

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
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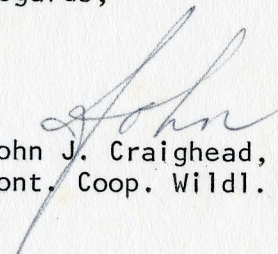
Dr. Frank C. Craighead Sr.
87 East Avenue
Naples, Florida 33940

Dear Dad:

I am enclosing a copy of my critique of the National Park Service's Environmental Impact Statement concerning the grizzly bears in Yellowstone National Park. No doubt this will raise a lot of hackles, but hopefully it will do some good. I have sent copies to all of the major conservation organizations in the country.

Hope everything is going well with both of you.

Regards,



John J. Craighead, Leader
Mont. Coop. Wildl. Res. Unit

JJC:gs
Encl: 1

CRITIQUE OF THE NATIONAL PARK SERVICE ENVIRONMENTAL IMPACT STATEMENT (1974).

Summary

The Leader of the Montana Cooperative Wildlife Research Unit has been asked by the National Park Service, Department of the Interior, to review and critique the recent National Park Service (NPS) Environmental Impact Statement (EIS) concerning proposed management of the grizzly bear in Yellowstone National Park, an integral component of the 20,000 km² (Craighead et al., 1974) Yellowstone Ecosystem. The National Park Service proposal was studied in detail and numerous specifics questioned. However, this critique considers the validity of the proposal and presents an overview including only certain specifics of primary importance.

The National Park Service Environmental Impact Statement of 1974 does not objectively address the subject of the grizzly bear and its environment with regard to past and future National Park Service management practices and policies. It has prejudged the situation to conform to its established policy and concludes, a priori, that it proposes to do "business as usual". Since 1970, the NPS has consistently made the mistake of ignoring scientific evidence of a serious population decline in favor of "continuing to implement an on-going management program" that it claims to be effective, but which has been seriously questioned by scientists and conservationists.

The statement omits or fails to recognize the most pertinent facts:

- a) the magnitude of the population decline; b) the failure of current management procedures to redistribute grizzly bears during the summer months of high visitor use; c) the failure to effectively reduce the probability of bear-man encounters except by killing bears; d) the widespread adverse.

effects on the bear population outside of the Park due to management action initiated within the Park; and e) the fact that most current data show a reproductive rate that is still depressed and a mortality rate that exceeds the number of man-caused deaths "allowed" by the NAS committee if the population was to restabilize. Failure to come to grips with these basic facts, now thoroughly documented, raises a question as to whether the EIS is an objective presentation of data and conclusions or an attempt to justify past NPS actions.

For its factual data concerning the grizzly bear, the NPS relied heavily upon a comprehensive report prepared by a special committee of the National Academy of Sciences (Cowan, 1974) and based primarily upon 15 years of in-depth research done by Drs. John J. and Frank C. Craighead, Jr. (this report will be referred to as the "NAS report"). The NPS statement, however, fails to cite most of the conclusions of the NAS report which were critical of the NPS program and frequently paraphrases the content of the NAS report in a self-serving manner.

The EIS is incomplete. It fails to cite directly the content and conclusions of the Craighead publication "A Population Analysis of the Yellowstone Grizzly Bears", Bulletin 40, Montana Forest & Conservation Experiment Station, September 1974. Also, the statement fails to cite and compare the population calculations of Craighead et al., 1974 with the NAS estimates and with those of Dr. Jack Gross, Colorado State University, Fort Collins, Colorado. All three analyses show a rapid decline in population size and strongly suggest that this trend will remain uncurbed unless the annual man-caused deaths decrease drastically and the reproductive rate increases or some other population compensatory process becomes operative. The

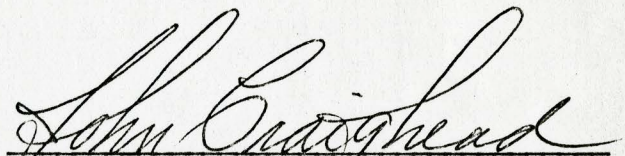
inescapable conclusion is that the Yellowstone grizzly bear population is in serious trouble and is not simply experiencing a "temporary disturbance" as summarized on page i of the EIS.

The EIS fails to objectively evaluate the grizzly bear problem or to offer realistic suggestions for rectifying it. Failure in the past to utilize all pertinent scientific data in evaluations has been a consistent mistake of NPS personnel since 1968 and has often resulted in erroneous conclusions which have subsequently been translated into management actions and administrative policy statements. In summarizing its EIS, the NPS offers the following management alternatives:

- A. No action.
- B. Eliminate grizzly bears from Yellowstone National Park.
- C. Further restrict visitor use.
- D. Increase grizzly bear population by artificial methods.
- E. Alternative actions (presumably cooperative action with other agencies) outside the direct authority of the NPS.

The most obvious and realistic action was neither considered nor listed as an alternative. An additional alternative action that would best serve the resource would be Alternative F: to recognize that the grizzly bear population in the Yellowstone Ecosystem has experienced, and is continuing to experience, a serious decline associated with the abrupt closure of the garbage dumps; to take immediate cooperative action with the states of Wyoming, Montana, and Idaho and various federal agencies to halt the decline and restore the population level. To do this would contradict the NPS objective (page i of the EIS) of perpetrating old practices that have been

seriously questioned, if not discredited, by the NAS committee report. Continuation of "grizzly bear management as usual" could place the population in greater jeopardy in the near future. Neither the NAS nor the Craighead et al. analyses provide data or conclusions which would support the NPS supposition that their grizzly bear management program has been successful and should be continued. The broad management objectives of the NPS (enunciated in the EIS) have never been contested; only the means for obtaining certain objectives and the evaluation of results. The current status of the grizzly bear population (which is serious and documented) should not be confused with statements in the EIS of estimates and hypotheses (largely undocumented) of impacts on the future of the grizzly bear population.

A handwritten signature in cursive script, reading "John J. Craighead". The signature is written in dark ink and is positioned above a horizontal line.

John J. Craighead, Leader
Montana Coop Wildlife Research Unit

Critique

The following items constitute some of the most evident inconsistencies and questionable procedures in the NPS report. All paragraph and page designations refer to the National Park Service Environmental Impact Statement, unless otherwise stated.

1. On page 1, opening paragraph of the EIS, the NPS states that it "proposes to continue to implement an on-going grizzly bear management program initiated in the 1960's and designed with the purpose of perpetuating a wild, free-ranging grizzly bear population in Yellowstone National Park, Wyoming-Montana-Idaho, and to minimize conflicts between humans in the Park and grizzly bears". Thus, the NPS has prejudged its own program before submitting any data or evidence. The purpose of an EIS is to present evidence that permits other agencies to judge the merits of an environmental situation. Data presented in the NPS statement as well as data and conclusions of the NAS and Craighead reports show that the success of the "on-going program" can be seriously questioned. Program success has frequently been confused with program objectives. The NPS should address itself to evaluating past and future management in terms of the dynamics of the grizzly bear population. The NAS report questioned past management and research policies of the NPS (see pages 7, 8, 15, 16, 27 and 38 of the NAS report, Cowan, 1974).
2. In quoting the NAS report, information critical of the NPS management program or contradicting NPS statements or data were often

omitted or paraphrased without indication. This has led to basic misinterpretations by the NPS staff, and has made the report difficult, if not impossible, for reviewing agencies to evaluate.

Examples:

- a. 1st paragraph, page 17: two different sentences were welded to omit estimates of the size of the Yellowstone Ecosystem by the Craighead team, as well as by the NAS committee.
- b. Following 3rd paragraph, page 28: omission of a continuing discussion in the NAS report which was critical of the Interagency Grizzly Bear Research Team established in 1973 to obtain objective data on the grizzly bear population. Statements critical of the fact that the chairman of the team is also the Chief Scientist of the National Park Service and a consideration implicit in the NAS discussion that a conflict of interest was a distinct possibility was deleted. Deletion of this information deprives reviewers of a NAS criticism necessary to judge the NPS population estimates, as well as the NPS current research and management proposals for the future.
- c. 3rd paragraph, page 58: NAS criticism of using injury rates as a means of evaluating the NPS management program was altered in the NPS statement to make it appear favorable to the NPS point of view. In addition, a judgment of "valueless" by the NAS committee regarding such comparisons, as well as information that "strongly suggest" that there was increased

grizzly activity in campgrounds and other developed areas during the period of dump closure from 1968-70, was omitted. Scientific data showing the number of grizzlies in campgrounds and movement of grizzlies back to campgrounds and developed areas after transplant have not been presented. Such data is necessary to ^{an} candid evaluation of the management program.

A listing of control actions is not sufficient.

3. Statements were made in the NPS report that were unconfirmed by any valid data-gathering procedures. Such references to Cole's data are especially common. Examples:
 - a. 3rd paragraph, page 21: "However, the assumptions on which the estimates are based are assumed to be valid." This statement is made by the NPS with reference to a statement immediately preceding that was quoted from the NAS report as follows: "Estimates of bear numbers for 1971 to 1973 (Cole, 1973, 1974) are based on hypothetical calculations and there are no data to verify them." The NPS makes no explanation as to why their "assumptions...are believed to be valid." Expediency appears to be the most likely motivation.
 - b. 3rd paragraph, page 24: "The above population estimates are presented, therefore, as the best possible guess based on current knowledge." A "...guess..." most definitely, but not "...the best..." nor "...based upon current knowledge."
 - c. 1st paragraph, page 62: "However, at the present time, the population [of grizzly bears] appears to be recovering

from the adverse effects of the dump closure and there is no evidence to support the contention that the management action itself has induced, or will continue to induce, a long-term population decline." There is no valid scientific evidence to support the contention that the population is recovering. Furthermore, the fact that no improvement is demonstrable indicates that the severe population declines following the abrupt closure of the garbage dumps have not been, and will not be, ameliorated in the future by the NPS management program of the past.

4. The NPS did not use and has refused to incorporate a marking program as suggested by the NAS committee. The various investigations proposed for the future will be subject to the same fatal errors as those of the past.
5. The report states that "independent" research will be encouraged... but under the license of the NPS. Past experience has shown NPS control to be inhibitory of creative effort and of independence, particularly when its own programs are threatened by factual data.
6. While paragraph 2, page 61, states that "This evaluation [of the NPS in Yellowstone Park] should not impair the viability of the Park's grizzly bear population in the short term", the NAS report does not say this. The evidence of a 45 percent decline in the ecosystem population between 1967 and 1974 (Craighead et al., 1974) was, in general, supported by the NAS analysis. This can only be viewed as a serious "short-term" impairment that could be devastating if the trend continues long-term.

7. Figures concerning bear mortalities may be even higher than reported by Craighead et al. (1974) or Cowan (1974).

a. Mortality rates in the population after 1970 were calculated by the NAS committee using to a large degree the ratio of marked to unmarked bears in the total kill. This is likely to be misleading as the NPS has repeatedly stated that they had been removing all markers from bears since 1970.

b. All mortalities within the Park may not have been reported to all interested parties. This is the substance of the allegation by H.V. Reynolds on page 58, an allegation which the NPS has neither discussed nor explained.

8. The management programs proposed by the NPS are naive in some cases and poorly explained with respect to scientific procedure in all cases. Examples:

a. Some of the management alternatives are unrealistic (Summary, page i, Part 4). The grizzly bear cannot be eliminated from the Park, as suggested in Alternative B, without also eliminating it from the ecosystem. There is no scientific evidence that a grizzly bear population can be increased by artificial methods as suggested in Alternative D. The most obvious alternative, to alter "on-going" management in order to curb the population decline is not considered in the NPS statement.

b. Of major concern is the question of control actions as outlined beginning on page 4, Part 3. To where will bears be transported? Will the bears be assured of arrival at their destination

without physical impairments? How often will individual bears be transported before they are judged "problems" and liquidated? What is a free-ranging bear as compared to bears that before 1970 utilized garbage as well as natural foods, but moved throughout the entire 5,000,000 acre ecosystem? What specifically is the current distribution of bears throughout the Park during the visitor season?

- c. How will animals be censused, population parameters obtained, or seasonal and annual distribution and movement patterns recorded without reliable identification, as suggested on page 6, Part 4, a and b? If, as demonstrated by Craighead et al. (1974) and substantiated by Cowan (1974), two-thirds of the total ecosystem population visited the open pit dumps before closure, then to establish a purely "free-roaming" population may have, and apparently has, required that most of the truly free-roaming bears be eliminated from the population.
- d. At the top of page 31, the programs for management of elk and bison are said to be based on nature being neither good nor evil. This platitude, however, does not prevent the range from being severely depleted due to overgrazing. Generally, ungulates die of "malnutrition" following serious range depletion or a combination of lack of food and severe winter conditions.
- e. The fifth paragraph on page 5 states the NPS intention of managing the black bear according to the same program devised

for the grizzly bear "...because of similarity in behavior [sic] traits and associated problems." While there is some "similarity" between the species, the black bear is a separate and unique entity for which control death statistics, population assessments (scientifically valid), distributions and all other pertinent parameters must be assessed. An entirely separate and specific EIS should be prepared regarding the status of the black bear in Yellowstone National Park and adjoining areas.

9. The final sentence on page 24 attributes a grizzly bear population estimate for the Shoshone-Teton National Forest of 100-150 to Mr. Larry Roop, biologist with the Wyoming Game & Fish Department. Mr. Roop (pers. comm. to F.C. Craighead) claims that he made no such statement to the NPS and no such estimate of grizzly bear numbers. This raises serious questions as to the credibility of other NPS statements that are supposedly derived from personal communiqués.
10. Page 9 holds reference to an official position document regarding "threatened" status of the grizzly bear in preparation by the U.S. Fish and Wildlife Service. It is stated to be unavailable "at this time". There are strong indications that the position paper was in circulation at the time the NPS report was being prepared and at least before its release on 18 September 1974. In any case, the position paper is now available and calls for the grizzly bear to be classified as a "threatened" species in the Yellowstone Ecosystem (based in large part, incidentally, on the identical NAS

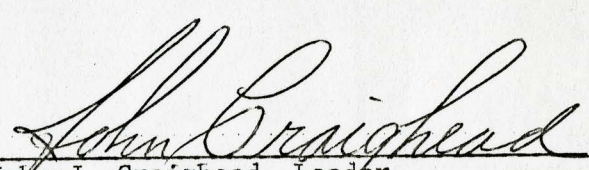
report that was the bases for the NPS EIS). A re-evaluation of the NPS policies regarding the grizzly bear are definitely called for in view of this status evaluation by the U.S. Fish and Wildlife Service.

The primary concern of the National Park Service is naturally the maintenance and administration of the National Park system. The NPS EIS actually makes this priority clear, but fails to deal with the problem in question, that of a declining grizzly bear population. In several instances, the National Park Service disclaims any responsibility for the grizzly bear in the total Ecosystem (e.g., the bottom of page 61 and top of page 62), preferring "to continue to implement an on-going grizzly bear management program initiated in the 1960's". The actual amount of information relating directly to the grizzly bear that has been accumulated by the National Park Service in the course of this program was stated by the NAS committee on the Yellowstone Grizzlies to be "inadequate to provide the data essential for devising sound management policies..." (Cowan, 1974). It is thus assumed that the primary bases for the decision to perpetuate the management policies of the past were research data accumulated by Dr. John J. Craighead and his colleagues, and subsequently interpreted by the Craighead team (see "literature cited" of NPS EIS for reference to the 12 separate publications) and independently by a special investigatory committee of the National Academy of Sciences (Cowan, 1974). It is interesting to note that virtually all references to the research results of the Craighead team are not direct ones, but are contained within the lengthy quotations extracted from the NAS report (Cowan, 1974). This is particularly true regarding data which contravenes positions taken by the NPS through the sundry reports of G.F. Cole

(1971a, 1971b, 1972, 1973, 1974). It thus becomes obvious that the National Park Service, by incorporating much of the NAS report as their own EIS, was obligated to accept the conclusions of the NAS report. It is indeed strange that apparent acceptance of the body of the NAS report by the National Park Service was not accompanied by a similar acceptance of the final conclusions from the report. Nowhere are the NAS conclusions listed, although a few have been inconspicuously incorporated, piecemeal, into the body of the text. By failing to report verbatim the NAS conclusions, the NPS has made it impossible for reviewers and critics to compare the two sets of conclusions (NAS vs. NPS), developed from the same data and from virtually the same analysis, without closely scrutinizing and cross-referencing both reports. The tendency could be for reviewers to accept the NPS evaluation in toto. The NPS has erroneously concluded that the NAS report has upheld its management policies, a very basic error. The NAS report, while differing slightly in terms of numerical values from those arrived at by the Craighead team, clearly agreed with the population assessment of the team. While Cole (1973, 1974) estimated a minimum population of 350 grizzly bears for the Ecosystem in 1973 (paragraph 3, page 19) using techniques and data discredited by the NAS committee (2nd paragraph, page 24 and 3rd paragraph, page 19), the Craighead team calculated a population of 136 bears using advanced computer analytical techniques to assess 15 years of data from marked animals (Craighead et al., 1974). The NAS report (Cowan, 1974) stated that "if there were no other changes in the population parameters, then the population that we have estimated to be 234 or greater could have been as low as 158 by 1973" (final paragraph, page 42). The NPS report stated in an interpretation of the NAS report that "there is no convincing evidence that this

population of grizzly bears is in [immediate] danger of extinction" (the word "immediate" is bracketed because it appeared in the actual NAS statement, but was omitted from the statement on page 72 of the NPS report). Precisely what "immediate" means must be established. The grizzly bear ecosystem population has declined by 45 percent over the past seven years (Craighead et al., 1974). This magnitude of decline was generally recognized by the NAS committee and suggests that "immediate" must be limited to a period of considerably fewer than several years if current trends are not reversed by a change in NPS management procedures. The NAS committee obviously believed that, unless man-caused mortalities were held to 10 or fewer per year (average for the past four years has been 36) and unless the recruitment rate improved to compensate for past mortalities, the grizzly bear population in the Yellowstone Ecosystem would be threatened. The mortality for 1974 has already surpassed the suggested limit of 10 (see Appendix). Current work by Knight (1974), though possibly invalid due to techniques that precluded differentiation of individual bears, suggests that the average litter size was lower in 1973 than the 2.2 reported by Craighead and Craighead (1967) and Craighead et al., (1974), or the 1.9 reported by Cole (1973). Therefore, there is no reason to believe that the grizzly bear population is rebounding to former levels. Indeed, its integrity quite probably is suffering further deterioration from the "on-going" NPS management program under the impact of continuing pressures inside and outside the Park. Nonetheless, the major administrative action offered in the NPS EIS is: "The National Park Service proposes to continue to implement an on-going grizzly bear management program the purpose of which is to perpetuate a wild, free-ranging grizzly bear population in Yellowstone National Park

and minimize conflicts between humans in the Park and grizzly bears by reducing man-generated food sources and by regulating visitor distribution in the Park". The NPS purpose is admirable and has never been contested, but the methods for accomplishing the purpose have been controversial. Clearly, the NPS, in spite of the conclusions and warnings of the NAS report, the results of the Craighead et al. analysis, the position document of the Fish and Wildlife Service and its own current death and reproductive rate statistics (not included in the EIS but which show a progressively deteriorating situation) has opted to recommend management as usual---management which has been seriously questioned by a NAS-NRC committee.


John J. Craighead, Leader
Montana Coop Wildlife Research Unit

Appendix

Grizzly Bear Kills, 1974 - Yellowstone Ecosystem

(pers. comm., Mr. Larry Roop, Wyoming Game & Fish Department).

1. Legal kill. May 31. 3/4 mile above Game & Fish cabin on North Fork Shoshone. Lg. dark phase male.
2. Legal kill. June 11. 5 miles up Grinnell Creek on snow slide. Medium sized female.
3. ?? Spring killed bear in Teton Co. Legal kill by resident from Big Piney. Warden Petera did not remember details when I talked to him, but he stated he included it in his monthly reports. Will check with Bill Morris on this for info.
4. Legal kill. Sept. 1. South Crandall Creek., Clark's Fork. Non-res. Old male. Marked w/ Craighead tatoo and ear streamer.
5. Depredation kill. Sept. 8. Arizona Creek about 1½ miles above Teton Peak boundary. Pinky Bonner's camp. Young male.
6. Natural death. Sept. 21 (?) Sulphur Creek on Sunlight Creek drainage. Large male that was brought from West Yellowstone one month earlier. Found by use of radio telemetry equipment. Discovered in 11,000 feet glacial cirque, extremely rugged terrain. Possibility that bear was shot, but could find no sign of open wounds. More likely animal was killed in rock slide since there were several abrasions and skinned areas. Attempt to remove carcass by helicopter for autopsy was unsuccessful.
7. Legal kill. Sept. 24. Jones Creek about 3 miles above junction with North Fork. Adult male.
8. Legal kill. Sept. 29. North Crandall Creek. Old female. Evidently a Craighead bear but no tatoo or ear tag discovered. Had green and white braided plastic loop in left ear. Loop still had part of blue streamer attached. Also notch in lower (rear) edge of left ear where tag might have been.
9. Illegal kill. Oct. 4. About 4 miles above Turpin Creek, T45N R112W Sec. 2. Old sow shot and left lay. Investigated by Warden Petera. Had Montana Fish & Game tag # H1583.

10. Illegal kill. Cub of the year with above sow. Only one paw found according to Petera. Another cub in area -- aggressive, had to be driven away from carcass of sow. Part of jaw removed from sow by Petera and given to Frank Craighead.
11. Legal kill. Oct. 24. Timber Creek. Old female. Had Yellowstone National Park tag # 7187.
12. Control action. Nov. 11. Yellowstone National Park. Carcass sent to Montana State Fish and Game laboratory in Bozeman.