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The Park Service: Protector or Destroyer?
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The Grizzly Bear, vanishing lord of the Rocky Mountains, is being driven to extinction by the Yellowstone National Park Service, the organization established by Congress to protect him, while some of his best friends, Drs. John and Frank Craighead and the colleagues and students of the University of Montana's Cooperative Wildlife Research Unit, have been barred from continuing research which might save him.

"Barred" is the wrong word, according to Jack Anderson, Superintendent of Yellowstone National Park where the Craigheads have been studying the grizzly for the past 12 years. Nevertheless, the Park Service has told Dr. John Craighead, leader of the Research Unit, to sign a "memorandum of agreement" or the Unit would not be allowed to continue. The memorandum is extremely restrictive and amounts to dictatorial censorship. Dr. Craighead has refused to sign because his team would be unable to do anymore than the private citizen can do--and that is accept the Park Service's word about what is happening to the grizzly.

To learn first hand, what has been happening in Yellowstone, I spent the whole summer making inquiries inside and outside the Park. When the Craighead research team did not show up for their 13th year of study of the grizzly, I asked Superintendent Jack Anderson why. He stated, "We have just prepared a memorandum of understanding that provides for continuing research." A copy of the memo and of the work plan provided by Anderson showed why the team was no longer in action.

The conflict is over the method used to return the bear to more natural foods. Both the Park Service and the Craigheads want to establish a natural population of grizzlies in Yellowstone, a population freed of the garbage feeding habit. The Craigheads, after years of study, report that the transition from garbage to entirely wild foods must be done gradually while being carefully documented. The Park biologists and superintendent, with little scientific data to back them, contend the bears must be weaned instantly and that documentation by the Craigheads is not necessary.

The Craigheads recently published a paper charging that the Yellowstone Park Administration's bear management program has created troublesome grizzlies that have become a danger to tourists and therefore to the bear's existence as a species. The report, published in the August 15 issue of Bio-Science magazine, is an updated and extended version of their 1967 report issued prior to the establishment of the present administration policies. That 1967 report noted the refusal of the Park Service to accept the recommendations of the Craigheads to slowly phase out the open-pit

garbage dumps in Yellowstone, allowing the grizzlies to adjust to new conditions. The Craigheads wanted the dumps closed eventually but said, both in 1967 and in the recent article, that a slow phase-out would result in fewer bears entering campgrounds and less danger to tourists and bears.

The new report says, "In 1968, the Yellowstone administration initiated a management program; its major objective of rapidly eliminating open-pit garbage dumps has drastically disrupted long established grizzly bear patterns of feeding and movement." The Craigheads reported at the International Conference on Bear Research and Management last fall in Calgary that this policy, if continued, might eventually be responsible for an encounter between grizzly and man in a campground or developed area which could be fatal to both. Instead of having the desired effect of returning the bear to greater dependency on natural foods and a return to the "natural wild state," the present Park Service program is driving the grizzlies, as if they were being herded, into the campgrounds and into trouble.

When the Craigheads reported this to the Yellowstone Park Administration and to the park biologist, they were branded as "trouble makers." Twelve years of research was ended with the denial of a research permit. The Park Service acting as a censor told the Craigheads that unless they remained quiet and did no more public criticizing of "government" policy, they would do no more research inside Yellowstone. This is written in the new memorandum of agreement. It clearly makes censorship final and permanent by limiting all areas of research and publication of the Research

Unit's findings. It says in effect, you can work in our Park if you report the right findings.

The following quoted stipulations are from the memorandum of agreement provided by Superintendent Jack Anderson, and the study plan which accompanied it. Each quote is followed by an analysis of the impact and probable implications to the Research Unit's activities based on interviews with scientists other than the Craigheads.

1. The memorandum clearly states the major reason for permitting the Craighead team to return to the Park--"Whereas a cooperative study of the patterns of grizzly bear distribution, movement and behavior during the transition period from bears feeding on garbage to bears feeding on natural food sources would be a significant contribution to the understanding of this species, the Park Service and the Bureau of Sport Fisheries and Wildlife mutually agree that a grizzly bear study program by the Montana Cooperative Wildlife Research Unit should proceed under the following conditions." The conditions set forth under which the Craigheads must work are so restrictive that it would be virtually impossible for the Unit team to obtain the necessary data to meet the stated objective. The first restrictive stipulation relates to the use, publication and dissemination of the information gathered and which is to constitute "a significant contribution to the understanding" of the transition of bears feeding on garbage to bears feeding on "natural" food only.

2. "Original data obtained using research techniques employed by the Montana Cooperative Wildlife Research Unit shall be respected as being the property of the Bureau of Sport Fisheries and Wildlife in order that publication of original data may result, and that proper credit can go to the researchers and authors. [Since little data would be original, little could be published.] However, all data and other pertinent observations that may result from research conducted by the MCWRU [abbr. mine] within Yellowstone National Park or related activities under the agreement shall be made freely available by the Bureau to the National Park Service for the sole purpose of internal use in carrying out management activities for which the Service is responsible."--This would put the Unit under two limiting categories: most data would not be original as it would be obtained from and cleared by Park officials and most of the data must also be gathered within the Park's borders and therefore would be limited to use ("for the sole purpose of internal use") by the Yellowstone administration. No purpose for outside use is acceptable. --"Any information. . . obtained by the National Park Service as a result of bear management actions. . . will be made freely available to the MCWRU, which shall respect the source of such information and the proprietary rights of the National Park Service for the original publication of such information." --This clause prevents publication or dissemination by any means of information gathered from Park Service files or from park personnel--data which in the past the Craigheads gathered themselves until as the Bio-Science article shows, it became evident that their interpretations of the data were

not in harmony with what the Park Administration and Superintendent Anderson had already decided to do with grizzly bears.

3. "All oral and written statements, including, but not limited to, progress reports, popular and scientific articles and other publications, talks and press releases prepared by the MCWRU concerning grizzly bear research within Yellowstone National Park shall be submitted to the Director, Bureau of Sport Fisheries and Wildlife for approval prior to publication or otherwise disseminated to the public."--This is censorship, curtailment of criticism, pure and simple, the kind that is disastrous to a democracy. The rights of free speech and the public's right to know the facts are being denied completely. This permits no statements what-so-ever. Technically the Craighead's cannot lecture about the Yellowstone grizzly to a class. In contrast, the same restrictions are not applied to Park Service Administration or biologists. They are free to speak about bear management and to criticize the Unit and the Craigheads.

It is obvious, in talking to Park employees, that the administration has conducted an extensive program of character assassination against the Unit and the Craigheads. There is no question of "national security" as with the Pentagon Papers, only the protection of bureaucrats snug in their positions. If members of the Montana Research Unit abide by this requirement at this stage in the game they cannot utilize a vast accumulation of biological information to do whatever is necessary to protect the grizzly. In short they cannot inform the public without permission. The question

arises, is the Unit's responsibility ultimately to the resource or to the bureaucratic policies and bureaucratic loyalty? Must the Unit continue to work "within the system," or should its members employ more revolutionary and politically dangerous methods such as the "rabble-rousing" they are already accused of?

4. "The Bureau recognizes the National Park Service as having the responsibility and authority for all management activities within Yellowstone National Park and the Bureau will obtain the concurrence of the Director, National Park Service, prior to making any expressions relating to the management of grizzly bears within said national park."--Again, the criticism of the Park Service is completely shut off. The Director of the Park Service, Hartzog, cannot stand criticism of his department. He would lose his job. Rather than pass on the criticism and honestly try to do something constructive about the management of the grizzly, the Service would in this way have the power to simply sit on it and crush it with delay.

5. "The capture, marking or collecting of biological specimens and samples, other than scats, shall not be undertaken except with the permission of the National Park Service,"--Permission can be easily withheld under the usual excuse that the Park Service personnel are already doing that part of the research, when in fact, the Service does not have the men, the backlog of experience, the money or the trained scientists necessary to do an acceptable job. It would seem much better if we returned to the World War II procedure of conducting the research under

the Bureau of Sport Fisheries and Wildlife, which is responsible under law for all such research on public lands. Under such a research directive the presently non-existent "checks and balances" system would return to prevent administrative mismanagement.

6. "Research activities carried out in Yellowstone National Park under this agreement shall be contingent upon receipt of a study plan that meets with the concurrence of the Director, National Park Service, and is approved by the Director, Bureau of Sport Fisheries and Wildlife. The Study Plan shall be prepared for proposed research to be conducted for each calendar year and shall state specific objectives, methods, and activities involved in the project. This Study Plan shall be submitted annually in time for consideration by the two Directors (or their representatives) at the annual review as provided for . . . ."--This is the turning point of the memorandum. The understanding favors the Park Service and in particular the administration of Yellowstone Park. The plan contains little mention of the specifics and no recognition of the research methods the Research Unit must employ if it is to do a good job. Only the limiting objectives and rules have been quoted, but they clearly show how the Unit would be unable to conduct proper basic research under this agreement.

1. "The National Park Service will be responsible for gathering all data resulting from control actions and such data will be made available to the MCWRU."--The Montana Unit personnel are restricted from gathering such data and thus are forced to rely on both untrained seasonal help such as

English teachers, students and policemen, and the five "trained" so-called biologists of the Yellowstone Park staff. The N. P. S. staff is small and they too have problems dealing with the complexities of research in the field. Cole and his biologists find it hard to get out and hike to obtain data, sticking to late morning drives on existing roads to gather information. They are also experiencing difficulties in using the drugs necessary to immobilize bears for transplant. The result has been drug overdoses labeled "drug malfunctions." It is not known whether the malfunction is the drug or the man administering it, but Ken Greer, a biologist of the Montana State Fish and Game Department says that four of the six bears killed out of the Mammoth headquarters were drug overdoses.

Under the Memorandum of Understanding the Unit cannot immobilize grizzlies, although the Craigheads developed the technique and they and their colleagues have drugged, examined and released (according to their Bio-Science article) over 550 grizzlies since 1959. The memorandum will allow these seasoned veterans to send an observer along with the Park Service team. The Unit observer could participate actively--only when it is "possible and/or appropriate for him to do so." The Yellowstone administration would decide the answers to both those questions.

2. "To obtain data on capture, release, and control of grizzly bears at weekly intervals only from the Superintendent, Yellowstone National Park." Having gathered this type of data in the field for 12 years and having reported their findings in Bio-Science for the scientific community to

judge, the Craigheads are now subjected to the indignity of requesting information from Park authorities in order to judge if the Park's management procedures are effective or are threatening the grizzly population. Information supplied in this way is subject to manipulation and is not even spoon-fed research.

3. "Specimens of lower jaws and femurs of elk, bison, and other ungulates that have died within the Park or have been killed by grizzly bears will be collected by NPS personnel only, but such specimens will be made available at Park Headquarters for inspection by personnel of the MCWRU." Such specimens are necessary to judge how and if the grizzly is adapting to prey on the natural foods. Much understanding concerning the nature of these deaths is lost if the animal and the site is not inspected. Moreover, the Craigheads would be dependent on the judgment and initiative of Park personnel to collect the evidence.

4. "To obtain information on bears within the Park from firsthand observations and from National Park Service's [sic] weekly summary sheets of management actions, . . . which may be obtained from the Superintendent."--Again, the Research Unit must make its conclusions about what is happening in campgrounds and what grizzlies have been killed or transplanted from summary sheets instead of gathering data in campgrounds or questioning the rangers involved in control actions. They have been conceded the "unusual" privilege of observing marked grizzlies in the wild--a privilege of any citizen that enters the Park.

5. "The Unit will furnish a list, by number, of color-marked bears which, if handled in a bear-management action, will have their color markers maintained, including renewal if needed. The Unit will furnish to the Service duplicate sets of color markers so that Service personnel may carry out this maintenance."--The Park Service can use this one ruling to sabotage, control or take over the entire research program if they wish.

In addition, the study plan makes the definite requirement that the summary of the Unit's research should be in Park Administration hands by the last of February, 1972. This puts the Unit under a deadline to submit a report that they have no right to publish. Under a benevolent administration this would not be a hindrance, but such is not the case. The original encounter between the two factions began when the Park Administration decided to develop its own grizzly bear research program and according to some Park Service employees deliberately and calculatingly phased the Craigheads out. The battle was the beginning of bitterness on both sides and it is only fair to say that neither has made a serious effort at rapprochement. In fact, the reluctance the Craigheads show toward visiting the administration headquarters at Mammoth has led the Service to use that as a weapon against their return to Yellowstone.

The Bio-Science report shows that the dumps have a great influence on the wanderings of grizzly bears. A rapid phaseout of the dumps has accelerated movements and has resulted in vastly increased intrusions of grizzlies into campgrounds and developed areas. Lack of prior sanitation

of campgrounds and developed areas has now resulted in extra intrusions, especially into the town of West Yellowstone, which lies a scant 200 yards from the western border of the Park. This year Ken Sear of the Montana State Fish and Game Department has had to kill 7 grizzlies which have wandered into the town of West Yellowstone from the Park, all a result of the new Park policy.

The 1967 report warned of this possibility. The Craigheads say that bears will feed easily at dumps while men are visible and near, but that the same bears will run at first sight or smell of man when more than 3/4 or 1/2 mile away from the dump. This indicates that the bears are not conditioned by the dumps, but by direct association of man and food through handouts or open containers in campgrounds--where the smell of man is pervasive and he is visible as the bear feeds close by. The Park Service claims that the dumps are the conditioners and that the Research Unit, by handling the bears in the course of the research, have contributed to the conditioning. Data in the Craighead reports shows this allegation to be false.

The marking of the bears enabled the Craigheads to identify the bears accurately and quickly, thereby making it possible to tell by the bear's behavior (related to his history) whether he was conditioned and how he got to be so. They report that nearly all of the grizzlies in the Park have fed at open-pit garbage dumps at some time in the bears' lives, and the indicated conclusion is that the dumps do not condition the bears. If they did become so conditioned, all of the bears would be troublemakers to the same extent.

Also, the Craigheads report that this natural search for food in dumps by most of the bear population makes it impossible to create a "wild population" by suddenly "denying this food and then dispatching all grizzlies that find it elsewhere in campgrounds and developed areas of the park." The Craigheads say the weaning process takes time and suggest supplemental feeding of surplus elk carcasses during the weaning process; the Park Administration says it must be done immediately. Regardless of which faction is right, the Craigheads should not be restricted in their efforts to find the truth.

The Craigheads radio tracked specific bears that regularly visited campgrounds, having been fed from the hands of tourists, and compared the behavior of these bears with the behavior of bears that had only fed at dumps or in the wild. They learned that animals conditioned by close association with man developed behavioral patterns that made them extremely dangerous. They concluded, "Such bears learn to associate food-getting with humans and soon lose their fear of man and human scent. They will make false or bluffing charges at close range, approach humans within what is normally a critical attack distance and explore or devour items containing human scent. They have become thoroughly conditioned to man. This conditioning is not associated with a particular feeding area, as is the case with grizzlies that feed at remote garbage dumps, but is a general conditioning to man wherever he is encountered."

The role of the dumps cannot be understood unless you also understand the position of carrion in the life of the grizzly. He is the vulture of the northern latitudes and the clean-up detail for the wild country. Andy Russell wrote, in his book Grizzly Country, "Grizzly bears have a great fondness for well-ripened meat, the higher the better; and any bear that locates a dead animal takes possession with the happy abandon of a hobo confronted with a platter of T-bone steak. . . . Any animal dead from the hard weather of winter. . . is feed for the bears upon emergence from wintering den. Cattle killed by some accident or dead from disease are claimed with the same enthusiasm and many an innocent grizzly has been blamed for such killing, when the animal was dead for days when the grizzly found it. After a grizzly has torn up a carcass and buried it, only the most experienced observer can tell the difference." Thus, any smell that indicates carrion or garbage to the extremely sensitive nose of the grizzly makes a ready trail for him to follow straight to the source, whether in a dump or in a campground. Since the great bear is a wandering hobo anyway, he is very likely to find such a scent trail as a matter of course in his wanderings--especially since the campgrounds are located on his natural migratory routes.

The dumps have existed in Yellowstone in some form or other since the establishment of the Park and the garrison of troups to administer and protect it in 1872, but the wide proliferation of garbage material did not come until the major uptrend in tourist use around 1916, the establishment of tourist facilities by the fledgling Yellowstone Park Company in the 1920's,

and construction of permanent ranger quarters and permanent tourist quarters inside the Park. Therefore, the bears have had, besides their natural liking for carrion, nearly 75 years to become accustomed to feeding at the dumps. The Craighead team contends that it is unreasonable to expect an overnight return to "wild behavior" when present behavior has been established for so long. They contend that the slow phase-out would allow the population to learn new ways of foraging, or at least to learn to forage in more natural ways to a greater degree. Obviously, that food must be replaced by other sources, most of which are now used, but not, perhaps, to the degree they should be used.

The basic reason for the Park Service's view, according to Cole, is the abrupt cutoff would make it impossible for young cubs to become conditioned to dump feeding. However, the actual result, since the whole population becomes far more mobile and migratory, is that the cubs become conditioned to the campgrounds that they meet while following their mothers in search of replacement food. In the long run it seems more reasonable to continue the dumps as an additional support until the threatened population can adjust to a wilderness diet. In that manner, time is available for sanitation of campgrounds, fencing if that is necessary, and for the bears to establish natural feeding habits. This would eliminate the present tragedy and slaughter of grizzlies in the name of tourist safety and control.

After all, the dumps of human leftovers are carrion in a sense and that garbage is a substitute for carrion in any case. Therefore, it may also be reasonable to accept the idea the Craigheads have offered that supply of carrion in the form of elk (slaughter of surplus elk is usually necessary anyway) would provide a more natural type of food to aid in the concentration of bears farther out in the back country than the dumps. The Craigheads report that this has been experimentally proven an effective means of drawing up to 23 bears at a single carcass, with no fatalities resulting among the bears. Cole charges that this additional supply of food would allow the population to increase unnaturally, but he produces no data to support his position. Noel D. Eichorn and Dr. F. Fraser Darling say, in a comprehensive report, "Man and Nature in National Parks," published in the April 1969 issue of National Parks Magazine, "If there were to be a build-up of the grizzly bear population, they would begin to prey on the elk calves and this might be the best way of keeping the elk population stable."

Already the loss may be too much. No one knows what the minimum population for adequate contact and breeding is within the Yellowstone ecosystem, but 23 to 25 grizzlies (depending who you ask) were either killed or shipped off to zoos or other back country areas during last year. The Craigheads contend that each bear taken from the population, whether by a rifle, or by overdose of tranquilizing drugs, or shipped to a zoo, becomes a "population mortality," and must be considered in evaluating the threat to the integrity of the population.

The population level is reaching a critical stage where it may be extremely hard, even with the coddling of bears, to maintain a viable population. As of August 24, six grizzlies had been killed by the Park Service this summer and seven by the Montana State Fish and Game officers at West Yellowstone, when they were forced from the Park. Such deaths are disclaimed by the Park Service as "not Park Service responsibility," even though every one of the seven bears are indigent to the Park. West Yellowstone lies so close to the western border of the Park that refusal to accept full responsibility for these West Yellowstone mortalities is a denial of obvious biological fact. Furthermore, the refusal of Park authorities to recognize State sovereignty in these cases will create legal problems. Even though the Park Service has no authority outside Park boundaries, it does have control over the policy that is driving the bears out of their preserve into hunted areas, even in the town of West Yellowstone.

The average annual birth rate is estimated by the Craigheads to be 33 cubs, two-thirds of which will survive past 18 months of age. The usual death rate as reported by the Craigheads is 11 bear deaths from known causes and 11 deaths from unknown causes. These when added to the 1970 loss of 22 from control killing and transplant to zoos makes a total annual loss for 1970 of 44 bears, much more than the annual increment. The population cannot long stand this kind of slaughter, and residents of West Yellowstone agree. Bud Lilly reported in late September 1970, that the grizzly had "about five years left" before extinction. Lilly is a fishing

guide on the western border of the Park and sees much of the back country each summer. He says he is afraid the Park Service policies will drive his business away if there is no wildlife left to see.

Other townspeople are just as concerned and rumor flies thick and fast that the Park rangers are under orders to shoot on sight and that they are even killing grizzlies and black bears in the back country, leaving the carcasses lay to prevent criticism. Ken Greer of the Montana State Fish and Game Department and his associate biologist, Dr. David Worley of the State University at Bozeman process the grizzlies killed in the admitted control actions. They cannot prove or disprove the claim, but Dr. Worley said that canabalism of slaughtered bears would help explain the high incidence of trichinosis (a parasite transmissible to man) in the Yellowstone grizzly population. The two men say that other possibilities may also explain the unusually high infection of the population--one being a cyclic high rate in the small rodent population upon which the grizzlies feed occasionally. No concrete proof can be found as yet for either theory.

The present result is extreme confusion for everyone but the end result for the grizzly will be extinction if something drastic is not done to protect the species in Yellowstone. The key to the whole problem is the question of the value of the bear and the impact of any killing over and above the annual mortality rate by natural causes. The grizzly, according to most researchers, practices his own kind of birth control--limiting the birth rate as a natural reaction to the amount of privacy left by man and the amount of food available. The more pressure from man, the less food, the less the

bears breed. Also, the deaths of grizzlies under control actions and the transplants outside the Park are not representative by sex. More adult females get in trouble, especially if they have cubs by side. This, the Craigheads report shows, is due to the increased mobility of females with cubs as they search for food. Behavioral statistics compiled by the Research Unit indicate these females are more touchy about their "critical attack distances" than other bears. This accounts for their more aggressive behavior. "Critical attack distance," as in humans, varies with each bear. The term refers to the territorial imperative, or distance at which insult is taken and attack is thought necessary. The loss of these productive females in the prime of their lives is a terrible and swift blow to the species' ability to breed.

The survival of the grizzly hinges on the impact of losses and the net loss to each year's population. Each bear that leaves the population is marked as a "population mortality" by the Craigheads. The transplant program is an artificially maintained migration. Most of these transplants are made within the Park boundaries, but an undetermined number are transplanted outside. One of the Park Service's problems, according to Cole, is the lack of transplant areas far enough away to overcome any homing capabilities. Since some of the bears are capable of homing within three days from 75 land miles away, the Service wishes to begin transplants as far as 200 miles away, but local ranchers and state fish and game authorities have been extremely reluctant. The ranchers complain that the only bears they would get would

be the incorrigibles that cause all the trouble. This may be true, but with effective sanitation of the ranch areas and supply of carrion elk in the remote back country, the bears would have plenty to keep them in the back country until they became acclimated. The Craighead Report states, "Mortality rates and population data taken over a seven-year period (Craighead and Craighead, 1967) suggest that not more than five or six animals should be transplanted annually." The Park Service reports that 81% of their transplants are permanent, but the criteria used to make this conclusion are not presented.

The whole program of transplants and preventive removal depends on accurate identification, tracking, and a realistic program of control killing of those bears which are thought to be unsalvageable. Even the Craigheads contend that there are those bears which may never leave the immediate vicinity of campgrounds, and therefore must be killed rather than transplanted.

Further problems result with the present transplant program and the control killing. When the bears return from a transplant, they usually do so within a short time and, according to Ken Sears who traps them in West Yellowstone, they are even more hungry than when they were first picked up. The policy has been to kill those bears that continue to return from longer and longer transplants. The Craigheads report that, "28 of the 72 bears captured in campgrounds or developed areas between 1959 and 1969, were killed or sent to zoos; 61% of these had recapture records of zero or one, and 86% had recapture records ranging from zero through three. Thus,

86% of the campground grizzlies which were eliminated had not become habitual offenders . . . ." In 1970 five grizzlies from Rabbit Creek were captured in campgrounds or developed areas and four were dispatched. None of these had previous campground records."

The answer to these questions is the same as the answer to the dilemma of knowing what is really happening to the grizzly--research that is done by organizations or individuals who are not concerned with saving face or keeping a job. That means immediate action on the part of the Bureau of Sport Fisheries and Wildlife, and the Park Service Director, to return the Craigheads to the Park free to do the necessary surveys, and especially free to publicize their findings. [I found it very hard to find rangers who would talk to me of things that are going wrong. They refuse to be identified or quoted and they seem to fear reprisal on the part of an administration that has a good grasp of the necessity of keeping itself intact under pressure. But I do not like the idea of quoting faceless, nameless, blameless sources. If what they say is true, and if it is important that it be known, then it seems to me these rangers should speak out. Alas, the fact is that the Service, at least in Yellowstone, is a military organization in this respect. No public voicing of criticism is allowed from within, and therefore little is heard from without.] The National Park Service pays lip service to research but when research can be done through independent sources the local administration fears it. The Park Service Administration in Washington says: "Guesswork, rule-of-thumb, and intuition are not good

enough--the preservation of this irreplaceable resource requires precise knowledge and scientific procedure,"--but the local administration and the National Administration have stopped the objective, independent Craighead research team.

The National Research Council of the National Academy of Sciences reports that Park Service research usually is a response to a crisis in the environmental complexity of the affected park. In Yellowstone it is just that type of response without adequate prior research that has created the now serious situation. Cole claims, for instance, that removals by killing or transplant control actions confined to bears which came into developed areas will not be "of sufficient magnitude to have lasting consequences on the park's grizzly population." No substantial data are offered in his 33-page report to support this claim. No one knows--yet.

Park Biologist Glen Cole has many critics, probably because he has not accumulated the data to back up his views. His published papers only offer opinions as facts. In one paper, in the same issue of Bio-Science as the Craighead report, he fails to show the meticulous attention to the accumulation of detail, the appreciation of the situation that comes from the accumulated information and experience necessary to good judgment. Other scientists than the Craigheads have questioned his methods. Cole's position has been described as that of one who thought up a program for management and control and then did the research to back it up.

While the battle smoulders under tight political wraps, the grizzly has sided with the Craigheads--he is living up to every prediction they made about him. Vindication is not what the Craigheads want, they fear the retaliation against the species by the public and the publicity-conscious Park Service, should a tourist be fatally or even seriously injured. After the unfortunate killings of two young girls in Glacier Park in 1967, the hue and cry for the elimination of the grizzly from the ecology of Glacier and Yellowstone was deafening. Since the Park officials bow quickly to congressional pressure, and since congress is subject to pressure from the public--at least the vocal public--the situation is tense. The right word in the wrong place can cause the elimination of the grizzly or any dangerous species from the ecology of Yellowstone and Glacier, especially under the type of emotional situation that existed in 1967.

The Yellowstone administration admits its vulnerability to that type of situation. Many rangers speak guardedly about that possibility, and the "necessity" of the grizzly's extinction in Yellowstone under those conditions. Even Park Superintendent Anderson said, "Under those conditions we might have no choice but to kill a large number of bears." This then is the reason for the closing of the dumps--whatever the result--the tourist is more valuable than the bear and the tourist, however dumb he might be, must be protected from the bear.

Happily, some reaction to the ecological responsibilities is growing in the Service. When a man was killed by a bull buffalo this summer, no punitive

action was taken against the buffalo. Indeed, the public reaction near the Park was "Hurrah for the buffalo!" The locals pointed out that one could hardly call the attack unprovoked and one could certainly not use the word "charge" to describe a distance of eight feet. The situation for the grizzly, however, could well be different. The Craigheads point out in their report that, "Although grizzly bear attacks on man are rare, they provide exciting news copy and generate apprehensive public response. This, in turn, has initiated control action often with over-reactionary measures that have been harmful to the coexistence of the grizzly and man. Following the 1967 fatal incidents in Glacier National Park, four female grizzlies were shot and a cub was wounded. Only one of these animals was conclusively linked with the attacks."

The fatal encounter, when and if it occurs, will be sudden and it will not be the fault of the grizzly if we are to judge by past affairs, and by the people who know him best. The editor of National Parks Magazine said in the December 1969 issue, "The fact is that the bears of Yellowstone and Glacier (the last significant grizzly populations in the 'lower 48') have been perverted and made dangerous by man. They have been enticed with garbage, sometimes to entertain tourists, right into the backyards of park chalets." Cole reports, in agreement with the Craigheads, that the incidents outside of the campgrounds are usually defensive reactions of females with cubs. Enos A. Mills once wrote that man is not condemned for acting in self defense, neither should the grizzly be condemned.

The primary objective of the present program is first to reduce the injuries to mankind, and then to return the bear to more dependence on natural foods. Cole admits this in a special interim report issued August 23, "My interpretations relate to the specific objectives of reducing grizzly-caused injuries to humans and restoring the grizzly population to using natural foods entirely." However, the danger to the species is a danger to the objectives of the park system as it was conceived--"to conserve the scenery and the natural and historic objects and wild life 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." (Act of 1916 establishing the Park Service) It is necessary to outline the possibilities of risk to human use to the point that the public is well informed of the risks involved in that use. The Craigheads wrote, "We believe that grizzly bears and man can coexist in this vast ecosystem if management is tailored to the facts of bear behavior, if all campgrounds and developed areas are sanitized, if open-pit dumps are slowly phased out, <u>if the visiting public is willing to accept a small risk</u>. . . ."

The statistics quoted by both the Craigheads and the Park Service bear this out. "The probability of being injured or killed by a grizzly bear in Yellowstone National Park is very small. . . . From 1931 to 1970 . . . official National Park Service records show 63 injuries and no fatalities. During these 39 years, an average of a million people per year visited the Park. Thus, the injury rate from grizzlies has been one person per 600,000 visitors." Two

fatalities and circumstantial evidence indicate a third occurred before 1931. However, the incidence and the probability of injury and property damage jumped markedly after the initiation of the present management policy. Personal injury rates doubled and the number of bears killed in control action tripled. The Craigheads wrote, "during 3 years of the Park Service's present program of bear management (1968-1970), injuries averaged 3.33 per year. In comparison, injuries were only half as numerous from 1959-1967 --averaging 1.67 per year . . . the increase is due largely to the present management practices that forced grizzly bears into campgrounds and developed areas of the Park. . . . During 9 years of this period (1959-1967), prior to the enactment of the . . . present program . . . control averaged 4.1 per year. During the 3 years of revised management (1968-1970), control averaged 12.3 grizzlies per year."

There is no evidence to imply that man and grizzly cannot coexist, even within the confines of the narrow spaces still available to the great bear. Researchers, hunters, camera bugs and hikers have found ways to live with the bear and not cause danger to either species. The key lies in realizing that, while in bear country, you are in his living room and subject to the rules he himself lives by. Andy Russell wrote in his book, "We filmed them as they really live, recorded their real character--tranquil almost to the point of laziness at times, and most certainly far different from the blood-letting and the confliction normally experienced by the hunter. Our film record was in fact so far from popular belief that it got us into some

considerable difficulty, ending in forced abandonment through lack of funds. Among those viewers who saw the rough footage, hardly anyone commented on what was perhaps the most significant point made by it. This was the clearly illustrated fact that association without undue conflict is possible between men and grizzlies."

The conflict between man and grizzly, a part of our historical past during the conquest of the Wild West, is a part of the much greater problem, of coexisting with all natural life forms, including those more inimical to man than the grizzly. The grizzly, say the Craigheads, "has a long history of seeking and taking the food it wants with little opposition. The erratic, aggressive, and frequently unpredictable behavior of both grizzly and man increases the probability of conflict." Also, "the ecology of bear and man has always overlapped," partially because the grizzly is omnivorous, like man, and will eat almost anything. "Within recent geological time," say the Craigheads, "the grizzly bear was at the top of the North American food pyramid. Wherever the species existed, it was either the dominant mammal or a co-equal with man." The voracious bear will still seek food when man is near, but without the presence of food or food odors, the grizzly is shy and avoids man.

No productive discussion of the situation and the solutions is possible without some understanding of the value judgements affecting each faction. The Park Service values the human and the use by man more than the grizzly species. The Craigheads value the species and the ecological integrity of

the whole ecosystem more than the use by man. The administration's values are the same values that affect the entire National Park System. The values that guide the Park Service in its decision-making are confusing and each ranger and administrator is allowed to make his own interpretation. The result is chaos in the policy decisions. Eichorn and Darling state that they found no uniform ideas within the administration of the Service of what a National Park is and can be. This confusion is immediately noticeable when the Service deals with the public over control of the Park or its wildlife. The basis for the confusion is the question of infinite use and infinite freedom of use. Just because the parks are out-of-doors does not mean that the use potential is limitless. Part of our legal definition of freedom is that your right to act extends to the point where you hit the other man's nose, and there it ends abruptly. Thus, the right to use these areas exists as long as that does no damage, and that use must be limited before damage occurs.

Linked with this question is the unanswerable question of what constitutes an acceptable loss, especially of the grizzly population. The Craigheads contend that the heavy direct losses and the indirect losses due to an upset, stressed population over the past three years have been unnecessary and, if continued, they could push the population past a point of no return. The Park Service contends that the losses are only small temporary losses that will have no lasting effect on the population. California had a grizzly population of about 10,000 animals 70 years ago and the pioneers there may have consigned their grizzlies to extinction under just the same kind of logic. Wyoming has

practically no grizzlies now left except in the Yellowstone ecosystem and may be repeating the California mistake. Obviously, if the Park Service's program is wrong, it will probably not be known until it is too late for the grizzly's survival. For that reason, it is extremely destructive to bar the University of Montana's Cooperative Wildlife Research Unit from Yellowstone Park. They must be present to assess, for the public, the status of the grizzly from year to year. Just as important, they must be free from all threat of censorship so they can report their findings to the public.

As it is now, the public is forced to rely solely on the Park Service for information. The Service in Yellowstone, as well as other large National Parks, is isolated geographically. The result is the creation of an island kingdom within the boundaries of the United States. Checks and balances are missing entirely, for the administration tells its superiors and the press that everything is O.K. and so on up the line. A case to illustrate how hard it is to know what is really happening: in a copyrighted story from the New York Times News Service Superintendent Jack Anderson was quoted as saying the program was going extremely well and that only two bears had been destroyed this season. The story appeared in Montana newspapers August 17, ten days after Park Biologist Glen Cole admitted that five bears had been "converted into scientific specimens"--which is the official description of killing a grizzly. The story of one of these bears was news when it overturned a pop-up tent camper, but the reports of the incident vary according to who is speaking and how nervous he is about public opinion.

Nevertheless, the Service in Yellowstone is largely free of outside criticism due to its isolation, and it is still guilty of protecting the tourist to the detriment of the whole park concept. This emphasis of tourist use results from the prevalent idea within the Service administration that the world, universe, the park itself, has no meaning without man. This, in terms of human worth, is anthropocentrism at its worst. Without technological man, the system would continue undisturbed, and might be much better off. One hears idealists speak of getting rid of the tourist, and the administration speaks in closets of the functional illiteracy of the tourist mentality. Some would rather shoot people than bears. The use must be "sufficient to justify its continuation." Park Service publications repeat that the Park has no value without the presence of man. Fraser Darling and Noel D. Eichorn say in "Man and Nature in the National Parks," published in the April 1969 issue of National Parks Magazine: "We have heard so often the remarks, 'Parks are for people,' and 'It is no good having beautiful areas if the public cannot get into them and see them.' Uncritical acceptance of the implications of these remarks would push aside the welfare of the biological communities represented in the parks, reduce scenery to bare physiography and its interplay with the climate, and deny continuing existence of truly remote places. Further, in a time when population is expected to increase considerably along with leisure time and technical ability in moving over remote country, we are bound to ask whether the parks are to be considered as expendable assets, and what kind of enjoyment of national parks will be available for posterity. . . . The

very fact that such preserved areas exist is a matter of immense satisfaction to people who take the view that nature exists in her own right and that it is the duty of reflective men, with his dominance over the planet, to conserve the areas represented by national parks . . . ." The statement that parks have no value without human use is comparable to the statement that a tree falling in the pre-human forest made no sound because man was not there to hear it.

Part of the present conflict over use results from the search for a "wilderness experience" by the speed-conscious tourist. Ever since man got kicked out of the Garden of Eden, he has been fighting to get back in. He has not yet made it, but still the lure of Nature and getting back to the "simple life" draws millions away from their jobs for a few hectic days spent in the wilderness, even if it isn't, and even if the effort spent is much more than the actual "rest." If that tree were to fall today, chances are that someone would not only hear it in the vastness of the National Park System, but they might be injured by it.

The park system is trying to cope with the lemming-like migration of tourists, but it cannot even pretend to keep up. Instead of the expected 80 million tourists visiting the park system in 1965, some 121 million arrived, and the present figures may reach 200 million annually. For mammoth Yellowstone, that could spell disaster. The present facilities have seldom been full this year, but the pressure is showing all over the Park. If the use pressure is allowed to mount without limits, even to the capacity of present unused facilities, both in and outside the Park, the grizzly will be only the

first casualty. Obviously, the use pressure must, under a reservation system, be spread around thinner, perhaps over the whole year, so that the impact is not confined to certain weekends or to peak periods that come the first two weeks in each vacation month.

The impact on our 35 major national parks is tremendous. The Park Service has tried to funnel these millions through a corridor system of roads such as in Yellowstone and around special interest impact areas that receive heavy use. The programs of road construction and control of the tourist are not developed well, but the problem is not only planning and administration but a confusion in values and the actual inventory of the resources the Service must protect. Recommendations for just such an inventory and evaluation have persisted since the establishment of the Park Service in 1916, both from Service personnel such as National Parks Magazine Editor Stagner and from the National Academy of Sciences Research Council, but there is evidence that a clear and concise study has been made. Park policy is now, as it has been, inconsistent and convulsive.

The basic theory of the corridor system and the "Grand Loop Road" in Yellowstone is that it (according to Superintendent Jack Anderson), "Lies lightly on the land," and does little damage to the essential wilderness picture. In reality, any such road with its high level of use is an unnatural barrier to the historic migrations of park animals, including grizzlies, and no one can assess the damage that it has done. Pushing the road through particularly fragile geologic areas causes an immediate and recognizable

impairment of the scenery, but only lately have biologists come to understand the probable impact of the road system and adjacent campgrounds on migration routes and the whole of the wildlife habitat.

Part of the impact is visual, both for man and for the animal. If you are able to get out of your car and see the animals, they are probably able to see you and their privacy vanishes along with the wilderness value. Looking is not the only thing the tourists do. One "elk jam" contained some 200 cars in four lanes (one in each ditch) and it "crawled"--all four lanes of it--up the road a mile in fifteen minutes. People, adults and children were screaming and running up the banks after the three big bulls as if they were tame puppies. One child yelled to his father, "Daddy! Daddy! Why are they running? Don't they like us?" His father, still running after the elk yelled back, "Run faster! They're getting away! Get a picture!" Everyone seemed caught up in the mob fury, but one driver got disgusted and bullied his way through the jam to get a ranger. His only comment was "Holy Christ!" but the ranger moved the people away and cleared the road. By this time the elk were long gone.

Still, the construction goes on. The large highway complex bypassing Old Faithful has cut out a huge area from one of the best elk ranges in the Park. Other bypass systems are now under construction at Grant Village, Bridge Bay and Lake Lodge. Proposed closure of the Fishing Bridge complex to overnight use is being discussed because it lies across a natural feeding and migratory route for the grizzly. It may be moved some two miles downriver.

Control of the wandering tourist is like trying to control a plague of locusts--nearly impossible without slaughter--but something has to be done if Yellowstone is to survive. Emotion runs high on both extremes. Some say, "To hell with the bear, the people gotta use the Park!" The listener almosts expects the speaker to produce a tommy gun and some grenades, and to go pounding off to "eliminate da bears." The other side is to say, "To hell with the people, we gotta save the bear!" This time the listener sees a phantom parade of gunmen approaching him with guns aimed in order to "reduce the population pressure and therefore the use pressure." Hopefully, a middle ground can be established under sensible management policies and realistic ecological goals.

No one can support the idea that the Yellowstone Park Service--under Superintendent Jack Anderson--has the deliberate goal of eliminating the grizzly under a deliberate extermination program, but it has been giving in to increasing demands for visitor protection and additional services, and is trying desperately to live up to its past record of attracting visitors. Eichorn and Darling found in their investigation that "visitor statistics showing high rates of increase year by year are welcomed as valuable weapons in getting larger appropriations for the National Park Service as a whole. Development [then] takes place which will encourage more visits rather than conserve the unique habitats which the parks represent." They added, in reference to the 10-year planning program called "Mission 66," "this operation over 10 years has been to increase visitation, making it

easier to get into the national parks and that the visitors should be more comfortable in various ways once they are there. Mission 66 has done comparatively little for the plants and animals." It has done a great deal for construction within park boundaries, and the result is that the great bear is being killed off so that the tourists can wander wilfully anywhere they please.

It would be a great relief to the Yellowstone administration to be free of the possibility of bear accidents and attacks, but any obvious action to bring this about is contrary to the purpose of the Service as it was established in 1916, "which purpose is to conserve the scenery and the natural and historic 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." Nowhere does the Act of 1916 say that the tourist is to be preserved, only his passage through the system smoothed so he leaves no mark. Editor Stagner wrote, "Wilderness, as it exists today, cannot long endure without attention--let us call it management, by which we mean only this: to correct and neutralize the influence of man. It does not mean control of natural forces or management of the environment for the purpose of creating a better wilderness."

Conrad Wirth, former director of the Park Service and mentor of Mission 66, wrote an article in the July 1966 issue of National Geographic (Vol. 130, No. 1, pp. 7-47) in which he outlined the many successes of the program, but not once did he write of the things that had not been done to

protect the parks, nor did he speak of mistakes. The article could only be described as self-congratulatory and protectively lacking in self-analysis. This probably results from the prevalent sickness in government circles to accept what one's subordinates report for the gospel truth. The over-all result is to make the Park Service stubborn, with preconceived ideas and preset conclusions, depressingly uncreative, and lacking in compassion for its charges. That is a blanket indictment of the system, not an individual criticism of most of the rangers on patrol, for they are a contradiction by their very existence and competence. The Craigheads and Jay Sumner, their research assistant, give them credit for the lack of injury this year: "They, the individual rangers, are doing a great job. If no injuries result from this control program, the success is to their credit."

Wirth is rather blasé about the impact of construction, especially the road system: "Suppose a road does encroach on the wilderness character of Yellowstone for a distance of, say, a quarter of a mile on each side? In Yellowstone the area thus 'spoiled' amounts to only 5 percent of the park." By comparison, it is not unreasonable to assume that the Grand Loop Road encroaches on much more than a "quarter mile on each side." It is not that the road should be done away with--that is too much--but the Service should be honest about its probable effect.

One of Wirth's pet projects, according to the article, was the demolishing of the old Canyon Lodge and the construction of the new $8 million facilities. Eichorn and Darling indicate that the construction

and location were wrong because the site lay across natural animal migration routes: "It could just as well have been outside the park and would have played a larger part in the economy of the state of Wyoming. Some would justify the existence of Canyon Village because of its proximity to points of high scenic value in the Park. . . . We would take the view that this is a prime reason why Canyon Village should not be there. The same objections apply to trailer camps and automobile camps." The same criticism is angrily voiced by Park Biologist Cole as he noted in an interview that no one could expect anything else but visiting grizzlies if the campground was right in the grizzlies' favorite kitchen as is the case with the Fishing Bridge complex. (He lumped the Canyon complex into the same category.) His recent memorandum says, "Something in addition to the occasional camper's ice chest appears to be attracting grizzlies into the Lake Outlet's Fishing Bridge and Pelican areas. This is suggested to be an abundance of natural food in the form of spawning fish and fish carrion which drifts back downstream, or is swept into the lake's north beach by prevailing winds . . . overnight facilities should be provided away from what is apparently prime grizzly habitat." Cole emphasized that this complex should be moved, preferably outside the Park, as well it could be since it is only a little more than a 30-minute drive from the Cody, Wyoming entrance.

The risk to individuals is small, but the nation must still understand the value of the life of man is meaningless if there is no environment to support his existence. The value of a man's life in relation to the grizzly

species is small. This is not to say that one should stand by while someone dies under the attack of a grizzly, especially if it is not their fault, but it does mean that those who invite such attacks should suffer the consequences. There are some who insist that animals should be regarded as things, possessions, having no right to existence as separate but equally valuable life forms. If one were to counter with the absurd, one could say that each bear of the world's population (a maximum of 15,000 bears as estimated by bear enthusiast Andy Russell and researchers) is worth, in a proportionate exchange on the basis of numbers an equivalent of 200,000 human lives. Thus, in the last year, the Yellowstone Park Service slaughtered, imprisoned or expatriated the equivalent of some 5,000,000 people.

That is the critical nature of the situation. The campgrounds must be sanitized under a program of extreme control, and the public must be educated to the risk involved for the preservation of the species. Outside the Park communities must initiate corresponding measures to insure their own sanitization programs--especially West Yellowstone--and everyone must cooperate. Additional measures are indicated as Cole and the Craigheads suggest, including closure of the most endangered campgrounds (Canyon Village, Fishing Bridge and Pelican are the worst), and establishment of a strict reservation system for the remaining areas--including fencing of the Bridge Bay and Lake areas, if they are to remain open to camping.

Statistics have been used to prove both sides of the biological arguments. Drops in attacks and campground intrusions can indicate the bears are adapting and going elsewhere for their food, or it can indicate that there are simply fewer bears due to control killing and drug malfunctions during transplants. The two latter possibilities are far more disastrous. Obviously an accurate marking and count program is necessary to underline the real situation. At this time the public is forced to reason the issue for itself, since no one has the information to question either party. It must be pointed out, however, that although both the Park Service and the Craigheads wish to preserve the grizzly, the Craighead Wildlife Research Team has no axe to grind, or any motive beyond preservation, whereas the Park Service has both the motive and the ability to distort the truth and mislead the public. No one but the Craigheads is able to approach even a close approximation of what the Service is doing. Now that the Wildlife Research Unit has been excluded from the Park, the public has no way of knowing.

Park Biologist Glen Cole seems to have won the argument for now since it would do no good to start over, but the lessening of grizzly "intrusions" into campgrounds may in fact be an indication that there are simply fewer bears to intrude. From personal observation and the comments of rangers and Park Company employees, I would accept that implication. In 1969 I saw 30-odd black bears in three days within the Park. This year I observed three in two and a half months. Quite clearly, the losses extend to the grizzly population whether by slaughter or transplant, and the

extinction of the grizzly from Yellowstone and Glacier is rapidly becoming fact. The present losses may never be regained, especially if more delay results from timidity on anyone's part. Someone has to remember the grizzly.

A program of national protection and support for the bear must be adopted immediately. A supervisory board of citizens and scientists, including the Park administration, should control the management programs while protecting the bear and letting the tourist fend for himself after educating him--if necessary, by force before entering the Park. Signed acceptance of a statement such as this warning from the administration of Kruger National Park, South Africa, would be a good first step for the Park Service to adopt here in the United States: "It is an express condition of your visit to the Park that the National Parks Board of Trustees shall not be responsible for any damage you may suffer as a result of any bodily injury whether fatal or otherwise, nor shall the National Park Board of Trustees be responsible for any damage you may suffer arising from the loss or damage to your property brought into the Park irrespective of whether such bodily injury, loss or damage arises as the result of fire, theft, floods or from the negligence or intentional act of any person whether or not in the employ of the National Parks Board. All visitors, whether or not they occupy accommodation within the rest camps are deemed to contract with the Board on this basis." The refusal to allow suits for damages by animals would absolve the Park Service of the pressure to kill offending

bears. Surprisingly, this recommendation came from Glen Cole, indicating some new awakening on his part.

As it is, government dishonesty is the central reason for these wrongs. The attempt to save the grizzly and the forces aligned against the conservationists serves as a frightening example of the forces the Park Service and the government can push against the public demand and the public's right to know. The present battle has degenerated into a personal battle far beyond the avowed interest of saving the grizzly. Personal pride has made the situation unbearable for the grizzly. Some change must come and soon. The only change that would be useful is the immediate surgical removal of the present administration, Glen Cole and Jack Anderson.

Without drastic action and even stricter protection than Cole might like to see, the grizzly is doomed. It may be an indication of man's ability to live within nature's requirements--an ability without which man will not survive. As the Craigheads say, this is a case of oversimplification of the environment: "The stability of ecosystems is dependent upon the maintenance of their complexity. The Yellowstone ecosystem has already lost the wolf and the cougar and the American Indian. . . ." Next year, 1972, is the 100-year birthday of Yellowstone National Park. It cannot be said at this time whether Mother Interior will be celebrating with a birthday party or a wake. . . .

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