why.

Jack Olsen has bared and expertly dissected the bear problem in Glacier, and he has shown where the responsibility for solving it lies. But Olsen's investigation did not provide him with the knowledge of how to solve it, though it did give him every right to be pessimistic. However, the solution of grizzly-man compatability lies not in pessimism but in intelligent application of scientific knowledge. The National Park Service now has at its disposal ten years of hard-won grizzly bear facts obtained by independent researchers. The Service can utilize this information to manage grizzlies and people to the end that man need not sacrifice--forever--a creature of our wilderness parks, which would be as tragic as the leveling of Yellowstone Canyon because someone fatally fell from its brink.

To manage grizzlies and people will require some drastic changes in National Park Service management procedures and a willingness to accept new ideas. It will require sufficient funds so that rangers may keep as close a watch on grizzlies as on people and fires and traffic. It will require an expanded ranger and interpretive service, and objective research by qualified personnel. Zoning areas for grizzlies and others for visitors will be necessary. Ultimately visitor use must be regulated if the parks are to be maintained as natural areas. Equally important, the public will have to accept a calculated risk. We must be willing to meet the challenge of co-existence. The grizzly is dangerous -- though it is not normally a man-eater -- but it is a minor hazard to life and limb in national parks compared to traffic, boating, swimming, and climbing.

Learning to co-exist with the grizzly bear is simple compared to co-existing with environmental pollution, population growth, thermonuclear weapons, and other threatening problems of our times. It will help to give the grizzly some uninhabited space, to treat him with respect, and to enforce present National Park Service regulations on feeding bears.

Sincerely,

John J. Craighead
Professor of Zoology and Forestry

JJC:rd

Copies - Frank
Graham
Lee Talamy
Joan George

June 2, 1969

Ms. Gay Flood
19th Hole
Sports Illustrated
Time-Life Building
New York, New York 10020

Dear Ms. Flood:

In 1959, my brother Dr. John J. Craighead, I and colleagues started a long range study of the grizzly bear in Yellowstone National Park. A number of factors prompted this, including declining bear numbers and the realization that past history and present trends of grizzly bear-man relationships made probable a future mauling or killing. It seemed imperative that at such a time grizzly bear behavior and population ecology be known and understood so that whatever action was taken would not be disastrous to the grizzly.

The triggering incidents occurred August 12, 1967 and I wish to congratulate Jack Olsen on his excellent job of reporting the Glacier Park bear killings and the sequence of events that led to them. He ferreted out and published information that many scientists as well as layman wished to know, but as in his case, had been denied. His story was skillfully and dramatically presented; perhaps too well dramatized with gory details considering that he concluded that it was man, not the bear, that was largely at fault. The author's constructive criticism of the Park Service was justified and needed. Hopefully it will be given the serious consideration it deserves. His analysis of the Glacier situation and his conclusions were objective and were well documented with facts. Olsen dug deeply into the bear-man relationships pertinent to the killings. He drew his conclusions as to their cause in a very professional manner. I was disappointed that he failed to delve as deeply into the ecology and behavior of the grizzly bear. Perhaps this influenced his sweeping generalization — "the fact is that grizzlies and humans are not compatible in large numbers in any circumscribed area (Glacier Park, I suppose) and a program that assumes the contrary is doomed to tragic failure". Is it not also

true that various human tribes and different nationalities are not compatible in large numbers as verified throughout history? However, if we took a defeatist attitude and assumed that nothing could be done to the contrary, there would be no hope for Homosapiens in the complex civilization he has built today.

The Act of 1916 establishing a National Park Service states that the purpose of the Park System, "Is to conserve the scenery and the natural and historical objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations". It takes research and application of the research results in management to do this, and it has not yet been tried with the grizzly. The information, however, was and is available. Before we scratch the grizzly, let's try intelligent and informed management of bears in relation to man — the objective that these two dominent species may live compatibly with a minimum of friction.

It is not my intention to detract from Jack Olsen's splendid job, but I feel compelled to comment on his statement concerning wildlife managers. It appears that he equated bureaucratic incompetence and bungling with the wildlife management profession when he stated, "This is the romantic approach, the approach of many professional wildlife managers who feel that all nature can be manipulated by their hands, who deeply admire the grizzly, and do not want him harmed and are frenziedly flailing about for rationalization of their viewpoints". This is a one-sided and erroneous concept of wildlife management though it may be what Olsen observed under atypical conditions. Wildlife management in the National Parks and in many of the extensive wild and wilderness areas is or should be to do as little as is necessary inorder to rectify wildlife and ecological problems that have themselves been caused largely by man's activities. When it is evident that manipulation, zoning and regulating are needed, it should be done in a professional manner and be based on a foundation of fact and knowledge.

Sincerely,

Frank C. Craighead, Jr.
Professor of Biology, State
Univ. of New York (Albany)
President, Environmental
Research Institute

FCC,Jr/pjf

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STEPHEN I. ZETTERBERG
LAWRENCE C. GEORGE

June 11, 1969

Dr. John J. Craighead
Professor of Zoology and Forestry
University of Montana
Missoula, Montana

Dear Dr. Craighead:

You may remember me. I was attorney for Smitty Parratt. At one time, but for somebody getting a cold, I would have brought my bedroll out and gone out with you and your brother when you were tracking grizzlies in Yellowstone Park.

I thought your statement in the June 9, 1969 issue of Sports Illustrated was terrific, and I hope the Interior Department reads it.

I did some hiking (over forty miles) in Glacier when I was investigating Smitty Parratt's case. I did this after reading a lot of literature on the bears, and everything that you wrote that I could get my hands on. I had specific ideas and suggestions for Glacier Park, that I offered to talk over with the Interior Department, but they were very non-committal in their reply to me. Basically, as an amateur, I agreed with your expert opinion. I had specific suggestions as to where trails might go, and as to where they should not go.

The thing that I cannot understand is, when I was at Granite Park Chalet, I sat out on the roof of the chalet and watched the bears at night near the garbage; and I got up before daybreak and watched the bears leave the garbage area. They left down the draw and over to the southwest, south of the trail cabin. Their line of departure was right near the place where the Interior Department later established the camp ground. This is something I cannot understand.

Also, the bear at Trout Lake is different from any bear I read about. I've never, to my recollection, read about a grizzly bear that attacked a human being in order to then eat the human being. It would have seemed that the bear was an unusual bear that should have been destroyed.

Good luck in your continued work. From what I hear of Smitty, he is doing a good job at college in the State of Washington and continues his interest in the wild areas of the west.

Very truly yours,

STEPHEN I. ZETTERBERG

SIZ:ck

June 2, 1969

19TH HOLE THE READERS TAKE OVER

TRAGIC AWAKENING (CONT.)

Sirs:

Jack Olsen has done a remarkable and courageous job of reporting the tragedy of that August night in 1967 in Glacier National Park (*The Grizzly Bear Murder Case*, May 12 *et seq.*). He has managed to research much closer to the truth than did the anonymous National Park Service investigative team. In spite of his pessimism as to the ultimate fate of the grizzly bear, he nevertheless has done the National Park Service and the American public a great service. Unfortunately, his in-cold-blood adherence to gory detail will create an image of the grizzly bear that may take years to erase from the public mind. The aberrant behavior of the two marauding grizzlies no more reflects the general behavior of the species than the behavior of Adolf Hitler reflects the behavior of humans in general.

After 10 years of intensive research on the habits and behavior of grizzlies, I believe that grizzly bears and man can coexist in our great wilderness national parks. In coming to this conclusion Dr. Frank C. Craighead, myself and our colleagues captured and handled more than 500 grizzlies in Yellowstone and radio-tracked and closely observed many more.

Jack Olsen has bared and expertly dissected the bear problem in Glacier, and he has shown where the responsibility for solving it lies. But Olsen's investigation did not provide him with the knowledge of how to solve it, though it did give him every right to be pessimistic. However, the solution of grizzly-man compatibility lies not in pessimism but in intelligent application of scientific knowledge. The National Park Service now has at its disposal 10 years of grizzly-bear facts obtained by independent researchers. The service can utilize this information to manage grizzlies and people to the end that we need not sacrifice—forever—a creature of our wilderness parks, which would be as tragic as the leveling of Yellowstone Canyon because someone fatally fell from its brink.

To manage grizzlies and people will require some drastic changes in National Park Service management procedures and a willingness to accept new ideas. It will require sufficient funds so that rangers may keep as close a watch on grizzlies as on people and fires and traffic. It will require an expanded ranger and interpretive service and objective research by qualified personnel. Zoning areas for grizzlies and others for visitors will be necessary. Ultimately visitor use must be regulated if the parks are to be maintained as natural areas. Equally important, the public will have to accept a calculated risk. The grizzly is dangerous, but it is a minor hazard to life and limb in national parks compared to traffic, boating, swimming and climbing.

JOHN J. CRAIGHEAD
Professor of zoology and forestry
University of Montana
Missoula, Mont.

Sirs:

I'm wondering now if the rangers will offer something in their defense. Not that I felt Mr. Olsen wrote too strongly about them, although it was obvious where he placed the blame. I feel the rangers reacted, right or wrong, in a behavior pattern typical of most humans. These men have to live with the haunting self-punishment of what should have been done, while their supervisors are undoubtedly passing the buck and the general public is smugly saying what they would have done. But would they?

JAN FOILES
Vista, Calif.

Sirs:

I believe you have left out part of the story. Shortly I will begin my fifth summer working on trail crews in Glacier National Park. I have camped or hiked in all the areas Jack Olsen wrote about. As we work trails, we come in closer contact with the hikers and campers than most other park-service employees. Most of the people we meet are sensible people who thoroughly enjoy their trips because they know what they are doing. However, a significant number of them are unprepared for their hikes, ignorant of their surroundings and foolhardy in their lack of regard for park wildlife. It is this group that keeps park-service employees so busy they are often unable to perform all their duties.

BOB LANGE
Fort Collins, Colo.

Sirs:

Jack Olsen has written one of the finest pieces of literature I have ever read. He has reported objectively the facts and drawn obvious conclusions and still was able to write a breathtaking and mind-shattering report about how man is destroying his world and ultimately himself!

HARRY F. BOSEN
Roanoke, Va.

Sirs:

Mr. Olsen's series of articles on the grizzly bear attacks failed to bring out the most important shortcoming in our national park policy. That shortcoming is the prohibition of guns carried by persons going into the backcountry. A .357 Magnum handgun and training in its use should be minimum requirements for anyone in grizzly country. How can anyone be naive enough to depend on rangers for protection when the rangers are miles away? A change of policy in this respect is definitely indicated.

DR. STEPHEN MEADOWS
Winston-Salem, N.C.

Sirs:

Jack Olsen's suggestion to eradicate the grizzly bear could only be extended to all animals of physical prowess superior to man, since man is crowding all such species to extermination just like the grizzly. To destroy the natural environment and its indigenous parts like this has already proved the height of unthinking shortsightedness.

PETER H. STOWE
Cambridge, Mass.

Sirs:

I applaud Jack Olsen's excellent, detailed account of the tragic grizzly bear attacks in Glacier National Park. I was especially glad to see previously recondite facts surrounding the events of that night brought into public view for the first time. A companion and I once hiked 50 miles inside the park, and we can attest that it would indeed be a shame to deny public access to all or part of the park because of the grizzlies.

But Mr. Olsen's careful objectivity fades in the last installment, when he claims that "America's last frontier was eliminated on the morning of Aug. 13, 1967" and implies that extermination is inevitable.

DAVID F. WEBB
Boston

● Neither SI nor Jack Olsen considers the extermination of the grizzly inevitable or desirable. Olsen's point is that park regulations must be changed drastically if bears—and human lives—are to be saved.—ED.

BITTER REWARD

Sirs:

In commenting on SPORTS ILLUSTRATED's article concerning the Santa Barbara oil disaster, Mr. Larry Dorsey suggests (19TH HOLE, May 12) that the people of Santa Barbara have reacted childishly to this tragedy.

In reply to Mr. Dorsey, I would ask this question: When does he foresee the possibility that such "products" as breathable air, unpolluted water and an uncluttered and livable environment will become an area of concern to the nation, indeed, the world? The time is rapidly drawing near when mankind will have to call a halt to the "bigger is necessarily better" philosophy of the utilities, the oil industry, the Army Corps of Engineers and other such despoilers of our

continued

June 9, 1969

19TH HOLE THE READERS TAKE OVER

TRAGIC AWAKENING (CONT.)

Sirs:

Jack Olsen's *Grizzly Bear Murder Case* (May 12 *et seq.*) has shaken me.

My own meetings with the Glacier Park wildlife seem so vastly inconsequential in comparison with the horrendous events that took place on the August night in 1967. However, with what I have seen, the animals of Glacier Park, from the largest, most unpredictable grizzly down to the tiny golden-mantled squirrel, are suffering from the coming of the easy life as associated with the encroachment of the American traveler with his garbage, litter and patronizing handouts. Once a wild animal has been fed through human hands, or has gotten an easy meal at an unkempt campsite, his self-sufficient spirit is broken. He then becomes the pesky, delinquent, welfare-seeking mammal that unfortunately abounds in our national parks today.

Glacier National Park, with its lofty splendor, should well be considered a sacred natural cathedral. Its parishioners, the wildlife, must be treated with respect; perhaps to the point of sanctification. Too many of us approach the animals of a national park with much the same attitude that we might approach the captives at the local zoo. However, at Glacier National Park we, too, are in the cage. The wild animal's one thought is to survive, via the easiest way possible. As reasoning human beings, it is our job to organize and facilitate a respectable survival for these natural citizens onto whose continent and into whose feeding grounds we are the intruders.

LARRY HORAK

Cucamonga, Calif.

Sirs:

Certainly we must exterminate the grizzly. And while we're at it, let's destroy all dogs with teeth and all cats with claws. For who knows when one of these potentially dangerous beasts may turn on us?

Eventually, there should be only Man. Because we get along so well together.

PETER R. WEED

New York City

Sirs:

Jack Olsen's *The Grizzly Bear Murder Case* is the most magnificent example of journalism that I have ever had the privilege to read. By being uncompromising with the truth and economical with his words, Mr. Olsen has created a piece that stands at the pinnacle of his craft.

GORDON H. TAYLOR

New Haven, Conn.

Sirs:

Never again will we camp in a bear-infested national park. I have learned to hate bears. I do not intend to have my family exposed to Russian roulette. I have camped in Glacier National Park twice, 1941 and 1961, and will never return. My experience that last trip convinced me that grizzly bears and people are natural enemies. And with black bears behaving as they do, who needs enemies?

Perhaps Mr. Olsen will get a kick out of learning that a nature lover came to develop a deep hatred for our lovable national park bears—those detestable garbage-eating slobs.

I would also like to express my warm appreciation for the magnificent work done by SPORTS ILLUSTRATED for conservation. You have accomplished more in two years than my beloved Sierra Club has in 77 years.

JOHN GROVE

Berkeley, Calif.

Sirs:

I have had a difficult time deciding whether or not to be disgusted at the way Mr. Olsen describes the killing of the two girls or to be frightened at the thought of just how dangerous a grizzly can be. If the purpose of the story was to warn people just how deadly the grizzly can be, or if it was to disgust people with his descriptions of the killings, whatever his original purpose was, Mr. Olsen has achieved both goals.

Never before have I read an article that had such a profound effect on me. I truthfully believe that I can say that I am now terrified at the thought of meeting a grizzly—outside of a zoo.

DAVID G. LAIRD

Corvallis, Ore.

WATER HAZARD

Sirs:

Having thoroughly enjoyed your article on *Golf's Underwater Underworld* (May 19), I believe my relating of a personal experience might be helpful to anyone who thinks that scavenging golf balls is relatively safe.

Six years ago, while diving (legally) for the Ponte Vedra Golf Club, Ponte Vedra, Fla., my friend and diving buddy, Tommy Veal, was actually attacked from the rear by a 10½-foot alligator. Tom was working on the pond's bank with his hands on the famous 9th hole hazard and his legs floating aimlessly in deeper water when he felt a surge behind him, and the jaws of an alligator clamped one leg in a vise. He somehow managed, with a quick jerk, to pull his leg from the gator's grasp and scramble up the bank. Tom was fortunate, having only suffered puncture tooth marks. The alligator was later shot and killed and removed from the lagoon.

Thus, scavenging golf balls can be even more dangerous in Florida with its alligators than in California with its catfish.

GARY KOFFMAN

Ponte Vedra, Fla.

JACK'S JACK

Sirs:

Thank you for exposing me to the frightful predicament of Jack Nicklaus (*What Has Gone Wrong, Jack?* May 19). I'm sure your article stirred up sympathy in the hearts of all your readers. After all, when a man earns only a paltry $155,285.55 in 12 months, something definitely has gone wrong. I can only hope that he gets back in the groove soon.

MIKE ROST

Plymouth, Mich.

ASLEEP AT THE SWITCH

Sirs:

My faith in the National Football League has been shattered (*They'd Rather Switch*, May 26). I have always soundly supported the merger of the two leagues, but little did I know that three of the most traditional teams in the NFL would go over to the AFL. I could stomach even this huge mistake if there were some kind of sane divisional and playoff system. But no, pro football has chosen an idiotic six-divisional setup which will make a shambles of the playoff system.

STEVEN WINEINGER

Knoxville, Tenn.

Sirs:

Finally the long-awaited merger of the NFL and AFL is completed. I believe that the move of Baltimore, Cleveland and Pittsburgh to the AFL is fine, but I think Commissioner Rozelle made a boo-boo in the realignment. He should have Buffalo and Houston change places. Just think of the natural rivalry between Buffalo and Cleveland—shades of the old All-America Conference! Besides, this would give Miami a rival in Houston.

ELI H. MASLEKOFF
United States Army

Fort Bragg, N.C.

DOGMA

Sirs:

Jeannette Bruce's article (*Slave to a Shah*, May 5) is undoubtedly one of the finest articles on one of the most rewarding and en-

continued

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

June 17, 1969

Mr. Horace M. Albright
427 Lanfair Avenue
Los Angeles, California 90024

Dear Mr. Albright:

It was nice to hear from you again and I am hoping that this letter can be followed by a visit with you in Grand Teton in early September. I will answer your questions as factually as I can. I trust you will be circumspect in your use of the information.

I am enclosing copy of a letter I sent to Sports Illustrated that expresses my thoughts on the Olsen articles. I am not in agreement with either Dr. Moment's or Mr. Olsen's views that the grizzly should be eliminated from our large wilderness parks. I notice that Olsen in a later issue of Sports Illustrated made it clear he was not advocating exterminating the grizzly, but believes that "bureaucratic bungling" would ultimately doom the grizzly in our national parks. Olsen labeled it "bureaucratic murder".

In the Glacier grizzly incidents of 1967, the Park Service was grossly negligent and unfortunately attempted to cover up by concealing the facts. The actions of the two biologists involved, Glen Cole and Cliff Martinka, were particularly reprehensible since they were the investigative biologists and knew better than to issue "half truths". Also, it is incomprehensible that no "bear experts" were consulted. We were denied information until the report was issued.

The accidents might have been excusable, but concealing the true nature of the accidents was inexcusable. Also, it is obvious that another such incident will sound a death knell for the grizzly in Glacier National Park, or in all of our large national parks for that matter. This is what prompted me to write my letter to Sports Illustrated.

I have been extremely concerned about Superintendent Anderson's handling of the garbage situation in Yellowstone and his bear management policies. His biologist, Glen Cole, has ignored our recommendations and the result could be extremely serious. I do not care to get into a discussion of personalities at this time, but I would be more than happy to discuss this matter with you in greater detail should we be able to get together in September.

I personally believe that if the policies currently being practiced in Yellowstone are continued that there will be one or more grizzly bear tragedies in that park.

The National Park Service, including Mr. Anderson, has copies of our report. I am enclosing comments made by the Park Service's chief scientist on our grizzly bear report. I am also enclosing my reply. Nothing has ever been done to rectify these differences of opinion and, in general, Mr. Linn's ideas have been followed and our advice, based on eight years of intensive research, ignored.

The abrupt termination of feeding at the Trout Creek garbage dump rather than a slow phasing out over a four or five year period (as advocated by Frank and myself) has, I believe, greatly increased the danger of bear-man incidents in Yellowstone. This in spite of our persistent efforts to dissuade the present administration from carrying out such policies.

In the best interests of the National Park Service and for the sake of the grizzly bear, I would like to see a true airing of this situation. In deference to the National Park Service, Frank and I have refrained from making an issue of the matter, but I believe it is only a matter of time until the entire management of grizzly bears will have to be discussed openly with the people who are most qualified to give opinions and to recommend management suggestions.

Kindest personal regards,

John Craighead

John J. Craighead,
Leader

JJC:AB

HORACE MARDEN ALBRIGHT
427 LANDFAIR AVENUE
LOS ANGELES, CALIFORNIA 90024

June 8, 1969.

My dear John Craighead:

I hope this will catch you before you take to the field for the summer. Much to my regret, I have not been in touch with you for nearly two years. I had a fine visit with your grand old Dad in the Everglades late in April. I was delighted to find him in perfect health, and the same grand fellow II knew so well in my Yellowstone days and in Washington.

I wonder what you brothers think about the three articles in SPORTS ILLUSTRATED about the grizzly bear tragedy in Glacier Park in 1967? Of course, I know you would never favor the author's - and the editor's - viewpoint that the grizzly must be exterminated. I note that the stories in the magazine are to be expanded into a book. I do not know the author. The articles were brought to my attention by high officers of Columbia Broadcasting System in New York. I was there for two weeks after our brief stay in Florida.

I wonder too how you men feel about Sup't Anderson of Yellowstone and his sudden decision to destroy all garbage, thus brining grizzlies down to the Grand Loop Road in Hayden Valley, and making it advisable to warn tourists to stay in their cars. I did not like this at all, and it seemed to me that Anderson was acting without consulting you, or studying your reports - if he had one, which I assumed he did have.

If you can write me briefly your views on these items, I'll appreciate your doing so. We will be here until late August when we will go to Yellowstone for a few days, then to Grand Teton for Laurance Rockefeller's board meetings which take place on Sept. 4th and 5th. I hope I will have a chance to see you there.

With kind regards, I am

Sincerely yours,

Horace M Albright

Dr. John J. Craighead,
University of Montana,
Missoula, Mont59801

P.S. It was exactly 50 years ago that I became Supt. of the Yellowstone.
Hey

University of Montana
Missoula, Montana 59801
(406) 243-0211

WILDLIFE RESEARCH UNIT
January 13, 1969

Superintendent of Documents
Washington, D.C. 20000

Gentlemen:

On January 9, 1969 I wrote requesting a copy of the Glacier Park bear incidents report. Would you please send us two copies of this report, the more exact title of which is "Grizzly Bear Attacks at Granite Peak and Trout Creek in Glacier Park, August 13, 1967". Please bill the Wildlife Research Unit, University of Montana, for these reports.

Yours very truly,

Rae M. Dabbert

Rae M. Dabbert
Secretary to Dr. Craighead

Division of Public Documents, Government Printing Office, Washington, D.C. 20402

We regret we are unable to write you a personal letter, but hope the following information is satisfactory:

We find no record of your previous inquiry as it is our policy to return correspondence with notations and information. Grizzly Bear Attacks at Granite Peak and Trout Creek in Glacier Park was not sold or distributed by this Office and in all probability your previous inquiry was referred to the Geological Survey for necessary action. For additional information regarding the publication you desire may we suggest you contact the: Geological Survey, Department of Interior, Washington, D. C., 20240. We hope this information is satisfactory.

SD 167

☆ GPO: 1964—O-724-657

Superintendent of Documents.

Wanita Madison
or Glacier

February 24, 1969

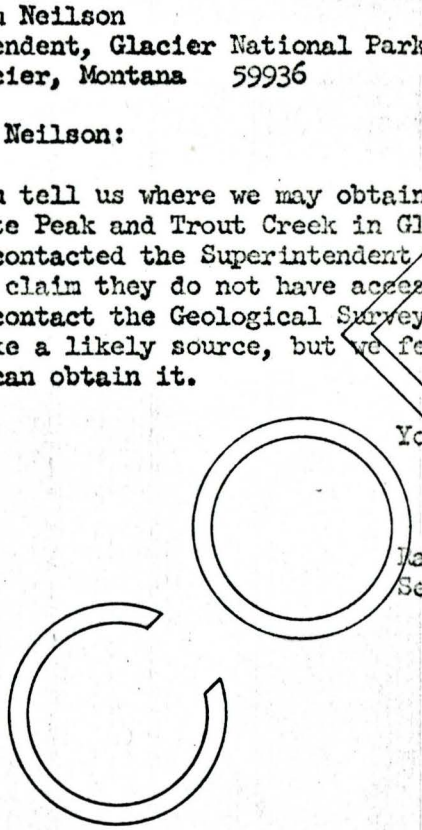
Mr. Keith Neilson
Superintendent, Glacier National Park
West Glacier, Montana 59936

Dear Mr. Neilson:

Could you tell us where we may obtain copies of "Grizzly Bear Attacks at Granite Peak and Trout Creek in Glacier Park, August 13, 1967"? We have contacted the Superintendent of Documents in Washington, D.C., and they claim they do not have access to the publication and suggested that we contact the Geological Survey in Washington. This does not sound like a likely source, but we felt you would know for certain from whom we can obtain it.

Yours very truly,

Mae M. Dabbert
Secretary



April 1, 1968

Mr. Keith Nelson, Superintendent
Glacier National Park
West Glacier, Montana 59936

Re: Grizzly Bear Research Study
in Glacier National Park

Dear Mr. Nelson:

It has come to my attention from several reliable sources that the National Park Service has initiated a research project on the grizzly bear in Glacier National Park. It is my understanding that Mr. Martinka is the biologist in charge of the program.

I have never received any official or unofficial notice of this, but since I have been deeply involved in research work on the grizzly bear in a national park and for the National Park Service, the programming of such a research project in Glacier is of vital interest to me. If such a project has been approved and financed, I think that thos responsible for the work should have communicated this fact to me and should have made an effort to coordinate this new research project with our nine-year study in Yellowstone National Park.

I would appreciate hearing from you on this matter since I feel that the possible duplication of effort could do more harm than good in advancing our knowledge and management of the grizzly bear.

Sincerely,

John J. Craighead

JJC:AB

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

IN REPLY REFER TO:
N22

April 3, 1968

Dr. John J. Craighead
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear Dr. Craighead:

Thank you very much for your letter of April 1 concerning the initiation of a grizzly bear research project in Glacier National Park. We are aware of your extensive research efforts and knowledge of the grizzly in Yellowstone and certainly appreciate your interest in our research program in Glacier.

The grizzly project is only a portion of an intensified research program in Glacier. Research on the grizzly is in an exploratory stage and Mr. Martinka would be most happy to coordinate his efforts with your Yellowstone study. The study is currently being coordinated through the Yellowstone research office which in turn, coordinates research and information for the Rocky Mountain and Alaska Parks and Monuments.

Copies of Glacier's research plan, research goals and work plans for our two resident research biologists are enclosed. In addition, a copy of the annual progress report will be forwarded to you when completed. Copies of your research reports on the grizzly would be appreciated.

May I again express by appreciation for your interest. If I may be of any further service, do not hesitate to ask.

Sincerely yours,

Keith Neilson
Superintendent

Enclosures

May 3, 1968

Mr. Keith Neilson, Superintendent
Glacier National Park
West Glacier, Montana 59936

Dear Mr. Neilson:

Thank you so much for your letter of April 3rd.

I was happy to learn of the rather extensive plans you have for research in Glacier National Park; however I was somewhat disappointed that you were unable to send me a detailed prospectus of the grizzly bear research work. I understand that Mr. Martinka has spoken publicly several times on the study and so assumed that it was considerably more advanced than in an exploratory stage.

I do hope that Mr. Martinka will contact me so that we can discuss coordination of his project with ours in Yellowstone. Approximately $100,000 a year, mostly federal funds, have gone into our Yellowstone research work. I think it would be very unfortunate if there was unnecessary duplication of effort. I am sure you are aware that if this should occur, it would probably be damaging to the National Park Service's recently established research effort and could prove highly confusing to organizations supporting this type of research on public lands.

Copies of all work done on the grizzly bear project have annually been submitted to the National Park Service in sufficient number for distribution throughout the Service. I had assumed that you received copies of most of our reports and publications. I certainly will put you on the mailing list and see that our quarterly and annual reports go direct to you in the future.

Sincerely,

John J. Craighead

JJC:AB

RESEARCH GOALS--GLACIER NATIONAL PARK

I. Publications classifying and describing natural units of Park vegetation and documenting successional processes.

II. Publications relating to the ecology of individual plant species and vegetational units.

III. Publications on habits, population dynamics and ecology (species and interspecies) of the following representative faunal species.*

Elk	Grizzly Bear	Cutthroat Trout
White-tailed Deer	Black Bear	Dolly Varden Trout
Mule Deer	Grey Wolf	Bald Eagle
Moose	Coyote	
Bighorn Sheep	Wolverine	
Mountain Goat	Cougar	
	Canada Lynx	

* Other faunal species to be considered in relation to their ecosystem roles.

IV. Publication on the fauna of Glacier National Park based on the ecosystem concept.

V. Carry out special studies needed by Park.

1. Biological evaluations of management programs.
2. Develop methods for measuring population status and trends of representative faunal species.
3. Develop criteria for determining allowable intensities of use by ugulates on important food plants and/or physiographic sites.
4. Map and quantitatively of ungulate winter ranges, determine conditions relative to site potentials and determine conflicts with attempts to portray primitive conditions.
5. Carry out other studies as needed.

VI. Serve the Park Superintendent's Staff to provide technical services on biological matters and liaison with other researchers, key individuals and organizations as needed.

VII. Encourage and aid to the greatest extent possible all aspects of natural science research within the Park by independent researchers.

C. Martinka 9/67
Approved by Superintendent Neilson 10/23/67

RESEARCH PLAN--GLACIER NATIONAL PARK

I. Research on representative faunal species will involve the following considerations.

A. Habits
1. Distributions, habitat use and movements.
2. Food habits.
3. Number limiting habitat or food supply links.

B. Population Dynamics
1. Identification of distinct population units.
2. Numbers and trends.
3. Population structures, natality and mortality.
4. Cause and effect relationships.
5. Population regulatory mechanisms.

C. Ecology
1. Relationships to environment, other faunal species and biological succession.
2. Departures from natural and/or primitive conditions.

D. Integration of plant and animal research to describe Park ecosystem.
1. Classification and description of ecosystem roles.
2. Number and biomass relations.
3. Interspecies ecology.
4. Relationship to biotic succession.
5. Problems relating to providing visitors with the opportunity to see and appreciate natural plant and animal scenes as they would have occurred in primitive times.

II. Research on Park flora will involve the following:

A. Ecological classification and description of natural units of vegetation.
1. Plant species origins and developmental history.
2. Species life history and ecology.
3. Successional processes.
4. Problems relating to portraying natural and/or primitive conditions.

B. Ecosystem relationships.
1. Biomass production of species and ecological units.
2. Measurements and interpretations of climate, physiographic, edaphic and biotic influences.

III. Special studies needed by Park will be carried out by appropriate procedures (see list of Research Goals).

C. Martinka 9/67
Approved by Superintendent Neilson 10/23/67

Work Plan - C. J. Martinka

Project I. Research leading to publication on classification and description of natural units of Park vegetation with emphasis on documenting successional patterns and processes.

Project II. Research leading to publication on habits, habitat relationships, population dynamics, interspecies relationships, and management of the grizzly bear.

Project III. Research leading to publication(s) on elk distribution, movements, population dynamics, winter habitat relationships, and relationships to other fauna (ungulates and predators).

Project IV. Provide technical services to Park, liaison and cooperation with other researchers.

C. Martinka 9/67

Glacier National Park
West Glacier, Montana 59936

WORK PLAN - C. R. Wasem

Project I. Research leading to report and/or publication on physical, chemical and biological classification of Park lakes and streams and identification of waters modified by man-caused eutrophication.

Project II. Research leading to publication on habits, population dynamics and ecology of the Dolly Varden in Upper Kintla Lake and it's tributary streams.

Project III. Carry out mgmt. oriented research or special Park studies relating to:

1. Ungulate winter range condition and condition trend.
2. Seasonal distribution and movement of marked animals.
3. Annual creel census evaluation.

Project IV. Provide technical services to Park, liason and cooperation with other researchers and resource management agencies.

C. R. Wasem 11/67

WORK PROJECTS
Cooperating Researchers

1. Flathead drainage fisheries investigations	D. A. Hanzel and Associates (Montana Fish & Game)
2. Grizzly bear management studies	Faye Couey (Montana Fish and Game)
3. Ecological impact of humans on alpine vegetation	E. Hartley (Duke University)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

IN REPLY REFER TO:

June 10, 1968

OFFICE ORDER NO. 26 (Revised 5/13/69)

BEAR MANAGEMENT RESPONSIBILITIES

The Bear Management Plan - 1969, approved by Regional Director Fagergren on January 16, 1969, provides for the preservation and maintenance of natural populations of bears while providing for the reasonable safety of Park visitors. A copy of the Plan is enclosed for your use and guidance.

The success of the Plan is dependent upon the actions of each Park employee and visitor. The following responsibilities are assigned:

A. TO ALL PARK EMPLOYEES:

1. Be familiar with the Bear Management Plan - 1969 and Notice to Back-country Users and set an example by practicing the instructions outlined in these documents, either while on the job or while on your own time. A copy of the Notice To Back-country users is also enclosed. Please review it carefully.

2. Full cooperation is expected on the bear monitoring system. The following action should be taken on all bear observations and incidents:

   a. Immediately report all personal injuries, property damages and molesting incidents to the Subdistrict Ranger of the subdistrict involved. After appropriate action is taken, the report should be promptly forwarded on Form R-47 (Revised) copy enclosed, entitled INDIVIDUAL BEAR INCIDENT REPORT, to the Resources Management Office at Park Headquarters.

   b. Bear sightings by Park personnel and visitors also should be reported immediately to the Resources Management Office at Park Headquarters on the Bear Observation cards, copy enclosed. Reports from visitors should be as accurate as possible, particularly regarding location and species identification. Habitat type, numbers and elevations should be determined if possible. Be sure to differentiate between new cubs and yearlings.

   c. Do not report sightings written on trail register forms.

B. TO PERSONNEL OF THE DIVISION OF RESOURCE MANAGEMENT AND VISITOR PROTECTION:

1. Ranger Division personnel will be responsible for posting all trail register boards with the Notice to Back-country Users. (See enclosed Notice.)

2. When there has been a bear molestation incident involving property damage or personal injury, the permanent Area Ranger will do the following:

   a. Termporarily close defined areas to foot travel. He will post the signs at appropriate locations to restrict foot travel.

   b. Close outdoor overnight camping in defined areas in the back country, and will post signs at all trail approaches to the defined area.

   c. A Ranger investigation will be initiated immediately upon incidents covered by "2" above, to determine location and circumstances. If the bear raided a back-country camping site with persons in the camp and committed the molesting incident, property damage or personal injury, then it may be destroyed if in the judgment of the Area Ranger such action is warranted in the circumstances. In cases of doubt about the molestation, the permanent Area Ranger will contact his District Ranger or the Chief Park Ranger for a final decision. If the bear has become attracted to an artificial food source, such as a dead horse along a trail, the artificial food source will be removed and a period of one week will be allowed prior to removing restrictions under 2a and 2b. In cases where sows with cubs are involved in molesting incidents along trails, the trail will not be reopened to hiking until lack of sightings indicate the offending bear has left the area.

   d. The Area Ranger will arrange for the posting of warning signs to permit group hiking only when valid reports indicate that a grizzly is frequenting a trail or camping area.

   e. The Chief Park Ranger or his representative will notify the two District Rangers, Chief Park Naturalist, and Trail Supervisor of bear management action pertaining to trail closures and other postings.

3. All management actions are to be reported on GNP-R-34, Record of Bear Management Action. Area Rangers will carry out all the applicable instructions involving bear management in developed areas as stated under the Glacier National Park Bear Management Plan.

4. The Rangers will play a key role in issuing the plastic litter bag and the "In Grizzly Country" folder to persons using the back country. A plastic bag and one folder will be given to each group on the ratio of one per three persons. For example: A party of 4 - 6 persons would be issued 2 of the above items, a party of 7 - 9 persons would be issued 3, etc. Under normal circumstances, the plastic bag will be issued only to persons planning an overnight camping in the back country. Day-use visitors will be encouraged to bring their trash out in the container which they used to carry their lunch in. Issuance of the plastic bag will usually be tied in with the fire permits.

5. Ranger personnel will make frequent inspections in the back-country areas of the Park to contact visitors and to be watchful for non-compliance with the litter bag and garbage buildup problems. Whenever feasible, they will correct the situation at the time of the inspection or make other immediate arrangements. They will conduct bear observations, check trail registers for notations about bears, and keep their supervisor fully informed about back-country use.

6. Ranger personnel will play a key role in recording bear observations, molestations, etc., from interviews with all persons. These reports will be sent immediately to Park Headquarters.

C. TO DIVISION OF INTERPRETATION AND VISITOR SERVICE PERSONNEL:

1. All Park Naturalists will mention to Park visitors, in Visitor Centers, during evening programs, and at every opportunity the inherent dangers of bears in general and of grizzly bears specifically. They will also mention that bear feeding is prohibited not only as a matter of safety, but also to preserve the natural scene.

2. All Park Naturalists will also emphasize, like above, the "PACK-IN, PACK-OUT" Policy, especially at interpretive talks and that litter bags will be handed out upon request. At Visitor Centers the provisions of paragraph B-4 will be followed.

3. While on conducted hikes, Naturalists will pick up and carry out trash along the trails and will explain to those on the hike why they are doing this. The primary purpose of this is not only to help keep the back country litter-free but also to accomplish conservation training by setting an example.

D. TO DIVISION OF MAINTENANCE PERSONNEL: The Park's trail maintenance crews, by the very nature of their duties, are in a particularly advantageous position to observe back-country use and assist in implementing the Park's Bear Management Plan. Accordingly, trail maintenance personnel will be responsible for carrying out the following assigned duties:

1. Each crew leader will report all bear sightings by members of the crew in accordance with paragraph A-2. It is especially important that all grizzly bear sightings be so reported.

2. All trail personnel will be familiar with all the precautions listed on the "Notice to Back-country Users," also, the instructions on the plastic litter bag distributed to back-country visitors for use in carrying out flattened cans, foil, glass, and other litter.

3. Crew personnel, in talking with hikers, should stress the need for the Park's "PACK-IN, PACK-OUT" Policy and offer to provide them with a litter bag if the group does not have one.

4. The Chief Ranger and Trails Supervisor will be jointly responsible in arranging for the notations being made of trail register comments pertaining to bears and the removal of accumulative signed sheets.

5. Each crew leader will post in each back-country shelter cabin in his trail maintenance district, a copy of the Park's "PACK-IN, PACK-OUT" Policy, together with a copy of the reprint entitled "Grizzlies in Camp," which stresses the need for back-country safety by eliminating artificial food sources for bears.

6. Each crew leader is responsible for leaving a clean camp which is free of leftover food and other garbage. Help us to teach the "PACK-IN, PACK-OUT" Policy to all back-country visitors. Bears quickly learn to associate the presence and smell of humans with food for themselves. Hence, the necessity for eliminating old garbage pits and other debris left by the previous back-country users. Clean trailsides invite back-country users to keep them clean.

7. Trails Supervisor will be responsible for training all trail employees in proper back-country habits. Trails employees will consistently pack out their own trash from the back country. Whenever possible, (as when a pack string is empty after delivering supplies) trash which has accumulated over the years will be packed out.

8. When returning to camp (on foot) trail crews shall pick up trailside litter. Trash bags or gunny sacks should be carried for this purpose.

E. RESOURCES MANAGEMENT OFFICE: Reports of molestings, personal injuries, property damage, and sightings will be cataloged and analyzed to assist in identification of existing and potential problems. This information will be reported immediately to the Chief Park Ranger for management action. A map with locations of reported bear sightings will be maintained in the Resources Management Office.

Enclosures:
Bear Mgmt. Plan--1969
Notice to Back-country Users
Form R-47
Bear Observation Card

Keith Neilson
Superintendent

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

BEAR MANAGEMENT PLAN - 1969

INTRODUCTION

Grizzly bears (Ursus arctos) and black bears (U. americanus) are indigenous to Glacier National Park. Populations of both species appear to be relatively stable and self-regulating. The grizzly bear is included on the list of native fish and wildlife threatened with extinction, prepared by Secretary of the Interior Udall on February 24, 1967, in accordance with the Endangered Species Preservation Act of 1966 /Federal Register 32, No. 48, March 11, 1967./

OBJECTIVE

To preserve and maintain the natural status of black and grizzly bears in the Park ecosystem while providing for the safety of Park visitors through reasonable procedures and management.

PROGRAM

Bear management involves considerations of the ecologic and aesthetic values of bears and visitor safety. For management purposes, bears will be designated as either back-country or developed-area bears with management activities directed accordingly.

1. Back-country management:

   a. A trail registration system will be completed to assure that visitors are informed of ways to travel and camp in bear country.

   b. A back-country "pack-in, pack-out" policy will continue. The Park will provide back-country users with free plastic bags to carry out cans and other unburnable trash. Each bag will have an accompanying message telling the visitor about keeping a clean and safer camp by burning all combustible rubbish and packing out all unburnable trash in order to discourage attracting bears to food odors left in unclean campsites.

   c. A bear activity monitoring system that compiles current records of Ranger reports, molesting incidents, property damage and personal injury will provide the basis for the following management actions:

      (1) Temporary restriction of outdoor overnight camping in defined areas--one molesting incident, property damage, or personal injury.

(2) Temporary restriction of foot travel in defined areas--one molesting incident, property damage, or personal injury.

(3) Ranger investigation - will be initiated immediately upon action (1) or (2) to determine location and circumstances. If artificial food sources are involved, they will be removed and a period of one week will be allowed prior to removing restriction (1) or (2). In cases where sows with cubs are involved in molesting incidents along trails, the trail will not be reopened to hiking until lack of sightings indicates the offending bear has left the area.

(4) Trapping, immobilization, and removal of offending bear--when outdoor camping restrictions and/or trail closures fail to cause an offending bear to return to its natural activity pattern away from trails and camping areas.

(5) Direct disposal in an expeditious manner of offending bear--when the remoteness of an area or visitor safety makes capture and removal impossible or whenever the visitor log or other reports indicate two or more molestations of campers or hikers. These reports must be reliable and the specific offending bear must be identified.

(6) Warning signs will be posted and group hiking only permitted when valid reports indicate that a grizzly is frequenting a trail or camping area.

d. A back-country campsite inspection system to identify potential problem areas will continue.

2. Developed-area management:

a. An active and aggressive public relations program with hand-out materials, personal contacts, interpretive programs, news releases, etc., will inform campers and other visitors about the inherent dangers from bears and the endangered status of the grizzly.

b. An active program of information will be directed at Park and concession employees to inform them of the inherent danger of bears, proper hiking and camping procedures, and the endangered status of the grizzly.

c. Inducement for bears to frequent developed areas and roadsides will be reduced by:

(1) Provision of bear-proof methods for trash and garbage disposal in developed areas and the timely removal and/or incineration of such material.

(2) Sequential opening of campgrounds. Campgrounds with greatest history of early season bear problems will be opened as late as possible.

(3) Strict enforcement of Sec. 2.32 (wildlife; hunting), Part 2, "Code of Federal Regulations," Title 36 to prevent bear feeding.

d. Black bears frequenting developed areas or roadsides will be captured and removed by use of appropriate capture equipment. This will be accomplished only by trained, specifically authorized, personnel.

(1) Animals captured for the first time will be ear tagged and released at a point distant from the capture site.

(2) Animals recaptured during the main visitor season will be destroyed unless circumstances dictate another attempt to relocate the animal. Animals trapped and tagged during a previous year or at least 30 days prior to recapture shall be released at a point distant from the capture site. Limit: Two trappings per season.

(3) Biological data will be obtained by the residing Research Biologist from all animals destroyed.

e. Grizzly bears frequenting an area will be trapped or immobilized, ear tagged, and removed from developed areas. Circumstances involving unusual and unprovoked aggression by the bear may dictate immediate destruction. Previously captured animals as indicated by ear tags will be destroyed unless circumstances dictate another attempt to relocate the animal. Animals trapped and tagged during a previous year shall be released at a point distant from the capture site.

3. Area Rangers will be responsible for those provisions of the plan having to do with initiating action to capture and/or dispose of troublesome bears as the need arises.

4. Personal injuries, property damages, and molesting incidents involving bears will be reported to the Chief Park Ranger on Form GNP/R-47(Rev. 1968) INDIVIDUAL BEAR INCIDENT REPORT.

5. All actions taken under this plan will be reported to the Chief Park Ranger on Form GNP-R-32(Rev. 5/66) RECORD OF BEARS TRAPPED OR DESTROYED.

Recommended by: /s/ Keith Neilson — Date 1/11/69
Superintendent, Glacier

Approved by: /s/ Fred C. Fagergren — Date 1/16/69
Director, Midwest Region

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Glacier National Park
West Glacier, Montana 59936

N O T I C E

To Back-country Users

The back country you are entering is inhabited by many species of wildlife, including black and grizzly bears. Back-country bears are usually shy and avoid people, but are always dangerous when encountered at close range. For your safety while in the back country the following precautions are a necessity.

When Hiking

1. Do not travel alone and do not hike after dark.
2. Make your presence known by noise.
3. Use caution where vision is obstructed.
4. Do not carry or use odorous foods.
5. Avoid bears when observed and never approach or attempt to feed them.

When Camping

1. Do not camp in areas frequented by bears.
2. Use "Pack-in, Pack-out" policy by burning all garbage and containers, then carry out all non-combustible trash from the back country.
3. Store foods in airtight containers away from sleeping areas.
4. Sleep near trees when possible.

Women

1. Do not use cosmetics or hair sprays in the back country.
2. Do not travel in the back country during menstruation.

IMPORTANT NOTICE: Bear distribution and activity information are necessary to insure that visitors following you may be informed. Report all bear damage, personal injuries and sightings to a Park Ranger.

Bear Management Report

Date	From	To	Subject
¢?%)?¢&	J. Good	JJC	Received Report
7/5/67	JJC	J. Good	Ask for suggestions
8/8/67	JJC	Supt.	Ask for joint release
8/14/67	JJC notes		Supt. called about report
9/29/67	Supt	JJC	Report
8/10/67	AEC	JJC	Mgmt. Report
8/23/67	Gutermuth	JJC	Ditto
9/13/67	F. Bell	Supt.	Ditto
9/26/67	Gould	Hartzog	Ditto
9/28/67	Regional Forester	JJC	Ditto
3/7/68	Cottam	Linduska	Ditto
6/8/69	Albright	JJC	Ditto, Glacier incident
6/17/69	JJC	Albright	Answer
5/21/68	Linn	Linduska	MGMT Report
5/29/68	JJC	Coutts	Ditto

Also see: Letters and Notes JJC notes 6/28/68

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N22

June 30, 1967

Dr. John Craighead
Route # 3
Missoula, Montana

Dear John:

I have tried to run down your manuscript on the management of bears. On about June 15 or 16, Gerry Mernin turned the original over to one of your graduate students. Jay Sumner thinks Hank McCutcheon was the boy who received it, but I suspect you can check this out and probably have your manuscript by this time.

A Cormac copy of the manuscript landed on my desk today and I intend to read it immediately.

Sincerely yours,

John M. Good
Chief Park Naturalist

July 5, 1967

Mr. John M. Good
Chief Park Naturalist
Yellowstone National Park
Yellowstone National Park, Wyoming 83020

Dear John:

Thank you for your letter of June 30th. The original bear management manuscript was returned to me by Gerry Mernin.

When I talked to you on the phone the other day I was concerned about getting the Cormac copy of the manuscript back with whatever suggestions the Park administrators might care to make. As you know, my purpose was to make certain that you, John McLaughlin, and others would have the opportunity to see what we were recommending in the way of management of grizzly bears before this report was submitted to authorities in Washington.

The delay in getting suggestions back to me may make it difficult to incorporate them in the final report. I would certainly appreciate any impetus you can give to a prompt review at that end.

Sincerely,

John J. Craighead,
Leader

JJC:AB

August 8, 1967

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear John:

Concerning our recent telephone conversation, I wish to confirm that Frank and I have completed a report of MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK supported by your organization and many other contributors. As of this date we are mailing copies to you and to staff officials in Washington, D. C., and to all organizations that supported the research.

As I mentioned over the phone, we have had numerous requests from public information centers to make copies of the report available upon completion. Making available our research reports is a routine procedure of the Wildlife Research Unit and is one of the major objectives of the Research Unit and this is spelled out in our memorandum of understanding.

I do not, of course, intend to make this publication available to the press until such time as I have met with you and your staff to determine the most appropriate time and place for such a release. As you know, we have provided you and your staff with those sections of the report for preview that have a direct bearing on park activities and policies, and so assume there is nothing in the report that could not be made available to the general public.

Because of the tremendous interest in the grizzly bear that exists in the state of Montana, and because of the closeness with which the press has followed this research project, it would be next to impossible not to release the report to those members of the press that have made specific and repeated requests to me for the report.

I hope, as I indicated to you over the phone, that Dr. Frank Craighead, myself, and members of your staff can get together in the near future and review the best way to release the report and possibly make a joint release if this appears to be desirable. I think you should recognize that this report will go to at least a dozen other organizations that have supported the research, some to a considerably greater extent moneywise than the National Park Service and that these organizations

might abstract the report for release at an early date. There is no way, of course, that we could control this, nor would it be in the public interest to attempt to do so.

I personally anticipate no problem in making the release and I feel certain that the report will reflect credit on your organization for the cooperation and support that it extended in this scientific endeavor. Any comments or suggestions that you care to make prior to our discussing this matter will guide our activities until we have arrived at a common decision.

Sincerely,

John J. Craighead

JJC:AB

cc Mr. C. Edward Carlson

August 14, 1967

Superintendent McLaughlin phoned me at the Laboratory in Yellowstone today. We had just learned from the newspapers that two young girls had been killed by grizzlies in Glacier National Park. I thought his call would be in reference to this but he made no mention of the incident whatsoever. Instead he said that he had glanced at our report on MANAGEMENT OF BEARS IN YELLOWSTONE and that though he had not yet read it, he was concerned about a statement in the report appearing on Page 101. The statement had to do with attitude of rangers regarding the control of grizzly bears within the park. He said he did not believe the statement belonged in a scientific report and that it was critical of the Park Service.

I answered that I did not think it was critical and that it was in the report because we thought the information would be of value to him and to his staff. His rangers believed it was a constructive statement. I said I was sorry if he felt strongly about what we had said but reminded him that we had sent the report to him and to his staff for review, specifically requesting that they indicate anything in the report that might in any way be embarrassing to him or his staff. I said that his staff had read the report but that in spite of two letters and several phone calls, I had never received any acknowledgement that the report had been received and not one word of criticism, instruction, or suggestions. I told him the report had been released and it was now too late to make changes. On August 8th I had informed Mr. McLaughlin of my intention to complete the report and requested joint release so as to avoid any embarrassing situation.

Mr. McLaughlin did not reply to the letter but in this phone conversation he said he would not release the report jointly to the press as I had suggested in a letter to him. This I had done as a courtesy and with the hope that we would all be in agreement. He said he saw no need to send copies of the report to the press but would not prevent us from doing so since it was

our report. I told him that I had promised Mr. Bibler of the Associated Press in Helena, Lloyd Schermer of the Missoulian, and John Campbell of the Missoula Radio station that I would provide them copies of the report. They had followed our work closely and were personally interested in the work. All had made repeated requests for the report. I told him that this sort of public education was a major objective of the Montana Unit and that I could not withhold the report. He said he would not ask me to withhold the report but did want to register his objection to certain things in the report which he said should not be in a scientific report.

I questioned him further but it was obvious that he had not read the report but only certain sentences, probably underlined by his staff, and it was apparent that we could have no discussion based on contents of the report. I again said I was sorry but felt the information was there for his best interests and not as a criticism of his rangers or the National Park Service. I said I felt sure the report would be valuable to him and hoped he and his staff would still take time to read it and make a detailed report to us of their objections and also of the areas of agreement. He said there would not be a written comment. However, before terminating the conversation he requested that I send him the names and addresses of the press receiving a copy of the report.

I think that a mistake has been made by not making a joint release to the press. To have done so would prevent possible misunderstanding between the researchers and the Yellowstone Park Administration should some of the material in the report be taken out of context or used to attempt to embarrass either party. Now any adverse comments made by the press can be used by the Park administration to discredit our work and to cite improper handling of the

release of information. I feel that we did all we could to prevent such a situation from arising. The decision not to work with us on this problem was made without any discussion with us and the decision given to us over the phone. My letter on the subject has not been answered to date.

UNITED STATES
ATOMIC ENERGY COMMISSION
RICHLAND OPERATIONS OFFICE
P. O. BOX 550
RICHLAND, WASHINGTON 99352

IN REPLY REFER TO:
RS:WMH

AUG 10 1967

Dr. John J. Craighead, Leader
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear Dr. Craighead:

Thank you for sending me a copy of the report "Management of Bears in Yellowstone National Park." I think the report is very well done. Section 1 and Section 3 were particularly interesting. Your data on the history and habits of bears in Yellowstone are most informative.

It appears to me that much of this report material would be excellent for publication. Again - thank you.

Very truly yours

William M. Harris

William M. Harris
Radiation Sciences Branch
Research and Development Division

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IRA N. GABRIELSON
President

C. R. GUTERMUTH
Vice-President

DANIEL A. POOLE
Secretary

WILDLIFE MANAGEMENT INSTITUTE

EGBERT C. HADLEY
Board Chairman

HARRY L. HAMPTON, Jr.
Treasurer

Dedicated to Wildlife Restoration
WIRE BUILDING, WASHINGTON, D. C. 20005

August 23, 1967

Dr. John J. Craighead, Leader
Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

Your grizzly bear report was studied over the week end. I have made photo copies of the Summary of Recommendations for Management to give to the members of the Yellowstone committee. Dan Poole, as you know, is on the committee.

You will be interested in the enclosed copy of "News From Nilo." I also have included photo copies of newspaper clippings that I secured.

In view of the study by the Yellowstone Committee, your report could not have appeared at a more propitious time.

Sincerely,

"Pink"

C. R. Gutermuth
Vice-President

CRG:dt
Encl.

Rocky Mountain Laboratory
Hamilton, Montana 59840
September 13, 1967

Mr. John McLaughlin
Superintendent
Yellowstone National Park
Wyoming 83020

Dear Mr. McLaughlin:

I consider myself fortunate in having had an opportunity to read the report on "Management of Bears in Yellowstone National Park." The diversity of sources of financial aid for the study project reflect the wide interest of Americans in obtaining sound scientific knowledge upon which to base management of the endangered grizzly. Certainly the Park Service, and particularly the administrators of Yellowstone Park, are to be wholeheartedly congratulated for having made the project possible.

Obviously your choice of investigators to conduct the study was very wise from a scientific point of view. I have been engaged in scientific work in the laboratory and in the field for 35 years and greatly admire the logic, intensity and thoroughness of the Craigheads in their approach to difficult field problems. I also feel that their ability to present their studies to the public in a fascinating and comprehensible way serves a most useful purpose in gaining support for rational management.

You have set a high standard for comprehensive investigation of a National Park problem. I hope that that standard will be achieved in the investigation of other problems.

Sincerely yours,.

J. Frederick Bell, M.D.

JFB:imm

cc: Mr. Stewart L. Udall
Secretary of Interior
U. S. Department of Interior
Washington, D. C. 20000

Mr. George Hartzog
Director of National Park Service
U. S. Department of Interior
Washington, D. C. 20000

THE UNIVERSITY OF ARIZONA
TUCSON, ARIZONA 85721

COLLEGE OF MINES
DEPARTMENT OF GEOLOGY

September 26, 1967

Mr. George B. Hartzog, Jr.
Park Service Director
National Park Service
Washington, D.C.

Dear Mr. Hartzog:

I have just been reading with great interest the report "Management of Bears in Yellowstone National Park" by Drs. John and Frank Craighead. I am greatly impressed by it and by the recommendations for management which they have included. Some of the tragedies that have happened might have been avoided if the insights, which these remarkable ecologists have, had been incorporated into practice.

I am well familiar with the work of the Drs. Craighead whom I have known for many years. I have a summer home in Jackson Hole and have been in the field in Yellowstone Park watching these men in their fascinating and I believe very important work.

I'm sure people in positions like yours get a great deal of advice. I don't really mean to advise you. I am only suggesting what a mine of information I found the Craighead report to be.

Cordially yours,

Laurence M. Gould

LMG:eg
CC: Dr. John L. Craighead

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
NORTHERN REGION
FEDERAL BUILDING
MISSOULA, MONTANA 59801

ADDRESS REPLY TO
REGIONAL FORESTER
AND REFER TO

2630

SEP 2 8 1967

John J. Craighead, Leader
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

We appreciate the opportunity to review your manuscript, Management of Bears in Yellowstone National Park. It has been routed to a number of people in the Regional Office for their review and information. I am sure they will find it interesting and informative. It will receive our close study and will be helpful in developing future programs and plans.

Phasing out the refuse dumps in the Park would seem to require drastic readjustment by the grizzlies if the supplemental feeding is not effective. What will be the probable impact at the campgrounds in the Park and the adjacent campgrounds and refuse dumps on National Forests? Possibly we should plan to phase out or eliminate the dump at West Yellowstone at the same time phasing out is being accomplished in the Park.

Is the high mortality outside the Park largely legal hunting or a variety of causes?

A copy of our Northern Region grizzly bear policy is enclosed for your information.

Thanks again for the chance to review your very interesting study.

Sincerely yours,

Neal

NEAL M. RAHM
Regional Forester

Enclosure

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TITLE 2600 WILDLIFE MANAGEMENT

2633.4 - Endangered Species Areas. The range of the grizzly bear in Montana and north Idaho is considered an endangered species area. It is the intent of the Forest Service to favor the grizzly on its range. Within this range and adjacent areas where Forest Supervisors consider maintenance of bear populations to be desirable, the following special considerations will be taken to favor grizzly bear:

1. Forest officers will strongly support hunting regulations designed to sustain grizzly bear populations.

2. Measures favoring grizzly bear habitat will be considered in wildlife management, wilderness area, and district multiple use plans. Support research and administrative studies on grizzly bear and their habitat.

3. Human use will be controlled on key ranges to meet objectives of sustaining or restoring grizzly bear populations. This can be done by restricting access, among other things.

4. Some property damage and inconvenience to Forest Service personnel will have to be tolerated.

5. Work crews will not be permitted to carry guns on the job in grizzly bear range. A high-powered rifle may be kept in camp for emergency use; however, this rifle will not be used against grizzly bear unless an attack is underway. The rifle may also be used to escort crewmen away from areas near dangerous or marauding grizzlies.

This restriction will not prevent Forest Service personnel from taking guns into grizzly range on legitimate big-game hunts.

6. When an ill-tempered grizzly is known to be a hazard to work crews or the general public, prompt administrative action will be taken to remove people from danger. Immediate followup with the proper local State game officer will be made to resolve the problem.

7. The need to protect grizzly bears will be publicized.

Precautions to Minimize Bear Incidents. In order to minimize bear incidents which would endanger personnel and property in grizzly country, the following should be done:

1. Request hunters to report knowledge of wounded bear to forest rangers or game officers.

2. Incinerate all garbage in camps which are occupied for more than two nights.

3. Advise lone travelers or small groups to talk, whistle, wear bells, or make noise. If a bear is sighted, maneuver to give it the

XEROX COPY

human scent. Bear are afraid of the human scent and usually are frightened away by noise.

4. Be particularly alert for bear when traveling on foot. Attempt to locate bear in travel path in order to avoid a close encounter. Take a safe haven when a bear is sighted. If a bear approaches and you cannot reach a safe place, it is better to play dead than to run.

5. Do not use old crosscut saw blades or anything which could seriously maim a bear to bar cabin windows and doors.

These precautions will be incorporated in crew instructions, handout literature, and other public contact media.

XERO COPY XERO COPY XERO COPY XERO COPY

ROB AND BESSIE WELDER WILDLIFE FOUNDATION
WILDLIFE RESEARCH AND EDUCATION
POST OFFICE DRAWER 1400
SINTON, TEXAS 78387

TRUSTEES
JOHN J. WELDER
PATRICK H. WELDER
M. HARVEY WEIL

CLARENCE COTTAM
DIRECTOR

W. C. GLAZENER
ASST. DIRECTOR

H.R.
F.S. & C.K.

March 7, 1968

Dr. Joseph P. Linduska, Associate Director
Bureau of Sport Fisheries and Wildlife
U. S. Fish and Wildlife Service
Washington, D. C. 20240

Dear Joe:

Some weeks ago John Craighead sent me a fairly good sized manuscript that he had prepared as a report to the National Park Service on his studies of the grizzly bear in Yellowstone. I think the two Craighead gentlemen have done a superbly fine job. To my way of thinking they have accumulated more geuninely good data than I know of any place else. It seems their material should come out sometime as a monographic report. I don't know that their report in its present form would be quite in line with the North American Fauna series but I am sure they would be delighted to put this thing into shape and fill in some gaps and round it out into what I believe would be an excellent contribution. I thought you might possibly be interested. Anyway, I have read the manuscript rather carefully and made some comments on it to them. In any case, it needs to be brought to light and I know of no finer place to publish a splendid article of this sort than in the North American Fauna series. If you are at all interested I suggest you get in touch with them.

With all good wishes,

Sincerely yours,

Clarence

Clarence Cottam, Director
Welder Wildlife Foundation

CC:rth

P.S. Hope to see you in Houston

HORACE MARDEN ALBRIGHT
427 LANDFAIR AVENUE
LOS ANGELES, CALIFORNIA 90024

June 8, 1969.

My dear John Craighead:

I hope this will catch you before you take to the field for the summer. Much to my regret, I have not been in touch with you for nearly two years. I had a fine visit with your grand old Dad in the Everglades late in April. I was delighted to find him in perfect health, and the same grand fellow II knew so well in my Yellowstone days and in Washington.

I wonder what you brothers think about the three articles in SPORTS ILLUSTRATED about the grizzly bear tragedy in Glacier Park in 1967? Of course, I know you would never favor the author's - and the editor's - viewpoint that the grizzly must be exterminated. I note that the stories in the magazine are to be expanded into a book. I do not know the author. The articles were brought to my attention by high officers of Columbia Broadcasting System in New York. I was there for two weeks after our brief stay in Florida.

I wonder too how you men feel about Sup't Anderson of Yellowstone and his sudden decision to destroy all garbage, thus brining grizzlies down to the Grand Loop Road in Hayden Valley, and making it advisable to warn tourists to stay in their cars. I did not like this at all, and it seemed to me that Anderson was acting without consulting you, or studying your reports - if he had one, which I assumed he did have.

If you can write me briefly your views on these items, I'll appreciate your doing so. We will be here until late August when we will go to Yellowstone for a few days, then to Grand Teton for Laurance Rockefeller's board meetings which take place on Sept. 4th and 5th. I hope I will have a chance to see you there.

With kind regards, I am

Sincerely yours,

Horace M Albright

Dr. John J. Craighead,
University of Montana,
Missoula, Mont59801

P.S. It was exactly 50 years ago that I became Supt. of the Yellowstone.
They

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

June 17, 1969

Mr. Horace M. Albright
427 Lanfair Avenue
Los Angeles, California 90024

Dear Mr. Albright:

It was nice to hear from you again and I am hoping that this letter can be followed by a visit with you in Grand Teton in early September. I will answer your questions as factually as I can. I trust you will be circumspect in your use of the information.

I am enclosing copy of a letter I sent to Sports Illustrated that expresses my thoughts on the Olsen articles. I am not in agreement with either Dr. Moment's or Mr. Olsen's views that the grizzly should be eliminated from our large wilderness parks. I notice that Olsen in a later issue of Sports Illustrated made it clear he was not advocating exterminating the grizzly, but believes that "bureaucratic bungling" would ultimately doom the grizzly in our national parks. Olsen labeled it "bureaucratic murder".

In the Glacier grizzly incidents of 1967, the Park Service was grossly negligent and unfortunately attempted to cover up by concealing the facts. The actions of the two biologists involved, Glen Cole and Cliff Martinka, were particularly reprehensible since they were the investigative biologists and knew better than to issue "half truths". Also, it is incomprehensible that no "bear experts" were consulted. We were denied information until the report was issued.

The accidents might have been excusable, but concealing the true nature of the accidents was inexcusable. Also, it is obvious that another such incident will sound a death knell for the grizzly in Glacier National Park, or in all of our large national parks for that matter. This is what prompted me to write my letter to Sports Illustrated.

I have been extremely concerned about Superintendent Anderson's handling of the garbage situation in Yellowstone and his bear management policies. His biologist, Glen Cole, has ignored our recommendations and the result could be extremely serious. I do not care to get into a discussion of personalities at this time, but I would be more than happy to discuss this matter with you in greater detail should we be able to get together in September.

I personally believe that if the policies currently being practiced in Yellowstone are continued that there will be one or more grizzly bear tragedies in that park.

The National Park Service, including Mr. Anderson, has copies of our report. I am enclosing comments made by the Park Service's chief scientist on our grizzly bear report. I am also enclosing my reply. Nothing has ever been done to rectify these differences of opinion and, in general, Mr. Linn's ideas have been followed and our advice, based on eight years of intensive research, ignored.

The abrupt termination of feeding at the Trout Creek garbage dump rather than a slow phasing out over a four or five year period (as advocated by Frank and myself) has, I believe, greatly increased the danger of bear-man incidents in Yellowstone. This in spite of our persistent efforts to dissuade the present administration from carrying out such policies.

In the best interests of the National Park Service and for the sake of the grizzly bear, I would like to see a true airing of this situation. In deference to the National Park Service, Frank and I have refrained from making an issue of the matter, but I believe it is only a matter of time until the entire management of grizzly bears will have to be discussed openly with the people who are most qualified to give opinions and to recommend management ;suggestions.

Kindest personal regards,

John Craighead

John J. Craighead,
Leader

JJC:AB

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
N22-N

May 21, 1968

Memorandum

To: Associate Director Joseph P. Linduska, Bureau of Sport Fisheries and Wildlife

From: Deputy Chief Scientist Robert M. Linn, National Park Service

Subject: Management of Bears in Yellowstone National Park, by Drs. John and Frank Craighead

The report, "Management of Bears in Yellowstone National Park," by Drs. John J. and Frank C. Craighead, dated July 1967, was received in August 1967. It contains four sections: (I) History and Past Management of Grizzly and Black Bears in Yellowstone, (II) The Problem of Managing Bears, (III) Population Dynamics of Grizzlies, and (IV) Suggestions for Managing the Grizzly. The question now arises as to the feasibility of publishing the report, to which I should like to address the following observations.

Section III of the report deals with population dynamics of the grizzly, and it is this aspect that is supported by field research. I am inclined to believe that this section is of most value to the scientific world and should be given further refinement for publication. On page 33 is the statement: "In this report we will not attempt to explain methods, to provide complete quantitative evidence, or to analyze all supporting data; such material will be presented in separate scientific papers." In order to produce publishable material, these omissions should be rectified because, as the authors state in various places throughout the report, scientific data must form the basis for conclusions and subsequent management procedures. This implies that the data upon which conclusions are drawn should be readily available and that the same conclusions could be extracted by most any scientist treating these data. Extremely important to any scientific paper is the exposition of methods used and the data obtained from the enactment of those methods, as well as the interpretation of those data to form conclusions. In summary, it is recommended that Section III be prepared for publication, giving full emphasis to sections on methods and data. From what I know of the project, this should make a fascinating paper, replete with important new methodology of great benefit to the scientific community.

I have serious reservations concerning the remainder of the report--at least for publication purposes. Primary among these is the way in which the purpose of a national park, as related in the report, comes through to me. For example, I would consider as a goal in the management of natural areas of the National Park System, "to maintain, or re-create when necessary and to the extent possible, those ecological conditions that would currently prevail were it not for the advent of post-Columbian man and his cultural impact." But the implication in the report is that the Park Service should manage the resources to augment the grizzly population. For example, on pages 46 and 58, it is shown that the grizzly population has increased at an average annual rate of 6 individuals from 1959 through 1966; then on page 61 is the suggestion that management should be directed toward increasing the survival of females to breeding age, thus increasing population numbers. In view of the fact that on page 6 the report states, "It is not known how the present population in the Yellowstone area compares with that of early times," it seems to me to be unscientific to recommend augmentation of population numbers when the entire idea is to present a natural population. Again on page 72, the first fact enumerated reads, "Annual recruitment is only slightly in excess of annual mortality; therefore the growth of the population is very slow." My question is, why should there be continued growth of a population except as segments of short-term cycles? This would only lead to overpopulation. Again the objective is to maintain or restore natural ecosystem relationships.

There are other management recommendations that need much further investigation prior to serious consideration. For example:

1. The reestablishment of distinct grizzly bear populations on suitable lands outside park boundaries is desirable. However, this would require that other agencies assume responsibilities that they probably will not be able to uphold. Hunters and grizzly do not mix too well where a downed elk or moose is the issue. It is also unlikely that the grizzly would remain protected on other than park lands after even one incident such as occurred in Glacier. It is probably realistic to recognize that significant grizzly bear populations will only be maintained in the larger national parks or game preserves where hunting is excluded and human use is carefully regulated.

2. The recommended "phasing out" of the Trout Creek dump represents an impossible research design for evaluating a practice which must either be <u>eliminated</u> or <u>continued</u>. I am apprehensive that phasing out would at some point hold animals on limited food supplies (as in Glacier), actually encourage incidents and lead to a restoration of garbage feeding before the no garbage feeding situation was tested.

3. I heartily disagree with the recommendation that the park policy should not be to afford visitors the opportunity to see a grizzly bear. I would consider it essential that we provide the opportunity for visitors to safely see a grizzly in a natural setting, or at least have an awareness that the animal exists in the park. One such approach could be to have an interpretive pullout with signs on both ends of the Hayden Valley. The sign could read along the lines of "The Hayden Valley is the home of the grizzly bear and other native animal life. Enjoy these scenes of primitive America from your car, or by staying on the roadside. Foot travel off roadsides is prohibited to assure your safety and to avoid disturbing the wild animals." A brief interpretive treatment of grizzly habits in relation to when he can be seen could follow. I would like to think that even if a visitor did not take the time to see a grizzly, his park experience would be enriched by knowing he at least drove through an area where they lived.

4. Last, but not least, the report directs some rather severe criticism toward the park's bear protection and management program. Early work by Murie is ignored, and it is apparently considered accidental that a representative grizzly population has been maintained over all these years and in the face of increasing visitation. It is one thing to be responsible for human safety and another to dramatize the removal of the few grizzly that have had to be controlled over the years. Here, too, the biological approach which realizes that the death of one member of a naturally regulated population simply provides food or space for another to recruit into the population would be appropriate.

In regard to the latter, I believe it inappropriate to accuse Service personnel on page 23: "Many of these accidental deaths resulted from incompetent administration of drugs by rangers attempting to immobilize bears..."; and then on page 57 to excuse mortality due to the research operation with:

> "Ten grizzlies were inadvertently killed by the injection of drugs. Three of these occurred during the first year of the study and were the result of developing and improving the immobilization technique. The other seven were all bears that for one reason or another were unusually susceptible to the immobilizing drug or were purposely drugged heavily to prevent accidents in congested campgrounds where these bears had become troublesome. Mortality induced by the research project averaged 1.4 grizzlies per year, or one animal for every 40 that were handled."

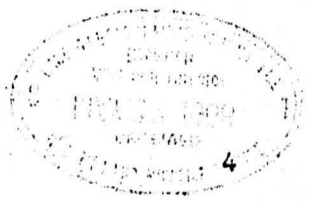
The bear management recommendations have been made to the National Park Service for consideration in advance of the supporting data. However, if

the Service is to manage its natural resources as a result of pertinent, scientifically obtained information, it must have access to the data which formed the basis for these recommendations. While the Service is considering each of the recommendations, it is handicapped by the lack of these data--especially in view of conflicting opinions that I have commented upon above. Therefore, I would suggest that "publication of most of the supporting data" (page 1) be accomplished as soon as possible so that due consideration can be given to the conclusions.

In summary, it is my opinion that (1) the report, in its present form, is far from publishable; that (2) Section III material should be expanded to include methodology and basic data before publication, and publication of this material should materialize; that (3) management recommendations cannot be judged without supporting evidence, and the Service cannot condone publication of recommendations having such broad impact without hard data to support them. I would also like to point out that on page 1 the report states, "The results of this study are being prepared for publication in scientific journals," and on page 33 it states, ". . . such material will be presented in separate scientific papers."

In view of the several contemplated publications concerning the several specific issues within the report, I wonder why the report itself should be published as such. It will be the total body of data and conclusions as found in many scientific reports that will be used to develop the policies and guidelines for management of bears and other natural resources in Yellowstone National Park.

Robert M. Linn





STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. James M. Coutts, Acting Chief
Division of Wildlife Research

DATE: May 29, 1968

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

Before commenting on Mr. Linn's memorandum of May 21, 1968, I think some background information and some general comments are in order - especially since the gist of Mr. Linn's review of the bear management report is highly critical and he discourages publication on the grounds that the report has served its purpose now that it is in custody of the National Park Service. I think it is essential for Mr. Linn to be aware of the following facts.

The grizzly bear study was initiated in 1959 solely on the initiative of Drs. Frank and John Craighead, but with the consent and cooperation of Lemuel Garrison, Superintendent of Yellowstone National Park. A major objective of the research was to gather information that would enable the National Park Service and federal and state agencies to cope with the problem of managing an endangered species. We recognized that since Yellowstone National Park is not a complete ecologic unit and since grizzlies move in and out of Yellowstone that the problem of managing bears would have to be shared by a number of land management agencies. Those agencies concerned, also recognized this essential fact.

Since the beginning of the research study in 1959, the Montana Cooperative Wildlife Research Unit in cooperation with the Environmental Research Institute has annually budgeted approximately $85,000 for the grizzly bear research project. Funds have been obtained from such organizations as the National Science Foundation, Atomic Energy Commission, the National Geographic Society, the American Museum of Natural History, the New York Zoological Society, the Wildlife Management Institute, Montana State Fish and Game Department, the University of Montana, Philco Corporation, the Bureau of Sport Fisheries and Wildlife, and other organizations.

Contributions were made for basic research but most contributors, including the National Park Service, emphasized their interest in the development of a management program. Correspondence from some of the financial backers specifically indicated they expected a management plan and the eventual publication of such a plan with wide distribution of such. The interagency nature of the responsibility for managing grizzly bears was never questioned.

When the study began, no funds were provided by the National Park Service. A housing facility was provided in 1959 and 1960. In 1962 Dr. Frank

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Craighead requested support for the project directly from the office of Senator Metcalf. Senator Metcalf expressed keen interest and this letter was passed on to the Assistant Secretary of Interior John A. Carver, who authorized funds in the amount of $6,000 annually. The request for these funds did not go to the Bureau of Sport Fisheries and Wildlife or to some other government source, but to the National Park Service. The Yellowstone Park administration was directed to supply the funds. This was a high-level decision.

From the beginning the intent was that there would be no strings attached to this contribution so as to keep the research as objective as possible. However, the National Park Service eventually managed to incorporate it into a contract against the wishes and judgment of the researchers. The financial contribution to this study by the National Park Service has been minor compared to the total investment. Cooperation during Mr. Garrison's term as superintendent was excellent.

Surely Mr. Linn realizes that the investigators have responsibilities to other supporters and collaborators as well as to the National Park Service. Also Mr. Linn must be aware that eventually all the material gathered in this study will be available to the National Park Service. The Park Service is the chief recipient of the effort that has been put out. The study and our presence in Yellowstone were instrumental in showing the need for basic research in this park and we strongly urged and supported the National Park Service in its efforts to develop its own research capability.

We have made rather exceptional efforts to resolve difficulties and to cooperate. Nevertheless, the general feeling among some responsible Park Service personnel is that they will tolerate privately sponsored research activities within Yellowstone but not encourage it. A condescending but not cooperative attitude prevails. Unnecessary "roadblocks" are all too frequently manufactured. This attitude has prevailed in spite of the fact that we have repeatedly pointed out that it is a responsibiliyty of the Bureau to do research on public lands. This negative, often hostile, attitude has grown in direct proportion to the success of our research efforts.

We believe it is our responsibility to eventually make available to the National Park Service all the information we have obtained, but we also feel there should be no restriction on the publication of this material unless it can be clearly shown that the information is invalid or would be unnecessarily embarrassing to the Park Service.

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Now with regard to the specific comments made by Mr. Linn.

On Page 1, Paragraph 2, Mr. Linn objected to the fact that in our report we did not attempt to explain methods or to provide all of the quantitative evidence we have for some of the conclusions arrived at. He has stated that in order to produce publishable material, these omissions should be rectified. I think it is clearly stated in the report why it is not feasible to include all of the data. It would constitute a report of from 500 to 800 pages, which would not be read by the very people who should read such a report. Also, the time involved in compiling a report of this kind would take years - and the grizzly bear is a threatened species and the management of this species needs immediate attention. Furthermore, the report contains more quantitative data than any similar report of this nature that I am aware of.

What Mr. Linn does not state is that ample quantitative evidence, but not all our data, have been included in the report to substantiate the conclusions drawn, and as such enables other scientists and administrators to determine how our conclusions were reached.

Also, if Mr. Linn were at all familiar with the work we have published to date, he would realize that much of the methodology has been described in the scientific literature and other papers are in progress. The purpose of the management report was not to go into detail on methodology but to draw conclusions from a long and detailed research study.

It is rather difficult to reconcile how Mr. Linn as deputy chief scientist of the Park Service can consider our report scientifically inadequate, yet have apparently given his official sanction to the recent National Park Service report GRIZZLY BEAR ATTACKS AT GRANITE PEAK AND TROUT LAKE IN GLACIER NATIONAL PARK IN AUGUST 1967. This report not only has been published, but the Park Service has felt it of sufficient importance that they can charge the public $6.50 without photographs and $7.50 with photographs.

Although the above-mentioned report deals with bear incidents and management implications, no attempt was made by the National Park Service to elicit the help of scientists with long experience in bear research. It is certainly impossible for the reader to arrive at the conclusions stated by the National Park Service from the type of data presented in the report. This report certainly should be carefully scrutinized by the scientific community, because the objectivity of the report can certainly be questioned and no doubt will be since a national resource is at stake.

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DATE:

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

On Page 20 of his memorandum, Mr. Linn states "I have serious reservations concerning the remainder of the report - at least for publication purposes" and he states "Primary among these is the way in which the purpose of a national park, as related in the report, comes through to me . . . . . But the implication in the report is that the Park Service should manage the resources to augment the grizzly population." Mr. Linn takes a full paragraph to state that the report recommends augmentation of the grizzly bear population so as to create an unnatural population. Mr. Linn also states that on Page 61 of our report we suggest that management should be directed toward increasing the survival of females to breeding age, thus increasing population numbers.

Actually what we have stated is as follows: "In view of these findings, grizzly-bear management should be directed toward increasing the survival of females to breeding age and providing greater security for those that have attained this age. This would increase the size of the productive female segment of the population and help to insure survival of the species." Since the grizzly bear is a threatened species, it would seem reasonable to suggest management techniques or management procedures that would enable this species to increase in numbers. In the body of the report we show how this can be done by creating a buffer zone around Yellowstone National Park. The report does not discredit the primary Park Service goal of maintaining or re-creating ecological conditions existing before the advent of the white man.

We suggest that the Park Service could cooperate with other agencies in creating a larger base population of grizzlies which would afford a greater margin of safety for the species. Nowhere have we advocated artificiality in management, but have pointed out where it already exists or how it could be eliminated or partially rectified. Again, it must be recognized that management of the grizzly is not the sole responsibility of the National Park Service but is also very much the responsibility in the Yellowstone Park area of the National Forest Service and the Montana, Wyoming, and Idaho Fish and Game Departments.

Mr. Linn goes on to say that he considers it unscientific to consider augmentation of population numbers even though this augmentation is done by natural means. Apparently he does consider it scientific to recommend the reduction of population numbers even for an endangered species such as the grizzly, or perhaps his concept is that the Park Service should to nothing.

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DATE:

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

The problem is that park land has protected the grizzly, but more than passive protection is now needed. We have provided information which will enable the Park Service to do some constructive management of grizzlies providing the Service chooses to look at this problem not as a National Park Service problem alone but as a problem involving other resource management agencies as well.

I fail to see anything in our report which infers or suggests that the management procedures we have advocated would conflict with the Park Service policy of maintaining or restoring natural ecosystem relationships. We suggest how these relationships can be restored or partially restored (see Page 88).

During the period of study, there was a slow growth of the population of grizzlies in Yellowstone. This was due partly to the fact that the Park Service personnel reduced the number of grizzlies annually killed in their control operations and that we perfected bear-handling techniques and passed these on to ranger personnel. Also there was a concerted effort on the part of agencies outside the Park to cut down on grizzly bear mortalities. The wide publicity given the study created an awareness of the need to conserve the grizzly and we believe this all had a beneficial effect.

There is no doubt that overproduction on the part of the grizzly could lead to overpopulation which is clearly pointed out in our report (Page 105). However, the fact that a population will increase if protected cannot be used as an argument that this is "tampering" of the ecosystem. Certainly no population biologist could be that naive. I fail to see Mr. Linn's point. Perhaps he is opposed to management of wildlife in a National Park. If so, he should state his belief - not confuse biological principles.

On Page 2 Mr. Linn states that there are "other management recommendations that need much further investigation prior to serious consideration". Number 1, he states that, "The reestablishment of distinct grizzly bear populations on suitable lands outside park boundaries is desirable. However, this would require that other agencies assume responsibilities that they probably will not be able to uphold." The fact is that these agencies have been assuming and upholding these responsibilities, and appear to be far more responsive to the suggestions resulting from nine years of intensive research than is the National Park Service's Deputy Chief Scientist.

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DATE:

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

A careful reading of the report will show that the grizzlies were not to be given complete protection on lands outside the park. In fact, the report clearly states how grizzly bears can be controlled outside of Yellowstone National Park (see Page 106). Suffice is to say that we have overwhelming correspondence and personal conversations to support the fact that the National Forest Service and the Montana, Idaho, and Wyoming Fish and Game Departments are ready and willing to cooperate in any plan that will help to sustain a population of grizzly bears outside the immediate environs of Yellowstone. This can be accomplished if the National Park Service is willing to cooperate.

Page 2, Number 2. Mr. Linn states that "phasing out" of the Trout Creek dump represents an impossible research design for evaluating a practice which must either be eliminated or continued." There is no statement anywhere in the report suggesting that the National Park Service either maintain their earth-filled dumps or eliminate these substituting them with incinerators. On Page 93, last paragraph, we state "However, concentration of grizzlies during the summer at refuse dumps has both advantages and disadvantages in the management of the species." For six pages then we go on to say in as objective a manner as possible, the pros and cons of retaining or eliminating refuse dumps. When officials of Yellowstone were questioned concerning administrative plans for garbage disposal, we were informed that there were long-range plans for substituting incinerators for the open-pit dumps, but no official time scheduling. There was certainly no communication that this decision was an either/or proposition and that we should consider management suggestions in this context. Mr. Linn implies that after the decision was made to install incinerators that the possibility of doing this gradually and evaluating the effects on grizzlies was not possible if a valuable resource were at stake. There is no question that slow phasing out of garbage dumps would be costly; however, this point is recognized by the authors in the report (Page 89).

No direct funds are now appropriated for bear management in Yellowstone. It does not seem unreasonable to spend some of the taxpayer's money to determine what will occur when the open-pit garbage dumps are removed. Mr. Linn has criticized our report as lacking in supporting data, yet his evaluation of phasing out garbage dumps is based only on his personal beliefs and an apparent budgetary problem.

FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

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Division of Wildlife Research

DATE:

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

Mr. Linn states "I am apprehensive that phasing out garbage dumps" (as recommended in our report) "would at some point hold animals on limited food supplies (as in Glacier), actually encourage incidents and lead to a restoration of garbage feeding before the no garbage feeding situation was tested." It is hard to conceive how one reasons that some food for the animals would make them more dangerous than no food at all. To the best of my knowledge, there is no statement in our report which indicates that the National Park Service should either get rid of open-pit dumps or provide incinerators. We simply present the pros and cons.

It seems incomprehensible to us that such points as these should be the subject of criticism when to date no member of the National Park Service has ever had either direct conversation or correspondence with us concerning our management report - with the exception of one phone call on August 14, 1967, from Superintendent McLaughlin who took issue with one or two statements in the report referring to Park Service personnel - in spite of every effort of the authors to bring this about.

On June 12, 1967, Dr. Frank Craighead and myself met with the Yellowstone staff specifically to go over the report, left the report with them, and specifically asked for comments and suggestions so we could finalize the report. Since then we have vainly tried to communicate for nearly a year. Mr. Linn's reponse is the first and came only after official prodding. Prior to this time there have been no comments or suggestions forthcoming, either verbally or in writing. Correspondence and phone calls produced no results. The manuscript was finally printed after a long delay, but still with no comment from Park Service officials.

On Page 3, Number 3, Mr. Linn states "I heartily disagree with the recommendation that the park policy should not be to afford visitors the opportunity to see a grizzly bear." Again Mr. Linn has grossly misinterpreted our statements. We have suggested in the management policy how grizzly bears could be viewed by the public but did state on Page 97 "However, providing a wildlife display of grizzly bears for the public should be secondary to the objective of holding the base population of grizzlies within the confines of the park." We then propose a modest program for the public viewing of grizzlies. I think that Mr. Linn should know that we discussed with former superintendent, John McLaughlin, how grizzly bears could be baited using elk kills and how these carcasses could be placed so that grizzlies would be attracted and could be viewed by the

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general public. We helped the Park Service to initiate a pilot program of this type based on our research; however we did warn there were dangers to a program of public viewing and that it could easily get out of hand.

It is hard to believe that Mr. Linn has read our report and arrived at the types of conclusions and statements he has incorporated into his memorandum. It would appear that he has been influenced by other information and not by the content of our report alone. Since Mr. Linn is not in a position to have any considerable amount of first-hand information on the grizzly in Yellowstone, it would be illuminating to know the sources of his information. I suspect he is relying on the attitudes of colleagues rather than on systematically gathered data.

Number 4, Page 3. Mr. Linn's comments on Item 4 are of such an emotional nature that it appears useless to even comment on them here. Obviously the research workers recognize the role of Yellowstone National Park in protection of the grizzly bear. It is stated in the very beginning of the report. It would be easy to strengthen this if this has caused concern.

In no way has the removal of a few grizzlies been dramatized. We have simply indicated how these grizzlies have died and we have been consistent in stating, as noted by Mr. Linn, that research people were responsible for some mortality. Had we wished to dramatize the control mortality, we could have stated how prior to the inauguration of our research program, practically all grizzlies killed within the park were thrown on the dumps with only an occasional attempt to preserve a specimen. Also we could have told how one extremely valuable marked grizzly bear was shot by a ranger and then the claws cut off for souvenirs. This was done with full knowledge of the value of the bear to our research program. We were not informed of the incident. We might also have cited incidents of grizzly bear killings by park personnel that were not reported by rangers in accordance with National Park Service directives. We also might have stated that we developed the immobilizing techniques and in turn instructed park rangers so that they in turn could utilize these techniques. The fact that some rangers tried this without adequate training and the fact that this was attempted on a much larger scale than it should have been without greater proficiency could have been highly dramatized by us if this had been our purpose.

Instead we have recognized the problems the Service has in managing bears and have tried to be helpful. Our attitude on this point is summed up on

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. James M. Coutts, Acting Chief
Division of Wildlife Research

DATE:

FROM : John J. Craighead

SUBJECT: Deputy Chief Scientist Robert M. Linn"s Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

Page 101 "The majority of rangers, however, understand the problem and require only more supervision and adequate financing to do a more efficient job." The section on personnel was included only after discussion with rangers and because they felt it would be helpful.

At the end of Page 3 Mr. Linn again reiterates that the management recommendations have been made to the National Park Service for consideration in advance of the supporting data. Our contention is that more than an adequate amount of supporting data have been presented in the report and that any additional data would be superfluous and would detract from its readability. Also, as stated before, the National Park Service and other agencies will have to manage grizzly bears in the very near future if they are going to save this endangered species. My personal feeling is that the chief scientist of the National Park Service should be thankful to have nine years of scientific data and experience on which to base a management program.

The few critical statements that have been made in the report have been made in the interest of the Park Service and in the interest of managing the resource and not to embarrass the Service which seems to be a central theme of Mr. Linn's memorandum.

It also should be noted that the National Park Service was given more than ample opportunity to rectify these situations in the advance copy of the manuscript. We pleaded with park personnel to make these corrections so that we would not be put in a position of unnecessarily or inadvertently criticizing a sister organization. Since we made every attempt to work out these problems with the National Park Service at the field level, and since an important aspect of research is to get information into published journals so that it can be available to all, we feel that the management report, with minor alterations, should be published at the earliest possible time.

We can offer concrete evidence that other scientists, agencies, and financial backers support this view. We should again like to point out that the National Park Service has been receiving the benefits of an $85,000 annual research project for an annual Park Service investment of less than $2,700.

We should like very much to sit down with Mr. Linn and discuss his points, one by one, where he can make ready reference to the manuscript, and where

STANDARD FORM NO. 64

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TO : Mr. James M. Coutts, Acting Chief
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DATE:

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SUBJECT: Deputy Chief Scientist Robert M. Linn's Comments on the Craighead Report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK

we can clarify points that have confused him. The investigators feel they have a responsibility to the supporting agencies to publish. We wish to give every consideration to Mr. Linn's criticisms and we wish to emphasize that we are more than willing to take suggestions and to make changes that have merit and which can be supported by fact or where our own data is proved to be unreliable. However, our ultimate responsibility is to the resource and this resource is the responsibility of a number of agencies and it is the property of the American people. It would be unfortunate indeed if the results of nine years of research effort could be withheld from publication because of what appears to be bureaucratic nitpicking.

I would like to again suggest that you read the recent report issued by Glacier National Park on the grizzly bear attacks. If this represents the kind of reports that the Park Service is willing to publish, then I must conclude they are operating on a double standard.

John Craighead

John J. Craighead

Laboratory

Date	From	To	Subject
5/2/67	Lovegren	Bazata	Remove lab by end 67
5/11/67	JJC	Lovegren	Ask for facilities
6/12/67	JJC notes		Lab removal
6/12/68	Supt.	JJC	Remove lab by mid August
7/22/68	JJC notes		Lab removal
9/27/68	Danson	JJC	Lab
1/27/69	JJC, FCC, Schaefer	Hickel	Lab facilities

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
C58

May 2, 1967

Mr. Art Bazata
President
Yellowstone Park Company
Yellowstone National Park, Wyoming 83020

Dear Mr. Bazata:

We agree the Canyon Village Mess Hall area is a dilapidated group of buildings which detracts from visitor enjoyment of the roadside scene. We thoroughly approve your plans to remove the buildings and renovate the site at the end of the 1967 season.

We do not believe the loss of these buildings will seriously hamper the wildlife studies of Drs. John and Frank Craighead, as we have recently completed a new apartment building at Canyon and can arrange to house some students there. There will be a period of adjustment, of course, but the wildlife study program will continue, and the removal of the old buildings will greatly improve the site.

Sincerely yours,

Robert R. Lovegren
Acting Superintendent

cc:
Dr. John Craighead

May 11, 1967

Mr. Robert R. Lovegren, Acting Superintendent
Yellowstone National Park
Yellowstone National Park, Wyoming 83020

Dear Mr. Lovegren:

I wish to thank you for the copy of your letter to Mr. Bazata in which you approve their plans to remove their buildings at Canyon at the end of the 1967 season. I realize that the Service must remove buildings as they become delapidated; however I had hoped it would not be necessary to destroy our research laboratory at Canyon until something equally usable had been arranged for us.

I am sure you are aware of the fact that we have spent in excess of $100,000 a year on research in Yellowstone National Park and all of this has been oriented directly towards management of the wildlife resources.

When we initiated the grizzly bear project in 1959, the Park Service agreed to furnish us with adequate housing for our research activities. In 1962 the Canyon Ranger Station was destroyed and the Park Service was unable to provide us with adequate housing in spite of the fact that we were engaged in research activities involving a great deal of research money. Had it not been for the timely help of the Yellowstone Park Company, our research efforts would have terminated in 1962.

Fortunately they agreed to furnish us with the needed laboratory facilities and also to pay for all the utilities. In other arrangements with the National Park Service, we have always had to pay for housing facilities. This has been a rather difficult thing for us to explain to the individuals and organizations that have sponsored our research since all of the information is of direct benefit to the National Park Service and to the Yellowstone Park administration in particular.

We still have some large outstanding contracts with both the Atomic Energy Commission and the National Science Foundation to conduct much needed research in Yellowstone National Park. I therefore am hopeful that there are firm and specific plans to provide us with laboratory facilities at Canyon when the old YP messhhall is destroyed. I feel sure this action would not be contemplated unless such facilities are anticipated.

The special problems that we are faced with in maintaining our $100,000 annual research effort in Yellowstone have in general been recognized by the National Park Service. I do wish to emphasize, however, that we cannot continue this research without adequate housing facilities.

Since this research has been cleared and ardently supported by top officials in the Department of Interior as well as by many national research organizations, I trust that every effort will be made to provide such facilities and that my brother, Dr. Frank C. Craighead, and myself will have the opportunity to discuss the problems involved with you and Superintendent McLaughlin in the near future.

Your help and cooperation in this will be greatly appreciated.

Sincerely,

John J. Craighead,
Leader

JJC:AB

June 12, 1967

Met with Superintendent McLaughlin, John Good, and other staff members to discuss our research, housing at Canyon, and our report on management of the grizzly bear.

The Superintendent said they would destroy the Y.P. mess hall at Canyon that has served as our laboratory. It was evident that no arguments by us would prevail. He offered to consider our housing needs at Canyon but it is all too obvious that they cannot meet our needs. This is just another example of the type of cooperation we have had. A decision is made that involved us and our work and in spite of the Memorandum of Agreement we are told to comply, but never given an opportunity to present our case prior to the decision making. These unilateral decisions have been the basis of most of our problems.

We reviewed our management report and left a copy for review by the park staff indicating it was privileged material and not to be circulated. We were asked why we had taken so long to produce a report. The atmosphere of the talk was not friendly or constructive. Much of the discussion between ourselves and park personnel dwelt on why we had taken so long to do the research work and get out a report and why it was necessary to do further research. It was quite evident that the Superintendent and most of his staff do not understand the nature of ecological research. We could not help but feel from the remarks and conversation that we were being tolerated but not wanted. It seems that the park administration fears we may influence Washington to support our research with Park Service funds and that this will mean that monies appropriated for ranger activities will be diverted between research and ranger activities. Basically, however, the problem is that we cannot be

completely controlled by Park Service directive as can all park personnel, and this fact constitutes a threat to the power and authority of the Superintendent and his staff and also to the established bureaucracy. I believe we have conducted ourselves with propriety and restraint but overtures on our part for cooperation and understanding are ignored.

The Superintendent terminated the meeting by requesting that we outline our research objectives for the coming year and submit a request for housing. We had already done the former and the latter appears to be a useless gesture since we have investigated the available housing at Canyon and there is nothing there that can serve our purposes. We will, however, comply with the request.

No action has been taken to review the Memorandum of Agreement I drew up months ago and submitted to the Superintendent. We have received no comments or acknowledgement of our AEC report. The Superintendent indicated he would not write the Audubon Society supporting our research although his staff admitted that Walt Berlet who had publicly critized our work had also caused them a lot of trouble and his position was known to be indefensible. He, instead, used this to illustrate why our research should not be continued longer. We reminded him that this sort of reasoning had not solved the Northern Yellowstone elk problem and that we had always supported his organization and their objectives and felt it would be in order for them to reciprocate.

Postal

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
D3415

July 12, 1968

Dr. John J. Craighead, Leader
Montana Cooperative Wildlife
Research Unit
University of Montana
Missoula, Montana 59801

Dear Mr. Craighead:

Subsequent to our recent meeting in this office, I have asked the Company for their schedule of building removal on those buildings you are currently utilizing at Canyon. The Yellowstone Park Company has scheduled the buildings for removal during the first two weeks of August. The primary reason for this scheduling is that after September 1, their crews are totally committed to construction projects and would not be available for demolition.

Due to this tight schedule, I must request that you make arrangements for other quarters prior to August 5. I would suggest that you would want to consider trailer rentals or something of this nature, and we will be happy to make trailer space available in the area. I regret that this is rather short notice, but we have been discussing this move with you since last October. In the event you decide to bring in trailers, please notify us as soon as possible in order that we can make the final arrangements.

Sincerely yours,

Jack K. Anderson
Superintendent

July 22, 1968

In conversation with Jack Anderson, Superintendent of Yellowstone National Park, I was told that he had no objection if I attempted to contact the Yellowstone Park Company to see if they could delay the date for demolition of our laboratory until such time as we could make other arrangements for housing.

Mr. Bazata said his company had not been pressing for the demolition of the laboratory, that in fact they had been extremely harassed by the present Yellowstone administration in many ways and that they wanted to cooperate with both the National Park Service and with us. He said he had a phone call from Mr. Pistell and had frankly told Pistell that he thought the situation between our research group and the National Park Service was "too hot for them to become involved further".

I said I was sorry the situation had developed this way, that we were extremely grateful for the help and encouragement they had given us over the years and that we did not want to put the YP Company in a difficult position. I told him, however, that it would be impossible for us to meet the deadline set by the superintendent that I would like to know whether the YP Company could alter the deadline. He said they could very easily do this, that they had no set date, nor any pressing commitment that required the destruction of the building on the date set by the superintendent. He said he would be happy to destroy the building at any date set jointly by the Park Service and ourselves. In fact, he said it would be much simpler for them to do this work in winter.

I asked him if he had any objection to my relaying this information to the superintendent and he said "No". Accordingly I phoned the superintendent and he agreed to delay the destruction of the building until after the first snow - probably some time in October.

I told him we would make every effort to have our operation moved into trail units by that time.

I asked permission for Dr. Herrera of Canada and Dr. Azuma of Japan to visit Trout Creek to visit our research work. He said he could not grant this request, that he was allowing no one but our research team to go into Trout Creek and he had already turned down the Assistant Secretary of Interior and Horace Albright as well as other foreign scientists.

I suggested there was perhaps a difference between the scientists visiting us who had a very direct interest in the research work and these other people who were in the park and who were simply curious to see grizzlies. His position was, however, that he had had these instructions from Director Hartzog and he felt if he opened the door in any area he would have to open it to anyone wishing to go into Trout Creek.

We have had no problem in the past confining the visiting to scientists who had a bona fide interest in the research. It was evident, however, that the superintendent was adamant on this point and I said I did feel the attitude might reflect adversely on the Park Service since it was very difficult to explain to scientists who were accustomed to scientific and academic freedom to be denied the opportunity to observe research activities. I said, however, we would do our best to support his position in the matter and we dropped the matter. This terminated our phone conversation.

EDWARD B. DANSON
Director

Museum OF NORTHERN ARIZONA

September 27, 1968

Mr. John J. Craighead
Unit Leader
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear Mr. Craighead:

Thank you so much for your letter of the 24th and for the copy of your bear management report, which I shall read with great interest.

I am very sorry to hear about the destruction of your research laboratory at Yellowstone National Park. Although there may be reasons for this which I do not know of, I am still puzzled over the need for it at a time when Park Service research funds are so terribly limited.

With all best, I am

Sincerely,

Edward B. Danson

Edward B. Danson
Director

EBD/eh

FORT VALLEY ROAD · P. O. BOX 1389 · TELEPHONE 774-2433 · FLAGSTAFF, ARIZONA 86001

Bunkhouse, Old Faithful
Yellowstone National Park
January 27, 1969

The Honorable Walter J. Hickel
Secretary of the Interior
Washington, D.C. 20000

Dear Mr. Hickel:

During the past ten years the signers of this letter have been conducting research within Yellowstone National Park under agreements of understanding with the National Park Service. This has included winter expeditions to Yellowstone Park, under sponsorship of the Atmospheric Sciences Research Center of the State University of New York with support of the National Science Foundation; and ecological and wildlife research by the Montana Cooperative Wildlife Research Unit and the Environmental Research Institute, sponsored by the National Science Foundation, the National Geographic Society, the Atomic Energy Commission, and other granting agencies.

Each year from thirty to forty scientists plus a number of students have assembled at the Old Faithful area of Yellowstone to conduct a wide variety of basic research studies related to atmospheric, geophysical and biological phenomena. The combination of frequent snowstorms, rich moisture supplies from the geysers and hot springs, and the very cold weather make the Upper Geyser Basin a unique outdoor laboratory unequalled throughout the world. These studies are typified by the brief descriptions contained in the enclosed reports of the Seventh and Eighth Expeditions. Approximately a quarter of a million dollars has been expended in the research activities. Scientific papers based on these studies have appeared in dozens of scientific periodicals.

The Montana Cooperative Wildlife Research Unit and the Environmental Research Institute have expended approximately a million dollars on research related to the grizzly bear, black bear, and elk over the past ten years (1959-1968). Reports and publications have been of value to the Yellowstone Park Administration in the management of these wildlife species and in developing a better understanding of the Yellowstone ecosystem. A list of research projects is appended. It is anticipated that at least a dozen major publications resulting from the past ten years of research will soon be in press and that these

publications will all have direct application to resource management within Yellowstone. Some important results of this research program are:

1. The early published work on the ecology of the grizzly bear in Yellowstone National Park was instrumental in creating interest and in obtaining support for a federal research and preservation program relative to endangered or vanishing species.

2. The technique of radiotracking and the more sophisticated biotelemetry research methods were initiated and perfected as one phase of the studies conducted on the grizzly bear and elk in Yellowstone. Biotelemetry research methods are now widely used in a multiplicity of ecological and environmental studies in this country and throughout the world. Resource management agencies are utilizing telemetry systems to expedite management and to solve ecological problems.

3. Information and findings resulting from basic research on the grizzly bear led to a moratorium on the killing of these animals in Wyoming and increased the possibility of cooperative management and inter-agency agreement on regulations within the tri-state area of Wyoming, Montana and Idaho.

During the past year the State University of New York entered into a new five-year agreement with the National Park Service to continue research activities. Similar arrangements were made by the University of Montana and other educational institutions. Recently we learned to our dismay that it was unlikely that facilities would be available to us next winter since the log bunkhouse, the two buildings used by our atmospheric scientists for mess halls, and at least one other well-constructed building are to be demolished and burned in the near future. We are told that these buildings are in the path of the new Old Faithful by-pass road now being cleared to facilitate summer travel in the Park.

During the past ten years a number of sound log and board and batten buildings used for research activities within the Park have been demolished. This has been done in spite of the urgent need for biological and ecological research. The necessity of long-term ecological research as well as research covering a wide range of disciplines was pointedly brought to the attention of the National Park Service in the

Leopold Report, "Wildlife Management in the National Parks" (1963), and in the advisory committee report of the National Academy of Sciences (1963). The latter report urged expansion of research conducted by educational institutions and greater effort by the Park Service to facilitate such efforts. In recent years we have viewed with increasing apprehension the curtailment of and apparent lack of interest in a cooperative research effort between the Park and outside agencies.

All four buildings soon to be demolished at Old Faithful are sound, very well constructed and ideally suited for winter occupation and support of field research activities. In fact, they are to be preferred over new facilities for such purposes. Thus we strongly recommend that these buildings be moved from their present location to a new site where they could be assembled as a field laboratory facility for the Old Faithful area. They could be located out of sight of the tourist road and set aside specifically for use as field laboratories. We are quite sure that if necessary we could assist in the reconditioning of these buildings.

Last year we made an attempt to interest a number of local persons at West Yellowstone to cooperate with us in the establishment of a Regional Research Laboratory at that location utilizing one or more of the abandoned Union Pacific Railroad buildings which were to be turned over to the town. We believe it is a wise policy to have such regional research facilities outside of the National Parks. However, for short period, intensive research studies, it is not practical or economical of time or money to move in and out of the Park every day, especially in the winter. Our plans for the West Yellowstone laboratories included the use of mobile laboratories and living quarters which could be moved to temporary locations away from the traveled roads within the Park, left there for the duration of an intensive research study, and then moved back to the core laboratory outside the Park.

With the recent curtailment of National Science Foundation and other federal funds we now believe it is expedient to delay for several years our request for substantial funds to develop a major laboratory at West Yellowstone. We thus are writing you to suggest that the buildings previously mentioned that are scheduled for destruction be spared and moved to a new site nearby where at small expense they could be reconditioned and made available for use by University and other research-minded individuals interested in utilizing the unique natural laboratory which is Yellowstone Park.

This move would permit us to continue our Expedition without interruption as well as permitting our associates in science to initiate or continue their studies in an efficient and effective manner.

We sincerely hope these suggestions have merit and we will do everything we can to cooperate with Park Service personnel in furthering their service to the American people.

V. J. Schaefer
Director, Atmospheric Sciences
Research Center

F. C. Craighead
Professor of Ecology
State University of New York

J. J. Craighead
Leader, Montana Cooperative
Wildlife Research Unit
University of Montana

Copies: Members of Leopold Report:
A. Starker Leopold
Stanley A. Cain
Clarence M. Cottam
Ira N. Gabrielson
Thomas L. Kimball
Members of Robbins Report:
William J. Robbins
Edward A. Ackerman
Marston Bates
Stanley A. Cain

F. Fraser Darling
John M. Fogg, Jr.
Tom Gill
Joseph M. Gillson
E. Raymond Hall
Carl L. Hubbs
C. J. S. Durham

Superintendent, Yellowstone National Park, J. K. Anderson
Director, National Park Service, George B. Hartzog
President of National Geographic Society, Dr. Melvin Payne

Enclosures:

Reprints:

Radiotracking of Grizzly Bears, Frank C. Craighead, John J. Craighead and Richard S. Davies, Pergamon Press, 1963.

Radiotracking of Grizzly Bears in Yellowstone National Park, Wyoming, Frank C. Craighead, Jr., National Geographic Society Research Reports, 1963 Projects, 1968.

Trailing Yellowstone's Grizzlies by Radio, Frank Craighead, Jr. and John Craighead, National Geographic, 1966.

Bio-Telemetry Radiotracking of Grizzly Bears, 18th Annual Instrument Society of America's Conference, 1963.

Reports:

Progress Report, Radiotelemetry of Large Western Mammals, John J. Craighead and Frank C. Craighead, Jr., 1965-1966.

River Systems, Frank C. Craighead, Jr. and John J. Craighead, Naturalist, Special Issue No. 2, 1962.

Management of Bears in Yellowstone National Park, John J. Craighead and Frank C. Craighead, Jr., 1967.

Final Report, Seventh Yellowstone Field Research Expedition, Atmospheric Sciences Research Center, State University of New York at Albany, 1967.

Interim Report, Eighth Yellowstone Field Research Expedition, Atmospheric Sciences Research Center, State University of New York at Albany, 1968.

Knocking Out Grizzlies for Their Own Good, Frank and John Craighead, National Geographic, August, 1960.

Reproductive Biology of Young-Age Female Grizzly Bears, John J. Craighead, Maurice G. Hornocker, Frank C. Craighead, Jr., 1968.

rd

Photographing Yellowstone Canyon

Date	From	To	Subject
9/19/68	JJC	Supt.	Permission to film
9/23/68	Supt.	JJC	Denied
9/28/68	JJC	Mel Payne	Canyon
9/30/68	Mel Payne	JJC	Canyon
8/24/55	Rogers (Supt)	Laythe	Commendations for River search
10/27/68	JJC notes		Supt., etc., floating Yellowstone River

September 19, 1968

Mr. Jack K. Anderson, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Jack:

I have been on annual leave for the past month, working on a TV Special for the National Geographic entitled WILD RIVERS.

In this film we are photographing some of the more spectacular western rivers. It is our hope to portray some of the wild and semi-wild rivers and show the recreational aspects of the rivers as well as convey a conservation message showing the type of research needed to maintain wild rivers in a primitive state. To date we have taken footage on the Green River, the Colorado, the Middle Fork of the Salmon, and the main Salmon.

We would very much like to take some footage on the Yellowstone River between the Lower Falls and Hell Roaring. Because this river is not open to public boating, we propose to photograph a back-packing trip into the Canyon and show some of its wild life and its natural beauty.

In order to do this within a reasonable time and expense, it would be necessary for us to travel in rubber rafts from Three Mile to the take-off point - probably at Tower Falls.

Since this stretch of the Yellowstone qualifies as a wild river and lies within a National Park, we are particularly anxious to include this in the TV show. Most of the other wild rivers lie within national forests and in order to balance the presentation there should be a stretch of river lying entirely within a National Park.

A number of years ago Superintendent Garrison authorized us to make this trip but our commitments on the grizzly bear research at the time precluded our carrying out the expedition.

Frank and I and members of the National Geographic staff would very much appreciate if you could grant us permission to use a raft on the stretch of river I have indicated some time between October 1 and November 15. We would probably be on the river only for a period of three or four days and, as I have indicated, the footage we would take would not show actual boating on the river so that the public viewing the show would not get the impression that the river was open to boating.

It will be necessary for us to firm up plans for this trip in the very near future and so I would appreciate an early reply to this request.

Very sincerely,

John J. Craighead,
Unit Leader

JJC:AB

cc Dr. Melvin Payne, president, National Geographic Society
Dr. Frank C. Craighead

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:

K3019
A9027

September 23, 1968

Dr. John J. Craighead
Unit Leader
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

We have received and discussed at considerable length the request contained in your letter of September 19, to traverse by raft that portion of the Yellowstone River from Three Mile downstream to Tower Fall. I regret permission to make the trip you propose cannot be granted. Regulations prohibit the use of watercraft on that portion of the Yellowstone River, and we cannot make special exceptions.

The value and qualification of the Yellowstone River within Yellowstone National Park as a wild river is beyond question, and it should fill a niche in your presentation. It occurs to us, however, that it would be wrong to portray recreational use, access, or view of this magnificent stretch of river that was not possible, safe, or advisable for the Park visitor. In fact, a very special value could come from a presentation, perhaps by aerial coverage, showing the formidableness of the Yellowstone Canyon and that portion of the Yellowstone River.

Your project of filming portions of rivers destined to possibly bear the designation of "wild river" sounds interesting. We shall be looking forward to seeing the fruits of your endeavor.

Sincerely yours,

Jack K. Anderson
Superintendent

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

September 28, 1958

Dr. Melvin Payne, President
National Geographic Society
16th and M St., N.W.
Washington, D. C. 20036

Dear Mel:

I am enclosing a copy of Superintendent Anderson's reply to my letter of September 19th. My impression after reading it is that the Superintendent is not particularly interested in our photographing the Yellowstone Canyon whether we did it with the use of a raft or otherwise.

It would be quite feasible to take a back-packing trip into the Canyon and photograph this and probably get most of what we would like to get. However, if doing this would further antagonize Superintendent Anderson and others in the Park Service, I would question the advisability in proceeding.

In a way, I think it is unfortunate, as the Yellowstone River is unique and the entire portion of the Canyon that we wish to photograph is accessible to hikers and fishermen who are willing to put out the effort to climb down the Canyon. In fact, they are encouraged by rangers to go down to Three Mile, Five Mile, and Eight Mile points in the Canyon where they can fish and camp.

I expect to see Frank tomorrow and will discuss this with him and probably get in touch with Carl. Offhand, my present reaction is that we should probably just go ahead and make a back-pack trip into the Canyon and photograph this. Any American citizen could do this without any request from the Superintendent or anyone in the Park Service so there would be no problem getting official sanction of the undertaking.

I will keep you advised on the matter and if you have any suggestions, Frank and I can be reached by phone in Yellowstone, 307-242-7204.

Kindest personal regards,

John J. Craighead

JJC:AB

cc Frank and Carl Harmon (blind copies)

National Geographic Society

WASHINGTON, D. C. 20036

MELVIN M. PAYNE
PRESIDENT

September 30, 1968

Dr. John J. Craighead,
Montana Cooperative Wildlife Research Unit,
University of Montana,
Missoula, Montana 59801.

Dear John:

I have noted with interest your exchange of communications with Jack Anderson and was sorry to learn that he had refused permission to make the raft trip down the Yellowstone as proposed by you.

I wasn't surprised, judging by my conversation with Park officials here in Washington, but I had hoped they might make an exception.

I don't know Anderson at all, but I can't help wondering if your plan to make a back-pack trip into the Canyon might be considered by him to be an evasion of his ruling. In any event, for the sake of good relations it seems desirable for you to advise him of your intentions, should you and Frank decide to go ahead, so that he cannot claim surprise. If, as you say, any citizen can do this without the formality of securing permission, then apparently he has no official grounds for objection. My only thought is to keep on the best possible terms with him since, obviously, he's the boss!

With all best wishes,

Sincerely yours,

Mel

President.

Yellowstone National Park,
Yellowstone Park, Wyoming

Office of the Superintendent August 24, 1955

Mr. Leo Laythe
Regional Director
U. S. Fish and Wildlife Service
Portland, Oregon

Dear Mr. Laythe:

Please accept our belated expression of appreciation for the expert services of Dr. John J. Craighead during a recent attempt to locate the body of Robert L. Landrum of Salt Lake City, who reportedly fell into a canyon near Tower Fall and was killed on July 19.

The Landrum body has not been located to date, but Dr. Craighead's assistance in the search supported our effort to conduct every feasible attempt to recover the body of the deceased.

Members of my staff have worked closely with Dr. Craighead for several years on cooperative wildlife matters, and are familiar with his uncomparable ability and experience in floating turbulent waters with light rafts. Following unsuccessful attempts by park rangers to conduct an overland ground search of a practically inaccessible section of the canyon, Dr. Craighead was requested to explore a water route through a particularly treacherous section of the Yellowstone River. He immediately volunteered his services and the use of his specialized river-rafting equipment, while on annual leave status from your organization during August 3-4.

The attempt was unsuccessful, but Dr. Craighead's willingness to undertake personal risk and to subject his equipment to damage in our behalf is greatly appreciated.

Please convey our expression of admiration and appreciation to Dr. Craighead for his assistance in this matter.

Sincerely yours,

Edmund B. Rogers
Superintendent

Copy to: Dr. David L. Leedy
Biologist in Charge, Wildlife Units
U. S. Fish and Wildlife Service
Washington 25, D. C.

October 17, 1968

Jay Sumner, Merlin Shoesmith, and I counted 10 canoes, each manned by a man and woman (presumably man and wife) on the Yellowstone River at Antler Creek. There were approximately a dozen cars and a stake truck parked by the roadside. We inquired of a truck driver, "What is going on?" He said that some Park personnel were cleaning up the river shore line. It was quite clear that this had been used as an excuse for a boating trip on a stretch of river where boating is prohibited. The entire area being "patroled" is posted as off limits to fishermen, and thus the area could hardly have contained trash and debris worthy of such an expedition. The canoeists were paddling down the middle of the river. We recognized the Park superintendent in one canoe.

This situation well represents the double standard so frequently employed by Park personnel. Mel Payne, President of the National Geographic, Frank Craighead, and I each requested permission to use a rubber boat in the Yellowstone Canyon to take some motion pictures for the National Geographic television show "Wild Rivers". Superintendent Anderson turned down the request on the basis that it was against regulations to use a boat on the Yellowstone. Said he could not make an exception. He obviously made an exception for his "Thursday outing" involving the husbands and wives of Park personnel. It was a beautiful, warm October day. We took a few photos as evidence.

Another exception to this regulation was made some years ago when I was asked to run the canyon below Tower Falls to help locate the body of a victim that had fallen over the canyon rim.

1969	From	To	Subject
4/7	Supt.	JJC	Memo. Understanding, NASA project
4/7	JJC	Supt.	NASA Project
4/14	JJC	Supt.	Research in YNP, marking

April 7, 1969

MEMORANDUM

TO: Superintendent, Yellowstone National Park

FROM: Leader, Montana Cooperative Wildlife Research Unit

SUBJECT: Proposal to radio-track an elk with the Nimbus 2 satellite

I was glad that we were able to discuss the satellite tracking project on the telephone Friday and to clear up any misunderstandings that developed from the premature news release by the National Aeronautics and Space Administration.

For several months I have been corresponding with Dr. Buechner of the Smithsonian Institution and Dr. Cote of the Goddard Space Center and my brother, Frank Craighead, concerning the possibility of tracking big game animals by satellite. Frank and I have furnished Dr. Buechner with specific information necessary to prepare a proposal for submission to NASA. I am enclosing a copy of the proposal drawn up by Dr. Buechner and submitted to NASA January 21, 1969.

Frank and I offered our services in this undertaking. However, I think it is quite evident that Dr. Buechner is responsible for the funding of the project, and it was my impression that a number of federal agencies, including the National Park Service, had been contacted by the Smithsonian and informed that this project was pending. You will note in the proposal (Page 5) that an elk would be captured and instrumented in Yellowstone National Park. Actually we suggested that this work could be done in Yellowstone or that work could be carried out on the National Elk Refuge, or in cooperation with the Montana State Fish and Game Department. No final commitment on our part has been made to date. I wish to assure you that, if and when the project is fully authorized and funded, I will contact you and discuss the program, as well as the possibilities of conducting some of this work within Yellowstone National Park under our 1966 Memorandum of Understanding.

As I indicated to you on the phone, this proposal was hurriedly drawn up and submitted to NASA to take advantage of certain electronic equipment and funds currently available. There are a great number of details that

will have to be ironed out, as well as a restatement of objectives, and I am certainly looking forward to the opportunity to discuss this proposal with you and your staff sometime in the near future.

You mentioned in our telephone discussion that a new Memorandum of Understanding regarding wildlife research within Yellowstone Park would be forwarded to this office soon. I shall look forward to obtaining this.

Should you have any further questions concerning the satellite tracking proposal, I would be more than happy to try to answer them.

John Craighead

JC:rd

Enclosure

copy - Frank Bachelt

COPY

1968	From	To	Subject
2/15	JJC	Supt.	Bull elk died
3/5	Bob Brown	JJC	Martinka's talk
6/5	JJC	Supt.	List of personnel (See notes 7/8)
7/11	Cole	Supt.	General Hypothesis 1 and 2
7/23	JJC	Cole	Cole's Hypothesis
7/11	JJC	Cole	Management Suggestions - Garbage
7/11	JJC	Supt. & Cole	Snaring
7/18	Cole	JJC	Snaring answer

Notes

6/28	JJC notes	Talk w/Supt. & Cole: Lab, Bears, Elk Management Report
7/2	JJC	Snaring (See 7/11)
7/8	Jay notes	Karen in Trout Creek (See Letters 6/5)
7/9	Jay notes	Conversation w/FCC, Jay, Cole
7/10	Jim Claar	Conversation w/Henderson, Old F. Ranger
7/12	Jay notes	Conversation w/Cole - Garbage
7/12	Jim Claar	Garbage
7/16	Jim Claar	Garbage
7/17	Jim Claar	Garbage
7/19	Jay notes	Garbage
7/22	Jim Claar	Rabbit Cr. census - NPS personnel w/friends
7/22	Jay's notes	Conversation Jay - Dale Nuss
7/22	JJC notes	Refusal to allow scientists into Trout Cr. (See Yell. Laboratory)

1968 (contd)

8/2	Jay's notes	Release of marked bears w/o notifying Unit
8/7	Jay's notes	Permission for AEC people denied
8/13	Jay's notes	Photo of marked bear by TV people (NPS)
8/16	JJC notes	Talk w/Dale Nuss
8/16	Jay's notes	John, Jay, Supt., Estey
	Merlin's notes	NPS Unit relations

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

February 15, 1968

Mr. John Anderson, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Jack:

Frank and I spent the last week of January and the first few days of February at the Atmospheric Science Research Center at Old Faithful. We have attended these sessions for the past five years and have found them extremely stimulating and rewarding.

This winter we went prepared to test some biotelemetry equipment and if possible to instrument an elk in order to gather movement and behavioral data. I think you are aware of the fact that we have immobilized and instrumented a number of elk in the Old Faithful area under our AEC contract and our Memorandum of Understanding between the Montana Cooperative Wildlife Research Unit and Yellowstone National Park.

We had a little bad luck and lost an elk that we immobilized. This happened to be a bull elk which we had captured and marked in previous winters. We immobilized the animal with the drug Sernylan. We obtained optimum immobilization and accomplished the instrumenting. However, the animal bloated before we could get it to its feet. We attempted to hold the bull in an upright position which prevents bloating and which had been extremely effective in the past on cow elk. The bull, however, became very dangerous as he came out of the drug and Frank and Dr. Erickson were both struck by the elk's antlers. Rather than risk possible injury under the isolated conditions that prevail in Old Faithful in winter, we let the elk on its side anticipating a slow recovery but fully expecting him to survive. The bull did not survive the night and we reported the death to Glen Henderson, the local ranger.

I want to express regret that an animal was lost in our experiments but did want you to know that this is the first elk we have lost in many that we have handled and immobilized.

Frank and I have had a very busy winter but we are looking forward to seeing you in June. It would be nice if all of us could get together for a few hours of fly fishing.

Kindest personal regards,

John Craighead

John J. Craighead

JJC:AB

Wildlife Laboratory
Montana State Univ.
Bozeman, Montana
5 March, 1968

Dr. John J. Craighead, Leader
Montana Cooperative Research Unit
University of Montana
Missoula, Montana

Dear John,

I got home just in time last Wed. to pick up Pat and take in the grizzly bear management talk by Martinka in the Ag Bldg auditorum-about 50there and Quimby and a engineering prof I've been told walked out 2/3 way thru. I waited for the questions and got the first chance to ask him the first pointed one, "why had he chosen to completely ignore the work your and Frank's group had done in Yellowstone?" He said , should I have? and I said it sounded as though he hadn't read the report that the Yellowstone Park Sptnd had received on the management of bears in Y.P. and he said there wasn't anything on home range in the report and that they had nothing available ~~to~~ on ranges, and populations from your work. This generated some other questions on life history and one on Granite Peak Chalet and Mtinka said no garbage was available there but that it was just good bear country. Here's a brief resume-for what its worth?

Began 25 minute talk which was mostly read!!

1. cited natnl park act, obj maintain biotic associations and grizzly non-compatible sp. with people. This was real news.
2. Obj of his study obtain basic facts on g bear, not after pop. density, just trends.
3. Some earlier est. was 100 grizzlies in Glacier, cited total of two other scources for density from Alaska and Canada 1/15 sq. mi. on tundra and I missed the Alaska figure. He's seen 1/58 mi in huckleberry areas.
4. 20% with cubs, have litter every three years, Not gregarious in G Pk, groups of 1-11 obsd, mostly 2-3. one last ref to movement 20 miles in Alaska and Mt. Mcinley Pk.
5. Food, carrion in spring, glac. lilly bulbs, grass, pine nuts fall dispersal to lower elev, cabin breakins, Bears limked to game animals-good healthy, young elk herd may limit G bears.
6. Grizzlies and blacks occur togher in G. pk, not chose ..you must be tired of this by now..
7. then he talked briefly about his experience as a bear trouble shooter but mostly with blacks.. didn't touch on the girl incidents except to say 4 old sows were killed in control operations. One as we knew from the vet lab here had contents in stomach, one of the others he said circumstantial evidence indicated was guilty and there wasn't much else. Any question on park policy he prefaced with 'that sounds like a loaded question', until it got plumb tiresome. We didn't stick around for coffee- Martinka came thru the lab the next fore noon after seeing Quimby and Greer and was apologetic about the thing. We had Fischer the PR insp. here and didn't stop to chew the fat. No mention of the large caries in the sows molars and Greer gave him some nice photos of the grizzly skulls and took the elk paunch samples he's been doing. So I'm afraid there wasn't really much to report.

Two of the students working here said they thought it was a farce, but I figured it "for leading questions" and quite truthfully said he had a lot to learn.

Will you be going to the Calgary meeting or is it the North American? If so, you must be nearly on your way.
Thanks for the dinner, Wed. I'hope you have a good trip back to D.C.
I will get a brief Pesticide project proposal together soon-I've tried a few but will settle for sublethal effects and operational spray program but should

our

include experimental phase other than simply non-spray controls. Would it mean more to include that McEwan's and my working hypothesis that males not returning to display might be assumed dead- is in fact wrong and was shown so in five cases with males surviving 1-1½-2years later even after some had shown advanced "signs" of dieldrin poisoning? I don't believe they changed the confidence limits on the LD50 we calc, but they sure weakened our evidence of assumed sub-leathe~~r~~ effects.

Jim should get a kick out of my cheap ~~/~~skate letter writing habits.

Tell everyone hello and good luck. Tony G must feel better already about parting with the 100 clams for Pat's painting- he put a hellofa $14 frame on it she says and a contracter tried to buy it out of the framing shop.

I'm urging her on - but in the production of painting she is mighty slow compared to her more familar areas.

the understatement of the year -

Regards,

I don't type much anymore -

Bob.

quite fast - bad touch -

June 5, 1968

Mr. John Anderson, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Mr. Anderson:

Frank and I plan to open the laboratory at Canyon on or about June 10th. We will have a number of graduate students and some undergraduates working with us this summer. As soon as I get to Yellowstone, I will make a list of all personnel, indicating those who will need to work in Trout Creek.

It was my hope that I could open the laboratory June 1st but this was not feasible. However, I have requested that Harry Reynolds, III, make some observations of breeding behavior for me at Trout Creek between June 1st and June 15th. I hope there will be no problem is his getting access to Trout Creek.

I am looking forward to a very productive summer and hope that in spite of busy schedules for both of us that we can get together for a few visits.

Sincerely,

John J. Craighead,
Leader

JJC:AB

Yellowstone National Park, Wyoming 83020

July 11, 1968

N16

Memorandum

To: Superintendent

From: Supervisory Research Biologist

Subject: Working hypotheses relating to grizzly bear distribution, 1968

General Hypothesis I: Lessened garbage at the Trout Creek dump has resulted in grizzly having scattered distributions. Bears coming into certain developed areas before July 2 was a response to non-bearproof cans; since July 2 late evening garbage pickups, a response to enough food from ice chests and other camper sources to keep the animals linked to campgrounds.

> Comment: The number of bear staying linked to campgrounds since July 2 do not appear to be obtaining enough garbage or camper food to have the campground represent a greater food source than the Trout Creek dump. From 80 to 100 cans of separated "edible" garbage are reported to go to Trout Creek daily. The incineration of separated combustibles and campground garbage is considered to amount to a small reduction in "edible" food in comparison with previous dumping of all garbage. The apparent failure of the animals to concentrate at the Trout Creek dump thus far does not seem attributable to a lack of edible garbage. If strongly developed habits were a factor, it would seem that the animals would be most accustomed to feed at the Trout Creek dump by midsummer.

General HypothesisII: Scattered distributions of grizzly may be in response to late spring and sufficiently abundant natural foods providing an alternative to the animals concentration on the Trout Creek dump. Midsummer links to certain developed areas are undoubtedly due to their location within the natural spring (and fall) habitat of the grizzly and just enough food from sloppy camping habits to keep the animals making nightly visits.

> Comment: This is condidered a fairly plausible hypothesis. Monitoring records show we have maintained a widespread and ~~conspicuous~~ conspicuous distribution of grizzly from Pelican Creek to Canyon since the animals came out of hibernation. Natural foods must have been, and possibly still are, sufficiently adequate to maintain scattered distributions. Coinciding high visitors use could be providing enough other food to cause some animals to regularly visit developed areas incidental to their natural foraging.

The latter hypothesis is tentatively favored because of the writer's research experience on pronghorn, mule deer and elk studies where artificial food sources were being utilized. These animals did not require these food sources, but variously used them in relation to variable natural food conditions. Conspicuously variable and different distributions of bear in relation to such natural foods as fish runs and berry or pine nut crops are documented in the literature. Such distributions are not without behavioral, territorial or home range complications, but a characteristic of food response distributions seems to be that they can be extremely variable.

Glen F. Cole

July 23, 1968

Mr. Glen Cole
Supervisory Research Biologist
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Glen:

I am enclosing a memorandum in response to your invitation to comment on your memorandum of July 11.

I feel that the entire situation at Trout Creek has got to be a lot more closely coordinated than it was this year if we are to get scientific answers to the effect of withdrawing garbage from the Yellowstone grizzlies.

There are many ramifications that we were unable for lack of time and space to incorporate into our management report. The management report was concerned largely with broad aspects of management. The details of management are equally important for an effective program and we would like to discuss these with you in the future and determine how they can be incorporated into the Park Service management program and our research program.

Sincerely yours,

John J. Craighead,
Unit Leader

JJC:AB

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

July 23, 1968

To: Supervisory Research Biologist

From: Leader, Montana Cooperative Wildlife Research Unit

Subject: Comments on Cole's hypotheses relating to grizzly bear distribution, 1968

I have read your memorandum of July 11 with considerable interest and will comment as requested.

General Hypothesis I: "Lessened garbage at the Trout Creek dump has resulted in grizzly having scattered distributions. Bears coming into certain developed areas before July 2 was a response to non-bearproof cans; since July 2 late evening garbage pickups, a response to enough food from ice chests and other camper sources to keep the animals linked to campgrounds."

Comment: During a nine-year period from 1959 through 1967 we have recorded observations of grizzly bears throughout Yellowstone Park from April through mid-November. During this period of time there have been slight variations in the distribution of grizzly bears throughout April and May in response to such natural food sources as rodents, elk and buffalo carcasses, and vegetation. The distribution during those years does not appear to me to have been essentially different than during 1968.

Both Frank and I and some of our students made observations of the distribution of marked and unmarked bears and although our level of effort was not as great as other years, nevertheless all the marked bears observed were within their known home ranges. I wonder if perhaps the fact that you alerted the ranger staff to recording all bears sighted during the spring of 1968 has not reflected a greater awareness on the part of rangers to the distribution of bears rather than actual distribution.

The situation from the First of June on is considerably different than in former years and this, I believe, is due to the fact that very little or no garbage was dumped at Trout Creek. From June 1 to June 14 I had a man making our usual observations at Trout Creek and at this time he estimated the maximum amount of garbage at the Trout Creek dump was 8 cans daily, with no more than 2 cans of edible garbage. This is considerably less food than our records show was dumped in former years.

The bears move into Trout Creek at this time from distant parts of the Park. When food is available, they remain in the vicinity as we have pointed out in our management report. We also pointed out that if food was not available, there was every reason to believe that many of the bears would not remain in the vicinity of Trout Creek but would move into campgrounds or into such large disposal areas as Rabbit Creek and West Yellowstone. Our observations from June 3 to the present indicate that this is very probably what has happened. Only a fractions of the bears normally censused at Trout Creek have been observed and some of these marked bears have been observed at Rabbit Creek and others at West Yellowstone and in the campgrounds.

According to our records, on June 13 only 5 cans of garbage were being dumped daily at Trout Creek but from this time there was a gradual increase in the amount of garbage being dumped. Periodic visits to Trout Creek by our personnel to count bears and to estimate the amount of garbage being dumped showed that at no time were more than 40 cans of garbage being dumped and many of the cans were half filled with water. We estimated that probably only 10 to 15 cans of garbage were available to the grizzlies during this period.

It appears that in the sorting process, not all of the garbage is being dumped at Trout Creek and it is being dumped in such a way that it is failing to hold the grizzlies in the area. In order to investigate the situation in greater detail, I requested two men to make continuous observations at Trout Creek.

On July 12, 1968, the garbage arrived at approximately 11 o'clock and consisted of a pile 12' x 7½' x 1½'. By count, there were 14 plastic pail liners full of garbage plus some garbage not in containers. The garbage was for the most part edible and a conservative estimate indicated there were approximately 25 to 30 cans.

On July 16 similar observations were made and the amount of garbage was approximately the same as on the 12th.

The amount of garbage being dumped has definitely increased since the middle of July; however it seems clear from our observations of marked bears that many bears that came in early to Trout Creek and found no food available moved to other portions of the park and have not yet returned to Trout Creek. They no doubt will do so later in the summer if there is a continuous supply of garbage at Trout Creek.

I cannot help but conclude that your first hypothesis is incorrect and that the failure to initially provide food at Trout Creek had a very direct influence in distributing the grizzlies widely throughout the Hayden Valley and beyond.

In our report MANAGEMENT OF BEARS IN YELLOWSTONE NATIONAL PARK we emphasized the need to very carefully observe and monitor the Trout Creek situation when garbage was withdrawn. Last year we offered to provide

the funds and manpower to do this job. We have a detailed plan of how we feel this should be done based on nine years of intensive study and we would be happy to perform this task next year.

In order to do this, certain conditions must be met and it will be imperative to have the complete support and cooperation of National Park Service personnel.

General Hypothesis II: "Scattered distributions of grizzly may be in response to late spring and sufficiently abundant natural foods providing an alternative to the animals concentrating on the Trout Creek dump. Midsummer links to certain developed areas are undoubtedly due to their location within the natural spring (and fall) habitat of the grizzly and just enough food from sloppy camping habits to keep the animals making nightly visits."

Comments: We have very little evidence to support General Hypothesis II since we have found scattered distribution of grizzlies in other years in response to availability of natural foods. However, each year as food became available at Trout Creek, the early spring distribution quickly altered and the grizzlies concentrated in the Trout Creek area.

Thousands of observations of grizzlies during the nine-year period do not support the hypothesis that this spring was an exception - at least our data do not indicate sufficient difference in number and distribution of grizzlies to support this hypothesis.

Our data on a ten-year distribution pattern for grizzlies is being prepared and these data will be ready for a general discussion when desired.

There are several other factors that could be involved in the distribution of the grizzly bears other than the total amount of garbage available at Trout Creek. Admittedly it is difficult to compare the amount of garbage being dumped now with other years because the dry refuse material is being incinerated. The way in which the edibles are being made available is undoubtedly a factor and I would like to discuss this with you in greater detail when we have had an opportunity to firm up a procedure for evaluating the changes that are occurring.

As we have indicated at other times, it is a rather simple matter for us to evaluate the changes at Trout Creek since we will be making regular censuses and since we have nine years of previous detailed census data at Trout Creek and at all of the other disposal areas to use as a basis of comparison. We can evaluate the changes on a basis of total bears, of marked bears, and of unmarked bears.

An evaluation based on a census of individual bears is far superior to a general monitoring of bears sighted since one bear can be sighted many times by different individuals and thus give both an erroneous conception of distribution and use of a given area. We have maintained records over the years of the distribution of the sightings of all bears as well as the sightings of individually recognizable bears.

The latter type of data can be more precisely interpreted, and since we are in a position to continue this type of observation we can, I am sure, accurately evaluate what effect present management procedures are having on the grizzly bear population.

John Craighead

John J. Craighead

JJC:AB

cc Supt. John Anderson
Dr. Frank C. Craighead

July 11, 1968

Mr. Glen Cole
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Glen:

I felt that our talk at your office on July 6th was most constructive. The fact that we both recognized the need for better communication and more cooperation was certainly a step forward - also the mutual recognition that the Park Service needs to know our long-range plans for research and that we need to know about Park Service management plans that will have a direct effect on our research program.

In line with our discussion, I would like to suggest the type of cooperation we would like to see at Trout Creek and outline our research objectives. You may recall that last fall we indicated we would supply personnel and funding to evaluate management suggestions that we made in our report of July, 1967.

In view of the fact that the administration has installed an incinerator and is in the process of shifting from open-pit garbage dumps to incinerators, we suggest:

1. That, if possible, the Rabbit Creek, West Thumb, and other Park Service open-pit garbage dumps be phased out, leaving the Trout Creek dump in operation.

2. That a quota of at least 60 cans of garbage be dumped at the Trout Creek area through August, 1968.

3. That the National Park Service keep close check on the amount of garbage to make certain that there is ample food to prevent the Trout Creek grizzlies from dispersing widely and entering campground areas.

We will continue to census the Trout Creek area as we have in the past and from our observations of marked and unmarked grizzlies, we will be able to determine:

1. The degree of dispersion, if any, of Trout Creek grizzlies,
2. The movement, if any, of West Thumb and Rabbit Creek grizzlies into the Trout Creek area,
3. The length of time that the grizzlies are held at Trout Creek within the geographic center of Yellowstone by food dumped in the area, and
4. We will record, with the help of the ranger staff, the number

of grizzlies visiting campgrounds and the number of grizzlies captured in campgrounds.

5. We will continue to monitor the general distribution of grizzlies throughout the Park as we have done over the last nine years.

From these and behavioral data, we should be able to determine the general effects of the phasing out of the Rabbit Creek, West Thumb, and other open-pit dumps. This program should be carried on during 1969 with a gradual reduction of food at Trout Creek, providing the data gathered in 1968 indicates this would be desirable.

Complete or near complete elimination of food at Trout Creek by 1970 to be accomplished, again providing that data gathered in 1968 and 1969 supports this as a wise management decision.

As in the past, the results of this evaluation will be made available to the National Park Service. In addition to the evaluation of phasing out of open-pit dumps, we would continue to gather information on the reproductive success, family history, and data on age specific mortality rates.

Marking of new animals would be held to a very minimum or non-existent except in the case of problem bears.

Radio tracking would continue on a limited scale during the fall of the year, with special emphasis on the instrumenting of sows to gather additional data on breeding biology and the movement of bears in an around campgrounds.

Considerable work has already been done in these two areas, but more is necessary for conclusive results.

As you know, we have spent a great deal of time and money on the study of the grizzly bear in Yellowstone and all of the effort has been of direct benefit to the National Park Service. By the end of 1968, the total expended in intensive investigation of the grizzly bear will approach nearly a million dollars.

Therefore, if we continue the research supported by private and government agencies, we will need to have the full cooperation of the Park biologist and ranger staff. Full support of the project by the administartion, and full and detailed knowledge of research and management plans conducted by your department which would have a direct bearing on our research activities is necessary.

I am confident that we can work successfully toward a common objective. The general procedure for doing this is pretty well spelled out in the memorandum of understanding between the National Park Service and the Bureau of Sport Fisheries and Wildlife, and also in a memorandum between the Yellowstone Park administration and the Montana Cooperative Wildlife Research Unit.

I think that we both must recognize that misunderstandings will a ise in the course of the work. As I indicated to you on July 6th, I think the most effective single step that can be made toward reaching a better understanding would be for the Superintendent to circulate a memorandum to all district and subdistrict rangers, indicating administration support for our long-term research projects under the auspices of the Bureau of Sport Fisheries and Wildlife, which has a direct responsibility to Congress for conducting research on wildlife species on public lands.

Both Frank and I would welcome further discussions on subjects and matters where we may now now be in full agreement or may not be in accord in the future. I feel that there is every reason to believe we can and must work effectively together.

Sincerely,

John J. Craighead,
Leader

JJC:AB

cc Mr. John K. Anderson, Superintendent

July 11, 1968

Mr. John K. Anderson, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Jack:

I am enclosing a copy of a memorandum I sent to Glen Cole. I hope that Glen will not misinterpret our motives.

We feel this snaring technique is very dangerous and believe that you would want this information in order to appraise the situation. Certainly, if I were in your position, I would want to get as many opinions as possible.

Very sincerely,

John J. Craighead

JJC:AB

July 11, 1968

To: Mr. Glen Cole, Yellowstone National Park, Wyoming

From: John J. Craighead, Mont. Coop. Wildlife Research Unit

Subject: Snaring of Grizzly Bears in Campgrounds

In 1959 and 60 we experimented with snaring grizzly bears. We found the technique to be extremely effective but also very risky.

On one occasion we snared an 800-pound boar that finally managed to break free and escaped with the snare on its foot. Several months later it turned up in the Thoroughfare country raiding hunters' camps and was shot. The bear had lost a good many hundred pounds over this period of time, was in extremely poor condition, and completely lacked the use of its right forepaw which was practically amputated by the snare.

On another occasion, a cub of a sow grizzly was snared, and the extremely dangerous situation that this presented even in the back country alerted us to the danger of snaring of a cub and having a rampand sow grizzly in the area.

Accordingly we discontinued the use of snares and suggested to the Yellowstone biologist staff that careful consideration be given to authorization for the use of snares in the future. It was obvious that the use of snares in heavily-populated campgrounds could be dangerous and disastrous.

We then developed a system of immobilizing campground grizzlies by shooting them with drugs. Over a ten-year period we immobilized for the National Park Service most of the grizzlies that entered campgrounds. We never had a serious incident and except on one occasion never lost a bear. With this system there was no danger to the visitors and we experienced no problem in immobilizing troublesome grizzlies.

On July 6th I inspected a trap snare in the Canyon campground set by Norton Miner of the Wildlife Services and learned in detail of the problem encountered when a cub had been snared in a heavily-populated campground during the height of the tourist season.

In the interest of being helpful to the Yellowstone administration, I respectfully suggest that the practice of snaring grizzly bears in congested campgrounds be very carefully evaluated. I personally feel it is

far more dangerous than methods used in previous years and that the chances of a serious accident occurring with this technique are far greater than with the technique of shooting and immobilizing.

I offer this suggestion after a background of ten years of working with the grizzly in Yellowstone and with a personal record of having captured and immobilized over 400 individual animals. Both my brother and I and our colleagues would be more than happy to discuss this with you and your staff in some detail and to give you the benefit of our experience.

Very sincerely,

John J. Craighead

JJC:AB

cc Mr. John K. Anderson
Mr. Norton Miner
Mr. Jay Sumner
Dr. Frank C Craighead

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N22

July 18, 1968

Dr. John J. Craighead
Leader, Montana Cooperative
Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

Thank you for your July 11, 1968, letter informing us of your experience with snares. Our experience and preliminary trials indicate snares might provide some extra margin of safety to campers and our personnel under certain conditions. Constant attendance of a set would be essential.

Your proposal for Trout Creek dump phaseout for future years will be reviewed with our staff and be ready for general discussion when desired. This year we are probably committed to all the Canyon concessioners separated "edibles" going to the dump, which has been running about 80 cans each day.

Enclosed is a copy of a memorandum on the bear distribution subject.

Sincerely yours,

Glen F. Cole
Supervisory Research Biologist

Enclosure

cc:
Superintendent Anderson

June 28, 1968

I met Jack Anderson, Superintendent of Yellowstone Park at 9:00 A.M. on June 28 to discuss my research work within the park. We discussed the housing situation. The Superintendent said that he still plans for moving the old mess hall at Canyon which serves as our laboratory; and this early in the fall or sometime during the winter and asked whether we could be prepared to leave at that time. He said that the Yellowstone Park Company wished to get rid of the lab and also that the Director of the Park Service, George Hertzog, was anxious to have the building removed as part of the clean-up program for 1967. We realize that we have to try and stall them if they get rid of the lab, but that we had no place to move into. I said we'd try to be ready to leave by fall, but that it would greatly disrupt our research and wondered if we couldn't use the ranger housing at Canyon in late fall, if the housing units are not used by the Park Service at that time. Mr. Andedson said that he doubted that this could be done, but he would look into it. The Superintendent said that they could perhaps delay destroying the building until mid-winter or very early spring. I said that this would be a better situation and would not be so disruptive to our research.

As to how long we expected to be working in the park, I told him that there was still a lot that we needed to learn about the grizzly bear and that we particularly wished to evaluate the management suggestions that we made for the grizzly bears.

He brought up the subject of the Trout Creek Dump. I told him that we probably would still be doing some work on the grizzly, although on a much reduced scale, until 1971. He mentioned that there was very little garbage being dumped at Trout Creek and as a result the grizzly bears had spread out into the campgrounds as we predicted. As to how

much garbage is being dumped, it was his impression that at least 60 cans a day were to be dumped. I told him that there was much less than this and that it was not holding the grizzly bears. I said that I thought that they were going to experience a lot of problems with the grizzlies later in the summer if the situation was not rectified. I said that we had suggested after nine years of research that the Trout Creek dump be phased out slowly, but apparently their biologists has decided otherwise, and that the food had been cut off completely for several weeks and then the decision to dump some food was made; but this was done after the grizzlies had dispersed widely.

I mentioned that we had offered to evaluate any changes that were made at Trout Creek or other garbage dumps during this summer, but that as of the present time we had not been contacted nor informed as to the plans of the National Park Service.

Then generalities for some time and the Superintendent mentioned that he had heard that we had killed an elk attempting to immobilize it in the Old Faithful area. I told him that this was true and that we had reported it to the Ranger and taken care of the carcass. I said that we had shot the elk to remove a radio collar but unfortunately the dart had penetrated between the ribs.and killed the animal. It was an unforunate incident but only the second elk that we had killed in years of working and years of immobilizing elk with drugs. He said he realized that there would be problems of this kind and the matter was dropped. This was quite in contrast to the consternation he exhibited last winter when we killed a bull elk in the Old Faithful area. This animal had been a marked one we had been working with for years and had recorded the history of this incident elsewhere.

The Superintendent and I walked over to the Ranger Station and after leaving the Superintendent I went up to visit Glen Cole. Immediately he began to discuss some subjects and it was quite clear that Glen was disturbed about some things and I told him that I was too and I thought we had to talk some things out. We agreed to put our cards on the table. I asked Glen why they had disregarded our management suggestions at Trout Creek and why we had not been informed of their plans. He said he had made the decision that it was better to cut off all food and that happened. I said that I felt this was very dangerous and that it would distribute the bears xxxy widely and they would go into the camp grounds, and also that this would disrupt our research and in fact already had since we had not been informed of what they planned to do. Cole and I discussed a wide range of subjects beginning with the two bears that had been killed, one at Lake and one at Old Faithful, neither of which had been reported to us, and so we could not salvage them as biological specimens. I told him that these animals were valuable to us and that we should have been notified in time to make use of the carcasses, and to perform an autopsy. I said that we had to be included in any plans that the Park xxxxxx was making for the management of the grizzlies whether they followed our suggestions or not, since whatever they did would directly effect the research and also that since we had been working on the grizzly bear within Yellowstone Park now for ten years we felt a heavy responsibility for these animals.

In the course of the conversation I told him that it was not just a case of our research team getting along with or cooperating with him but a matter of interagency cooperation. I was in here representing the Bureau of Sport Fisheries and Wildlife and had been in here for many years prior to his arrival and

that it was necessary for us to cooperate. He said that he didn't think we wanted to work with him and for that reason hadn't sent us any information concerning new management policies within the Park and plans for management of the grizzly bear. I asked Cole why he felt this way; that I could see no reason for his taking this attitude; that while in the Park we recognized the need of ~~better~~ following Park regulations and policies; that over the years we had made every opportunity to cooperate; that we worked effectively with the Rangers, but since the Ranger staff and the superintendent's staff changed over the years that it was impossible to maintain the best kind of working relationships unless the Park Service people would make as strong an effort to cooperate as we have; that we had submitted a management report to him upon his arrival in the Park and asked that he and his staff comment on it and return it with their suggestions; that this had never been done; that the Superintendent had also not made any comments until after the report had finally come out; that we had not received any comment from Washington until very recently and this had been very superficial and rather highly critical review of the managment suggestions, but that the criticism had not been based on the report itself but on subjects quite irrelevent to the management suggestions we had made. I stated that our only purpose in being in the National Park was to conduct research, to make management suggestions, and to make this information available to the National Park Service; and Frank and I had a strong interest in National Parks, and for years had worked within National Parks; and we could see no reason why we could not effectively work with the present administration. In fact, Cole said that he thought we should try to cooperate. I said that it was not a matter to trying, that we had to cooperate.

I asked Cole if he would tell me just what the Park Service plans were for the management of the grizzly bear, particularly with regard to Trout Creek. He reiterated some of the information that I had gotten from

the Superintendent, stating that it was his decision to stop the feeding at Trout Creek entirely. We had quite a long discussion on this, during which I warned Cole that the procedure he was following would certainly bring on grizzly bear trouble later in the summer. I pointed out that the action he had taken without in any way coordinating it with us had greatly disrupted our research; and that we had a Memorandum of Understanding on this and for getting the information for the benefit of the National Park Service and that we simply had to be informed of major decisions. I said part of the problem in the past had been these unilateral decisions; and that I hoped that we could improve the situation.

Cole then discussed some of the types of information he was getting on the grizzly bear, that he had set up a monitoring system for reporting all grizzly bear sightings, and that they had seen an unusually large number of grizzlies near the roads in May and June. We then looked at the map and told him that we had been getting the same type of information for the last nine years; and that although there may have been more grizzly bears along the roads in June, I doubted whether this applied in May since we had always seen many grizzlies.

I again asked him if he would outline exactly what the plan was at Trout Creek. He said the plan was to now feed a certain amount of garbage to the bears through August. I told him that I thought someone should check carefully on the amount; that I thought the amount of garbage that was being reported was far less than the amount that was actually being dumped; and that we knew from our censuses that the grizzly bears were simply not in the Trout Creek Area. Cole admitted that they had a number of grizzly bears in all the campgrounds, and that they had had more trouble with the grizzlies than in all the previous years. However, the management plans were one thing and the research another. I said I realized this

but that since we had an unerstanding with the National Park that we had to know what they were doing in order to plan our research. Then I asked Cole how he would have felt if he had been here working nine years on a project largely of value to the National Park Service, and had not been informed of major changes that drastically affected the research. He admitted that this would have caused him concern. I said that it had caused us concern and that we feel that we had to come to a much better understanding than we have at present; that comments in our report about the that the Rangers had caused a lot of hard feeling on the part of the Rangers. I said that I was sorry about this, but that we had earlier asked him to go over the report, and suggest deletion of any such material; that we had talked to a number of Rangers, and they felt that the inclusion of this would be helpful in getting a strong management program, and so for this reason we left it in. I said that I felt that it would be extremely helpful if he and other members of the staff would tend to play this down rather than as had so often been the case make an issue of it. There were a number of Rangers and naturalists running our project down throughout the Park; that this had been done from the very beginning of the study but it was particularly intense now. We mentioned that criticism and extremely derogatory remarks were made about us and about our research program even in their training sessions to Rangers; and that we had adequate proof of this. I thought that if they wanted to cooperate with us, that here was a good place to start. I also said that we very definitely wanted to cooperate with Cole; that in fact we knew it was essential to do so; that we were literally in the back yard of the National Park Service and had no alternative but to cooperate. We knew this and we had made every effort in the past and would make every effort in the future. I said if you really want the kind of cooperation that we have

have been talking about here there is one way to make sure that we get it. That is to ask the Superintendent to send a memorandum to all the district and sub-district rangers stating that the administration supports the grizzly bear research; that it is a long term study that will still require a number of years of research; and that every effort should be made to work with the biologists. I said that this had been done with Superintendent Garrison, and once the Rangers recognized the administration was behind the project they intended to cooperate fully, but when they knew the administration was not supporting the research and in fact belittling it and attempting to hamstring it then they owed it to them by failing to cooperate with us or to inform us of things that were essential for us to know.

We then discussed the problem of the Northern Elk Herd and Cole mentioned ~~that~~ some of his ideas and that there was a new look here in Yellowstone with regard to management. They were going to manage on the basis of an ecosystem and that there would actually be very little management. They planned to continue research but that all marked animals would have to have their markers removed by 1972. The empahsis would be placed on trying to maintain a natural ecosystem without any management. I did not comment on this but indicated that I thought the Park Service had finally gotten to the point where they recognized the need to do intensive management based on detailed information of species in the ecosystem and that I felt it was a step backward to suggest very limited management. I further conveyed the thought that the ecosystem concept was fine, but it was nothing new; that the Yellowstone Park and adjacent national forest areas should keep the ecosystem under consideration since anything smaller was not truely an ecosystem in relation to big game species.

On leaving Cole I felt that we had at least made some progress. We had come to a better understanding of each others problems and ~~viewed~~

they stated a desire to cooperate more closely. Just as I was leaving the Superintendent came in and we had another very brief discussion and then I left.

John J. Craighead

1968

Notes on Yellowstone research situation.

On July 2nd, Jay Sumner phoned and said that Glen Cole and Norton Miner had visited the laboratory and had requested their help in capturing a female grizzly and her two cubs in Canyon Campground. Jay and the crew spent most of the night and finally succeeded in capturing the sow and her two cubs using Sernylan and the Cap-Chur gun. They released these animals at Trout Creek.

In spite of the long hours, the hard work, and the success of the undertaking, they received no thanks from the subdistrict ranger or from Norton and his associates for their efforts.

We later learned that Norton had been demonstrating how to snare grizzly bears in several of the park campgrounds and that he had plans for extending this work at Canyon, but at no time did Glen Cole or Miner make this known to our people or discuss their previous snaring efforts.

I returned to the lab on July 5th and learned from Jay that snares had been set in the Canyon Campground. We went to one of the sets in order to inspect it. The snare had been set within 20 to 25 feet of a visitor's camper and only 10 or 15 feet off the loop road. While we were inspecting the set, Norton Miner arrived and proceeded to dismantle the snare. I took this opportunity to tell him that we were disturbed that neither he or the Park Service people had informed us of their activities, that snaring these bears was disruptive to our research efforts unless we knew exactly what was going on, that the cubs were separated from the sows so that the family units were disturbed and the behavior patterns altered.

I also mentioned that we had tested the snare technique in 1959 and found it was an efficient trapping method but it was an extremely dangerous method to use in a national park, that we had had several hazardous experiences

with snared grizzlies and that I thought it was not a technique that should be employed in a park campground - particularly at the height of the tourist season.

I explained we had developed a technique of shooting the bears with drugs in campgrounds, that we had successfully captured and removed nuisance grizzly bears from campgrounds over the past nine years and that the techniques we utilized was extremely effective. I wondered why neither he nor the Park Service had consulted us on the matter.

As it turned out, we learned that a cub had been snared and, as we had warned the Park people so many times before, the sow became extremely aggressive and ran through the crowded campground all night long with the trappers unable to either release the cub or to shoot and immobilize the sow. By their own admission, they were completely helpless to control the situation. Fortunately the sow did not injure anyone and the cub was released the next day, but we were unable to learn with any certainty whether the ~~sow~~ cub had lived or had been strangled in the noose. One cub was already missing following the first capture.

It was apparent that the agitation of the grizzly had frightened those responsible for the snaring and they were pulling up their snares and leaving. Obviously this will be the last attempt to utilize snares in a crowded campground.

It appears that Glen Cole is still completely unwilling to consult us on these matters and in fact has deliberately gone out of his way not to keep us informed and to make certain that others connected with the operation also do not cooperate with us in any way. This was extremely disturbing to me in view of the recent meeting I had had with Glen Cole in which we had spent many hours discussing cooperation on such matters as this.

July 8, 1968

Karen Craighead, Jeff Nelson, and I took No. 228 to the Trout Creek gravel pit to release her. Upon our return to the service road gate, the car overheated and we stopped to replace the water that had boiled out.

A government vehicle pulled up to the gate and the superintendent stepped out. He asked me if we had been into the Trout Creek Dump and I replied that we had. He then asked me what I was doing taking a girl into the Trout Creek area. I informed him that she was Karen Craighead and that she had permission to be in the area. He stated that he had permitted the Craighead boys to enter Trout Creek but had definitely not granted Karen Craighead permission and she should not be allowed to go into the Trout Creek area. I commented that Dr. Craighead had just given him the list of personnel the previous week and that to my knowledge all people on the list had met his approval. He again stated he had not given us permission to take Karen to the dump.

I again stated that Karen had been gathering quantitative information on the behavior of the grizzlies at Trout Creek. I also stressed that she was collecting important data that I didn't have the time to gather. I told him she was an essential and necessary part of the study. His only comment was: "I don't care; I don't want to take the chance of anyone seeing her entering or leaving Trout Creek!" He then told me to tell Dr. Craighead to call him.

Generally, his attitude was very poor. He began asking questions without introducing himself or asking my name. He used very little tact; his questions were quite rude. He returned to his car without introducing himself

to anyone present. It was obvious that he had little concern for us as individuals or for the grizzly bear study.

PERSONNEL LIST--GRIZZLY BEAR PROJECT--1968

John Craighead
Frank Craighead
Jay Sumner
Jim Claar
Jack Seidensticker
Hank McCutchen
Jim Romansky
Jeff Nelson
Karen Craighead
Harry Reynolds

Lance Craighead
Charlie Craighead
Derek Craighead
Johnny Craighead

Will assist occasionally in specialized field work--handling large bears and radiotracking.

July 9, 1968. Conversation between Glen Cole, Frank Craighead, and Jay Sumner.

Tlen Cole stopped by the lab to discuss problems and relations between the National Park Service and the Grizzly Bear Personnel. He talked to Frank about 15 minutes before I arrived on the scene.

Major areas of discussion were:

1. The memo I had written to Cole concerning the request for cooperation by Rangers in filling out the weekly list of grizzlies entering campgrounds. He returned my letter and form and requested that we cooperate next year. He said that they were gathering the same data and we could obtain the information from them as long as we acknowledged the source.

2. The Great Falls Tribune article that supposedly criticized the National Park Service's report on the Glacier Park incident.

3. Craighead's not giving credit to the NPS for their part in managing the grizzly.

4. The use of snares in the campgrounds.

   a. They are definitely planning to incorporate snares in the campgrounds (with close supervision).

   b. He feels they don't have to consult or inform us about their campground management policies.

5. He criticized me for helping capture the sow and two cubs in the Canyon campground.

   a. He stressed the legal actions that could be brought against me in case of an accident.

6. We discussed the Glacier grizzly incident.

   a. He admitted that the Park Service had kept back pertinent details.

   b. Suggested that John and Frank don't speak out on the killings [illegible] behind them.

7. Discussed briefly the amount of garbage present at Trout Creek and the need for continuing to dump.

8. Discussed marking new bears. I told him we would mark only a few important bears. He said this would be fine.

It was apparent to me from the conversation that the NPS administration expected us to cooperate and keep them informed but have no intention of informing us of their plans or following our management recommendations.

Discussion with Glen Henderson, Old Faithful

The afternoon of 7-10-68, I went to Old Faithful, planning to census at Rabbit Cr. dump. I obtained the Key from Glen Henderson, sub-district ranger, and asked him if any grizzlies were in the camp-ground. He said they hadn't experienced any trouble lately, except with a few black bears. This sounded like a predetermined answer, so I also asked the secretary later, and she immediately gave me the same reply. I definitely feel they have been told not to give us any information along this line.

During our discussion, of the cub mortalities of May 26, he admitted that he knew very little about bears. His attitude was, however, quite cooperative and he seemed interested in helping us.

Jim Claar

Apparently, we are not suppose to commiserate at Rabbit Creek - instructions from Glen Cole.

July 12, 1968. Conversation between Glen Cole and Jay Sumner

Glen called to comment on the number of cans of garbage being dumped at Trout Creek. He states that, after a thorough investigation, 80-100 cans of garbage are being dumped daily at Trout Creek. I explained that probably one half, at the most, of this amount was being dumped.

He tried to get me to admit that a late spring and high rodent populations may be the primary cause of the scattered distribution. I explained that in the past nine years there have been both late springs and high rodent populations - neither contributing to a scattered distribution.

We also discussed the use of knock-out drugs and removing markers from our grizzlies. He asked me if it would be possible to remove markers from some of our less important bears. I told him all marked bears were important members of family groups and all marked bears must remain marked in order to continue our research objectives. He dropped the matter.

Second Conversation

I called Glen and asked if we can at least look at the unmarked bears captured in the campgrounds. I gave him the following reasons:

1. To determine if the bear had lost its markings.
2. To obtain weights and measurements.
3. To decide if it is one of our unmarked recognizable grizzlies.

He commented that "many" believe marked bears may be inhabiting the campground more frequently than unmarked bears. Apparently they form an association with man because of our handling procedures. He said he would try to get us permission to work on the unmarked grizzlies.

5

Trout Cr. Dump

The morning of 7-12-68, Jeff Nelson and I took census at the dump from 10:00-12 noon. The garbage was brought out at approximately 11:00 and consisted of a pile 12' x 7½' x 1½' . By count there were 14 plastic pail liners full of garbage, plus uncontained garbage and a few cans and papers. The garbage dumped was for the most part edible, and a conservative estimate would be from 25-30 cans. This is, however, the only garbage dumped there during the day. Thus, as indicated by the census it is mostly consumed by young bears and sows with young. Another consideration is the concentration of the food in a small pile which tends to eliminate less dominant individuals from the feeding until later.

The garbage men are spending an average of fifteen minutes at the dump photographing the bears. This has been observed on the days I took census.

The garbage volume is definitely up now in comparison to the estimations we have made in the past three weeks.

Trout Cr. Dump

At 1:15 P.M., 7-16-68 Jeff Nelson and I went to the dump area for a brief census and check for darts. There were very few bears in sight (approx. 20-23) and none in the dump. Either garbage was not dumped this morning or else it had been almost completely consumed.

We found another dart from last nights shooting; thus all have been retrieved.

Jim Claar

Trout Cr. garbage: June 3-14, 1968.

During this period Harry Reyholds took census at the Trout Cr. dump and estimated that a maximum of eight cans of garbage was being dumped. He arrived late at night usually and felt that there was one load per day, though this is not definite. The refuse was mostly paper and wet, with the cans eliminated. Harry estimated that no more than two cans of edible food was available per day.

Our records have shown that the amount of edible food has now increased.

Jim Claar 7-17-68

July 19, 1968. Trout Creek garbage situation.

The amount of garbage dumped at Trout Creek has been drastically reduced during the spring and summer of 1968. The reduction in garbage is supported by the following evidence:

1. Harry Reynolds observed at Trout Creek from June 3 to June 14. He estimated the maximum amount of garbage dumped was 8 cans with no more than 2 cans of edible garbage.

2. June 17. Jerry Mernin, Lake sub-district ranger, informed me that the Park Service policy was to burn all garbage from Lake and Canyon. Because of the problem in campgrounds, they decided to begin dumping edible foods at Trout Creek.

3. June 15. A garbage man reported only 5 cans of garbage being dumped a day.

4. June 14-July 12. A gradual increase of garbage being dumped. Periodic visits were made to Trout Creek in order to accurately estimate the amount of garbage being dumped. At no time were there more than 40 cans of garbage being dumped. Many of the cans were half filled with water. Probably only 10 to 15 cans of edible garbage is available to the grizzlies.

5. See Jim Claar's report.

In summary, there is not enough garbage at Trout Creek to concentrate the grizzlies in this area. The grizzlies that do visit the dump remain only a few minutes and then disperse. Most of the grizzlies that enter the dump get no food because a few sows and young clean up the garbage early in the day.

Rabbit Cr. Census 7-22-68

Census disrupted at 8:30 P,M., when a N.P.S. vehicle I-12003 entered the dump. There were four people in the car appearing to be an employee and his wife, plus an elderly couple. They left at 9:25 P.M.

Didn't have a chance to ask Henderson about the policy on people entering Rabbit Cr. dump. In our case, however, he has said that a key will be left at the ranger office particularly for our use.

Total of 26 bears in the dump.

J Claar

July 22, 1968. Conversation between Dale Nuss and Jay Sumner

I called the superintendent and asked permission to take Dr. Azuma and Dr. Herrero to the Trout Creek Dump. The permission was denied for both men. I then asked permission to take Elliot Dalton to assist in handling the grizzlies. He referred me to Dale Nuss who was supposed to O.K. all personnel entering Trout Creek.

I explained to Dale that we wanted to take a student from Pennsylvania into the dump. I told him he would be working for a month and that I felt another person was necessary to carry on our work. He replied that we already had 14 men on the list and questioned the necessity of taking more people out to Trout Creek. I explained that half our personnel were engaged in elk work.

He then asked me what the student's major subject was in college. I informed him the student was in high school. He replied "You will not be allowed to take high school students to the dump." I asked if this was the policy of the superintendent. He said the he had gotten the idea from Mr. Anderson.

In the evening at approximately 8:30 P.M. Dale Nuss drove into the dump and asked us our names. He then asked if he had scared the bears. I commented that he had and asked if it would be possible to check on us at the gate. He replied "I have 90,000 acres to look after and don't have time to sit at the gate and wait for you to come out." I asked if it would be possible to send an assistant to check at the gate. He said that he must check himself.

During both conversations Dale Nuss was rude, tactless, and showed no sign of trying to cooperate with us. He seemed to be purposely trying to discourage our research.

Dale Nuss's visit was at a very inappropriate time. We had just show sow No. 40 with 210 mg. of sernylan. The noise of his car engine frightened No. 40 and she ran approximately 250 yards before she was overcome by the drug; thus she was located in a dangerous position for the required field work.

August 2, 1968.

A few days before the above date, I was informed by a Y.P. employee of the capture of a sow and cubs in the Canyon Campground on 7/26/68. I asked Ranger Dick Guilmette if the sow had been captured. He admitted the sow had been captured and released at Sylvan Pass.

I asked him why he had not informed us of the capture since this was a marked grizzly. He commented that since we had already marked the sow and cubs this year, it was unnecessary to inform us of the tagging. I informed him of the proper date (1963) the sow was marked. I also asked his cooperation in informing us of trapped marked grizzlies in the future. He said this was the only marked grizzly that wasn't turned over to us.

Denial of AEC personnel - Aug. 14, 1968

August 13, 1968.

Jim Claar called Jerry Mernin to obtain permission to census at the Bridge Bay Incinerator. Jerry Mernin informed us of a young marked male, No. 311, who was trapped the night of August 12th. Dale Nuss told Jerry that the bear was to be released at Trout Creek and photographed by Joe Fass of American Sports. Apparently they need a shot of the NPS releasing a bear for a TV show. Jerry was apologetic but said he had to follow orders.

August 16, 1968.

Drove from Moose to Canyon and stopped at Lake to talk with Dale Nuss.

Learned from Jay Sumner that Nuss had released a color-tagged grizzly at Trout Creek for TV photographers from Sports Illustrated.

I questioned Nuss why:

1. We had not been informed that they had a marked bear?
2. Whether the superintendent had approved the photographer to enter Trout Creek?

Nuss said he had his orders direct from the superintendent to release the bear without contacting us and that permission had been given the photographer to enter Trout Creek.

This was all I wanted to know since the superintendent had denied similar privilege of entering Trout Creek to the AEC team and other research scientists.

I repared to leave when Nuss asked why our people had not been reporting direct to him. I told him we had been working through the sub-district rangers as in the past and assumed that they reported to him. I offered to have our people report direct to him if this is what he wanted.

We had a long discussion on cooperation and Nuss's attitude toward the grizzly research work.

I accused him of continually speaking out about the research in a disparaging way, of throwing road blocks when he could, and of indoctrinating rangers against our team and our work.

He countered that we did not cooperate. I asked him to specifically name one instance in 1967. He said he could think of none. I said then 1968. Again he admitted he could think of none. Finally it came out that years ago someone failed to ask his permission to enter Rabbit Creek, and that we had never invited him to the lab. I said if this had occurred, I apologized and on the spot invited him to visit our lab. I said that all of us made mistakes, but this did not justify the antagonism he had shown throughout the years. I said I intended to find out where our present trouble was coming from and if necessary would bring pressure to bear.

I believe our discussion cleared the air a little. It was evident that he was getting his instructions from the superintendent and from Glen Cole, the supervisory biologist, and blemishing their orders with his own brand of heckling.

August 16, 1968.

Meeting between Dr. Craighead, Jay Sumner and Jack Anderson and Bud Estey

At 9:00 A.M. Dr. Craighead received a call from Jack Anderson's secretary asking him to meet with him at 11:00 A.M. Dr. Craighead and I arrived in Mammoth at about 12:00 noon. The conference began at approximately 12:15 P.M.

The superintendent brought up two main points:

1. He disliked the feed-back he was getting from various individuals and agencies. These people all felt Anderson was discouraging individual research.

2. He disliked Dr. Craighead contacting his district and sub-district rangers on policies he had made.

The meeting was very long and many problems were discussed. Some of the more important areas of discussion were:

1. General lack of cooperation on the district and sub-district levels.

2. Glen Cole's attitude towards our research.

3. Complete lack of communication between the NPS and our research team.

4. The attitude of Dale Nuss this summer and past summers.

5. Their policy on releasing unmarked bears without informing us. Anderson said he knew nothing about this policy.

6. Anderson's policy on the screening of all people at Trout Creek was discussed at some length. Apparently he is going to keep the same policy.

8. The elk management problem.

9. We requested that he send a memorandum to all districts indicating his support of our research.

10. Anderson was disturbed about the Great Falls Tribune article and our reaction to the Glacier killings.

11. Discussed the Glacier Bear-incident report.

12. Need for public hearings on new Park policy:

1. Research
2. Management
3. Overall policy

Dr. Craighead made the following requests in order to rectify the present problems.

1. The memorandum as discussed in (1) be circulated.

2. That we should be given the opportunity to help formulate the management program and coordinate it with our research efforts.

3. A policy be considered which would permit visiting scientists to visit Trout Creek and also permit Park Rangers to visit Trout Creek.

4. That Glen Cole be brought into line with regard to his actions and attitude toward our research.

5. That we have the opportunity to discuss Park policy either affecting or directed toward our research before putting such policy into effect.

The replies to the above requests were all in the negative except for number "(2)".

We stated that there had been much talk about our lack of cooperation in the last nine years. Dr. Craighead said that we would stand on our past record in the Park. Anderson agreed our record was clear.

Notes on Yellowstone Personnel with Respect
to Research and Immobilization

February 14, 1968.

Glen Cole stated that the Superintendent was pretty upset over the loss of the bull elk since Old Faithful is such a high visitor use area. Upon my request to immobilize a neckbanded bull, Cole said that this was okay with him but that he didn't know what Jack Anderson would think of it in view of these recent developments. It was obvious to me that Cole could have helped the situation on Old Faithful if he had wanted to. Barmore was quite cordial and backed me as much as he could.

Glen got off on a tangent on the general elk report that Gerry has been working on. Glen stated that he will wait and see what the report contains before he decides whether the information is of any value to the Park Service. He thinks that the observations made on the marked elk over the past five or six years do not justify marking one elk for every five unmarked in the northern herd. I reminded him that over 5000 observations on marked elk have been accumulated. I also reminded him of Dick Ellis, Rich Blott, and the summer crews who have worked quite hard in accumulating so many observations. Barmore had no comment. He did assure Cole that after talking to Gerry recently that the report would contain good material for the benefit of the Park's management program.

Jerry Mernin expressed concern about needless marking of bears when he and I were discussing the merits of marking animals in general. He said bears inferring black bears as opposed to grizzlies. He has not received complaints from tourists about markings on bears over the years despite the fact that numerous blacks along the road were marked. He did not elaborate further.

Dr. Pengelly was apparently put out with Cole since Glen did not show up with Barmore to meet with his class. Pengelly stated that this was not a big enough show for Cole. He went on to call him the biggest egotist and most arrogant bastard there is for what it is worth. He privately expressed concern about the direction Cole was going with the management program. Also, Cole favors Bozeman; that he gets it honestly because Quimby, Lovaas, Picton, Martineka, etc. are similar in nature. Martineka has great plans in Glacier for grizzly research and Cole is pushing that project.

February 20, 1968.

I met Bill Barmore along the road to Lamar this morning and discussed the immobilization situation with him. I proposed that three cows be held back from the chutes to determine a safer dosage of Sumylan for elk than what we had to work from in the Old Faithful case. Bill said that it would be

John —

Enclosed are some notes on the Yellowstone situation for your interest and reference. I hope they will provide some background on the Park situation.

Merlin

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February 20, 1968.

I met Bill Barmore along the road to Lamar this morning and discussed the immobilization situation with him. I proposed that three cows be held back from the chutes to determine a safer dosage of Surnylan for elk than what we had to work from in the Old Faithful case. Bill said that it would be

quite a job to rig the squeeze chutes for weighing elk. During the reduction program this year, the elk have not been weighed. The scale bases were removed from the squeeze chutes at the various traps. Bill and I both agreed that possibly marked cows would be the best to work with under the circumstances since we had winter weights on file for marked elk from previous years. Bill recommended that I see Cole on this for approval. He stated that Jack Anderson and Glen were both pretty mad about the Old Faithful bull and he didn't know how thay would react to this proposal under the circumstances. Barmore could see nothing wrong with this but implied that his hands were tied.

I presented the proposal to Cole later in the afternoon. His immediate reaction was silence and apparent indecision; finally he replied that he couldn't see using a Park elk for an experimental animal and remaining within the original concept and objectives for which the Park was established. He couldn't conscientiously recommend such a proposal to the Superintendent although he expressed some willingness to discuss it with him. He said that if we wanted to work out a dosage of surnylan for elk, he would give us a truck load of elk that we could put in a pen outside the Park and run the experiment correctly. I tried to impress upon him that we were not working out the dosage but were trying to find a safe upper limit of immobilization before salivation became critical.

The topic of elk immobilization was closed when Glen closed the door to his office. Then several other aspects of research and experimentation were discussed. He stated that Bart O'Gara and Ken Greer had been cut off in their biological collections in the Park. In respect to Greer, Cole stated that the Park rangers were getting pretty tired of aging and fooling with yearlings. (I have hot heard complaints at the trap by rangers working there; Tom Milligan thinks the trapping operation would be much simpler if the vet didn't have to bllod test. There shouldn't be any complaints on this aspect anyway in view of how fast elk are processed. One hundred cows and calves with few bulls can be precessed in three hours with adecuate manpower as has been shown time and time again at the Soda Butte and Frog Rock traps this winter.) A discussion on the contribution of the general elk report to elk management was revived. I again assured him that it would contain management information but that its usefulness in attaining management goals would best be evaluated in terms of how much or to what degree the reports recommendations are adopted by Park officials.

I left the biologists' office with the understanding that I would use sucostrin for immobilization. Cole would not discuss the surnylan proposal with Anderson unless I requested it again. Barmore was not present nor was he in his office.

I have gotten along remarkably well with the Park rangers this winter. I have picked up no comments from them regarding the grizzly or elk research in the Park despite numerous "feelers" aimed at getting such opinions. I am sure that no comment, however, does not mean that they don't have thoughts on the subject. They are interested in the radio telemetry and often discuss my work in the Park.

My contact with Anderson has been very infrequent. Marg and I felt somewhat shunned by him at a Lovegren-Hennessey open house at New Years despite our efforts to converse. This may be understandable since my letters last fall did not particularly flatter the Park Service.

1967	From	To	Subject
6/28	JJC	Supt.	GRIZZLY
7/18	JJC	Supt.	Management Report, Radiotelemetry Report
7/18	Supt.	JJC	Memo. Understanding
7/25	Supt.	JJC	Radiotelemetry Report, Cole's work
7/26	JJC	Supt.	Memo. Understanding
8/3	JJC	Supt.	NPS Research Goals
9/14	Supt.	JJC	Walt Berlet (Inferiority complex)
9/15	JJC	Supt.	Answer
10/16	Cole	Supt.	Elk or bison kills
?	JJC	Cole	Answer
11/1	Cole	JJC	Elk or Bison Kills

Notes

6/27	JJC notes		Conversation JJC, Supt., J. Good - grizzly
1959-1967	JJC notes		Review of Research in YNP

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

June 28, 1967

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear John:

I want to thank you for your phone call concerning the National Geographic TV production GRIZZLY. I appreciated your frank comments concerning certain portions of the narration and also your concern as to whether the film sufficiently emphasizes the grizzly bear and its present status.

I can only reiterate what I said over the phone that the sole purpose of this film is to create a public understanding of some of our major resource problems including the need to preserve a threatened species and to portray to the public how information is obtained to carry out these objectives. We probably will not know whether the show will accomplish this until it has been released to the public. However, I do believe that the show will do this, and hopefully not at too great a risk to scientific reputations.

I am enclosing a letter that Dr. Paul Saltman wrote me after he had viewed the film. I think you should know that Dr. Saltman was a stranger to me until I received this letter so his judgment is based entirely on what he saw in the film.

I am sure that no one recognizes the hazards involved in presenting a film of this kind to the general public any more than Frank and I do. We did a lot of soul searching before we agreed to cooperate with the National Geographic Society in this venture.

I am making every attempt to get a finished copy of the film prior to the general release date of November 1st. If I manage to effect this, I would be most happy to show the film to a small group of Park officials, and I would certainly appreciate as candid a review of the film as you made of the script.

Sincerely,

John Craighead

John J. Craighead

JJC:AB

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N1427

July 18, 1967

Dr. John J. Craighead
Leader, Montana Cooperative Wildlife
Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

Enclosed is a revised copy of the proposed Memorandum of Understanding providing for continuation of the grizzly bear studies. This refers to the memorandum which accompanied your letter of December 16, 1966, which action has been delayed pending receipt by the National Park Service of a management report from you. As evidenced during our conference on June 12, a Grizzly Bear Study Report appears imminent; hence I am able to consider your request for continuation of the study. The enclosed revised draft covers our thinking on a Memorandum of Understanding to provide for such a study.

Our draft provides the following revisions in your proposal.

Page 1, Paragraph 1.

We believe this agreement should be effective for the period June 30, 1967, through June 30, 1969. We believe any agreement should have a termination date. Changing conditions and times make this arrangement desirable from the standpoint of all parties concerned. Extension of this agreement beyond June 30, 1969, may be possible upon written application and mutual agreement of terms by the Montana Wildlife Research Unit and the National Park Service.

Page 2, Paragraph IV.

We would request the addition of one new item (Item No. 6) to read: To identify number limiting food and/or habitat factors as they influence recruitment, death and emigration of grizzly bear.

Page 3, Paragraph IV, Sub-Paragraph which was headed: "Specific Physiological and Behavioral Objectives Are", Item No. 3:

We suggest the words "Secondary and/or By-Product" be inserted as shown so that the sub-paragraph heading would read: "Secondary or By-Product Physiological Objectives Are".

It is our feeling, in this instance of an endangered species in a natural area of the National Park System, that we are not justified in allowing certain studies that could be conducted elsewhere. We believe that studies involving the physiological relationships between bear and man must be of secondary importance unless this data can be secured without harm or harassment to the bears as by-products or supplementary information to the principle objectives of the study.

Page 3, Continuation of Paragraph IV, Sub-Paragraph which reads, "Specific Management Objectives Are".

Item 1:

We would suggest the addition of sub-sub-headings to be included as follows:

a. Comparative population numbers, sex and age structures, and distributions of free ranging and habitual dump ground utilizing population groups.

b. Comparative seasonal food habits of the two groups (a above).

c. Comparative conflicts with primary Park objectives of providing visitors with opportunities to see native faunal scenes as they would have occurred in primitive times.

d. Comparative conflicts with preservation of grizzly as a representative faunal species in Park ecosystem.

Page 4, Agreement Item No. 2.

We cannot grant exclusive use to you of the Trout Creek Valley area. We therefore believe the word "exclusive" should be eliminated from the agreement. Administrative use of this area will be minimized; it will be closed to visitor vehicles; and the public will be discouraged from traversing this area by any means.

Page 4, Agreement Item No. 3.

Helicopter use and landings within the Park are restricted to emergencies involving human life or safety, and fire suppression. Any other helicopter use or landing must be approved by this office.

Page 5, Agreement Item No. 7.

We would recommend elimination of the last sentence of this item, since we believe the present buildings at Canyon, which are owned by the Yellowstone Park Company, will not be available after this summer season.

We will be glad to discuss any of these items with you, and we trust we may now proceed to provide for the further study in accordance with this Memorandum of Understanding. Please advise us how many copies you will require, and we will make the necessary copies available for signature.

Sincerely yours,

John S. McLaughlin

John S. McLaughlin
Superintendent

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO: N22

July 25, 1967

Mr. John J. Craighead, Leader
Montana Cooperative Wildlife
Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

We have one copy of your report, Radiotelemetry of Large Western Mammals. This report presents some very good descriptions of your methods and some of the basic data obtained. The home ranges of elk are most informative.

As a result of the Casper hearing we ended up with three full time research positions in Yellowstone. These were filled by Glen Cole, Bill Barmore and Bill Hendrickson. Enclosed is a list of research goals and a briefed plan that was developed to give direction and continuity to our research effort.

We would hope you would be able to satisfy the categories relating to the habits, population dynamics and ecology of the Grizzly. Glen Cole's primary research will be on the comparative habits, population dynamics and ecological relationships of naturally controlled and managed elk populations in the Park. He will also be expected to integrate all plant and animal research for a comprehensive publication on the fauna of Yellowstone. Bill Barmore's primary research will be to work on the habits, population dynamics and interspecies ecology of the different ungulates that use Mammoth area winter ranges. Bill Hendrickson will give us an ecological classification of Park flora and other plant ecology studies as needed.

Each of these men have, in addition to their primary research, one or more special studies that serve the more pressing management needs of the Park. As you can see, the Director has definitely put us in the research business.

None of this precludes research work by other independent researchers or cooperators. In fact, it should encourage such work. Hopefully, however, we should be better able to communicate our specific research needs and use results to accomplish the primary purpose of the Park.

Sincerely yours,

John S. McLaughlin
Superintendent

Enclosure

July 26, 1967

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming

Dear John:

I received the revised copy of the proposed Memorandum of Understanding providing for continuation of the grizzly bear studies. I reviewed the carefully and found that your draft is acceptable except for a few minor provisions which I now bring to your attention.

Under Section IV, Specific Objectives Involving Population Ecology, Item 6 has been suggested by your staff but the wording is not clear and I am not sure just what is intended. Perhaps this could be clarified in the final memorandum.

Section IV, subheading Specific Management Objectives - Under the first specific management objective there are three subheadings a, b, and c. I suggest that a and b be deleted. Again the wording is not clear, but in any case it appears to assume that there are two populations of grizzlies, free-roaming and dump ground. We have no scientific evidence to indicate that such a situation exists. Therefore I would suggest substituting the following for subparagraphs a and b.

> "Determine if a "discreet back country" population of grizzlies exists and the relative size of this population unit. "

I refer you to the changes that are made directly on the proposed Memorandum of Understanding.

Subparagraph d. Comparative conflicts with preservation of grizzly as a representative faunal species in Park ecosystem. I believe this is pretty well covered in our report and need not be stated as a specific management objective. However, there is no objection to it if you feel it desirable to restate it in the Memorandum.

At our meeting in June you requested that I let you know what our space requirements would be if we were to continue our research efforts in Yellowstone National Park. I feel that it is highly desirable to have at least the same amount of space and facilities as we have had in the past at the old Yellowstone Park Company mess hall.

We anticipate having four to five students working in the park each year and in addition several staff members of the University of Montana.

We will need messing facilities as well as indoor laboratory space and storage. Also as in the past we will require housing for six to eight people minimum.

Over the past years we have found it difficult to conduct research over a five-month period with the facilities that have been available to us in the past. We have been unable, of course, to have our families present and over a long period of time this works a hardship on staff members as well as students.

We would not expect to rectify this situation in the future, but it will be difficult if not impossible to do research on the scale we have in the past without space and facilities that are comparable to those at the Yellowstone Park Company mess hall. We recognize that this installation must go; however a brief survey of existing National Park Service facilities has caused concern that once the mess hall is removed that adequate facilities will not be available in the Canyon area.

I will be happy to discuss this matter or any of the other items with you when I come to Yellowstone in August. However, I think we should proceed to complete this Memorandum of Understanding. We would like two copies for signature and three additional ones for our files.

Sincerely yours,

John J. Craighead

JJC:AB

August 3, 1967

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear John:

I was happy to learn that as a result of the Cooper hearings you now have three full-time research biologists in Yellowstone. There is no doubt that this is a big step towards obtaining the basic type of data so necessary to the management of the park's flora and fauna. I was particularly encouraged to see that one of the goals will be to aid and encourage independent researchers.

With regard to the research goals, I can assure you that we can satisfy the category relating to habits, population dynamics, and ecology of the grizzly bear. We plan eventually to prepare a monograph on the grizzly and this should certainly take care of that specific goal. Our studies on elk should also meet some of the objectives listed. We will, of course, make these publications available and are more than happy to contribute to these specific research goals.

Research goal Number 3 is broad in scope and extremely ambitious. However, I think your biologists are to be commended on their foresight, for this type of information is certainly basic to intelligent resource management.

I have quickly reviewed the tentative research plan. To carry out the plan as outlined will require a great deal more color marking of individual animals than has been done in the past. It has been my impression from the last several meetings that we have had that the trend in thinking among your biologists was to cut down on projects involving color marking of individual animals. Apparently there has been a change in this attitude and I for one am most happy to see a reversal in this trend of thinking.

I want to assure you that we are prepared to cooperate fully in this overall research plan and we feel that our contributions to date have gone a long way towards meeting many of these objectives with regard to the species we have been working with.

Very sincerely,

John J. Craighead

JJC:AB

cc Mr. C. Edward Carlson

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N22

September 14, 1967

Dr. John J. Craighead
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

Back in July you wrote to suggest we write Walt Berlet and ask him to stop criticizing your research project. We did not write him then, preferring to wait until we could refer to your research report.

Since your report has reached us, we have decided not to write Mr. Berlet at all. We do not believe our writing would change any opinions of the work he may have and may have a contrary effect by giving him a persecution complex. One lone dissenter being harried by two federal bureaus.

We believe your report speaks for itself. Why not send Mr. Berlet a copy?

Sincerely yours,

John S. McLaughlin
Superintendent

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

UNIVERSITY OF MONTANA
MONTANA FISH AND GAME COMMISSION
WILDLIFE MANAGEMENT INSTITUTE
FISH AND WILDLIFE SERVICE, UNITED STATES DEPARTMENT OF THE INTERIOR

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

September 15, 1967

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear John:

Thank you for your letter of September 14th. In spite of the fact that you had not received our report, I had hopes you would write Walt Berlet.

My suggestion was not to stop him from criticizing our research project but that the Yellowstone Park administration suggest that he "refrain from adversely criticizing a research project sponsored by the National Park Service and numerous scientific organizations until such time as he had acquainted himself with the facts". This was all I requested and in light of the effort we have made to get facts for the National Park Service, it seemed like a very small request.

I will be happy to send Mr. Berlet a report if he requests one. I certainly don't want Mr. Berlet to develop a persecution complex. Possibly a more positive approach would be to give the people doing the work the best kind of support. It is even possible that biological researchers could develop this ailment.

I am happy to know that our report speaks for itself. However, as I indicated in several letters and a number of phone calls, both Frank and I would appreciate written comments and suggestions from your staff. Comments that you made to me over the phone several weeks ago certainly left me with the decided impression that you were not at all pleased with the report.

In view of the fact that we have put so much time and effort into this project, we would like to wind it up in a manner satisfactory to all concerned. This, of course, was the purpose of our meeting in June and was the purpose of my frequently contacting your staff to try and get their comments and suggestions before release. There is nothing that Frank and I would rather do than to get together with you as old friends and informally discuss this report. Would it be possible to do this some time in October? I think that by such a talk we could clear up any misunderstandings.

Very sincerely,

John J. Craighead

JJC:AB

N22

Superintendent, Yellowstone October 16, 1967

Supervisory Research Biologist

Dr. Craighead's request to kill elk or bison for grizzly bait

Hank McCutchen and Harry Reynolds who are working with John and Frank Craighead phoned me on October 12 and 13, respectively, to request our approval to kill an elk or bison for research purposes. The animals were to be used as bait to check grizzly bears that may have non-functioning radio transmitters. I expressed my reluctance to approve such a request and asked if domestic meat scraps, honey or some other material might serve as an alternative to killing park wildlife.

John Craighead called on September 14 and stated that their situation was somewhat critical. A considerable investment in study time and money hinged upon being able to check certain bears that had been followed for as long as three years and they would only have about one more week that this could be done. He had assumed that we would have no reluctance to authorize the use of elk or bison for attracting grizzly to specific areas for study purposes, since this had been done in previous years and was provided for in past and present cooperative agreements.

Under these circumstances I felt we had no alternative to approving the use of up to two animals, if absolutely necessary, providing they were taken in the remote areas of Hayden Valley. I also asked that John send us a letter giving specific reasons why they had to use wild ungulates to bait grizzlies and that they not kill bison because of possible interference with Mary Meagher's study.

I personally have some very strong feelings against prevalent attitudes that we have excessive or surplus numbers of ungulates throughout the Park. Over large areas we are extremely short of native ungulates if we consider that the Park's primary purpose is to provide visitors with the opportunity to see native wildlife scenes and maintain some semblance of a natural ecosystem. I would recommend that in future years research collections or control of ungulates within the Park only be permitted on herd segments or areas where documentive evidence shows that control is absolutely necessary. Alternatives to research procedures that involve destroying wildlife, or otherwise conflict with the primary purpose of the Park, can usually be found. These must be used, if research itself is not to become a contributing factor to the loss of park integrity as a natural area.

Glen F. Cole

cc: Dr. John Craighead

M E M O

To: Supervisory Research Biologist
Yellowstone National Park

From: Dr. John J. Craighead, Biologist,
Bureau of Sport Fisheries and Wildlife;
Professor of Ecology, University of Montana

Subject: Glen F. Cole's memorandum concerning Dr. Craighead's request to kill elk for scientific studies.

I want to thank you for the copy of your memo of October 16 to the Superintendent of Yellowstone concerning my request to kill elk for scientific purposes. There were statements in your memorandum that caused me concern and so I am taking the liberty of expressing myself more fully on a few points.

Knowing that you have very recently arrived in Yellowstone and could not have had time to review in detail the many research projects and knowing that you have not yet discussed our grizzly bear research project with either Dr. Frank Craighead or myself, I will try to clarify a few points for you at this time.

Frank and I have been concerned with the way in which animal reductions have been made, particularly on those species where basic population data are meager or lacking. The contents of your letter suggest that the policy of sacrificing animals for scientific purposes is a practice that has been initiated and developed by Frank and myself and possibly other researchers working within Yellowstone rather than a policy that has been formulated by the National Park Service and carried out by scientific research workers within the park. A quick review of this subject may prove helpful to you in evaluating this situation. I know that you are familiar with the big elk reduction that occurred during Lon Garrison's term as superintendent. Also during this time heavy reductions were made on the buffalo particularly in the Hayden Valley and Upper Nez Perce Valley. These reductions were made on the basis of recommendations from Park Range specialists. They were also urged by conservation organizations in Montana as well as by the U. S. Forest Service. These reductions were, as you know, opposed by certain segments of the public. In spite of the opposition, reductions were made and a park policy established of making annual reductions to keep the elk and bison within the carrying capacity of the winter ranges.

Because it was difficult to obtain the necessary annual herd reduction of elk, Mr. Garrison solicited suggestions as to how some reduction might be made other than on the winter ranges and how a more selective reduction could be effected. Frank and I made these suggestions to Superintendent Garrison.

Memo to Supervisory Research Biologist
From: Dr. John J. Craighead

1. That an elk movement and migration study be conducted with particular emphasis on the Mirror Plateau, to gather basic information on herd movements. The purpose of this-to determine if selective reduction could be practiced on the winter range on the basis of more intimate knowledge of herd movement from specific summer ranges.

2. That in order to effect some herd reduction on the summer ranges or during the fall migration that a relatively small number of animals be killed in connection with the grizzly bear research project and possibly other research projects.

The animals killed by our research team would be for two purposes:

1. To attract instrumented grizzly bears to a specific spot so they could be shot with a propulsive syringe dart and immobilized and then reinstrumented. Biological specimens would be taken from such animals and turned over to Ken Greer to supplement his research work.

2. A certain number of grizzly bears entering campgrounds have always presented a problem to the National Park Service and the ultimate solution to this problem was frequently to kill the offending grizzly. It was suggested that a limited number of elk be killed to approximately determine how far and under what conditions grizzly bears could be attracted from campgrounds to an elk carcass. It was reasoned that a nusiance grizzly attracted from a campground could be one less grizzly killed for control purposes. Possibly 25 to 30 elk kills have been made over the past seven years and the movements of bears to these carcasses documented. These data will prove extremely valuable in the future management of the grizzly bear in Yellowstone.

At no time has either an elk or a bison been killed simply as <u>bait</u> to attract a grizzly for observational purposes alone nor has any animal been killed without first requesting permission from the superintendent or the chief-ranger. In every case a record of these kills has been made by us and turned over to the park biologist.

I was, therefore, particularly surprised at your reaction to our request (first made nearly six weeks ago) for killing two animals.

Memo to Supervisory Research Biologist
From: Dr. John J. Craighead

The kills were for a well established purpose already agreed upon in our memorandum of understanding. I am sure that you will understand my puzzlement when the requests were initially refused since it is well known that the Yellowstone Park administration has been encouraging the taking of ungulates for scientific purposes as part of the overall animal control program. I do not have to mention the many hundreds taken by Ken Greer in his outstanding study of elk productivity and physiology of reproduction nor those taken by or utilized by Dr. McBeebe in his blood studies and physiological studies of the micro-flora of the elk rumen.

Perhaps because you have arrived so recently in Yellowstone you are not aware of the fact that Mr. O'Gara from the University of Montana is currently shooting antelope in the Park to gather biological data related to a study of the physiology of antelope reproduction. He has a quota of 30 antelope to take this fall. Ken Greer took 25 elk in the month of June 1967, alone, in connection with his research. Most of these elk were yearling females as I understand it. Also, Ken Greer has been given permission to take between 150-200 yearling female elk from the traps during the winter of 1967. To the best of my knowledge there has been no curtailment in the taking of Park animals in these research programs. I am quite familiar with these projects and I hope that these research workers will be allowed to continue to take advantage of animals that the Yellowstone Park administration has considered to be over abundant and in need of reduction.

I am not prepared to judge whether the National Park Service studies on which these reduction quotas are based are adequate and the data and conclusions valid. This is a Service responsibility but certainly a critical examination might be in order. This policy of utilizing surplus animals for scientific purposes, in my opinion, is highly commendable.

When Dr. Frank Craighead and I began our research work in Yellowstone Park in 1959 most of the elk being shot on the winter range were dressed in the field and the carcasses turned over to Indian Tribes or to Penal Institutions. There was practically no attempt to obtain biologicalspecimens. The same was true of black and grizzly bears killed in annual control measures. I can state with some degree of pride that since our study began no grizzly has been killed by the National Park Service that has not been thoroughly autopsied by us and all possible organs and tissues preserved for scientific study. In addition ofcourse the hide, skeleton, and skulls have been preserved for scientific study. We have also attempted to make use of the many black bears that are annually killed but even now many black bears are destroyed that serve no biological purpose.

Memo to Supervisory Research Biologist
From: Dr. John J. Craighead

This letter has become rather lengthy, but I did want to acquaint you with a few facts that might prove helpful to you in future planning and to make it absolutely clear that the practice of taking a small number of ungulates in connection with the grizzly bear study for scientific purposes is not a research procedure that would qualify as, destructive of Park wildlife or in the words of your memo, "that envolve destroying wildlife, or otherwise conflict with the primary purpose of the park....." Our cooperation in the elk reduction program by taking a few elk to supplement our field studies of grizzly bears, has been encouraged by past Park administrations in order to take full advantage of planned reductions authorized by these administrations.

As I see it the problem is not that research may, "become a contributing factor to the loss of park integrity as a natural area". Rather, and I pose some questions: are the animal reductions planned and largely executed by Park personnel based on adequate range trend and animal census data for specific areas, especially areas in the park where these animals can be viewed by the public? Is the breeding biology, population structure, and population behavior sufficiently well documented and understood by Park biologists that they can scientifically defend their annual reduction quotas? Is this not really the crux of the questions you have posed concerning the killing of park animals?

I do hope that we can meet with you at an early date in order to review our nine years of research effort within the Park.

John J. Craighead

cc: Dr. Frank C. Craighead, Jr.
Jack K. Anderson, Superintendent

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N22

November 1, 1967

Dr. John J. Craighead
Leader, Montana Cooperative
Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear John:

Thank you for your recent memo expressing your views on scientific collections of ungulates.

I thought our phone conversation ended in a better understanding of the situation than your letter indicates. The first request I received to kill two bison or elk was by an October 12 phone call from Hank McCuthen, not six weeks ago as stated in your letter. In our October 14 phone conversation I acted in the Superintendent's absence to approve your request. At this time I also expressed our concern that both control operations and biological collections had resulted in certain ungulate population groups being less observable to park visitors. We have similarly explained our concern to Ken Greer and Bart O'Gara and secured their cooperation in our attempts to restrict biological collections from certain herd segments. Our research this summer and over the next several years will be directed toward obtaining information which will permit refinements in control operations to favor certain ungulate groups that can be seen by park visitors. The Service has recognized for some time that such refinements were necessary, but has only recently been able to assign research biologists to obtain the needed information.

I, too, am hopeful that we can soon meet to discuss your research results and will convey your desire for an early meeting to Jack Anderson.

Sincerely yours,

Glen F. Cole
Supervisory Research Biologist

cc:
Superintendent Anderson

June 27, 1967, Conversation between John J. Craighead and John McLaughlin and John Good, officials of Yellowstone National Park, recorded immediately following a phone conversation.

Superintendent McLaughlin contacted me by phone and informed me that he had received a copy of the script to the National Geographic TV show GRIZZLY. The script had been sent to him by Wolper Productions with no instructions or information whatsoever. The Superintendent asked me if I had been responsible for sending the script and if I was satisfied with the TV movie.

I told him I had not been responsible for sending the script and that although I had not seen the final version of the TV script nor had I seen the completed film, I was reasonably well satisfied with both the script and the film. I explained that there were many areas of compromise that we had had to negotiate but that I felt the overall impact of the film would be highly favorable.

He then expressed rather strong dissatisfaction that: 1. Yellowstone National Park had not been more prominently featured in the picture; 2. That it had not been sufficiently emphasized that the Park Service had been preserving the grizzly bear, and 3. That he felt the grizzly bear "came out second best to the Craigheads" in the film. I asked him if he would explain what he meant by this and he said that he felt that not enough emphasis had been given to the grizzly bear and its status as a threatened species, and too much attention had been given to John and Frank Craighead, the major researchers, and their families. Both he and John Good, in effect, stated they felt that it appeared we were using the grizzly bear and the Park as a means to publicize our work.

I told him this could hardly be further from the truth, and that we had made every attempt to present the Park Service and their problems in a favorable light and I felt he could not judge the film simply by the script which does not include the sound sync or the inter monologue. I then explained

to him that the purpose of the film was not solely to portray the grizzly bear, but using the grizzly bear to get across a conservation message to the general public - a message national rather than park-wide in scope.

I also mentioned that it was the practice of the National Geographic's Committee on Exploration and Research to select each year a scientist and feature his or her work and that such films were as much concerned with the people doing the work as with the animals or subjects they worked with. I mentioned that both Frank and I had been very apprehensive about being featured in a film of this kind and had agreed only after a great deal of soul searching and after we were convinced that such a film would serve as an important educational medium.

The Superintendent expressed the fear that the movie might reflect adversely on our image as scientists and this in turn on the image of the National Park Service. I assured him we had given a lot of consideration and thought to this and recognized that there would be colleagues and others who would interpret such a film as a publicity venture rather than as an important educational contribution, that we, however, felt that the risk that some would misinterpret our motives was worth whatever risk if we were able to produce a film that would explain problems in resource management and explicitly the need to protect threatened species and how this type of work is carried out by research biologists.

I stated that I appreciated his candid remarks but wished that he would pub them in writing so that I would have an opportunity to study his objections and present these to the staff of the National Geographic Society. The Superintendent then said he felt the film would only aggravate our research problems in the Park. I asked him if he could be more explicit on this and he said he was much concerned about the marking and handling of wild animals, that he had had innumerable letters inquiring about research

projects, and that he felt that the film would aggravate the situation.

I stated I thought that both he and we would get criticism of any program we might conduct in Yellowstone involving either research or management and cited the tremendous amount of public criticism of the management of the Northern Yellowstone elk herd. I stated I felt the solution to this was not less public education but more and that the TV medium was an excellent way to show the public what was going on and give them the reasons for the work, and that in the case of the National Geographic TV show, approximately 30,000,000 people would be exposed to it.

I said I fully felt the responsibility of producing a show that would bring credit on the National Geographic, Bureau of Sport Fisheries and Wildlife, and the National Park Service, and that it had been carefully reviewed by both Frank and myself and by other scientists, and that the script had been cleared by my own organization, the Bureau of Sport Fisheries and Wildlife.

John Good then mentioned that he felt the language of the script was very generalized and should be more scientific and more profound. I told him we have had our problems with the script writers in this regard but after working with them for many hours and recognizing their problems as well as ours, we compromised on the present script and we felt it would effectively do the job and that the movie film was not a scientific film in any sense of the word. It is designed primarily to feature how scientists and their work and precedent has been set for this with the National Geographic TV programs on Dr. Goodall, Dr. Costeau, and Dr. Leakey.

I mentioned it was important in a commercial TV venture to inject personalities and human interest, otherwise the TV viewers would not watch the program for an hour and that this was again another point where we had

had to compromise our personal feelings with the need to produce a show that would entertain, inform, and also carry a message.

It was difficult for me not to get the feeling that both Superintendent McLaughlin and John Good were primarily concerned because they felt the National Park Service had not been sufficiently featured, and I mentioned this. The Superintendent then said that my explanation was helpful to him and that in light of what I had said his earlier criticisms were not wholly justified.

I mentioned to him that the Park Service had recently produced two films in cooperation with the Animal Kingdom series illustrating research and management of the Northern elk herd and the black bear, and asked if he felt these had been of value to the National Park Service or whether they had been detrimental. I mentioned that both films had featured marked animals or the marking of animals. I did not get a clear-cut answer to this particular question.

I told the Superintendent I was very sorry that the script had been presented to him without any forewarning and that I was doing my best to get a copy of the completed film to show to University officials and Park Service officials prior to the release date of November 1st. I indicated to him, however, that the film was completed and that it would be difficult if not impossible to make changes and that both Frank and I were as concerned about this problem of making alterations in the film as certainly they would be, but that the nature of film making was such that it was very difficult and costly to make changes after the film had reached a certain stage of production.

I again requested the Superintendent to make an official report and send his criticisms to me, but he indicated that he probably would not make a written report on the matter. I concluded the conversation by telling

him that Frank and I felt the film would reflect credit on the Park Service and the University, that it would go a long way towards educating the general public to resource management problems, and in particular to the status of the grizzly bear, and that we would do everything in our power to alleviate any fears he might have that the film would discredit us or the National Park Service. This terminated our conversation on this particular subject.

Following this conversation I later phoned John Good and discussed the matter in greater detail with him and urged that they please not disseminate their thoughts and views on this matter until they had had an opportunity to view the film, that I thought it would only be a disservice to the Park Service, to us, and the National Geographic Society. He said the conversations would be kept confidential within the Service.

I told him I would contact the National Geographic Society and see what I could do to straighten out the situation.

June 28th.

I phoned Robert Doyle of the National Geographic explaining the situation to him and asked him to please provide me with a finished copy of the film and a finished copy of the script. I indicated to him that I felt we had a definite obligation to the University of Montana, the Bureau of Sport Fisheries and Wildlife, and to the National Park Service to let them view a film which featured these organizations so prominently. He agreed to get the film to me as early as possible.

Dr. Melvin Payne, president of the National Geographic Society, arranged a showing of the film GRIZZLY for the director of the National Park Service and twenty regional directors. The film was also shown to members of the University of Montana and the B ureau of Sport Fisheries and Wildlife.

All comments were enthusiastic including those from the Park Service as indicated from Dr. Payne's letter of August 9, 1967, which is attached.

Some Park Service personnel, however, still continue to belittle the film and our efforts. My letter of June 28, 1967, to Superintendent John McLaughlin following our phone conversation is attached.

1966	From	To	Subject
3/2	JJC	Supt.	Elk work
4/4	JJC	Supt.	Elk work - Merlin
3/18	Supt.	JJC	Elk work - Merlin
10/24	JJC	Cole	Permission for elk kill
12/16	JJC	Supt.	Request for physiological work

March 2, 1966

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming

Dear Mr. McLaughlin:

Thank you for your letter of February 23rd confirming that we are essentially in agreement on the elk movement study and that you will prepare a contract along the lines we discussed at Old Faithful last month.

In order that there will be no misunderstanding as to what we can agree to do, I will state some general objectives that I think should be incorporated in the contract:

1. We will prepare a final report that will include the data obtained through the 1966 field season.

2. We will submit a list of marked elk observed in the field through 1966.

3. We will continue to pursue the general objectives stated in the 1965 elk migration study contract.

Because of the extensive work involved in tabulating and summarizing four years of data and drawing meaningful conclusions from such, we will plan to allocate much of our time and effort towards fulfilling objective No. 1. We would hope that it would be unnecessary to make the usual periodic reports since all information would be incorporated in the final report due at the termination of the contract period.

I hope this arrangement is satisfactory. Should there be any areas of doubt, I would be happy to discuss the matter further.

I was disappointed to learn this winter that there would be no further effort to color mark elk. We accepted a Ph.D. candidate and placed him on the study with the thought that the Park Service would continue to color mark elk. A misunderstanding probably developed somewhere along the line, but it was my understanding that the Park Service would continue to color mark as long as there was a migration study - whether supported by Service funds or private funds.

The study is a difficult one at best because of the vast area over which the elk disperse in summer. Maintaining a high level of

marked animals is essential to success. There is an annual attrition of neckbands, which has been 10 to 13 per cent over the years. Also one or more severe winters that move elk outside of the Park could result in hunters harvesting a fairly high percentage of the marked elk. During the winter of 64-65 over 100 marked elk were killed in the Gardiner area. Should this occur in one or more of the three- to four-year period that our graduate student would be conducting his research work, it would jeopardize the entire project - thus our concern for the continued marking of at least a limited number of elk. The replacing of neckbands will, of course, be essential.

As you know, the objectives for management of elk and the objectives for research do not and can not always coincide. We recognize this and are willing to work within these limitations. However, it would be most helpful to have information on proposed elk reductions at least a year prior to their being put into effect since heavy reductions in elk numbers make it more difficult to find marked elk on the summer range.

Because there is uncertainty as to the number of marked elk that might be present two or three years from now and in view of the uncertainty of locating an aggregate of marked elk even with the present number of neckbanded animals, we propose to have the graduate student, Mr. Shoesmith, conduct a pilot study this summer. He will then evaluate the situation and if it does not appear feasible to conduct a management and behavior study under the conditions that exist, we will drop the study and propose some other project for Mr. Shoesmith.

As you pointed out in your letter, there will probably be some duplication of data in the present study. However, Mr. Shoesmith will be primarily concerned with movement of elk throughout the Mirror Plateau. Until the data we have taken on movement and retraps in past years are actually analyzed and until these data are specifically related to the herds inhabiting the Mirror Plateau, we will not know specifically what segments of the Mirror Plateau elk herd are being removed in the annual herd reduction program. This is one of the practical objectives of Mr. Shoesmith's study. Objectives of studies conducted in the past and the present study supplement one another.

The study of the movement of elk over the vast summer ranges in Yellowstone has proved to be an extremely difficult one, I think, due to the physical aspects and the logistics of keeping men continually in the field. I feel, however, that the results will be of considerable value to the National Park Service, particularly if additional information is obtained by your staff over a period of years. For this reason I hope that we can cooperate fully and effectively on this project.

Since Mr. Shoesmith will be working in the back country, we would like to make arrangements for him to use the Park Service communications system. This could possibly be arranged as a Park Service contributionto

the study or we could rent the use of one of your portable radios. I personally feel that in order to protect the student, the University, and the Park Service, some type of communication should be worked out since the student will be working largely alone.

There is one more matter that is cause for concern on the elk study. It was agreed in 1962 that this would be a long-range project and no termination date was set. It was also agreed that a number of elk would be marked over the years as long as the study continued or as long as there was a need for such marking. It was certainly my understanding that the determination of whether elk would need to be marked in any given year would rest with the project leader. A final decision for action would, of course, rest with the Park Service, but after consultation with the project leader.

Almost a year after we had arranged to put a Ph.D. graduate student on the elk movement project and committed funds to the project, we were informed that no additional elk could be marked. However, your 1965-66 elk and habitat management plans for Yellowstone National Park show 200 to 400 elk will be live trapped and neckbanded for a study of the Gallatin elk in cooperation with the Montana Fish and Game Department.

I would think that if there is a problem in neckbanding additional elk that priority would and should have been given to the study the Wildlife Research Unit planned and initiated in 1962 at the request of a former superintendent of Yellowstone.

John, I want to assure you that I am not criticizing decisions but only the unilateral way in which some of these decisions have been reached. I should like very much to discuss this with you on a personal basis some time in the near future because I feel sure that our thinking is very much alike and that the causes of these problems could readily be cleared up.

Very sincerely,

John J. Craighead,
Leader

JJC:AB

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:

N22

March 18, 1966

Dr. John Craighead
Leader, Montana Cooperative
Wildlife Research Unit
University of Montana
Missoula, Montana

Dear John:

We have received your letter of March 2, in which you have expressed feelings of concern as to our next year's elk program, especially relative to Merlin Shoesmith's proposed study.

First, relative to this coming year's contract, we have submitted a draft of a contract to our Washington Office which follows the line you mentioned in your letter. The best we can tell, it will be necessary to make periodic reports if you want to receive partial payment before the summary report is finished. This needs only to be a statement that progress toward completion of the report is satisfactory and that the field observations are being carried out as outlined in the contract.

Now, as to future marking of elk. This year has been particularly trying as weather conditions have been such that many of the elk have wintered higher than usual, and have not become concentrated in large numbers on the winter range. As a result, we have been successful in trapping only 1,710 animals. Of this number, 460 have been retrapped, neckbanded animals. We have placed new neckbands on 72 elk for the first time. Thus, 532 animals of 1,710, or over 31 percent of the total animals trapped have not been available for shipment.

We accept this fact even though we will be a long way from our reduction goal of 2,500 animals when we terminate our trapping program, much less taking the estimated annual increment of 1,600. Our total reduction to date is 1,183 animals of the northern herd. This may be the final figure. This means that next year's program will be a difficult one at best, and if we should have another light winter, we would really be in trouble.

It was with the above thoughts in mind that we made the statements to you in our letter of February 23. On January 27 when we met with you at Old Faithful, you gave Bob Howe a copy of Merlin Shoesmith's

proposal. Upon reading it, we realized for the first time that you expected us to neckband about 500 elk next year. In line with keeping you informed on our management program as far ahead as possible, we wrote our letter of February 23.

We are in sympathy with the problems Mr. Shoesmith faces, but we are anxious and obliged to accomplish our management objectives. We have no excuses if the herd again builds up to 10,000 animals. The effect on the whole National Park Service program and the fundamentals of the Service itself could be catastrophic.

We also feel that the importance of the summary report which you will be working on this next year cannot be underestimated. Once it is complete and you and we have had an opportunity to digest and assess it, we will know whether we need additional work relative to migration from a management standpoint.

We are sure Mr. Shoesmith's project would add information of interest, but the value to management of this herd from a study primarily on elk behavior is certainly one we would have trouble justifying for support. We do not feel that we can jeopardize our management program by neckbanding more elk at this time to facilitate this new study. As mentioned before, we could agree to replace worn or missing neckbands on elk trapped for the duration of Mr. Shoesmith's study, unless we had another winter like this one. Under such circumstances, it might be necessary to ship marked elk, thus reducing further the number of marked animals available for the study.

We have discussed the use of the Park radio frequency by Mr. Shoesmith. As mentioned previously, this frequency is overloaded during the June 15 to September 15 period. Possibly Mr. Shoesmith needs it more than you need this use in your AEC studies. Again, it would be necessary that he use it only for emergencies. We do not feel that we can add emergency communications of both studies during the height of the visitor use period.

Sincerely yours,

John S. McLaughlin

John S. McLaughlin
Superintendent

April 4, 1966

Mr. John S. McLaughlin, Supt.
Yellowstone National Park
Yellowstone National Park, Wyoming 83020

Dear John:

Thank you for your letter of March 18th.

I am sure you are aware that I recognize the full value of keeping t the northern elk herd reduced since I was active in helping to bring this about as early as 1952 and was one of the strongest supporters of the reduction program.

I think that any problems that exist regarding our research in Yellowstone National Park can be cleared up when we can get together for an informal meeting.

As I indicated in our earlier letter, we will go ahead on a tentative basis with Shoesmith. Likewise we will proceed with the elk marking contract. There are still stome areas of discussion with regard to conducting research under National Park Service contracts that I should like to go over with you, George Sprugel, and whoever fills Bob Howe's position.

A better understanding of each others problems would, I think, be helpful to all concerned.

Sincerely,

John J. Craighead,
Leader

JJC:AB

October 24, 1966

To: Mr. Glen Cole, Yellowstone Park Biologist

From: John J. Craighead

In accordance with the understanding that we reached over the phone on October 14th, I am making a formal request for permission to shoot two elk in upper Hayden Valley for purposes directly related to our grizzly bear research work within the Park.

In our most recent Memorandum of Understanding you may recall provision was made for the taking of a limited number of ungulates for research purpose

The specific purpose of taking the elk requested are:

1. To attract grizzly bears No. 40 and No. 101 that have been instrumented with radios since early summer. These radios have now ceased to operate. In order to recapture these grizzly bears and reinstrument them so that they can be tracked to their winter dens, it is necessary to lure them into a bait where they can be immobilized.

2. In addition to reinstrumenting these grizzly bears, observations will be made at the kills to determine the number of grizzly bears that utilize the carcass, to observe family groups that may utilize the carcass and their behavior on the carcass, and in addition estimates will be made of the distance that the animals have been attracted to the carcass.

Such information will prove valuable in the future management of the grizzly bear.

December 16, 1966

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming 83020

Dear Mr. McLaughlin:

You may recall that in our meeting on October 19th we discussed the future of the grizzly bear research and I indicated a desire to continue this research for a few more years. It was agreed that I should submit a Memorandum of Understanding with a brief prospectus for the research project. Accordingly I have prepared a Memorandum of Understanding similar to the one we have just completed on the Elk Radio Tracking Project. Would you please make changes that you feel are necessary and prepare copies for a final draft.

I feel that it is particularly important to continue the study of the grizzly bear during the period in which the incinerators will be installed and I have indicated this in the prospectus. The work will be supported by the National Science Foundation and there will be no need for any direct contribution from the National Park Service.

You may recall that last summer Dr. Gonzalez, Research Physiologist at the Virginia Mason Research Center, wrote you requesting permission to do some physiological experiments on grizzly bears. His request was forwarded to me by Mr. Carpenter and I answered the correspondence. Since then I have met with Dr. Gonzalez and associates and explored the possibility of working with them on their physiological experiments.

I feel the work they could do would be extremely valuable and could be done in Yellowstone with a minimum of disturbance to the grizzlies. The main purpose of their project is to study the cerebral circulation of the bear in connection with cerebral stroke in man.

In human anatomical studies it has been noted that the internal carotid artery in entrance into the cranium makes a sigmoid curve through the cavernous sinus. It has been suggested that this is a pressoregulator mechamism for vascular adjustments due to postural changes. Dr. Gonzalez's main reason for suggesting the grizzly as a subject of study is that it assumes essentially the posture of man since it frequently stands erect and their carotid artery-cavernous sinus area is developed to a greater degree than in humans. Bears' internal carotid twists three times on itself.

They would like to measure blood pressures in the vicinity of the carotid artery. They believe that such measurements would help them greatly in their research of cerebral stroke. This could be readily done without in any way injuring the bear and information could probably be obtained from work on not more than two bears.

Should you have questions concerning any of the objectives I have listed in the Memorandum of Understanding, please don't hesitate to call me. I will be glad to explain any of them in detail.

Sincerely,

John J. Craighead,
Leader

JJC:AB

1965

Date	From	To	Subject
1/4/65	JJC	Martinek	Tour of Lab for I. Walton League
1/21/65	JJC	Howe	Elk Radiotracking
2/12/65	JJC	Supt	Ditto
6/28/65	JJC	Supt	Contract - Walt Kittams
11/3/65	JJC	Supt.	Memo of Understanding
11/23/65	JJC	Supt	Hunter kill of marked elk
11/30/65	JJC	Wayne Howe	Tape of Glacier Grizzly

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
A3819

December 3, 1964

Mr. John Craighead
Cooperative Wildlife Research Unit
Montana State University
Missoula, Montana

Dear John:

As you may know, the Izaak Walton League is holding its National Convention this year in Cody, Wyoming on June 16 - 19 inclusive.

On June 18, which is their tour day, a visit is scheduled to Yellowstone National Park. We have been working with them on their planning for this tour and it basically would consist of entering via East Entrance, visiting the Lake Area, Grand Canyon of the Yellowstone and lunching at Canyon.

We feel this group would be very interested in your work and wonder if you might be receptive to giving each of two tours about a half hour talk at your Canyon laboratory. We will appreciate hearing your reactions about this and if favorable, what you might consider for a general outline of presentation. I am sure they would be interested in your equipment, in addition to your work and current progress.

We hope you are "wintering well" and look forward to seeing you when you next visit the Park.

Sincerely yours,

Marty

J. A. Martinek
Assistant Superintendent

January 4, 1965

Mr. J. A. Martinek
Assistant Superintendent
Yellowstone National Park,
Wyoming 83020

Dear Marti:

Thanks for your letter of December 3rd. Have not yet been able to firm up plans for our summer work but in all likelihood we will be in Yellowstone National Park on June 18th.

If we are, I would be more than happy to give the Isaak Walton League members a tour of the Canyon laboratory and explain the research work on the bears and elk.

Am hoping to come to Yellowstone some time this month.

Sincerely yours,

John J. Craighead,
Leader

JJC:AB

January 21, 1965

Mr. Robert Howe
Yellowstone National Park
Yellowstone Park, Wyoming

Dear Bob:

Thanks for your nice letter. I'm looking forward to seeing you at the Wilderness meetings.

If we should carry out some radio tracking of elk within Yellowstone National Park as I proposed last summer, then it would be desirable to capture and hold certain of our marked elk so that we could instrument them late in the winter and radio track them during the spring, summer, and fall.

Enclosed is a list of the marked elk sighted in the Hayden Valley area. These elk would be particularly desirable for us to capture and instrument since we could radio track them from the laboratory at Canyon. Would you alert the field crews to this and hold any of these elk that should be captured.

I realize that the plans have not yet been firmed but if we wait until everything is squared away, it may be too late to obtain these particular animals.

Perhaps it would be possible to hold them in the Crystal Creek trap. I realize that there will be some inconvenience to holding and feeding these animals - particularly if they have to be held for a period of time. However, the information that can be obtained will be useful in the management of the elk and will be considerable. I think it will be well worth the effort of the Park Service to do this.

Sincerely,

John J. Craighead,
Leader

JJC:AB

February 12, 1965

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming

Dear John:

It was certainly nice to have a visit with you at Old Faithful and to have the opportunity of discussing our research work on the elk, and in particular the possibilities of doing some radio tracking of elk within Yellowstone. I am leaving for Washington, D.C., tomorrow and will be gone for approximately a month so will not have time to draw up a formal memorandum of understanding on the elk radio tracking project until my return. I do feel that such a study could be mutually beneficial to all concerned.

Unfortunately I was unable to attend Bob Howe's meeting in Mammoth due partly to the snow conditions which prevented Bob from picking us up at Norris and partly because I had a call from the President of the University on matters he wanted to discuss before I left for Washington.

It was a real disappointment not to be able to attend, but I am sure the program was nevertheless well represented by our institution since Dr. Pengelly, Dr. Taber, and Dr. Harris were all present.

Lon Garrison was still in Missoula when I returned and I had a nice visit withihim and he too is enthusiastic about the elk radio tracking project.

Hope to see you in April, if not sooner.

Kindest personal regards,

John J. Craighead,
Leader

JJC:AB

June 28, 1965

Superintendent John McLaughlin
Yellowstone National Park
Wyoming

Dear John:

It seems that Walt Kittams and myself are once again in a haggle over research contract details. I am at a loss to put my finger on the trouble. I know that both you and Lon Garrison are sympathetic to our efforts and recognize the difficulty of conducting an independent research effort within a national park. The misunderstanding of what is required is down the line. My hope is that the problem is misunderstanding and not deliberate obstructionism.

Obtaining funds to support research is a necessary evil but the "red tape" and bureaucratic inefficiency is, I hope, unnecessary and also remedial. I do not feel inclined to battle this thing out down the line another year and I believe that you feel the same way. This haggling over details not only delays the research effort and confuses the organization's contracting to do the research, but it also may in course of time bring about hard feelings and misunderstandings between those that should have most in common. I want to assure you in this letter that my only interest and those of my colleagues is to conduct research on vital problems in Yellowstone National Park and to make this information available to the National Park Service. In the course of doing so we naturally expect recognition of our efforts.

It does not seem to me that we are asking too much when we request that we be allowed to do our work at our own pace and at least somewhat at our own convenience. The wording of the contracts infer that we are neophytes in the business of research and that every kind of regulation and restriction must be written in the contracts in order to prevent us from either absconding with the information or misinterpreting our findings as it were. They have demanded far more control over the work and the results than the financial support justifies. The method of financing places the burden of support on us, since no funds are forthcoming until we have presented a report showing work accomplished.

I have no objection to a detailed outline of work proposed under a contract, but I see no reason for furnishing a detailed outline and work schedule for research that we initiated, planned, and financed before the Park Service initiated its present research program. This information is all available in reports we have submitted to the National Park Service in the past and the work is now terminating.

This attitude might be comprehensible if our only funding came from the Service contracts and if we were in effect realizing some personal return from our effort. The work is getting done because we have a dedicated group, who for five months out of each year for a period of seven years have been willing to sacrifice their family life and the nicéties of home living, and put up with a great number of personal inconveniences in order to pursue the quest of knowledge. The information obtained through our research is entirely in the interest of the National Park Service. We are dedicating our time, effort and funds that the Park Service may eventually realize a better wildlife management program. I can not be sympathetic with those who would use our efforts to promote their own personal objectives or ambitions within the Service. Actually, as I have indicated to Mr. Garrison, we can accept a Park Service contract only by expending a considerable amount of our own funds and in all cases where the research shows promise we can and have obtained additional research support that has far outweighed any contributions made by the National Park Service.

In most instances we have initiated our own research, originally funded it and then sought additional support from the Park Service. This was done more to make the Park Service a partner to our efforts than to get needed funds (see enclosure 1). The reaction, to what I consider to have been a generous attempt on our part to closely integrate our independently financed research with the emerging Park Service program, has been an attempt by Park Service personnel to completely engulf our work into a rigid service program and to take credit for our accomplishments without even the courtesy of treating us as fellow colleagues.

It would seem that in our case, which is special, that a gentlemen's agreement signed by both parties should be all that is necessary to assure honest efforts and good intentions from all concerned. Research can not proceed without a certain amount of respect and trust. Integrity and mutual respect is the life blood of the scientific community. Without it there can be no research in the true sense of the word.

It is my hope that we might be given the courtesy of offering the results of our research efforts to the National Park Service rather than having this information demanded of us by contract in unseemly terms and language.

This contract business has been very discouraging and depressing to me, to Frank and to our associates. I would appreciate an opportunity to discuss this with you personally if for no other reason than to explain our motives and objectives in conducting research in Yellowstone National Park. I feel sure that an understanding of our views would provide a broader basis for mutual understanding.

Sincerely yours,

John Craighead

cc:Bob Howe
L on Garrison

November 3, 1965

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Yellowstone Park, Wyoming

Dear John:

I am enclosing a copy of my letter of January 13th and the suggested memorandum of understanding which we discussed at our recent meeting at Canyon.

I would appreciate it if you and your staff would make some suggestions as to whether a memorandum of understanding along the lines I have suggested would be agreeable. Both Frank and I would like to work out a rather informal arrangement through the Yellowstone administration so that we could do work under an AEC grant. As I have indicated in my earlier letter, I think it certainly would be to the advantage of the National Park Service.

Both Frank and I would be glad to discuss this again with you in greater detail if you think it necessary.

Kindest personal regards,

John J. Craighead,
Leader

JJC:AB

November 23, 1965

Mr. John McLaughlin, Superintendent
Yellowstone National Park
Mammoth, Wyoming

Subject: Killing of Marked Elk during Gardiner Winter Hunt

Dear John:

You may recall that last winter approximately 100 elk marked with individually color coded collars for joint migration studies in the Park were shot from the population during the winter hunt near Gardiner.

We learned very little from returns of hunter killed elk. The loss in opportunities to make future observations on these elk is considerable. The effect of this on the study is difficult to evaluate but there is little doubt that it constitutes not only a loss in materials, time, and labor to both the Park Service and to the Research Unit, but also a loss in potential information.

It is possible that a similar number of elk may be killed this winter; therefore I wish that you and your staff would consider the possibility of writing to the Montana Fish and Game Commission requesting that the taking of collared elk be prohibited during any open season in the Gardiner area.

I realize there probably will be objections to this and the Commission might not go along with the suggestion but I do feel it would be worth a try.

Sincerely,

John J. Craighead,
Leader

JJC:AB

cc Robert Howe

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Yellowstone National Park, Wyoming 83020

IN REPLY REFER TO:
N22

November 9, 1965

Dr. John Craighead
Montana Cooperative Wildlife
Research Unit
University of Montana
Missoula, Montana

Dear John:

Enclosed is the tape of the Glacier grizzly bear incident which we mentioned to you some time ago. We think you will find this quite interesting.

Sincerely yours,

Wayne

Wayne R. Howe
Chief Park Ranger

Enclosure

November 30, 1965

Mr. Wayne R. Howe
Chief Park Ranger
Yellowstone National Park
Wyoming 83020

Dear Wayne:

Thanks for sending the tape of the ~~grizzly~~ grizzly bear incident. I have been so swamped with paper work since returning that I haven't had time to run it off; however hope to do so in the near future. Sure appreciate your sending it.

Kindest regards,

John J. Craighead,
Leader

JJC:AB

1962

Date	From	To	Subject
2/5/62	Metcalf	Udall	$6,000 for Maurice
4/6/62	Udall	Metcalf	Answer
5/17/62	JJC	Bob Howe	Contract

COPY

5 February 1962

Honorable Stewart L. Udall
Secretary of the Interior
Department of the Interior
Washington 25, D.C.

Dear Stewart:

You are familiar with the grizzly bear research project under way in Yellowstone Park, under the direction of Doctors John and Frank Craighead. This study is one of many conducted by the Montana Cooperative Wildlife Research Unit at Montana State University, on a total budget (1960-61) of $61,536. Of this amount, the University contributes about $17,000, the National Science Foundation $5,000, the Montana Fish and Game Commission $28,500 (based on a 14-month budget because of a fiscal year change) and Wildlife Management Institute $1,500. The Department of Interior (Fish and Wildlife Service) contributed $9,215, in salaries.

I share your hope that through my S. 1364, or the more ambitious outdoor recreation research recommended by ORRRC, the work at the MSU Unit and others can be expanded. However, one problem concerning financing of the grizzly study needs immediate attention.

Maurice Hornocker, the graduate student who has worked with the Craigheads on the project over the past three years, will complete his master's degree this June. He has proved invaluable on this study, and his continued work on it, over the next two years, would certainly add to the final result. However, the unit has no funds to keep him on, and would need approximately $6,000 a year, for two years, for salary and travel expenses.

The National Park Service has not contributed any funds toward this study, although it stands to benefit from it more than any other organization. NPS has of course been very cooperative in other respects.

COPY

I understand some research money is available at NPS. For example, some was allocated to Montana State College biologists this winter for studies of the elk harvested within Yellowstone.

It is my hope that the National Park Service can contribute to the MSU Unit, for the grizzly project, to the extent indicated above.

Sincerely yours,

Lee

Contract with P.S - Marquis

copy to Watt.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

APR - 6 1962

Dear ~~Senator Metcalf~~ See:

Thank you for your letter of February 5 concerning the grizzly bear research project in Yellowstone National Park, conducted under the auspices of the Montana Cooperative Wildlife Research Unit, Montana State University. You point out that the Cooperative Wildlife Research Unit lacks funds to continue the very important contributions to this project by Mr. Maurice Hornocker, and you indicate that approximately $6,000 a year will be needed for two years for his salary and travel expenses.

This is a most interesting project, and one which promises to yield much information of value to the Service. We have regretted that the National Park Service was unable to contribute to this valuable research project in past years.

Representatives of the National Park Service had an opportunity to discuss the Yellowstone grizzly bear study with Dr. John Craighead during the recent 27th North American Wildlife Conference in Denver. As a matter of fact, the Service had already earmarked an adequate sum in its 1963 fiscal year research budget for the purpose.

While the entire increase of $225,000 requested in the budget for Natural History investigations was recently disallowed by the House, we hope it will be restored before the appropriation bill is enacted. However, in any event, because of the importance of the grizzly bear study, we believe it will be possible to provide $6,000 for the project within the fund resources that are expected to be available to the National Park Service for 1963, as well as a like amount in 1964.

Accordingly, the necessary contract between the National Park Service and Doctors John and Frank Craighead will be made requesting progress reports and tentative recommendations applicable to grizzly bear as well as the pressing black bear versus man problems we experience in many areas.

Thank you for your continuing interest in the national parks and in this important project.

Sincerely yours,

Secretary of the Interior

Hon. Lee Metcalf
United States Senate
Washington 25, D. C.

May 17, 1962

Mr. Robert Howe
Yellowstone National Park
Yellowstone Park, Wyoming

Dear Bob:

Recently we discussed the funds allocated to the grizzly study and the necessity of soon preparing a contract between Montana State University and the National Park Service with regard to the grizzly bear research. As I understand the situation, the Department of Interior has allocated $6,000 for each of the fiscal years 1962-63 and 1963-64 with the possibility of additional funds for the year 1964-65. The funds are to be allocated at the rate of $6,000 per year and to be applied to research work on the grizzly bear.

As you know, the study has been under way for three years and during this period of time there has been close cooperation between the Park Service and the Wildlife Research Unit on the project. We have made available reports and publications arising from the study and we have made suggestions from time to time to the Ranger force with regard to the management of both the grizzly and the black bear. We will, of course, be agreeable to continue to do this in the future.

I am stating the general objectives of the study so that these can be incorporated into any agreement that you draw up:

Objectives:

1. To develop and perfect methods and techniques of capturing, handling, marking, and immobilizing grizzly bears.

2. To study the population dynamics of grizzlies and with the aid of marked animals, determine population size, density, sex and age composition, breeding age, reproductive capacity, growth rate, mortality rate, and population turnover.

3. To study population behavior, family composition and activities, breeding behavior, and relationship between various units in the population.

4. To determine home ranges, daily and seasonal movements, and distances traveled to food, to hibernation sites, and for breeding purposes.

5. To determine carrying capacity and habitat requirements and relate these to existing conditions of food abundance, habitat types and hibernation sites.

6. To collaborate with specialists in conducting physiological, hematologic and pathological studies.

7. To adopt and utilize electronic equipment in obtaining ecological data.

8. To prepare a management plan for the grizzly bear in Yellowstone National Park.

Present Financial Support:

This project is supported by a five-year grant from the National Science Foundation and from annual grants from the Research and Exploration Committee of the National Geographic S ociety and the Wildlife Management Institute. Funds from the Montana Cooperative Wildlife Research Unit are annually budgeted for operational expenses and some salaries. The National Park Service and the Yellowstone Park Company have made laboratory facilities and special equipment available. The student fellow was supported in part by grants from the National Wildlife Federation and the American Museum of Natural History. The radio-tracking phase is supported by a three-year grant from the National Science Foundation and by funds allocated by Philco Corporation for development of radio-tracking equipment by engineers of their Western Research and Development Laboratory.

I have included the financial arrangements because I think it should be understood that a number of organizations are contributing to the financing and any agreement between us and the National Park Service should recognize this fact.

For example, although we will provide reports and make the information available as it develops, we will not be in a position to take on routine management tasks within the Park nor will we be in a position to make generally available photographs and other material that may develop out of the project. As you know, we are heavily committed to the National Geographic Society with regard to the photographic aspects of the study. Also we have responsibilities to all the granting agencies and this complicates the responsibility to any one agency.

At the termination of the support from the National Park Service, we agree to prepare a report in which we will outline a management program for the grizzly bear and show the relationship between the management of the grizzly and other large mammals in the Park including the black bear.

I am sure you realize and I think it should be made clear in the contract that the publication rights of all reports and techniques developed

by the research personnel rest solely with the investigators. It is our intent to get out publications just as rapidly as possible but we will make this material available to the Park Service as soon as feasible and prior to publication in Quarterly Reports of the Unit.

It is my understanding that we would be free to plan, supervise, coordinate, and conduct the study with the same degree of freedom as in the past. Information would not be released for publication or news releases made without prior consultation and consent of the principal investigators, Frank C. Craighead and John J. Craighead. The National Park Service will be properly credited in all news releases and publications originating from the study.

Contract with Montana State University:

With regard to financing - the contract should be drawn up between Montana State University and the National Park Service indicating that the responsibility for the work will reside with the Wildlife Research Unit located at Montana State University. Perhaps the best way to proceed is for you to make a rough draft of the contract and to send a copy to me. I will go over it and then return it for final confirmation by you, Mr. Garrison, and staff.

The final contract should be sent to Dr. Frank Abbott, Vice-President, Montana State University, and the allocation of funds should be sent to Dr. Robert Pantzer, Financial Vice-President.

Sincerely,

John J. Craighead,
Leader

JJC:AB