

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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May 1, 1969

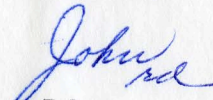
Dr. Frank Craighead
P.O. Box 156
Moose, Wyoming 83012

Dear Frank:

I received your letter of April 14 in which you commented on my letter concerning the paper on prehibernation and denning activities of grizzly bears. I would like to see the paper before it is submitted to a journal. As I had indicated to you over the phone, I have not made any specific changes in the manuscript because I felt that we should put our effort on the management paper first, which paper we had prepared a full year before this one, and on which I have not yet received any written comments, suggestions, or contributions from you.

If you find time to go over the management manuscript I will then try to get it into shape for publication. As you know, there are several outlets, including the National Parks Association.

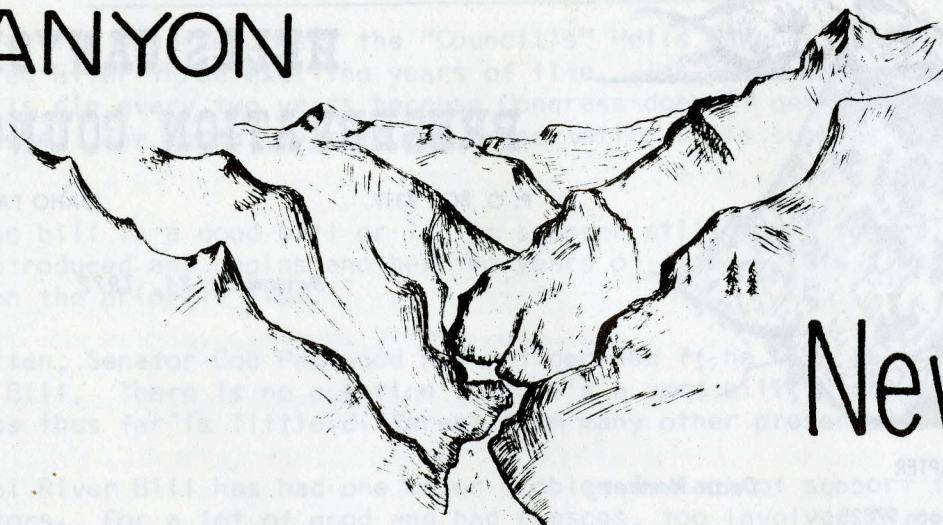
Regards,


John

JC:rd

The

HELLS CANYON



News

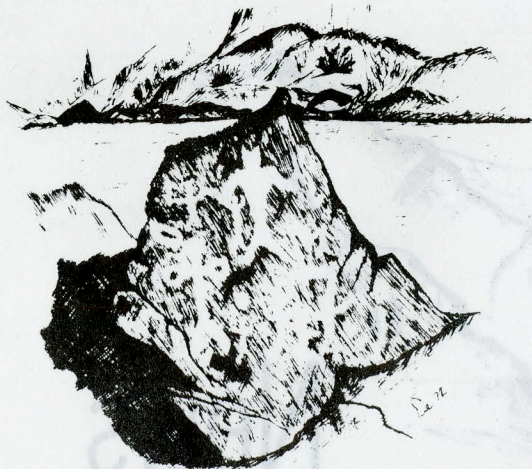
The Hells Canyon Preservation Council, Inc.
P.O. Box 2317
Idaho Falls, Idaho 83401

November 1972

Vol. 5, No. 2

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HELLS CANYON PRESERVATION COUNCIL, Inc.

P. O. BOX 2317

IDAHO FALLS, IDAHO 83401

November 24, 1972

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P. O. Box 254
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TU-EKA-KAS AWARD

1967 WILLIAM O. DOUGLAS
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1971 BOB PACKWOOD
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1972 PETE SEEGER
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Dear Member,

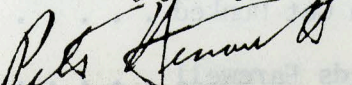
Again it has been too long since our last newsletter. We don't have any good excuse except to say that our volunteer staff is small, a lot has been happening and, as the days slipped by, we kept giving in to the attitude that our faithful members could be put off till 'next week'. We apologize.

The biggest news we have to tell is about the agreement we've reached with Senator Frank Church on a formula to save Hells Canyon. This means that Church, Senator Packwood, and the Council are now all on the same team, a goal for which we've worked a long time.

The second best news is that we got "our" \$4,000,000 to prevent the private lands in Hells Canyon from being commercially developed. The lands are not yet safe but the money is there and I want all the members to know that it was your dues and letters that got us as far as we are. The dues paid for four of us to go to Washington to plead our case before the U.S. Senate and at the White House as well as for countless phone calls and many rolls of postage stamps.

I hope, after reading the details of these and other developments, you'll realize you're a part of one of those efforts in life that matters. Life seems to be a constant search for meaning. If, in a hundred years, our grandchildren can know Hells Canyon as we have had the opportunity to know it, I think we will have accomplished something that matters. We're well on our way toward accomplishing that goal. With your continued support I know we will succeed.

Sincerely yours,


Pete Henault, President

"The grandeur and originality of the views presented on every side beggar both the pencil and the pen. Nothing we had ever gazed upon in any other region could for a moment compare in wild majesty and impressive sternness with the series of scenes which here at every turn astonished our senses and filled us with awe and delight."

Captain Benjamin L. E. Bonneville, 1833

A NEW BILL TO PROTECT HELLS CANYON

With the close of the 92nd Congress, the "Council's" Hells Canyon-Snake National River Bill (S.717) died after three exciting years of life. Its death was not untypical -- hundreds of bills die every two years because Congress doesn't get around to bringing them up for a vote. The mortality rate for preservation bills such as S.717 is greater than most.

Normally, if the bill is a good bill or if its sponsor still wants to see the bill become law, it is reintroduced and begins another two years of life -- this time usually a little higher on the priority list.

As this is written, Senator Bob Packwood has not decided if he will reintroduce the National River Bill. There is no question that it's a good bill, right for Hells Canyon, and its progress thus far is little different from many other preservation bills.

But the National River Bill has had one major problem -- lack of support from other Northwest senators. For a lot of good and bad reasons, too involved to explain here, legislation regarding public lands must have support of the Senate and House Interior Committee members from the states or districts where the public lands are located. What this means with respect to Hells Canyon, is that any protective legislation standing any chance at all of passing the Senate must have the support of Senator Church of Idaho and Senator Hatfield of Oregon.

The National River Bill has not had support and, in fact, when it came to a showdown last year, both senators opposed us. Senator Packwood and the Council have been searching for a way to win the needed support without compromising Hells Canyon. In recent months Senators Packwood and Church have met a number of times to discuss a possible compromise. Packwood has stated that he'll go along with any bill that does the job and has the Council's backing.

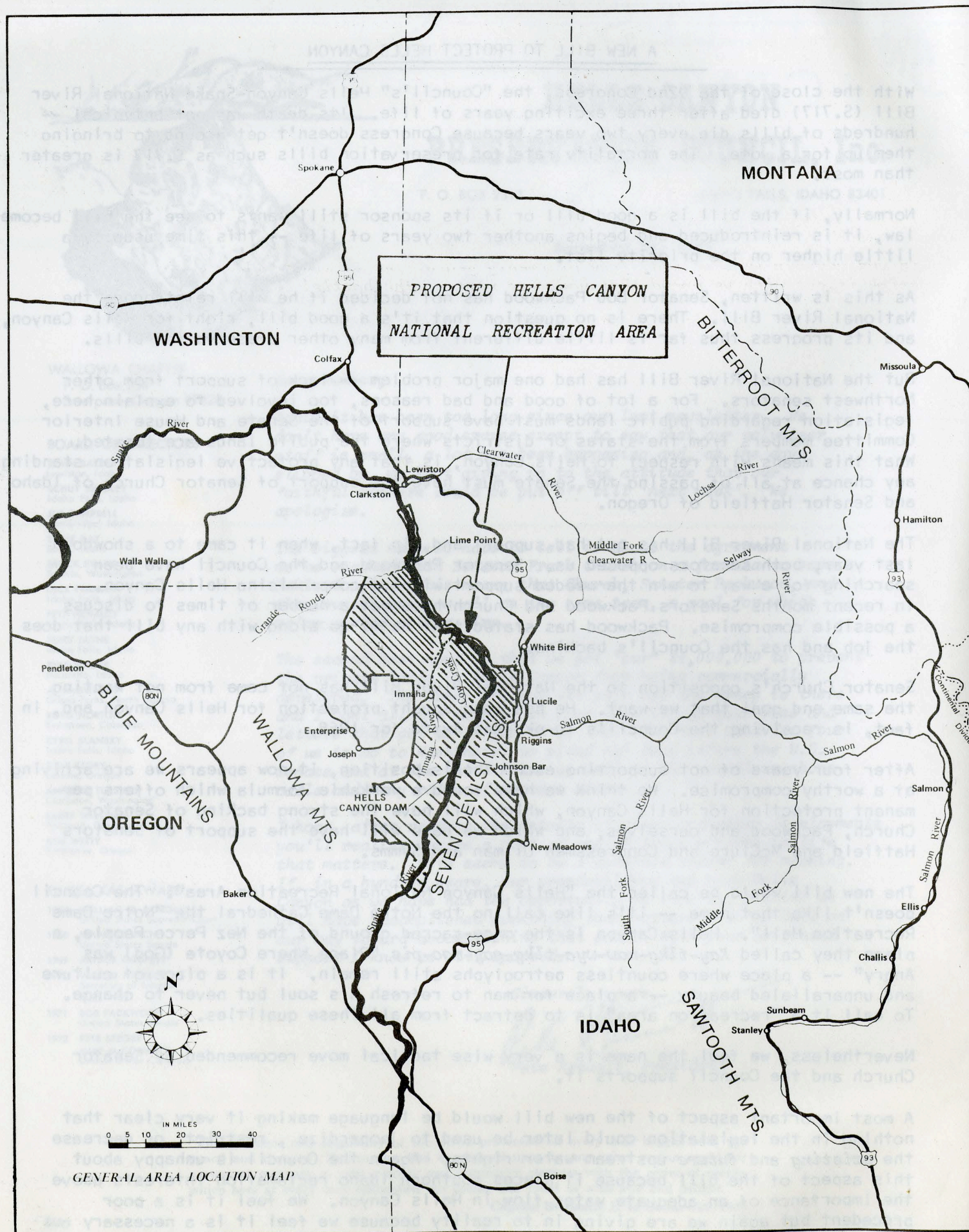
Senator Church's opposition to the National River Bill has not come from not wanting the same end goal that we want. He has long sought protection for Hells Canyon and, in fact, is receiving the Council's Tu-e-ka-kas Award for 1968.

After four years of not supporting each other's position, it now appears we are arriving at a worthy compromise. We think we have found a workable formula which offers permanent protection for Hells Canyon, which will have the strong backing of Senator Church, Packwood and ourselves, and which we hope will have the support of Senators Hatfield and McClure and Congressmen Ullman and Symms.

The new bill would be called the "Hells Canyon National Recreation Area". The Council doesn't like that name -- it's like calling the Notre Dame Cathedral the "Notre Dame Recreation Hall". Hells Canyon is the once-sacred ground of the Nez Perce People, a place they called *Kay-tlkg-maw-wya-tlkg-gay-moo-pis* "Place Where Coyote (God) was Angry" -- a place where countless petroglyphs still remain. It is a place of culture and unparalleled beauty -- a place for man to refresh his soul but never to change. To call it a "recreation area" is to detract from all these qualities.

Nevertheless, we feel the name is a very wise tactical move recommended by Senator Church and the Council supports it.

A most important aspect of the new bill would be language making it very clear that nothing in the legislation could later be used to jeopardize, restrict, or decrease the *existing* and *future* upstream water rights. Again the Council is unhappy about this aspect of the bill because it places southern Idaho reclamation interests above the importance of an adequate water flow in Hells Canyon. We feel it is a poor precedent but again we are giving in to reality because we feel it is a necessary compromise if the bill is to become law.



Still another compromise would be the protection which the National River Bill would have given to 100 miles of the Salmon River and 40 miles of the Grande Ronde River upstream from their confluences with the Snake. These aspects would likely make it more difficult to win passage of the new bill and, since state agencies are moving in the direction of protecting these rivers under the National Wild and Scenic River System, the Council felt it was a justifiable exclusion.

Final compromises would be the dropping of language in the National River Bill which would have excluded mining, logging, roadbuilding, commercial development, and any other land-altering uses in the non-wilderness portions of the protected area. The new bill would instead require a study of management alternatives and that recommendations be made to the Congress three or five years after passage of the bill. The Congress would then decide the destiny of these lands.

With all these compromises, what would the new bill accomplish?

First of all it would set aside for permanent protection a tract of land approximately the same as the proposed National River. Notable reductions would be 45,000 acres of land along the Salmon and Grande Ronde Rivers. The Council is hoping, however, that some 150,000 acres of additional lands will be added on the Oregon side. These would primarily be lands included in the Hells Canyon National Recreation Area proposed by Oregon Congressman Al Ullman (H.R. 1188, 92nd Congress).

Upon passage of the proposed new legislation, the Snake River, from the existing Hells Canyon Dam downstream to Asotin, Washington, (101 miles) would be incorporated into the National Wild and Scenic Rivers System. Existing uses, which include power-boat and motorless craft travel would be recognized as valid existing uses and would continue under the new designation much the same as today.

Also upon passage of the proposed new legislation, the Ka-moo-new T-kon Wilderness would be created. This new wilderness would include most of the lands comprising the Oregon and Idaho faces of Hells Canyon from the existing Hells Canyon Dam downstream approximately 51 miles on the Oregon side and 39 miles on the Idaho side. The wilderness would also include the Seven Devils Mountains of Idaho and certain lands on the Salmon River drainage. On the Oregon side, certain parts of the Imnaha River drainage and the Wallowa Plateau along the Hells Canyon Rim would be included.

The name for the wilderness comes from the Nez Perce name for the Snake River and literally translated means "Hemp River". The Nez Perce gave it this name because it was the primary source of hemp for their ropes.

The principle remaining feature of the bill was mentioned earlier and would be the study of management alternatives in all those parts of the recreation area not included in the Ta-moo-new T-kon Wilderness. Various types of multiple-use management and policies of the Forest Service would be studied to determine their place in the new NRA. Congress would later rule on what the actual priorities and uses would be. During the period of study, the new bill would prevent any use which might jeopardize a future use.

The Council believes the new bill as it is now conceived is an excellent formula for protecting Hells Canyon. We are looking forward to seeing the final language and to introduction in the 93rd Congress early in January. We'll keep you posted.

* * *

Senator Jordan Supports Dams On Snake River

By JOHN CORLETT
Statesman Political Writer

The Snake is a "working river" and "it ought to be kept as a working river," Sen. Len B. Jordan said in an interview Friday.

The senator said Idahoans should "look at the Snake River basin in its entirety, including the Salmon and Clearwater rivers," and added:

"Let's make wild rivers out of the Salmon and Clearwater, but let's not make a wild river out of the rest of the Snake which has been a working river for nearly 100 years, supplying irrigation and power. It ought to be kept as a working river."

Idaho Falls POST REGISTER
September 6, 1972

California Stockmen Buy Circle C Ranch

By BOB LORIMER
Statesman Staff Writer

NEW MEADOWS — The Circle C Ranch, a key attraction in Meadows Valley, has been sold, it was announced Monday by Rollie Campbell, McCall, president of the ranch corporation.

Campbell named as the new owners: Robert L. Lewis, Palo Alto, Calif., attorney; Val C. Stiefel Jr., Fullerton, Calif., cattleman, and Eugene Schwertner, Austin, Tex., also a cattleman.

The amount of the sale was not disclosed, although it was a cash deal, Campbell said.

A total of 30,000 acres of deeded land plus an additional 120,000 acres were involved in the transaction. The sale included not only the home ranch at New Meadows, but holdings at Rapid River, Race Creek, Council, Pittsburgh Ranch on the Snake River, and the Maynard Ranch on Whitebird Ridge.

The IDAHO STATESMAN (Boise)
October 31, 1972

Idaho Falls POST REGISTER
November 5, 1972

Snake River Study Delayed by Oregon

SALEM, Ore. (UPI) — A study of the Middle Snake River to determine if the waterway should be preserved in its natural state will have to wait until after July 1, 1973, Oregon Water Resources Board Chairman W. Bruce Chase says.

Gov. Tom McCall had requested the board to reconsider its present policy on the Snake as a preliminary to inclusion of the river on the scenic waterways system. The board's present policy states that the river is best suited for construction of hydroelectric dams.

The Water Resources

Board last week asked the Legislative Emergency Board for \$17,000 to conduct the study, but the request was turned down. The legislators said the money should come from the water board's regular 1973-75 budget.

Chase said the proposed study will now have to wait until the next biennium when funds may be available.

McClure Will Oppose Dams, To Study NRA

BOISE, Idaho (AP) — Rep. James A. McClure, R-Idaho, elected to replace retiring Republican U.S. Senator Len B. Jordan, says he will oppose construction of hydroelectric dams below Hells Canyon on the Snake River.

McClure, speaking Friday in an interview with KTVB Television, said he also wanted to inspect the details of proposed federal legislation for a recreation area on the Middle Snake.

"I will say again what I have said for four years," McClure said, "that if there is a license about to be issued for that dam, I will oppose it."

McClure was responding to a question about his stand if pressures grow before the Federal Power Commission to license the dam construction.

Commenting on the election campaign, McClure said he considered an issue against his

Democratic opponent, Dr. William E. Davis, in support of Cesar Chavez and the United Farm Workers, a legitimate one.

He said the Chavez issue should have been discussed in "the light of its great importance to Idaho agriculture."

McClure discounted reports that special interests dominated his campaign, adding that of more than 8,400 contributors, some 8,250 contributed \$100 or less.

When asked if he owed allegiance to officers of corporate interests who contributed to the campaign, McClure replied:

"What is wrong with allegiance to industries of Idaho that provide the jobs and the payrolls and the means by which the majority of the people of Idaho pay their bills that educate their children, provide medical services and build their homes."

\$4,000,000 FOR PRIVATE LANDS

In the last newsletter we told how Senators Church and Packwood and Governors McCall, Andrus and Evans, in an impressive display of solidarity, had petitioned the White House and both houses of Congress to aid in making \$4 million available for the purchase of private lands in Hells Canyon. The lands comprise some of the most beautiful benches and sandy beaches in the Canyon and have been owned by sheep and cattle ranchers since they were homesteaded early in the 1900's. Ranching is no longer provitable in the remote canyon and the owners want to sell. Commercial land developers want to buy.

If the lands are sold to private developers the Council feels it would be the same as replacing the stained-glass windows of an ancient cathedral with billboards and posters, or replacing the pews with hot-dog stands and slot machines. The cathedral would still be there but the opportunity to relax, to meditate, and to refresh the soul would be gone. We believe that cannot be allowed to happen.

Responding to the appeals of the Senators and Governors, and with the guidance of Senators Bible and Hatfield and House members Julia Hansen and Wendell Wyatt of the appropriations committees, and with the strong support of Congressman James McClure, the Congress finally appropriated \$4 million to the U.S. Forest Service for the specific purpose of purchasing the lands. The President signed the appropriation in August.

That's the good part.

The bad part is simply that nothing has happened since August. The money is sitting in some hidden bureaucratic drawer in Washington, the Forest Service is dragging its heels, the owners are itchy to sell, and the land developers are drooling more than ever. You can help.

The Forest Service started out with promise. The land was appraised. But the appraisal was ridiculously low -- \$150 per acre. We had asked for \$300 per acre (the owners' asking price) and that's what Congress appropriated. Water-front properties have already been sold for several thousand dollars per acre. The Forest Service has refused to raise its offer.

Lem Wilson, long-time sheep rancher and owner of 4300 acres of land on the Oregon side, has now subdivided 28 acres of his property on Salt Creek (across from Suicide Point). He is proceeding to sell 100 by 200-ft lots (about half an acre) for \$5,000 each. We feel that Wilson doesn't want to see the cathedral become a shelter for the hot-dog stands but he's no longer in the sheep business and he must have income from some place. We feel he deserves a fair price.

As this is written on Thanksgiving Day, we have just learned from Wilson that he has sold the first eight lots for a total of \$45,000. We have a personal promise from him to wait until December 4 before selling any more -- he has people waiting in line. If the Forest Service doesn't move quickly and come to some kind of agreement with the owners, we can only conclude that we've won a battle and are losing the war.

Letters to John McGuire, Chief of the U.S. Forest Service (Washington, D.C.), to Governors Tom McCall (Oregon) and Cecil Andrus (Idaho), and to your Congressmen may help. A note to Lem Wilson, asking him to be patient with America's bureaucracy, may also help. (Address: 410 Washington, Grandeville, Idaho 83530)

WALL STREET JOURNAL, Oct. 6, 1972

THE SNAKE RIVER RANCH

"I wish you could've seen the Snake River this morning..."

Sprawling magnificently between the exploding rapids of the Snake River and majestic 5800 foot Canyon peaks lies 16,000 acres of Idaho's most striking land. The pristine beauty of the Snake River marks over two miles of the properties western border, while gently sloped mountains surround the land from the East and North like silent sentries. Wildlife is everywhere. Elk, Deer, Wild turkey, Chukars, pheasant, blue Quail. This is unblemished nature. The Ranchstead was built the way folks built homes in 1918. Solid. Through the spring and summer the slowly melting snow keeps moist soil rich in grazing grasses, for near year round livestock grazing. Sportsman, investors, cattlemen, this is truly an outstanding property.

\$65 acre. Less than \$3000 yr. R.E. Taxes.
Financing available.

JOHN B. COLE

P.O. Box 5330, Houston, Texas 77052
(713) 223-4061

Hells Canyon Land Owners Make Charge

By THE ASSOCIATED PRESS

Five landowners in Hells Canyon along the Oregon-Idaho border say the U.S. Forest Service has slashed the purchase value of their land, which the federal government wants to add to the Wallowa-Whitman National Forest.

As a result, one of the owners has sold eight recreation home lots in Salt Creek Ranch Subdivision and more will be sold unless ranchers and other owners agree with the government on land value.

The five own 12,000 acres on both sides of the Snake River in the nation's deepest river canyon. Congress appropriated about \$4 million to pay asking prices and fringe costs, based on an average of \$300 an acre.

But Portland appraiser Elmer Kolberg, who assessed the land for the Forest Service, set values at only \$150 to \$165 an acre.

All five owners refused to sell at that price.

"They were furious and they were justified," said Pete Henault of Idaho Falls, Idaho, a nuclear physicist and president of the Hells Canyon Preservation Council.

"That's a ridiculously low price," he said.

The 28.5-acre Salt Creek subdivision, owned by Lem Wilson, fronts on the Oregon side of the river across from Suicide Point, "one of the most beautiful places in the canyon," said Henault. "It would be a crime to build houses there."

Wade Hall, who is in charge of Forest Service efforts to buy the land, says, "There is a sense of urgency about this. You never know if a high-powered outfit will come in and the Lord only knows what will happen then."

Hall said the appraisals can be increased only if Wilson or the other owners prove they have higher offers for their land.

Another possibility, he said, is a friendly lawsuit to condemn the property and have the courts decide the prices.

"I would prefer to go ahead and develop," Wilson said. He and his lots will vary from 20,000 square feet at Salt Creek to 160 acres for those buyers who own airplanes.

Owners, acreage and original asking prices on the Oregon side are Wilson, 4,182 acres at \$1.25 million; Kenneth R. Johnson, 1,943 acres at \$870,000, and Double O Bar Ranch, 1,970 acres at \$175,000.

LEWISTON MORNING TRIBUNE

Opinion

EDITORIALS
LETTERS
COLUMNS

WEDNESDAY, SEPTEMBER 27, 1972

Page 4

The Bidding Game In Hells Canyon

Saving Hells Canyon from cabin clutter is so essential that the question of price must not stand in the way of government purchase of the land from the present owners. Fair play to both the present owners and the federal taxpayers demands a fair price, no more no less. A fair price can best be determined in court. And common decency demands that the present owners allow time for the matter to go to court before rushing into sales with those who would subdivide and corrupt one of America's most exceptional natural features.

As the cabins moved in on Hells Canyon, a bill was rushed through Congress to purchase the land for the people so that the canyon could always be enjoyed by everyone and not just by those who would cheapen it by trying to possess it for themselves.

★ ★ ★
In the rush to head off the subdivision of a singular natural wonder, Congress made certain that there would be more than enough funds to purchase the land. The understanding was that a fair price would be paid for the land and the remaining money turned back to the federal treasury. Better in that instance to appropriate too much rather than not enough.

At least one of the landowners apparently assumed that Congress had decided the exact worth of the land and had intended that all \$4 million appropriated should be paid. When the Forest Service had the land appraised, it produced an estimated worth of substantially less, and that, as required by law, is what the Forest Service offered.

The landowners apparently felt that they were being cheated and at least one of them said he wouldn't accept a dime less than the maximum appropriated and would renew his negotiations with those who would purchase the canyon for exploitation by the few at the expense of the many.

If the land is actually worth more than the Forest Service offered, the

landowners should have that fair price. If it is not worth more than the offer, the taxpayers should not be expected to pay it under the threat of the unwanted development.

John Rogers, supervisor of the Wallowa-Whitman National Forest, believes the matter can be settled in court if everyone is patient.

"The critical thing in this matter," he said, "is the intent of Congress in appropriating the money. If the intent is found that the canyon should be preserved for public use, then the right of eminent domain would apply. After all, if we have a willing seller and a willing buyer, the only question in dispute would be the price, and that would be a matter for the courts to decide."

Can there be any doubt that the clear intent of Congress was that the canyon should be preserved for public use? And it was also the obvious intent of Congress that the land be acquired for the people at a fair price to both seller and buyer.

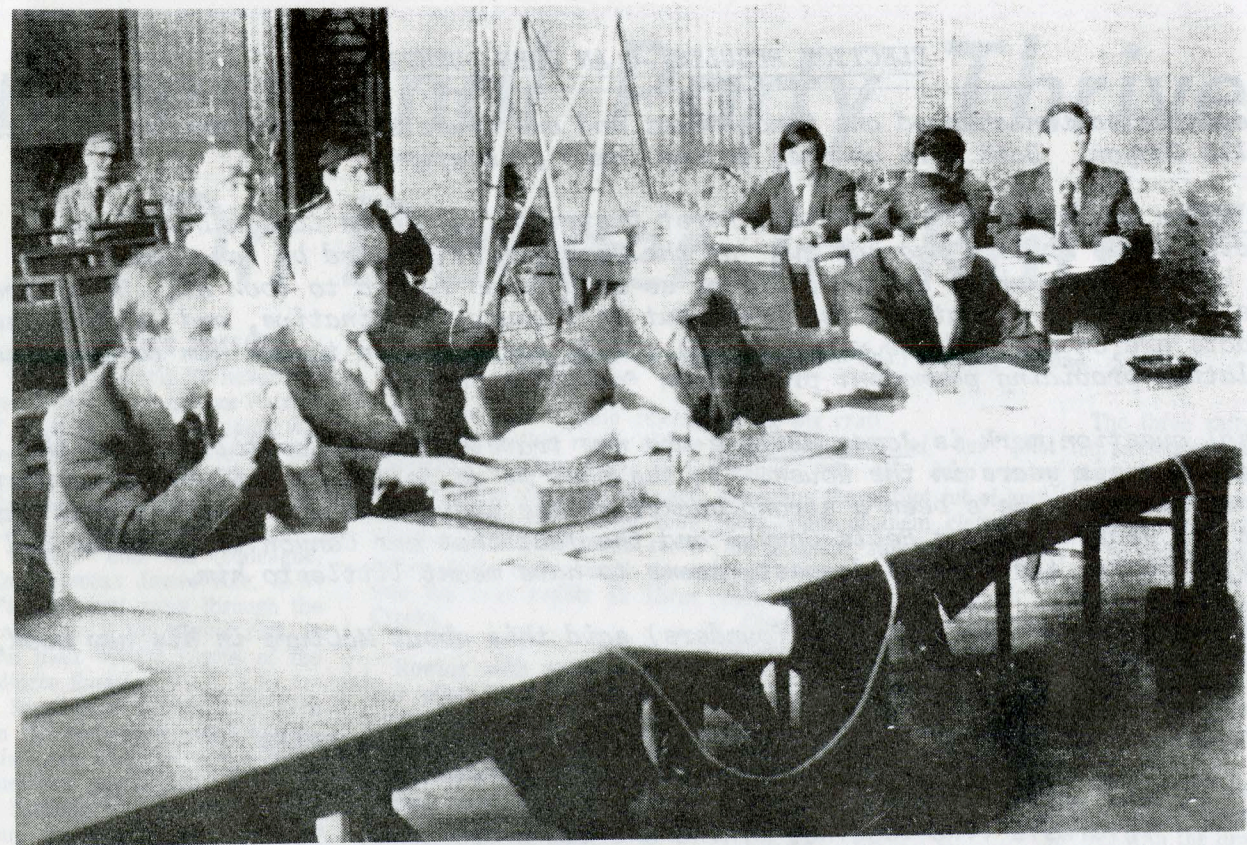
What is a fair price?

The courts decide such matters.

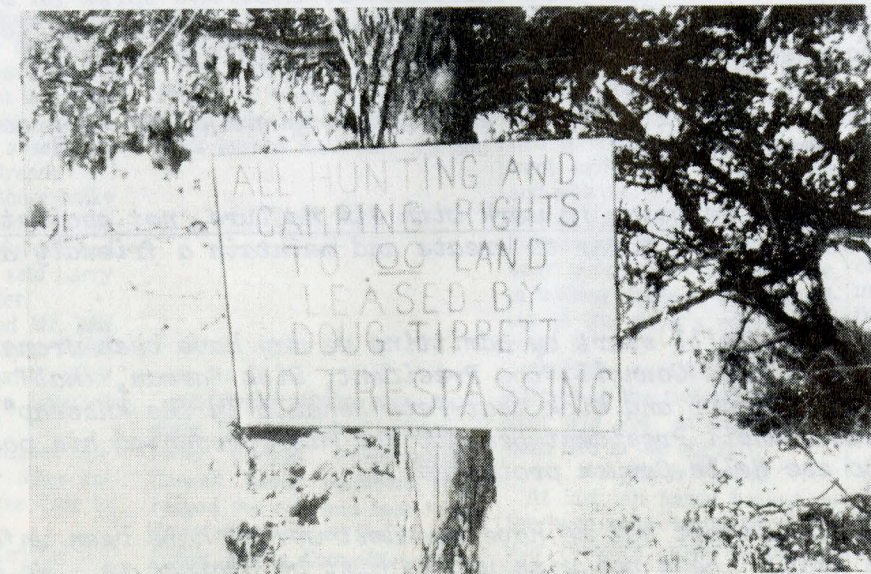
Meanwhile, the preservation of one of the nation's most precious natural wonders should not depend on whether some millionaire from California is willing to outbid the people and take their canyon away from them.

★ ★ ★
Hells Canyon is at least as worthy of public purchase as the highway right of way which government routinely buys, with the courts, if necessary, deciding the fair price, regardless of any other inflated prices being offered by individuals.

Meanwhile, anyone who would sell Hells Canyon or any part of it out from under the people while the matter is coming to court would come to be regarded as one of the great villains of Northwest history. Conversely, the individual who waits for a court verdict on a fair price for a public treasure will not only be equitably compensated but will be well thought of in the public mind. — B.H.



Senator Bob Packwood, Governors Tom McCall and Cece Andrus, and Senator Frank Church testifying before the Senate Appropriations Committee last March. The Northwest leaders were asking Congress to provide \$4,000,000 to the U.S. Forest Service to purchase private lands in Hells Canyon. (HCPC Staff Photo)



Already some camping sites have been lost to public use. This picture was taken last summer at what used to be a favorite camping spot for wilderness raft trips. (HCPC Staff Photo)

The recent election changed one Senate seat and one House seat important to the future of Hells Canyon. Both were changes in the Idaho delegation.

Steve Symms was elected from Idaho's First District (the Hells Canyon District), replacing James McClure who had run for the Senate seat vacated by Len Jordan. We don't know Symms -- he's new in politics so we have no record to look at. He generally favors development of natural resources but he's young, imaginative, and we feel when the facts are on our side he would be too. It's not too soon to ask him to co-sponsor legislation providing permanent protection for Hells Canyon.

The real question mark is James McClure who now travels across Capitol Hill to the Senate after six years in the House. In the past we've felt that McClure was opposing us at every turn. He's been a strong backer of the industries and agencies that have fought for years to drown Hells Canyon and the fact that our Canyon is a unique and beautiful gorge, the world's deepest, seems to have meant little to him.

Boyd Norton (one of the Council's founders) said this about McClure in his new book, SNAKE WILDERNESS:

Idaho Congressman James McClure, in whose district Hells Canyon is located, was quite opposed to preserving it, and his voting record indicated strong alignment with exploitive interests like logging, mining and dam proponents. McClure, in fact, would not support even the moratorium, apparently because he was anxious to see the dams built quickly. On occasion in the privacy of his office he was openly antagonistic and abusive to constituents who favored preserving the canyon.

It is almost certain that McClure will be appointed to the Senate Interior Committee where he could cut up our bill in committee without our ever knowing what had happened. The protocol in Congress is that little will be done for a given state or district unless all of the representatives from the state or district agree on what is to be done. "Don't expect us to settle your fight for you," congressional leaders will say. "Work it out among yourselves and then bring the legislation to us."

It would seem that we have six years of hard fighting and going no place ahead of us with Senator-elect James McClure!

That's not the case! We're going to work with Jim McClure, not against him. We're going to do everything in our power to create and maintain a friendly and respectful relationship.

We don't know how yet. We'll start by admitting we may have been wrong. Last week in Washington, McClure told Council Vice President, Dick Farman, (half jokingly), "I want you to go back to Idaho and kick that Pete Henault in the kneecap"! He went on to say that he felt Council President Henault had misrepresented his position, that he really wants to see Hells Canyon protected.

We haven't kicked Henault yet but we have to admit we may have been unfair. Our attitude has been that if he's not with us, he must be against us. We haven't tried to communicate as much as should and we haven't always had an open mind.

* * *

Congressional Party Thrives On Danger In Raft Trip

By ANNETTE TUSSING

Mon., Aug. 28, 1972

Lewiston (Ida.) Morning Tribune 5

"This is one trip I'll never forget!" said Congressman Patrick T. Caffery, D-La., dumping water out of his suitcase on the boulders below Granite Creek Rapids, in the depths of Hells Canyon, Tuesday morning.

Caffery and his colleague, Congressman James Kee, D-W. Va., had just come through the capsizing of the 27-foot raft, in the most violent rapids of the Middle Snake.

Seven of us and our pilot were in the 17-foot raft following the big craft with its heavy cargo and nine passengers.

Disbelieving, we saw it dip into the frenzied chute of Granite Creek Rapids, about 110 miles upstream from the valley, lurch sideways, its starboard rear and careen over, inverting the craft in the wild water.

Virtually unsinkable, despite its weight of 6,000 pounds, the inverted raft continued to slide downstream in the fast currents. The pilot, crawling atop the upturned bottom, strained to pull aboard Kee, clinging to the side ropes.

Spotted On Shore

With overpowering relief, we saw the younger Tussings and Miss Libbey Evans on the Idaho shore rocks, later to be picked up by a fourth raft, a separate party, coming downstream.

"I know now why those bulky Kapok jackets are called 'life vests' and I'm thankful we had the best equipment," said Larry Tussing, Spokane, later.

He and his wife and Mr. and Mrs. Teter Henault, Idaho Falls, and Libby Evans, Seattle, were all pinned under the inverted raft for a short time.

A careful outfitter makes sure no dangling ropes or other encumbrances are in the raft to entangle passengers.

Always in any craft on the violent chutes of unpredictable water there is possibility of it capsizing. Many do every year in the nation's wildest waters — the Grand Canyon of the Colorado, yet the people running such rivers in rafts are increasing annually.

But now, our frantic rowing brought us within reach of the capsized's bowline. Tying it to our sternline, our pilot strained on the 14 oars to bring the combined rafts to the Idaho shore before both were swept down into the next rapids at Three Creeks.

Rowing with extreme effort, our pilot finally fell from his seat amidships, in exhaustion.

Congressman Mike McCormack, D-Wash., who had been taking his turn at the oars in milder rapids upstream, leaped to the oars now, bracing almost horizontal as he strained to pull the big raft swinging at the end of the ropes, out of the fierce grip of the fast current and toward shore.

Almost there, he gave out and James Olson grabbed the oars, also extending himself with unbelievable stamina to move both rafts.

If we missed a small jut of rocks just downstream, both crafts would be swept into the next rapids.

We were only two feet from the rocks when our raft began losing ground, slowly sliding back toward the ponderous pull

of the big craft.

McCormack and our pilot leaped into the deep water bounding the abrupt jut of boulders. Both of them clawing at the smooth, slippery boulders, lost holds and slid under our raft, briefly.

Olson still pulled at the oars to prevent us from sliding away from shore again.

Finally, scrambling and clawing, the men in the water got the bowline around a rock. It gave way. Another, and it loosened and tumbled out of place.

Scrambled Ashore

A third rock held. The rest of us scrambled ashore on the huge rocks, to help pull the big raft in and tether it to the jumble of boulders which pitched sharply into the deep water.

For the next hour and a half, the combined selfless effort of all in the party displayed that luxury-cradled modern men and women still retain the primitive resiliency heired from earlier ages.

Though still weak from his struggle ashore, during which he caught and brought with him a floating pailsized plastic camera container which had not been tied to the raft, Pete Henault went under the inverted raft, and with one of the pilots, slowly loosened all pieces of the securely-lashed-on cargo and handed it down under the 30-inch rim-tube, to waiting hands of those kneeling in the water's edge to receive it.

Nothing excepting cameras carried at the time of the accident was lost, so well had all been tied in the big raft.

All Hands Pushed

At last, all hands heaved on the huge raft, righted it, and it was reloaded, with its passengers bravely climbing aboard again.

"On the rest of that trip, as we approached rapids, I momentarily re-lived the experience of our accident. But, I realize that it was best to re-enter the raft, and regain my confidence," said Gail Tussing, later.

The three rafts and well-wetted passengers proceeded to the planned rendezvous with four jet boats at Johnson Bar, 93 miles upstream from Clarkston.

The entire party went on two miles downstream, to put in at Willow Creek camp, where they were warmed and dried by hot beverages and the hearth fire.

They completed the trip in the boats, stopping to view potential damsites and petroglyphs, en route.

"This would be a great trip any time," Spence said later. "But with the drama of the raft flipping, I know it's one my people will be talking about for years."

"You know, it's curious," mused Pete Henault, the next day, after the congressional party had departed.

"I feared mostly for the elderly and ill Congressman Kee, in that cold-water dunking.

"But I noticed at the meal last evening, he appeared much stronger and in better spirits than he had at the outset of the trip, when he seemed so weak and ill.

"Could this indicate that the human spirit occasionally needs challenge — the opportunity to test itself in a physical situation? Evidently, proving to himself that he could survive such an ordeal gave the congressman confidence that he has more remaining vitality than he'd thought!"

McCormack summed up our reactions on the whole trip: "Perhaps, above all, arguments

for preservation of the fine natural resources of the Middle Snake, this, then, is its greatest value — as an opportunity for man's confrontation with raw nature.

"By daring to challenge the roadless canyon and the wild water, and conquer it, he can gain the confirmation of physical ability and courage that humans still need."

A FRIEND BIDS FAREWELL

A true friend of Hells Canyon has bid farewell to us. Barbara Holliday, staff assistant to Senator Packwood for environmental affairs, left the Senator's office on November 17 to devote more time to her family and private life.

For four years, Barb has been the environmental arm and force behind the scenes of Senator Bob. Environmentalists from throughout the Nation have worked closely with her on all those efforts to save Oregon's wild places that you've read about -- French Pete, the Three Sisters, the Minam, Oregon Dunes, nitrogen supersaturation in the Snake and, of course, Hells Canyon. She has asked our advice and advised us; she has been our counsel and strength for four years. Senator Packwood, Senator Church, the Hells Canyon Preservation Council and a few others have been getting the credit, but Barb has been doing the work.

The Nation is going to miss her in ways they won't know and we are going to miss her more than most.

Her goodbye to us is on the next page.

TU-EKA-KAS AWARD

"Many, many moons ago, so many moons that not even the oldest people of the tribe could remember, the Nez Perce wandered, a free and happy people, over a vast area of mountains, plains, valleys, and sagebrush plateaus. Their hunting and fishing ground extended throughout what is now north-central Idaho, southeastern Washington, and northeastern Oregon. As the Great Spirit Above intended they should, these peace-loving and care-free Nez Perce roamed the grassy plateaus and valleys during the spring, summer, and fall, seeking pasturage for their large herds of well-bred horses."

So begins Helen Addison Howard in her book, War Chief Joseph, a book about the Nez Perce people and the dramatic story of Chief Joseph, leader of the Nez Perce War against the United States. It is a tragic story of broken treaties, countless broken promises, and outright murder by the United States. It is a story of how the United States stole Hells Canyon from the Nez Perce.

Joseph was Chief of the Wallowa Nez Perce, those Native Americans who lived in what is now the land on the Oregon and Washington side of Hells Canyon. Joseph's father was Tu-eka-kas, known to the whites as Old Joseph. Tu-eka-kas was a true statesman by any definition we have today. He taught his people to respect the land, that no man owned part of the earth, that the earth was the mother of all living things and that it was a sacrilege to despoil her.

When the settlers, miners, and ranchers began moving into the Wallowa Valley he resisted, always peacefully but firmly, always defending the right of his people to live in peace in their sacred tradition. In 1855 he and the other Nez Perce Chiefs signed a treaty with the United States which guaranteed the Nez Perce the right to forever live on most of their native land. Virtually all of the Hells Canyon country we are still seeking to protect today was included in the treaty. The United States Senate ratified the treaty in 1859.

During the 1860's the United States broke the Treaty of 1855, trying for several years to force most of the Nez Perce onto a much smaller reservation in north-central Idaho.

Tu-eka-kas died in 1871. His death was later described by his son, Chief Joseph:
twelve

BOB PACKWOOD
OREGON

United States Senate

WASHINGTON, D.C. 20510

November 16, 1972

Hells Canyon Preserv. Coun.
Post Office Box 2693
Idaho Falls, Idaho 83401

Dear Members of the HCPC:

Just as Thanksgiving is dawning upon our nation, I am packing my belongings and preparing to depart the Packwood staff. It is fitting that this should occur now, for it gives me pause to reflect on what we (the hard-working conservationists and the Packwood office) have been able to accomplish thus far. We have a very real reason to offer "thanks" this year. Perhaps for many things that DIDN'T happen as well as some that did.

We didn't see Three Sisters Wilderness mined; French Pete logged and roaded; Hells Canyon dammed; Federal lands in Oregon drilled without proper environmental consideration; Asotin dam built. We did see a growing awareness among Federal and State agencies for responding to public concern on environmental matters; and increased public opinion and activity in expressing those concerns.

As Jonathan Livingston Seagull might put it, we have learned that the prize can be ours if we are consistent in our patience, perseverance and our belief that it IS possible. Discouragement has no place in our grand venture!

To say that I have had a thoroughly enjoyable and rewarding experience in working with Bob Packwood for a better environment is the understatement of the year. His willingness to strike out and fight for what has been termed impossible to accomplish is unprecedented. I believe in doing so, he has given great encouragement to the conservation movement and inspired many folks at the local level to actively become involved in determining what kind of an environment they have and will pass along to their children.

Most of what has been accomplished has come about because of the open communications between you and the Packwood office, which generated efficient "teamwork" -- I hope this will continue. It is invaluable to both the conservation efforts in Oregon and the nation and to the Packwood office.

And, now, joining with Senator Packwood to send you every good wish at this holiday season now opening, I do say,

FAREWELL,

Barb Holliday
Barb Holliday

thirteen

...my father sent for me. I saw he was dying. I took his hand in mine. He said: "My son, my body is returning to my mother earth, and my spirit is going very soon to see the Great Spirit Chief. When I am gone, think of your country. You are the chief of these people. They look to you to guide them. Always remember that your father never sold his country. You must stop your ears whenever you are asked to sign a treaty selling your home. A few years more, and white men will be all around you. They have their eyes on this land. My son, never forget my dying words. This country holds your father's body. Never sell the bones of your father and your mother." I pressed my father's hand and told him I would protect his grave with my life. My father smiled and passed away to the spirit-land.

I buried him in that beautiful valley of winding waters. I love that land more than all the rest of the world. A man who would not love his father's grave is worse than a wild animal.

Chief Joseph and his brother Ollokot refused to move their people away from the Wallowa Valley. White Bird and Too-hool-hool-zote, Chiefs of the other two groups of Nez Perce living in what is now the Hells Canyon country, also refused.

Finally in 1877 the United States declared war. The war involved troops from all over the West, lasted 115 days, and resulted in the death of several hundred Nez Perce men, women and children. The United States won their war and the sacred lands of the Nez Perce were offered up for homesteading.

* * * * *

For some time now the Council has wanted to give recognition to the leaders of American public opinion who have taken up our cause. Sometimes just saying thanks is not enough.

Recently the Council decided an award each year, given to those who contribute substantially to our efforts, would be a good idea.

We searched for a long time for a worthy name for our award. After studying the early history of Hells Canyon, we concluded that no man more eloquently and unyieldingly advocated our own goals than the first American opinion-maker and leader to do so, Tu-eka-kas, Chief of the Wallowa Nez Perce. We are borrowing his name and we hope he would be honored by our choice.

There won't be any money going to the recipients of our award (we may ask them for some) but we do plan to give a plaque or scroll explaining the meaning of the award and why the recipient received the presentation.

Since the Council was formed in 1967, there have been many well-known Americans who have brought public attention to the unique treasure we all have in Hells Canyon. We can't recognize them all -- but we are going back to 1967 to start our awards. They will go to the following people:

1967 - Justice William O. Douglas
United States Supreme Court

It was the decision of the Supreme Court in June 1967, led by Justice Douglas, that saved Hells Canyon from the brink of death and gave us the new hope to fight on. In handing down the High Court decision, Justice Douglas wrote:

The test is whether the project will be in the public interest, and that determination can be made only after an exploration of all issues relevant to the public interest. These include future power demand and supply in the area, alternate sources of power, and the public interest in preserving reaches of wild rivers in wilderness areas, and the preservation of anadromous fish for commercial and recreational purposes, and the protection of wildlife.

1968 - The Honorable Frank Church
United States Senate

On September 12, 1968, Senator Church introduced the Middle Snake River Moratorium Bill for the specific and stated purpose of buying time for Hells Canyon. This was the first time protective legislation was introduced in the Congress. The efforts of Senator Church in publicizing the unique qualities of Hells Canyon went a long way toward buying the time needed for us and others to develop the case for eventual protection.

1969 - Arthur Godfrey

In 1969, members of the Council persuaded Arthur Godfrey to visit Hells Canyon. Godfrey fell in love with the Canyon, as many of us have, and became one of the staunchest proponents of preservation. Through his radio show and eloquent descriptions, Hells Canyon became known to millions of Americans. He has written letters, testified before the Senate and in 1970 talked Wally Hickel and Burl Ives into returning with him to Hells Canyon.

1970 - The Honorable Walter Hickel
Secretary of the Interior

Burl Ives

Secretary Hickel and Burl Ives joined Arthur Godfrey on an "official tour" of Hells Canyon in May of 1970. It was no secret that the real purpose was to publicize the justice of saving the Snake from dams and to bring national interest to the Department of Interior's new Johnny Horizon Program. The trio traveled with jet-boat operator and Council member Floyd Harvey some 85 miles up the Snake from Lewiston -- to the rapids where Hells Canyon is more than a mile deep.

Later in his book, Who Owns America, Hickel in referring to his support for the Moratorium Bill said, "...maybe we should even study which of the dams already built should be dismantled. There are places to put dams and places not to, and this is a place not to."

Burl Ives was the voice of Johnny Horizon. Ives and Godfrey spent much of the trip trying to outdo each other with humorous back-country ballads. Ives was contributing his time and effort at his own expense and later did much to help Americans know Hells Canyon.

1971 - The Honorable Bob Packwood
United States Senate

Beginning in the fall of 1970, and lasting through September 1971, Bob Packwood aimed a constant barrage of reasons for saving Hells Canyon at every imaginable decision maker in Washington and the Northwest who might even remotely be able to make a decision someday affecting the future of the Canyon.

For years many had felt the time was not right to save Hells Canyon -- the public was not ready. Bob Packwood was not willing to wait for the right time to come and so in 1970 and 71 he stood up and made the time right.

It'll take a book to someday tell the whole story of Bob Packwood's impact on Hells Canyon. No man deserves our Tu-eka-kas Award more.

1972 - Pete Seeger

The Honorable Mike McCormack
United States Congress

To help focus national attention on the efforts to save Hells Canyon, Folk singer Pete Seeger joined Council board members and other conservation leaders during July 1972 for a five-day float trip through the Canyon. Seeger wrote two songs about Hells Canyon during the trip, sang a lot of others, and has given the Council hopes of putting out a "Pete Seeger in Hells Canyon" record album.

A month after the Seeger float trip, Congressmen Mike McCormack, Jim Kee, and Pat Caffrey visited Hells Canyon for a two-day raft and jet-boat trip down the Middle Snake. Purpose of the trip was to give members and staff of the House Public Works Committee (the committee that deals with appropriations for dams) first-hand knowledge of the Canyon. McCormack, who arranged for the tour, felt that by actually showing members of the committee what was at stake, he could greatly decrease the chances of any money being appropriated for dams.

After completing the trip, McCormack declared he would sponsor legislation in the next session of Congress deauthorizing the proposed Asotin Dam at the north entrance to Hells Canyon.

WHAT DO DIRECTORS DO?

The Board of Directors make up the active leadership of the Hells Canyon Preservation Council. None get paid by the Council. Besides putting out the periodic Hells Canyon News, answering countless letters and requests for information, spending many hours on the telephone, speaking to groups and giving slide shows all over the West, testifying at hearings, lobbying, writing magazine articles, releasing news items, working for political candidates, and a dozen or so other routine activities, the directors occasionally see Hells Canyon.

During the past four months, for example, from mid-July to mid-November, eleven of the sixteen directors drove over 30,000 miles to spend over 100 man-days in Hells Canyon.

Two of the directors have jobs which bring them into the Canyon and this accounted for about half of the visits. The remainder was largely Council business with the time and expense usually contributed by the individuals involved.

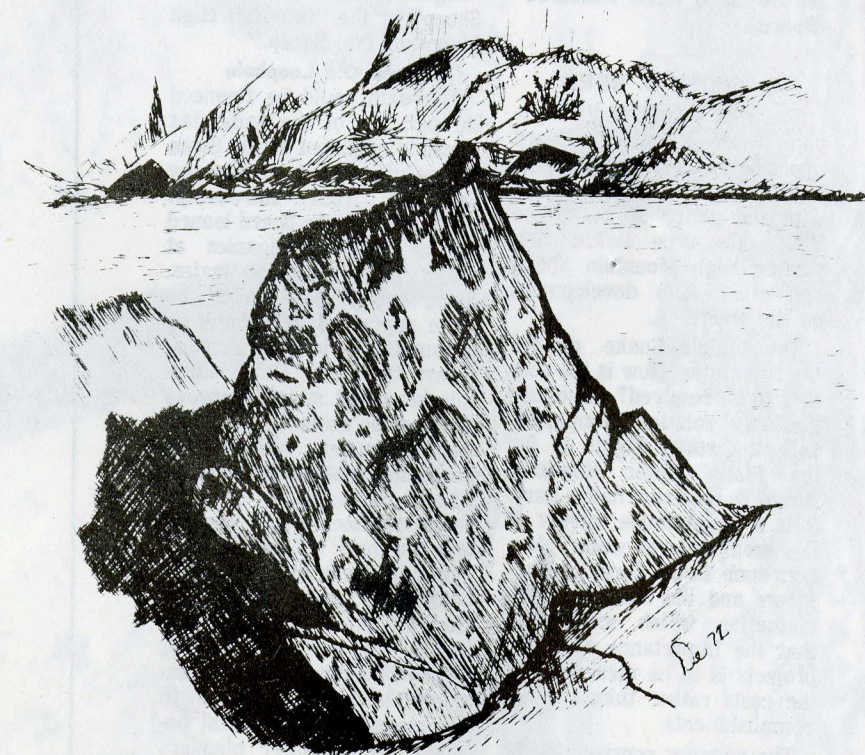
KEEPING IN TOUCH

Putting together a newsletter like this one is a difficult and expensive task. We tend to put it off and so you don't hear from us as often as we'd like. Not only do we feel guilty but we must have your active support and keeping in frequent touch is therefore primary. We don't want to reduce the size of the News, however, because we feel it's important to keep you well informed on as many events as we can. Then too, our Hells Canyon News is the only accurate record of many important events that might otherwise be lost to history.

To give you the best of both goals, we hope in the future to send out the News every three or four months. Monthly, in between, we'll try to send out a one-page bulletin telling you briefly about important developments, who our friends are and who isn't, and suggesting specific ways in which you can help. We'll attempt to carry out this policy until some type of legislation offering adequate, if not permanent, protection is achieved.

One time, in our growth, we believed we had a three or four year battle ahead of us. It's been over five years now and the future isn't certain. In any event, we intend to be the Hells Canyon Preservation Council until permanent and total protection is won whether that is two, five or twenty years. We'll try to make those of you who stick it out with us proud that you were part of the battle!

* * *



One of the several petroglyphs at Buffalo Eddy on the Snake River about five miles upstream from the Grande Ronde. (Etching by De Henault)

A Modest Proposal

Build Half A Dam

The author, who lives at Coeur d'Alene, is a member of the Idaho Water Resource Board.

By SCOTT W. REED

The new policy of the Oregon Water Resources Board opposing any new dams on the Middle Snake River conflicts with the policy of the Idaho Water Resource Board supporting High Mountain Sheep and other dam development on the river.

The Middle Snake divides the two states. How is the conflict to be resolved? Obviously the only solution compatible with the states rights is for the Idaho Water Resource Board to construct half a dam. It is a compromise worthy of the great federal water planners such as the Corps of Engineers and the Bureau of Reclamation which understand that the importance of water projects is to be measured by the costs rather than the accomplishments.

The dam for construction at High Mountain Sheep would extend from the Idaho side exactly one-half way across the river. The limitation in storage capacity can be compensated for on sound engineering principles by making the dam twice as high as presently planned for the full length dam. In algebraic recognition of this engineering achievement the dam could be

renamed the "One-Half Two High Mountain Sheep" or the "High Two Mountain One-Half Sheep" or the "One-Half High Mountain Two Sheep."

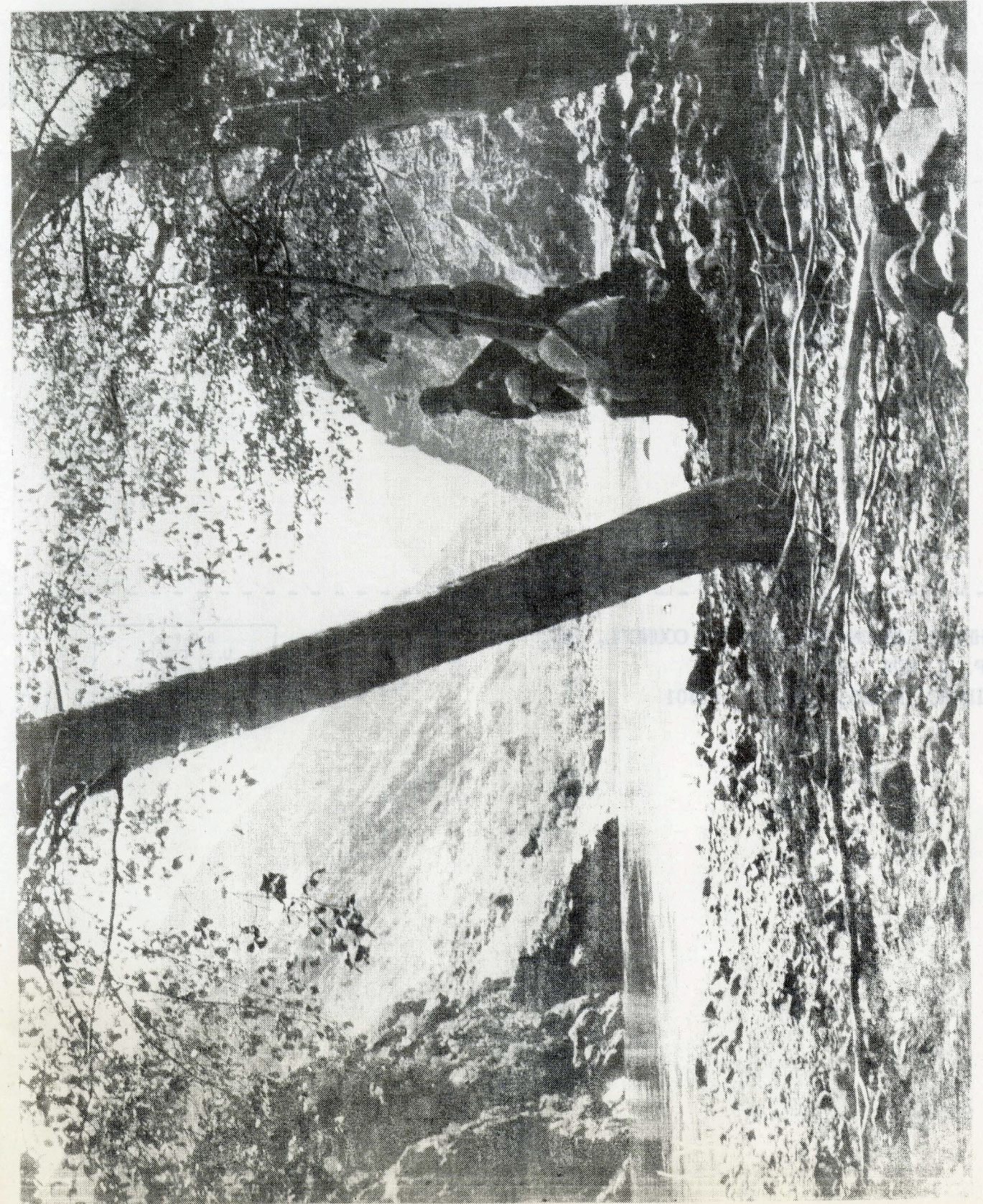
Same Old Loophole

The dam could be financed through use of the same tax loophole exploited in the Swan Falls-Guffey joint venture by proceeds from tax-exempt bonds sold by the board loaned to the power companies at going utility finance rates. Since the project would be state supported and therefore automatically in the public interest, the public Utility Commission could simply approve passing the costs on to the power consumer without any searching analysis of the benefit-cost ratio.

The turbines would operate only on half of the river at run-of-the-river capacity without storage for peaking power. However power revenue is no longer the sole measure of project benefits. Proper consideration must be given to the enormous recreational potential which water planners regard as identical to environmental protection.

Idaho would achieve world-wide fame for building half a dam. Tourists would swarm to the huge Hells Canyon dam-site to see the spectacular twice as high half a dam. Everyone would recognize that the Idaho Water Resource Board had supported another half vast project.

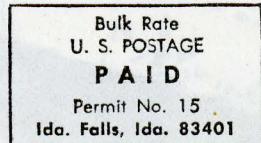
from the LEWISTON MORNING TRIBUNE
September 3, 1972



AND THIS IS WHAT IT'S ALL ABOUT! PHOTO TAKEN AT SADDLE CREEK IN THE DEEPEST PART OF THE WORLD'S DEEPEST GORGE. IDAHO MOUNTAINS ON FAR SIDE OF THE SNAKE RISE 1.5 MILES (7,900 ft.) ABOVE THE RIVER. (Photo taken by HCPC director Ernie Day)

The Hells Canyon Preservation Council was incorporated in 1967 for the specific, single purpose of saving the world's deepest river canyon from being drowned by additional dams. The Council has approximately 1300 members in 45 states and Canada. National headquarters are at Idaho Falls, Idaho and the Wallowa Chapter is located at Enterprise, Oregon (P.O. Box 254, Zip 97828). Regular membership in the Council is \$7.00 annually; student membership is \$3.00; contributing member is \$25.00.

HELLS CANYON PRESERVATION COUNCIL, INC.
P. O. BOX 2317
IDAHO FALLS, IDAHO 83401



5 January 1971

Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington D.C. 20036

Dear Mary:

I am sending you some rolls of films, most of which were taken on a raft trip down the Snake River the day after Christmas, the temperatures well below zero. Some of the others are of our pet raven and his association with our dogs.

At the end of the week I plan to go up to Yellowstone and will be doing some work related to the satellite tracking of animals. We will try some preliminary telemetering of physiological parameters and this will eventually lead to doing similar work with free-roaming elk.

I will be taking some color stills and hopefully some movies as well. I am a little short on the Kodachrome X, 35mm and would appreciate it if you could send me a supply of about twenty rolls to Frank C. Craighead Jr., West Yellowstone, Montana, General Delivery.

I am out of mailing boxes so would also appreciate it if you could send some to me at my address here at Moose, Wyoming, Box 156.

I hope you had a very Merry Christmas and a Happy New Year.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/1a

February 2, 1971

Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am sending four rolls of Kodachrome, which were taken in Yellowstone National Park.

We set up our satellite monitoring equipment and monitored air and snow temperatures as well as different light intensities. This work is connected with the elk satellite tracking and the bear monitoring. We are trying to get reference information for interpreting the results of the sensors that we place on the free-roaming animals.

The weather conditions were very poor during my stay, so I did not take many pictures. Most of these will be more valuable for our progress reports than for any magazine use, but you will probably want to look them over.

I am getting low on the Kodachrome X and we have run out of mailing boxes, so if you could arrange to send me some of both, it would be most helpful.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr.:mb

Encl: 4

February 11, 1971

Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I will soon be sending you a few rolls of film taken on the Cossatot River in Arkansas.

I went there to evaluate this river as a free-flowing stream so that I could testify as to its fishing and boating value in Federal Court. I would appreciate it if you would return these as soon as possible.

I would also like to get the rejects from the winter run down the Snake River that I filmed around Christmas. I need these for talks and reports relative to our continuing work on wild and scenic rivers. Some of these will probably be resubmitted later if we become involved in preparing an article on World Wild and Scenic Rivers that should be preserved.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr.:mb

answered
3/20/73



HELLS CANYON EXCURSION, INC.

BOX 368, LEWISTON, IDAHO 83501

PH. A/C 208 743-7701

March 12, 1973

Dr. Frank Craighead
Box 156
Moose, Wyoming

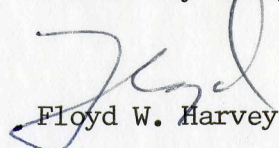
Dear Snake River Gang:

Once again we bring you greetings from Willow Creek and the "deepest canyon in North America" -- Hells Canyon. The camp opening trip this year will be April 6th, 7th, and 8th, starting at the new Windjammer Restaurant with cocktails and dinner the evening before, April 5th, at 6:30 p.m. The cost is one-half of our new Executive prices as is shown on the enclosed brochure, or \$90 for the three days.

Hells Canyon Excursions will furnish the liquid refreshments if you let me know before March 30th that you are going.

Plan now to be with us for the 25th semi-annual weekend of "fun and frolic".

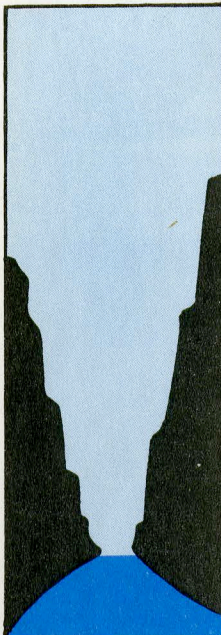
Yours very truly,


Floyd W. Harvey

P. S. If you wish to stay on the invitation list, please let me know along with your address and Zip code. We will be going to computer addressing this year to keep up with address changes, and down with costs.

P. P. S. We still will be needing funds for this year's projected trip for those of us who are concerned about saving the Snake River. I would like to plan on two or three people from amongst us to attend hearings in Washington, D.C. when the new Hells Canyon Bill is written. Send tax deductible donation to----- Trout Unlimited, Box 651, Lewiston, Idaho, 83501.

F. W. H.


*Frank:
I hope to see you + John
again this yr.
F.W.H.*

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ADVISORY CHAIRMAN OF THE BOARD

National Geographic Society

WASHINGTON, D. C. 20036

December 21, 1970

Dr. Frank D. Craighead, Jr.
Environmental Research Institute
P.O. Box 156
Moose, Wyoming 83012

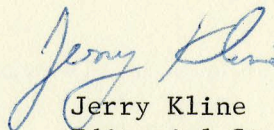
Dear Dr. Craighead:

I am pleased to learn that our Committee for Research and Exploration has approved your request for a grant to continue support of your study of satellite animal tracking systems, on elks and other animals.

This is just a brief letter to offer my best wishes and to remind you of our continuing interest in the possibility of an article for the National Geographic. You already know our editorial needs, and I know you will want to keep in touch with Mary Griswold in regard to pictures.

Again, my sincere wishes for success in your very interesting project.

Sincerely,



Jerry Kline
Editorial Staff

amk

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

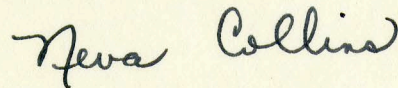
July 27, 1970

Dr. Frank Craighead
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

As Miss Griswold promised you in her letter of July 15th,
enclosed are the duplicates of two selects from your latest shipment
of satellite animal tracking film.

Sincerely,

A handwritten signature in cursive script that reads "Neva Collins".

(Mrs.) Neva Collins
Secretary to Miss Griswold

Enclosures: (2) Transparencies

August 26, 1970

Miss Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am enclosing 5 rolls of Kodachrome slides for development.

I haven't received the discards from my last shipment and wonder if by chance these could have been sent to John rather than to me. I would appreciate it if you could check on this.

I am hopeful that within the next few weeks we will get some more pictures relative to the satellite-tracking of elk. However, these will probably be pictures of an airplane experiment to pick up the signal rather than pictures of the animal.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

July 24, 1970

Miss Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am enclosing four (4) rolls of Kodachrome. You may wish to select a few of these in connection with the satellite-tracking project.

There were a few from the last shipment that you might wish to consider. I will soon go over these and send a few of them back to you.

Regards,

Frank C. Craighead, Jr.

FCC,Jr/pjf
Enclosures (4) rolls of film

A
d
O
C

July 16, 1970

Miss Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am beginning to run low on Kodachrome II and am completely out of Kodachrome X. Could you please send me 20-30 rolls of Kodachrome II and about 20 rolls of Kodachrome X?

Under separate cover, I am sending you 2 rolls of exposed film. These are some taken on the grizzly bear and the black bear and I doubt if you will want to select any from them now, but they will be of use to us for later reports.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

A
d
O
C

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

July 1, 1970

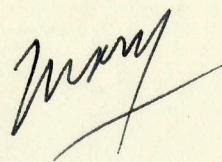
Dr. Frank Craighead
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Frank:

Here are the discard rolls of film you shot during Secretary Hickel's river trip. As a matter of fact, we are returning everything to you because we saw, in the end, no way to use this material. We had hoped that something might be applicable to our general pollution story but it didn't work out that way.

I hope things are going well for you. We're looking forward to seeing your next shipment of film.

Best regards,



MSG:nc

Enclosures: (6) Boxes Transparencies

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

June 18, 1970

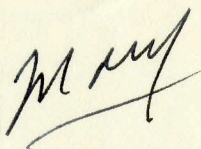
Dr. Frank Craighead
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Frank:

Here are the discard rolls from your latest shipment of film taken in connection with your and John's animal satellite project. As usual, I have made a number of selects to hold here, and duplicates of these will be forwarded to you within a short time.

We also have the film you shot during Secretary Hickel's river trip. It is being reviewed with the thought that one or more of the pictures might be useful in a forthcoming article we are planning on pollution.

Best regards,



MSG:nc

Enclosures: (3) boxes film

June 24, 1970

Miss Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I was glad to hear that the Geographic is interested in some of the pictures that I took when Secretary Hickel and his party recently made a trip into Hell's Canyon.

I would appreciate receiving the rejects from this shipment as soon as it is feasible as I promised to send some of these pictures to members of the Hickel party as well as to the outfitter who supplied the boats. Included in the shipment or in a previous one were some shots that I took of gliders or sail planes. I promised to show some of these pictures (rejects) to the Jackson Gliding Club so hopethat these can also be returned before too long.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

A
d
O
C

June 2, 1970

Miss Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am sending you three boxes of slides taken at the second instrumenting of, "Monique" the elk. The NASA people urgently needed a picture of the elk eating hay right after regaining her feet after being immobilized and they asked me to let them have the film developed so that there would be the least possible delay. I agreed to this and they made copies of the pictures they wanted and then returned the slides to me. You will probably want to select some from this group. Please return the discards to me.

Under separate cover, I am sending you six rolls of exposed film as well as one roll of commercial Ektachrome.

Regards,

Frank C. Craighead, Jr.

FCC,Jr/pjf
Enclosures

A
d
O
C

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

May 5, 1970

Dr. Frank Craighead
Environmental Research Institute
P.O. Box 156
Moose, Wyoming 83012

Dear Frank:

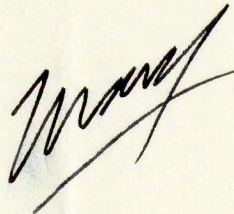
Here are the three discard rolls from your latest shipment of film. I have pulled a number of selects to keep here and will send you duplicates of these within a short time.

There were a number of interesting frames, but nothing that seemed to be particularly important to your satellite tracking project. As I have already told John, would you please keep in mind that since neither of you is sending any caption cards with your film, you should make sure that important subjects that may be returned to you in the discards should be carefully preserved to be submitted to us again at some point in the future.

I hope you are having a nice spring.

Best regards,

MSG:sm
Enclosures: (3) boxes discards



National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

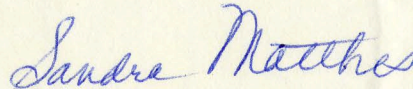
May 8, 1970

Dr. Frank Craighead
Environmental Research Institute
P.O. Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

Miss Griswold has asked me to send you the enclosed transparencies. They are duplicates of selects from your latest shipment of film.

Sincerely,



(Mrs.) Sandra Matthes
Secretary to Miss Griswold

Enclosures: (21) transparencies

March 19, 1970

Mrs. Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mrs. Griswold:

I would appreciate it if you could send me the transparencies that I recently sent to you after you have made a selection. There are a number of these that I need to illustrate reports as well as slide lectures.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

A
d
o
c

January 31, 1970

Mrs. Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mrs. Griswold:

Recently I sent you three rolls of film hastily shot on the instrumenting of an elk for satellite-tracking. I would appreciate it if you make a selection from these and return the rejects as soon as possible. I need the transparencies for a lecture session with NASA people here in Jackson on February 17. At this time, we will attempt to instrument a wild free-roaming elk and monitor it by satellite.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

NASA

MELVIN M. PAYNE
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CHAIRMAN OF THE BOARD AND EDITOR-IN-CHIEF
THOMAS W. MCKNEW
ADVISORY CHAIRMAN OF THE BOARD

National Geographic Society

WASHINGTON, D. C. 20036

October 14, 1969

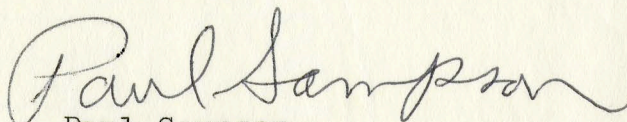
Dr. Frank C. Craighead, Jr.
P. O. Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

Enclosed is a draft of a proposed press release on your ground-satellite biotelemetry experiment. Could you please read it, make any corrections or changes you feel necessary, and return the copy to me.

The project sounds fascinating, and I wish you success in the coming year.

Sincerely,



Paul Sampson
Assistant Chief
News Service

PS/c

202-296-7500

DONALD J. FREDERICK

NEWS SERVICE
THE NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D. C. 20036
296-7500

X 293

NIMBUS-3 SATELLITE
TO STALK WYOMING ELK

Immediate Release

Washington -- The Nimbus-3 weather satellite will track wildlife as well as storms.

By monitoring animals, scientists hope to learn more about the mysteries of migration and gather data to protect species threatened with extinction. For a start, Nimbus will eavesdrop ^{a migratory} ~~on~~ ^{Jackson Hole} an elk in Wyoming.

[The elk was chosen for the initial experiment because ~~it~~ ^{they} ~~usually moves only three or four miles a day.~~ ^{may migrate 50 to 100 airline miles.} ~~will also~~ A man on the ground can easily keep track of the animal and check his findings against the satellite's.

If the experiment is successful, the satellite someday may zero in on ^{caribou,} ~~birds,~~ whales, polar bears, and other animals whose wide-ranging movements are almost impossible to trace from the ground.

Naturalists Provide Support

Nimbus will contact a ^{radio package developed by NASA engineers. In addition a} ground tracking telemetry system developed by naturalists John and Frank Craighead in association with Joel Varney of the Philco Corporation ^{will be used to check the accuracy of the satellite positioning.}

The National Geographic Society, which has sponsored the Craigheads' previous animal tracking studies, will ^{help} support the satellite project. The ^{major} ~~entire~~ program ^{is being financed &} ~~will be~~ coordinated by the Smithsonian Institution, ^{by} and the National Aeronautics and Space Administration's Goddard Space Flight Center.

(MORE)

A unit on the satellite called the Interrogation Recording Location System (IRLS) will ^{locate} ~~follow~~ the elk.

The system will receive and relay data from a ~~small~~ instrument package on the animal's neck. Information on the elk's herd behavior, feeding habits, and body temperature will be stored by the IRLS and later transmitted to a ground station at Goddard for analysis.

"This experiment," predicts Frank Craighead, "will be just the beginning of a new research approach for obtaining worldwide information on our wildlife species and for gathering ecological data valuable in the overall effort to comprehend and to decelerate the present rapid rate of environmental deterioration."

Monitored Grizzlies

The Craigheads' portable tracking receivers provided a vital aid in the first major scientific study of grizzlies. The brothers harmlessly drugged the ferocious animals, took vital statistics, then attached collars with built-in radios.

The receivers converted the signals from the radio into a pulsating "beep-beep" that enabled monitors to keep tabs on the marked bears and learn the life-and-death details of Yellowstone National Park's grizzly population. A similar system will combine with the satellite to study the elk.

The IRLS system on the satellite already has opened new vistas in other sciences. In oceanography, for instance, small radio transmitters attached to remote buoys near Puerto Rico and Bermuda, have supplied valuable statistics on tides, water temperatures, and salinity.

In the future, agronomists might use the satellite to gauge rainfall more accurately in remote forests and desert regions.

DRAFT

NIMBUS-3 SATELLITE

TO STALK WYOMING ELK

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(MORE)

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In the future, agronomists might use the satellite to gauge rainfall more accurately in remote forests and desert regions.

SCHEDULE

RIVER SHOOT

19 a.m.

Ed Spiegel
Allan

Depart L.A. - NYC
Check in Holiday Inn
440 W. 57th St.
NYC
Ed: rent car at airport

p.m.

George Vollmer
Carl Harmon
NGS Still Cameraman

Check in Holiday Inn
440 W. 57th St.
NYC
Carl: rent station wagon at airport

8 p.m. -- Production Meeting:

Ed Spiegel
Carl Harmon
Alan Capps
Mitch Donian
James Brennan (OR 5-4314)
George Vollmer
NGS Stillman *Jim Sugar*

20

Shoot around NYC
Aerials?
River and shore
N.Y. Port Authority

Donian checking helicopter and mount

Need tug
Garbage scow

Cannot contact Robert
Unrath until Mon. a.m.

Frank Craighead arrives- Check in Holiday Inn

21

Continue NYC coverage
George Vollmer works way up Hudson River

22

Shoot Frank Craighead around NYC
Rent lights

Depart La.G. airport 8:00 p.m.
for Albany - Mohawk # 425
Arrive 8:52
Pick up 2 station wagons at airport
Check in Holiday Inn
State Rte 32.
575 Broadway
NEWARK N.Y.

23 and 24

Shoot FC and VS at Suny Lab
and tour on and around Hudson River

6:00 Mitch Donian
James Brennan

Depart Albany - NYC.
Return rented lights

5:50 ES, CH, AC, FC
NGS Still

Depart Albany - DC

ES, AL, FC: Check in:
Marriott Key Bridge

25 and 26

Pick up DC based ass't Cameraman
and sound
2 NGS cars

Shoot FC & JC in DC area:
bridge, industrial
pollution, buildings,
Great Falls area

Check Karan arrival, Fla.

27

11:10

Depart National Airport for
Miami, Fla.

ES, CH, AC, JC: Check in:
Holiday Inn
Homestead, Fla. 4.5. 1

FC departs D.C. for Jackson, Wyo.

Call Frank McLeod (305) 887-3695 (home)
(305) 887-1762 (office)

With crew call for:
Jack Gary
Ray Preston

Call FC, Sr. Set up time for production meeting.

28 and 29

Shoot 3 generations Craighead's in Everglades

30

9:00

Alan Capps
Ed Spiegel

Depart Miami - L.A.
Nation. #41 Lv. 9:00- Arriv. 10:55

a.m. Carl Harmon -- Miami-D.C.
a.m. John Craighead - Miami-Missoula

February 10, 1970

Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I am sending you under separate cover three rolls of exposed film.

Would it be possible for you to ship us a supply of film packing boxes?

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/p

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

February 6, 1970

Mr. Frank C. Craighead, Jr.
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Frank:

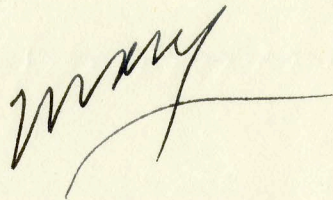
I am returning the three rolls of film showing the instrumenting of an elk for satellite tracking. We have made two selects to hold here, but you will find almost exact duplicates of them among these discards.

I trust that these will have arrived in time for your NASA lecture session at Jackson on February 17.

I will be reviewing the shipment of film sent by John within the next few days and will give you a report on it. We are also sending you some additional Kodachrome.

Sincerely,

MSG:sm
Enclosures: (3) rolls film



March 12, 1970

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

Dear John:

I have reviewed the shipments of film sent to me by you and Frank and have made selects to keep here in connection with your satellite tracking project. We are returning the discard boxes - including those transparencies made by Frank - to you now. Within a short time we will send you duplicates of those pictures being held here.

In spite of the obvious confusion surrounding your instrumenting of the elk and black bear, the two subjects are covered fairly well. However, you did lose a large number of frames for technical reasons including poor exposure and camera movement. May I suggest that you do more bracketing of your exposures in the future? Many of the black bear shots were under-exposed (as you thought they might be) and many of the elk shots are over-exposed. Please take a look through your discards as soon as you have a chance.

Will either you or Frank be here in Washington within the next several weeks? If so, I'd like to sit down and review the selects with you.

Best regards,

MSG:sm

Enclosures: (20) discard rolls

MARY S. CRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

March 25, 1970

Dr. Frank Craighead
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Frank:

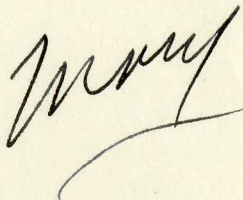
Thanks for your letter asking for the return of your transparencies. I suspect that these particular pictures are ones returned among a large group of discards sent to John at Missoula. There has been quite a bit of confusion here concerning which one of you made what photographs, and I thought that John could return to you whatever you need.

I am enclosing a copy of a letter from me to John dated March 12, 1970 commenting on that particular shipment of film. I am enclosing also with this letter the duplicate transparencies of the selects being held here. Would you, in turn, see that John gets those dupes that he will need. I am sending, too, discard roll 31 received here a couple of days ago. I have kept a number of selects and we will be sending duplicates in due course.

I hope this material reaches you in time to illustrate your reports and to use in your lectures.

Best regards,

MSG:sm
Enclosures
cc: Dr. John Craighead



7.C.C.

National Geographic Society

WASHINGTON, D. C. 20036

LECTURES DIVISION

Dear Frank:

We have received the following motion picture film from you:

4 x 100' rolls ECO 16mm

A preliminary check of the film for exposure and possible camera malfunction indicates the results were technically acceptable except as follows:

Heavy edge fog on one roll.

One roll was not exposed in the camera.

Other two rolls are OK

You will receive a complete report on this footage as soon as it has been printed and projected.

Sincerely yours,
David G. Dildine

MAIL ARRIVAL NOTICE

ARTICLE
NO.

R-110734

YOU MAY	CALL FOR MAIL AFTER _____ M.	Mail is at
	Bring this notice—Identification required. OR	
	REQUEST DELIVERY—Notify your carrier or post office.	

NAME AND ADDRESS (Include ZIP Code)

Dr. Frank C. Craighead Jr. -

☐ CHECK INDICATES
DELIVERY TO AD-
DRESSEE ONLY.

ARTICLE MAILED AT

☒ REGISTERED☐ CERTIFIED☐ INSUREDRECEIVED
SIGN HERE

BY

POD Form 3849
Nov. 1965

DATE DELIVERED

BY

CABLE ADDRESS
NATGEOSOC, WASHINGTON

Magazine

036

FILE
ARNOLD

November 6, 1969

Dr. Frank C. Craighead, Jr.
P.O. Box 156
Moose, Wyoming 83012.

Dear Dr. Craighead:

In Mr. Arnold's absence I am returning - under separate cover - your reject yellow boxes from shipments 14-15-17-18-19, along with some ID dupes of our selects.

Also, Lance's yellow box rejects - shipments 5 and 6 - are being returned.

Sincerely,

Marta M. Marschalko

(Mrs.) Marta M. Marschalko
Secretary to Mr. Arnold

/mm

Encl. 87 duplicate transparencies

Rolls 38-39 (shipment 5)
" 41-42 (" 6)
" 128, 129, 130 (shipment 14)
" 131, 132, 133 (" 15)
" 150-157 (shipment 17)
" 158-161 (shipment 18)
" 163-180 (shipment 19)

File

November 5, 1969

Mary S. Griswold
Assistant Illustrations Editor
National Geographic Magazine
Washington, D. C. 20036

Dear Mary:

I would like to acknowledge receipt of your letter relative to Frank and John's research work in connection with the animal tracking by satellite and to also advise you that we have received the twenty rolls of Kodachrome II and ten rolls of High Speed Ektachrome. As this film is exposed we will return it to you for processing and evaluation.

Upon Frank's return to the office, I will bring your letter to his attention for additional comments.

Thank you.

Sincerely,

Phyllis J. Farrell
Administrative Assistant

PJF/

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

October 27, 1969

Dr. Frank C. Craighead, Jr.
P.O. Box 156
Moose, Wyoming 83012

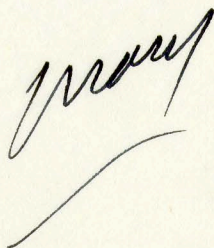
Dear Frank:

I had the opportunity last Friday to discuss your and John's forthcoming Society-supported work in connection with the animal tracking by satellite project. It certainly sounds like an exciting thing, and as you already know, we are very hopeful of ultimately producing a publishable story on it.

John asked me if we could provide both of you with film at this time, and we are, therefore, sending twenty rolls of Kodachrome II and ten rolls of High Speed Ektachrome to each of you. As you expose this film, please return it to us for processing and evaluation.

We are looking forward to working with you on this fascinating project.

Sincerely,



MSG/sbt

June 17, 1969

Miss Joanne Hess
Secretary Lecture Committee
National Geographic Society
16 and M St., N. W.
Washington, D. C. 20036

Dear Joanne:

I am sending you three (3) rolls of film, most of which was taken on the Canada goose. A considerable portion of the material was taken with the zoom lens. I thought it would be well to check and see how this is working before we do much more filming.

Sincerely,

Frank

FCC,Jr/p
Enclosures (3)

National Geographic Magazine

WASHINGTON, D. C. 20036

THOMAS R. SMITH
ASSISTANT ILLUSTRATIONS EDITOR

May 31st 1966

Dr. Frank Craighead
Route 1
Boiling Springs
Pennsylvania

Dear Frank,

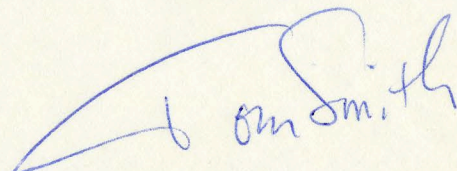
Well, the Grizzlies story is in final form, color proofs are in and the presses will start soon. We think it looks very good and should be a popular piece. I hope you agree.

I passed along your thoughts on the pictures - the need for a portrait of a bear wearing a collar; your concern that the small picture on the opening spread not be misconstrued as an actual bear-tracking operation; and your wish that we consider substituting another instrumentation picture for the summer weighing shot on the science spread. Careful consideration was given to each. The legend for the two pictures on the opening spread was handled in such a way as not to imply that an actual bear-tracking operation was underway in the shot at Castle Geyser. We say that equipment is being tested, which I think covers the point very well. I suspect that you have seen a proof of the final text and legends by now, but just in case you haven't, I'm enclosing a copy of the opening legend.

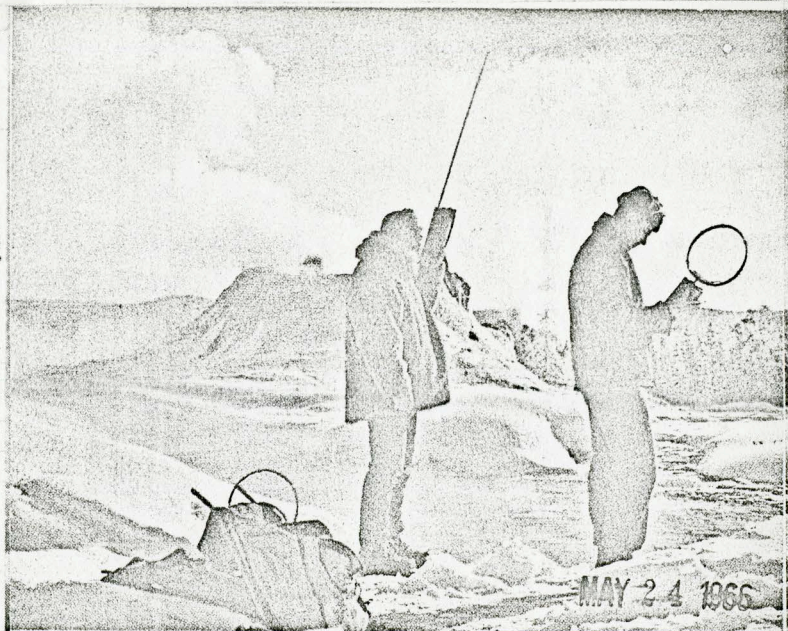
On the matter of the two suggested picture changes, we weighed the merits of them and decided to leave the dummy as it was. To include a bear portrait with collar would require dropping a picture or cutting text. The summer weighing shot seemed to add seasonal variety, and helped to picture the scope of the total operation.

Again, thanks for your help. You can be assured that we were guided by your suggestions all along the way, even though we were not able to make these final two changes. Your counsel on the picture layouts of your articles is always welcomed.

Sincerely,

A handwritten signature in blue ink, reading "Tom Smith", with a large, sweeping flourish above the name.

TRS/pk



KODACHROMES © NATIONAL GEOGRAPHIC SOCIETY

Trailing Yellowstone's Grizzlies by Radio

Article and photographs by
FRANK CRAIGHEAD, JR., Ph.D.
and JOHN CRAIGHEAD, Ph.D.

SAVAGE OR SERENE—a grizzly bear can be both. Rage succeeds indifference in this mighty mammal with alarming suddenness, and, when disturbed, unpredictable *Ursus horribilis* deserves its reputation as the most feared and respected of North American carnivores.

Our own respect for the grizzly took a big leap forward on a sobering occasion when for the first time we, the pursuers, became the pursued!

On a quiet summer afternoon we were following a gruff old sow and her two cubs through forests of dense lodgepole pine in the heart of Yellowstone National Park. Though closing in on our quarry, we were unobserved, for we were tracking the bear family by radio. Earlier, we had immobilized the sow with a "shot"—one of the hypodermic variety, in a dart fired from a gun—and then had instrumented her by affixing a collar containing a radio transmitter. It broadcast her whereabouts by means of silent electronic signals that our portable receivers converted into sound.

"Beep, beep," came the signal. Even steep hills and valleys at the head of Alum Creek did not prevent the radio pulses from reaching us. We knew by the strength of the beeps that we were very close to the bears.

Deposed monarch, the grizzly ruled the West until the repeating rifle overcame his size and strength. To help save the species, the authors conduct a unique study to fill in the blanks in his life history. Hanging radio transmitters around the necks of the animals and tracking their travels, they gather new knowledge of grizzly numbers, movements, hibernation, breeding, mortality, and social behavior. Frank Craighead (above, at left) and Maurice Hornocker test equipment in below-zero temperatures at Castle Geyser in Yellowstone National Park.

National Geographic Magazine

WASHINGTON, D. C. 20036

EDITORIAL RESEARCH STAFF

April 28, 1966

Dr. Frank Craighead, Jr.
Route #1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

For your confidential information the National Geographic is preparing for publication an article on the Canadian Rockies by Mr. Alan Phillips.

The editors are most anxious for you and your brother to review the section having to do with grizzlies. I've included those few pages and hope that you will be good enough to go over them carefully, calling to our attention anything which you feel may be either wrong or potentially misleading to our readers.

Thank you very much for your help; we hope our request won't be an imposition for you.

Sincerely,

Edith C. Berg

(Mrs.) Edith C. Berg
Editorial Research Staff

March 19, 1965

Mrs. Anne Dirkes Kober
National Geographic Society
Washington, D. C. 20036

Dear Mrs. Kober:

Thanks for the check representing additional payment for the Great Gray Owl transparencies. I was also pleased to get your letter indicating that you were pleased with Ron Jenkins' paintings and were asking him to prepare sketches for the bird album. I know that Ron is delighted and will do a good job for you.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

March 2, 1965

Dr. Frank Craighead
RD #1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

It was a great pleasure to be able to talk with you here at the Geographic.

As we discussed in the office I am enclosing the Society's check for \$50.00 which represents additional payment for your Great Grey Owl transparency.

I certainly will be looking forward to the wild flower book when I know we will be working together again.

With all best wishes,



(Mrs.) Anne Dirkes Kobor
Picture Editor

ADK/rl

Enclosure

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

March 12, 1965

Dr. Frank Craighead
Route 1
Boiling Springs
Pennsylvania

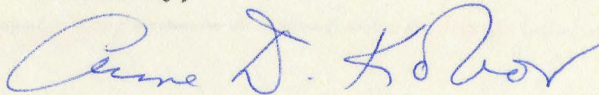
Dear Dr. Craighead:

Thank you so much for your suggestion that we contact Ron Jenkins regarding the artwork for the record album to accompany WATER, PREY, AND GAME BIRDS OF NORTH AMERICA.

We called him and he came in to see us on Tuesday and agreed to do two sketches. They arrived here today, have already been approved by Dr. Aldrich at the Smithsonian, and it looks like Mr. Jenkins will do the artwork for the entire album.

We are very impressed with Mr. Jenkins' work and are extremely pleased to have him working with us. Again, many thanks to you for making it possible.

Sincerely,

A handwritten signature in blue ink, appearing to read "Anne D. Kobor".

(Mrs.) Anne Dirkes Kobor

ADK:jam

July 14, 1964

Dr. Frank Craighead
Route 1
Boiling Spring, Pennsylvania

Dear Dr. Craighead:

We had a preliminary showing of the first half of the dummy before Dr. Grosvenor left on vacation. I am happy to report that your beautiful female Anhinga picture is solidly in. Although we will not have a showing of the entire dummy until September, the portion which has been approved is currently being prepared for the engraver, and the writers are busy writing the copy for those pages.

Could you provide us with some caption material for the enclosed picture? Prime information is where and when the picture was taken, the species and any additional information you can provide on the setting or peculiarity of the species, which may be of use to the legend writer.

I had hoped that you would have a chance to get some additional bird pictures to us. Particularly any Falconing shots you may have. I am also searching for anything active on Vultures.

I will appreciate receiving any additional pictures you may be able to send.

Most sincerely,

(Mrs.) Anne Dirkes Kobor

ADK/r1

Enclosure

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

July 16, 1964

Dr. Frank C. Craighead, Jr.
Box 128
Canyon Village
Yellowstone National Park
Wyoming

Dear Dr. Craighead:

Thank you for your letter of July 14. As you can see from the enclosed copy of a letter I wrote you recently, the reason for the delay in returning your transparencies was the need to have the color in hand for the showing.

We have not finished the gull layouts and if I may I would like to hold a few of the gull transparencies for a little longer.

If the dummy print is not forwarded to you on the female anhinga, the one we have chosen is very similar to two of the ones I am returning. Perhaps you could provide us with the needed information by working with one of these.

I assume that you are now far from your pictures and it will be some time before we can hope to see any additional material.

I am sorry if I caused you any concern over your pictures. Normally we start gathering pictures far in advance and I return the originals immediately rather than hold them for months until a dummy is finally approved. However yours arrived so close to presentation time that it seemed better to hold them rather than to have to write and ask for them back right away.

Most sincerely,

Anne S. Kobor
(Mrs.) Anne Dirkes Kobor

ADK:jam

Enclosures

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

August 18, 1964

Dr. Frank C. Craighead
Box 128
Canyon Village
Yellowstone National Park
Wyoming

Dear Dr. Craighead:

I have just returned from vacation, hence the delay in answering your letter of July 23rd. Thank you for the caption material on the Anhinga.

We, of course, prefer to purchase pictures outright, however, if you wish we will return the originals after the plates have been made and proofed, retaining the right to use the plates made in other Geographic Publications and other purposes related to the Society - such as promotion material for the book.

I would be most happy to see any pictures which you feel may be of interest. The time element is a problem. Our deadline for a completed dummy is the end of September. We can always make room for a better picture and even at that late date we may still have holes.

Thank you for all your help.

Most sincerely,



(Mrs.) Anne Dirkes Kobor

ADK/r1

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

July 14, 1964

Dr. Frank Craighead
Route 1
Boiling Spring, Pennsylvania

Dear Dr. Craighead:

We had a preliminary showing of the first half of the dummy before Dr. Grosvenor left on vacation. I am happy to report that your beautiful female Anhinga picture is solidly in. Although we will not have a showing of the entire dummy until September, the portion which has been approved is currently being prepared for the engraver, and the writers are busy writing the copy for those pages.

Could you provide us with some caption material for the enclosed picture? Prime information is where and when the picture was taken, the species and any additional information you can provide on the setting or peculiarity of the species, which may be of use to the legend writer.

I had hoped that you would have a chance to get some additional bird pictures to us. Particularly any Falconing shots you may have. I am also searching for anything active on Vultures.

I will appreciate receiving any additional pictures you may be able to send.

Most sincerely,



(Mrs.) Anne Dirkes Kobor

ADK/r1

Enclosure

Everglades Natl. Park, Fla.

Anhinga, anhinga
Snake Bird

Only picture - on cartons use.

Box 128
Canyon Village
Yellowstone National Park
Wyoming

July 23, 1964

Mrs. Anne Dirkes Kobor
National Geographic Society
Washington, D. C. 20036

Dear Mrs. Kobor:

I was glad to hear from you concerning the picture selection for the bird book. I will try to get some additional slides to you before your closing date, but doubt if I can do much with the falconry pictures until late fall as I do not have these with me.

My brother, John, sent you a selection of pictures and asked if I would inquire as to whether you plan to use any of these and, if so, will you return the originals until they are needed.

In regard to the anhynga picture which you have selected, is it the intent of the Geographic to purchase this and possibly other pictures outright or just single publication use? The anhynga picture was taken in the Everglades National Park in Florida during the winter of 1960. The scientific name is *Anhynga anhynga*. It is commonly known as the snake bird or water turkey. It feeds on fish, catching them as it swims under water. These birds often sit out in the sun to dry and to preen their feathers. This picture was taken when the anhynga had left the water and perched on the limestone rock while sunbathing.

Both John and I have quite a few pictures that I think would be of interest to you and we can send you a selection if your publishing deadline is not before the fall of 1964. Could you give me some idea how long it will be before you must complete your final selections?

Sincerely,

Frank

Box 128
Canyon Village
Yellowstone National Park
Wyoming

July 14, 1964

Mrs. Anne Dirkes Kobor
Book Service
National Geographic Society
Washington, D. C. 20036

Dear Mrs. Kobor:

On my last visit to the Geographic, June 3, I left fifteen kodachrome slides illustrating anhyngas and gulls. I would appreciate it if you would review these as you indicated in your letter of May 13. Make black and whites of those you may wish to use and return the originals. The procedure that you have outlined would be quite helpful as the Geographic has filed quite a variety of our pictures over the years. Many of these have not been published and we have no indication of whether they will be used or not. We would much prefer to submit pictures and then have them returned as you have suggested.

Sincerely,

Frank Craighead

January 24, 1964

Mr. Don J. Crump
National Geographic Magazine
Washington, D. C. 20036

Dear Don:

It certainly is all right for you to hold these seven pictures that you are considering for the Wyoming story. Legends for the pictures are as follows:

1. Bull Moose - The Yellowstone River and Yellowstone National Park.
2. Shooting a Bull Moose - Teton National Forest, Wyoming.
3. Grazing Mule Deer - "Antlers Velvet", Yellowstone National Park.
4. John Craighead catching Bull Trout (Dolly Varden). This picture was taken in Montana, not Wyoming.
5. Mud pots near Old Faithful, Yellowstone National Park.
6. Cooking Cutthroat Trout at bottom of Yellowstone Grand Canyon, Yellowstone National Park.
7. Fishing Lewis River Falls, Yellowstone National Park.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

National Geographic Magazine

WASHINGTON, D. C. 20036

ILLUSTRATIONS STAFF

January 22, 1964

Mr. Frank Craighead
Route #1
Boiling Springs, Pennsylvania

Dear Frank,

Our Wyoming story has been postponed for a while and we are holding pictures which we still consider possibilities for our dummy. Seven of your transparencies are being held so they can be considered again when the story is reactivated in 1965. I'm returning two pictures which don't interest us.

The Illustrations Library requires that we supply complete legend information for any picture put in file. I'm enclosing duplicates of those we are holding. If it is all right for us to hold the pictures, please write legends and return them. If you would prefer to have us return the pictures at this time, let me know.

Best regards,



Don J. Crump

DJC:erc

Enclosed:

- 2 35mm transparencies
- 7 duplicate transparencies

January 24, 1964

Mr. Don J. Crump
National Geographic Magazine
Washington, D. C. 20036

Dear Don:

It certainly is all right for you to hold these seven pictures that you are considering for the Wyoming story. Legends for the pictures are as follows:

1. Bull Moose - The Yellowstone River and Yellowstone National Park.
2. Shooting a Bull Moose - Teton National Forest, Wyoming.
3. Grazing Mule Deer - "Antlers Velvet", Yellowstone National Park.
4. John Craighead catching Bull Trout (Dolly Varden). This picture was taken in Montana, not Wyoming.
5. Mud pots near Old Faithful, Yellowstone National Park.
6. Cooking Cutthroat Trout at bottom of Yellowstone Grand Canyon, Yellowstone National Park.
7. Fishing Lewis River Falls, Yellowstone National Park.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

MELVILLE BELL GROSVENOR
PRESIDENT AND EDITOR

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EXECUTIVE VICE PRESIDENT AND SECRETARY

ROBERT V. FLEMING
VICE PRESIDENT AND TREASURER

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VICE PRESIDENT AND ASSOCIATE SECRETARY

THOMAS M. BEERS
VICE PRESIDENT AND ASSOCIATE SECRETARY

GILBERT GROSVENOR
CHAIRMAN OF THE BOARD

THOMAS W. McKNEW
VICE CHAIRMAN OF THE BOARD

National Geographic Society

WASHINGTON 6, D. C.

February 17, 1964

Mr. Frank C. Craighead
R. R. # 1
Boiling Springs, Pennsylvania

Dear Mr. Craighead:

Your last shipment of four rolls were good in overall exposures but you have such a variety of subjects that I did not want to send you any rejects since there were not too many exposures on any one area.

Dick Stewart is at present in Costa Rica on an archaeological trip with Dr. Stirling. I see by our files that he has had extensive correspondence with you. I shall be sitting in for Dick while he is away. If you need any information or help, or would want particular comments on your other shipments, please let me know.

Regards,

Albert Moldvay

Albert Moldvay

AM/ee
Encl

Bole picture
Telemetering

MEMORANDUM

Shipment #

23

Date

2/13/64

Rec'd First Class, PA.

DR. M. B. GROSVENOR

MR. WILBURN

RECORDING DESK

The following material has been received in the photographic laboratory from

Frank C. Craighead

GRIZZLIES II

4 rolls KM-135 Kodachrome II film

Remarks:

Legend cards

EDITOR: See Letter of February 11, 1964 to Mr. Patton

~~W-RP~~
TR5

A copy of this report was sent to Mr. Craighead/

A. M.
2/17/64

February 22, 1964

Mr. Albert Moldvay
National Geographic Society
Washington 6, D. C.

Dear Mr. Moldvay:

Thanks for sending on the pictures from the four rolls I recently sent in. Unfortunately, none of the ones you selected were those that I needed. The only pictures in this assortment that would fit into our forthcoming Geographic article are those depicting the wildlife. The Atmospheric Sciences Research Center paid my expenses for this trip and I must now provide them with a report on my activities. I wish to illustrate this report with several photographs, one of these to be a picture showing the outdoor small white rubber coated transmitter that is placed in a hot spring. The other is a picture of a larger instrument, or temperature probe. Perhaps, you could send me one or two of these, or better yet, check with Bob Patton and I imagine he will tell you that it is okay to release all or most of these.

I had hoped while making this trip to Yellowstone to also get pictures of the hibernating grizzly for the National Geographic Society. We did attempt this but were unsuccessful.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

MELVILLE BELL GROSVENOR
PRESIDENT AND EDITOR

MELVIN M. PAYNE
EXECUTIVE VICE PRESIDENT AND SECRETARY

ROBERT V. FLEMING
VICE PRESIDENT AND TREASURER

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GILBERT GROSVENOR
CHAIRMAN OF THE BOARD

THOMAS W. McKNEW
VICE CHAIRMAN OF THE BOARD

National Geographic Society

WASHINGTON, D. C. 20036

September 18, 1964

Mr. Frank Craighead
Box 128, Canyon Station
Yellowstone National Park
Wyoming

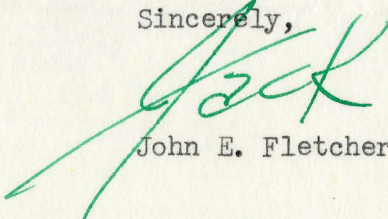
Dear Frank:

Yesterday Bob Patton called and informed me that you were in need of two sets of batteries for your Nikon motor drive. I also learned of your need for a lens.

Under separate cover we shipped to you yesterday two sets of batteries and one 58-mm lens No. 158978. The package was shipped by air parcel post and should be in Canyon Station in the very near future.

Kindest personal regards to both you and John, and I shall look forward to seeing you when you return to the East.

Sincerely,


John E. Fletcher

JEF:iw

P.S. Through an error, the equipment was addressed to John instead of to you.

JEF

National Geographic Magazine

WASHINGTON, D. C. 20036

EDITORIAL RESEARCH STAFF

April 20, 1966

Dr. Frank C. Craighead, Jr.
Route #1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

Herewith we are sending you a copy of the revised manuscript mimeographed April 14 and the legends dated April 18. On these copies are questions in blue pencil from Mr. John Weeks, the geographic researcher, and in black pencil from me.

We shall appreciate your careful scrutiny, especially since the manuscript is shorter than the original. We hope no vital supporting fact has been inadvertently omitted. May we also have your latest figures and updating.

The same package with the same questions is being mailed to your brother John at Missoula.

We shall be most grateful for your written corrections as quickly as possible. Of course, we understand it will take a little time to check all the statistics, etc., but we always like to get as many changes on first proof as possible.

Thank you very much for your kind consideration. Before mailing the material (please retain the dummy), will you please telephone me collect, area code 202, 296-7500, ext. 766.

Sincerely,

Levenia Loder

(Miss) Levenia Loder

P. S. Enjoyed our telephone conversation today, the 21st. Sorry the material was held up. The issue editor now tells me we will not make-up until next Tuesday. Best regards.

Franklin
4/2/66

MELVILLE BELL GROSVENOR
PRESIDENT AND EDITOR
MELVIN M. PAYNE
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GILBERT GROSVENOR
CHAIRMAN OF THE BOARD
THOMAS W. McKNEW
VICE CHAIRMAN OF THE BOARD

National Geographic Society

WASHINGTON 6, D. C.

May 9, 1966

Mr. Frank Craighead
Route #1
Boiling Springs, Pennsylvania 17007

Dear Mr. Craighead:

Assistant Editor Andy Brown has conveyed to me, as issue editor for the August issue, the editorial changes and restorations you have requested. Almost all of them appear entirely reasonable to me, within the limitations you so aptly described in your letter. It is, indeed, as you say, a "tough job" to satisfy the dual demands of scientific accuracy and popular interest. I think that the editors who tackled it have done an excellent job, and all of us welcome the guidance now provided in your letter.

The only point of importance which has given us some difficulty is the listing of all 14 sponsoring or contributing institutions, either in the text or as a footnote or divided between. I have indicated herewith how we presently intend to cover these acknowledgements.

I have included with this letter a copy of the proof as it appears with most of the changes you have suggested, both in text and legends. We are all most appreciative of your cooperation and your understanding of the frequent toils of the creative process. Your article will be read, enjoyed, and remembered by millions of readers.

Cordially,

Matthew
176
Joseph R. Judge

Issue Editor

JRJ:mns

P.S. When you've had a chance to look over this set of proofs, which have been held up and amended to include the several sets of changes we've received from you and John, would you call us collect--either myself, on Ext. 357, or Miss Loder on Ext. 766. Thanks.

National Geographic Magazine

WASHINGTON 6, D. C.

THOMAS R. SMITH
ASSISTANT ILLUSTRATIONS EDITOR

April 5th 1966

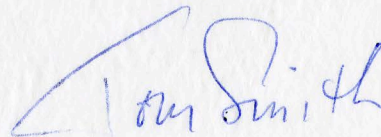
Dr. Frank Craighead Jr.
Route 1
Boiling Springs
Pennsylvania

Dear Frank,

The Grizzlies dummy was approved enthusiastically last Friday by the Editor for the August magazine. I'm forwarding a dummy so that you can see the final layout and can use it as a reference in matters dealing with legends and research. Miss Loder of Editorial Research says she will be in touch with you after the legends have been written, to go over the material. We feel the dummy turned out very well, and that the Grizzlies article will be an important part of the August issue. Additionally, we know that your Grizzlies research is a valuable contribution to the scientific understanding of these long-neglected animals.

Allan Fisher tells me that the manuscript still is undergoing some revision, so that I cannot include a copy of it in this package. When work on it has been completed, a copy will be forwarded. We will do the same with the legends when they are ready.

Best regards,



TRS/pk
Encl: Grizzlies dummy
cc: ACF
AHB
T. Loder
RSP

P.S. Bob Patton is off camping in the Blue Ridge this week.

January 17, 1967

Mr. George Crossette
Chief, Geographic Research
Washington, D.C. 20036

Dear George:

I read your letter of November 1, 1966, after I left Yellowstone and returned to my cabin at Moose. I started to answer it and then put it off until I could get the information that you requested.

The names of the two drugs that we have been using to immobilize grizzly bears and elk are; succinylcholine chloride, and sernylan. One of the trade names of succinylcholine is sucostrin. This is put out by a number of drug companies, one of which is Libby.

The sernylan is made by Parke Davis, but is not at this time on the market.

The dosages of these drugs varies with a number of factors such as: Body Weight; Age; Sex; Stress, and etc.

We have found the 1 mg/5-6 pounds of body weight is about right for grizzlies. The strength is about 100 mg/cc of solution. The dosage for sernylan is 1 mg to every pound of body weight of the bear.

For elk, the dosage of succinylcholine that we have found most suitable is 1 mg/52 pounds for spring and summer and 1 mg/80 pounds in winter.

We have used pentobarbital sodium on the bears following immobilization with sucostrin. This was done when we wanted to anesthetize the bears for longer periods of time.

We used pentobarbital sodium (250 mg/cc of solution) at a dosage of 1cc/16 pounds of body weight. The dosage of these two drugs vary greatly with species as you can see when comparing doses given to elk and grizzlies. The dosage may vary equally as much when used on other species.

January 17, 1967
Mr. George Crossette
Page 2.

I hope that this preliminary information will be sufficient for your purposes.

John and I hope to work-up our data on immobilization this winter and when we get it completed, I will send you a copy.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/p

National Geographic Magazine

WASHINGTON, D. C. 20036

GEORGE CROSSETTE
CHIEF, GEOGRAPHIC RESEARCH

November 1, 1966

Dr. Frank Craighead
Carlisle
Pennsylvania

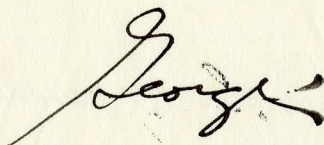
Dear Frank:

The professor of Zoology at Iowa State University, who is doing a special study of bison, has asked me for the names of new chemicals for immobilizing large animals.

Can you help me with this by providing trade names, producers and some idea of dosages?

Many thanks as always,

Sincerely yours,



Succostin (Succinylcholine chloride)

Bears 1mg per 5 to 6 lb body wt. strength 100mg./cc. of sol.

Sernylan 1mg to 1 lb body wt - bear

1mg. per ~~10 to 17~~ lb body wt. - elk
52 (av) Spring + Summer

1mg per 80 lb in winter

Pentobarbital sodium (25 mg. per cc sol.)
dosage 1 cc for every 16 lbs body wt.

GEORGE CROSSETTE
CHIEF, GEORGIAN RESEARCH

November 1, 1966

Dr. Frank Craighead
Carlisle
Pennsylvania

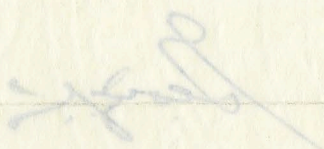
Dear Frank:

The professor of Zoology at Iowa State University,
who is doing a special study of bison, has asked me
for the names of new chemicals for immobilizing
large animals.

Can you help me with this by providing trade
names, producers and some idea of dosages?

Many thanks as always,

Sincerely yours,



1 cc for 16 lbs body wt - this
is the same as the dosage with
25 mg per cc solution
1 cc for 80 lbs in water

June 19, 1967

Mr. C. Vernon Sanders
Associate Secretary
National Geographic Society
Washington, D. C. 20036

Dear Mr. Sanders:

I received your letter of June 6 with your calculations of the amount the Society owed me for services in connections with the production of the Grizzly Bear TV film. I appreciate your explanation of how you arrived at the total amount due but must admit this was not my understanding of how payment would be calculated.

I discussed this subject by telephone this morning with my brother John and he too feels that there has been some misunderstanding. John will be in Washington this week and will probably call you at about the time you receive this letter. A meeting with you or a phone conversation may help clarify the situation.

There are a number of things that I would like to point out for your consideration. The (47) days that I have listed were days when I actually worked full-time and in many cases over-time. As you will notice the work extends through a period of seven months. The largest number of days was 35 and this involved two months (August and September). I can't figure how in your computation you could reduce 35 days actual work to 25 regardless of how you might figure it.

I assumed that I would be paid on the basis of a 20 day month or for a portion of it, as was stipulated in the contract. It was my impression that the number of months would be computed on a basis of the total number of days worked, that is, 47 days would amount to two months and one week.

Mr. C. Vernon Sanders
Page 2

Neither my brother nor I were anxious to work consistently on the basis of a seven day week, but the TV crew were being paid while on the job, whether they worked or not. The producer and crew wanted to work and apparently felt obligated to work so, we felt we would be saving the Society money by doing the same. The crew could not do anything without our assistance. We furnished the people for the movie shots, the lab and field setting, the vehicles used in the movie as well as most items of equipment. It was essential for us to be with them at all times in order to help them get the shots that they wanted.

It was my understanding that the TV crew was paid on the basis of the number of days they were on the job. If this is so, it might be well to consider payment for John and for me on the same basis.

It seems to me that the amount you have already paid me for two days is the fairest way to compute the over-all amount due. It is in accordance with the wording of the contract.

If you have not done so, perhaps it would be well to discuss this with Dr. Mel Payne and Dennis King. If, then, we do not seem to agree as to how payment should be figured, I am certainly willing to compromise. I really do not think that your computations are fair or apply in this case as I actually worked for 47 days and am being paid for 35. If the payment due seems out of line or creates budgetting problems then this is another matter and I'd be glad to discuss the problem and seek an equitable solution.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/ps

Sent to
com John

National Geographic Magazine

WASHINGTON, D. C. 20036

MARY S. GRISWOLD
ASSISTANT ILLUSTRATIONS EDITOR

June 22, 1967

Dr. Frank C. Craighead
Box 156
Moose, Wyoming

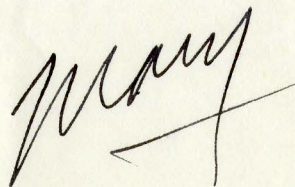
Dear Frank:

We have completed the television foldout publicizing your forthcoming Grizzly show, as I believe you already know, and we are quite pleased with the result. It was decided to attach this foldout to an article by staff photographer Bill Allard on Yellowstone in Winter, and I'm sure you'll agree that this makes a perfect vehicle for it.

We have given strong consideration to the transparencies you sent to Bill Garrett last month, and we have brought them to Dr. Payne's attention as you suggested. However, it was decided not to utilize them as a short separate story at this time, nor did any of them seem appropriate for use in the TV foldout since the pictures deal exclusively with elk and black bears.

We are therefore returning all of the transparencies to you enclosed. Thanks very much for sending them in - I know we'll want to see them again when the time is right for another inimitable Craighead article.

Best regards,



MSG:ss
Encl: 200 35mm's

20036

February 10, 1966

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

Dear John:

I am happy to enclose the Society's check reimbursing you for personal expenses in connection with your AAAS lecture in Berkeley. Also it gives me great pleasure to tell you, as I previously told Frank, how delighted we all are at the splendid job you did in Berkeley. Congratulations.

Frank has sent me two issues of the Naturalist containing your exciting material on Wild Rivers. We will develop an article on this subject for the School Bulletin. I hope next fall will be okay because we have already scheduled most of our remaining space for this spring.

With kind regards and best wishes,

Cordially,
Ralph Gray
School Service Division
National Geographic Society

RG:jh

cc: Frank Craighead

National Geographic Magazine

WASHINGTON, D. C. 20036

EDITORIAL RESEARCH STAFF

*Call John Mon. night
unless I hear from him
Call Matthews*

May 18, 1966

Dr. Frank C. Craighead, Jr.
Route #1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

Here is the complete final-for-release proof incorporating the changes received from your brother John and those of your own, as discussed by you, Mr. Matthews, Mr. Brown, and myself last Friday evening. It was very helpful to have you here in person.

*Names of bear
Two words*

Please call collect as soon as you have had time to go over the text and legends carefully, in case any serious error may have occurred. We hope to incorporate any such problem before releasing the story to the printer. We are already past the scheduled release date.

On page 263, we want to be very sure of the identification of Harry Reynolds and Bill Staniger and the spelling of their names. The remainder of the color proofs came in today and they are attached. I hope they will assist you in the identifications. If you have any doubt about ^{any} identifications or spellings, please let me know immediately. ^

Thank you again for all your splendid help.

Sincerely,

Levenia Loder
(Miss) Levenia Loder

44 in mark

*255 - John; let our research team
pictures of Joel*

*Staniger?
Reynolds R?*

Frank Craighead Jr.

Box 128
Canyon Station
Yellowstone Natl. Park, Wyo.
Sept. 24, 1964

Mrs Anne Dirkes Kobor
National Geographic Society
Book Service
Washington , D. C. 20036

Dear Mrs Kobor:

In this same mail I have sent off a letter to my wife in Penna. asking her to send you a selection of falconry pictures. I am sure she will get these to you as soon as possible.

I am enclosing three Sharp-shinned hawk pictures which you may wish to consider. . Please return these to me at my Penna. address.

Last summer we took some interesting osprey pictures which you may wish to look at. They are at the Geographic and in with our grizzly bear material. We have trained an number of ospreys so you may also want to include a picture of a trained osprey in the falconry chapter. It is unusual to train an osprey and as far as I know we trained the first one in this country.

Sincerely,

Frank C. Craighead Jr.

Box 128
Canyon Station
Yellowstone Park, Wyo.
July 13, 1964

Mr. Barry C. Bishop
National Geographic Society
Committee For Research and Exploration
Washington, D. C. 20036

Dear Barry:

We are now well into the summer routine of work and everything is going along fine. At the present time we are tracking two instrumented grizzlies and are getting some interesting data. We will have several more beeping before long.

We expect to receive equipment from Philco within the next few weeks and hope to start experimenting with some of the problems of telemetering physiological data from free roaming grizzlies by August.

Yesterday while tracking an instrumented grizzly we just about stepped on a huge sleeping bear. We climbed some trees and then awakened him. As he got up another one that we had not seen took off too. She was wearing a collar that we put on last year. The animal with the beeping transmitter was just ahead of these two. Three grizzlies in dense timber all less than 200 feet apart is getting crowded.

I'd appreciate it if you can send me a check for the remainder of the research grant to the above address. I'll get you off a more informative letter before long. I hope that all is going well for you and that you will get a chance to get away from the desk work for awhile.

Sincerely,

Frank C. Craighead Jr.

Box 128
Canyon Station
Yellowstone Park, Wyo.
Oct. 2, 1964

Mr. Barry C. Bishop
National Geographic Society
Committee for Research and Exploration
Washington, D. C. 20036

Dear Barry:

Our working season here is fast drawing to a close. We have another month yet before the snow will push us out and a great deal to try to do in this time. This has been our busiest summer yet which is one reason I haven't been a better correspondent.

We trapped and handled over sixty grizzlies this summer and ran our total of individually marked bears to 197. To date we have instrumented 5 grizzlies and plan to put radios on several more. We have been instrumenting certain bears to get specific information and the results are gratifying. We instrumented # 40 again for the fourth consecutive year. This summer she had her first cub and we have been interested in comparing her present activity and behavior with that of former years.

We put a radio on one of the big dominant bears, # 14. He weighs 1000 lbs and has a 40" neck. He has led us quite a chase over some of the most heavily timbered and rugged country in Yellowstone. Several days ago we returned from a five day back packing trip during which time we tracked this grizzly day and night and slept wherever darkness overtook us. With the use of radio we moved in on a mother grizzly as she started to dig a winter hibernation den for herself and cub. We have now located two dens in addition to the one last fall. Now that we know where and what to look for we will undoubtedly continue to find more. I hope to track another grizzly into hibernation this fall. We are learning some interesting things about the relation of one or more bears to others and about elk-grizzly relationships in summer.

Philco's engineer, Joel Varney visited with us this summer and will return for a few days this month. Through his efforts we now have a very excellent temperature sensitive transmitter and will put it on a bear this fall. We have experimented with a transducer and transmitter for recording EKG but still have quite a bit of work to do before we will be ready to try it on a free roaming animal. We have also developed a transmitter controlled by a timer. This will give off a signal for a period of one year with the same range that we now have on our other tracking transmitters. We will probably test this by putting it on an elk or grizzly this fall.

Our crew here has now been reduced to four and when John leaves in several weeks there will only be three of us. I will probably leave here about the first week in November and arrive in Penna. about the middle of the month. I expect to come to Washington shortly after this and will plan to visit with you and give you more details on the summer's work.

Have obtained some interesting documentary pictures and others suitable for an article.

Look forward to seeing you soon.

Sincerely,

National Geographic Society

WASHINGTON, D. C. 20036

BOOK SERVICE
MERLE SEVERY CHIEF

May 13, 1964

Dr. Frank C. Craighead
Route I
Boiling Spring, Pennsylvania

Dear Dr. Craighead:

We are currently preparing layouts for our new book on Water and Game Birds of North America. It will include all of the species on the first half of the A.O.U. Check List.

There are still a number of gaps in our picture files as the enclosed list indicates. In addition to good color close-ups to illustrate the individual biographies of the species listed, we are also in need of behavioral sequences and action pictures of any of the Water and Game species.

We are especially interested in a good color series on Falconry, any good shots of birds of prey in action, and a good picture of masses of Ducks migrating.

If you should have any transparencies which you would care to submit, they will be reviewed immediately and all of the originals will be returned to you within two weeks. We will make black and white prints for layout purposes, and will call for the original colors on any material which is in the final approved dummy only when the plates are ready to be made.

The layouts are progressing rapidly, therefore, I would appreciate seeing your material as soon as possible.

Most sincerely,

Anne D. Kobor
(Mrs.) Anne Dirkes Kobor

ADK/rl

Enclosure

*June 2
left 15 slides
at secy. - anhinga
& gulls*

Route #1
Boiling Springs, Pa.

May 14, 1964

Mrs. Anne Dirkes Kobor
Book Service
National Geographic Society
Washington, D. C. 20036

Dear Mrs. Kobor:

I was interested to learn of a new bird book you are preparing and will see if I have pictures that will help fill your gaps. You mentioned having enclosed a list of the pictures you are seeking. This list was not included with this letter so I would appreciate receiving one at your convenience. After receiving this, I will try to make a selection as soon as possible.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

LEONARD CARMICHAEL
CHAIRMAN

ALEXANDER WETMORE
VICE CHAIRMAN

MELVIN M. PAYNE
VICE CHAIRMAN

BARRY C. BISHOP
SECRETARY

National Geographic Society
COMMITTEE FOR RESEARCH AND EXPLORATION
WASHINGTON, D. C. 20036

April 6, 1964

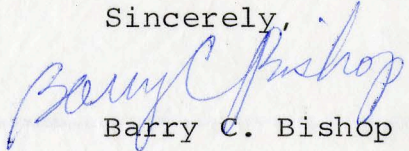
Dr. Frank C. Craighead, Jr.
Resource Management Consultant
RD # 1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

This is to acknowledge receipt of your proposal,
"1964 Proposal for Continued Research on Ecology
of the Grizzly Bear," by the Committee for Research
and Exploration.

The Committee will take action on your proposal in
the near future. I will notify you concerning that
action as soon as possible.

Sincerely,


Barry C. Bishop

an

National Geographic Magazine

WASHINGTON, D. C. 20036

March 14, 1969

CHARLES ALLMON
ASSISTANT ILLUSTRATIONS EDITOR

Dear Frank:

For the past 15 years I have had the pleasure of working with some of the world's most unusual people whose contributions were published in National Geographic. Would you be kind enough to autograph the enclosed print for me and return it to my home address which is 3601 Stewart Drive, Chevy Chase, Maryland 20015. You will have an honored place in my "rogue's" gallery.

After some 23 years' association with National Geographic, I have decided to take an early retirement and devote my time to personal interests. Photography, travel, and president of a new mutual fund should provide ample excitement for the foreseeable future.

With thanks and warm regards.

Sincerely,



CA:rmp
Enclosure

Dr. Frank Craighead
Box 156
Moose, Wyoming

SEABIRDS - SWIMMERS AND DIVERS

Least Grebe (Mexican)
 Short-tailed Albatross (rare)
 Cape Petrel (Pigeon)
 Fulmar
 Cory's Shearwater
 Pink-footed Shearwater
 Pale-footed Shearwater
 Greater Shearwater
 Sooty Shearwater
 Slender-billed Shearwater
 Manx Shearwater
 Audubon's Shearwater
 Black-capped Petrel
 Bermuda Petrel
 Fork-tailed Petrel
 Leach's Petrel
 Ashy Petrel
 Black Petrel
 Least Petrel
 Wilson's Petrel
 Great Cormorant
 Olivaceous Cormorant
 Brandt's Cormorant
 Pelagic Cormorant
 Yellow-billed Tropic Bird

LONG LEGGED WADERS

Glossy Ibis

FLYING WATERFOWL

Barnacle Goose
 Ross's Goose
 Black-bellied Tree Duck
 Mexican Duck
 Mottled Duck
 Bahama Duck
 Greater Scaup
 Bufflehead
 Old-Squaw
 Harlequin Duck
 Steller's Eider
 King Eider
 White-winged Scoter
 Surf Scoter
 Common Scoter
 Red-breasted Merganser
 Cinnamon Teal
 European Widgeon
 Shoveler

BIRDS OF PREY

Black Hawk
 White-tailed Kite
 Mississippi Kite
 Swainsons Hawk
 Zone-tailed Hawk
 White-tailed Hawk
 Short-tailed Hawk
 Ferruginous Hawk
 Gray Hawk
 Harris' Hawk
 Gyrfalcon
 ✓ Prairie Falcon
 Aplomado Falcon (Mexican)
 Swallow-tailed Kite
 Coopers' Hawk
 Chachalaca

MARSH AND SHORE BIRDS

Jacana (Jacana Spinosa)
 King Rail
 Yellow Rail
 Black Rail
 Black Oystercatcher
 Black-bellied Plover
 Mountain Plover
 Surfbird
 Black Turnstone
 Common Snipe
 Eskimo Curlew
 Wandering Tattler
 Willet
 Ruddy Turnstone
 Pectoral Sandpiper
 Baird's Sandpiper
 Long-billed Dowitcher
 Stilt Sandpiper
 Western Sandpiper
 Marbled Godwit
 Sanderling
 Aleutian Sandpiper (rock)
 Curlew Sandpiper
 Long-billed Dowitcher
 Red Phalarope
 Northern Phalarope
 Pomarine Jaeger
 Long-tailed Jaeger
 Parasitic-Jaeger
 Sora
 Knot

*Pictures to
 Mrs Anne D. Kolon
 Natl. Geog.*

GULLS - AUKS AND THEIR ALLIES

Glaucous Gull
Bonaparte's Gull
Little Gull
Ivory Gull
Ross' Gull
Roseate Tern
Black Tern
Sabines's Gull
Common Murre
Thick-billed Murre
Dovekie
Marbled Murrelet
Kittlitz's Murrelet
Xantus's Murrelet
Craveri's Murrelet
Ancient Murrelet
Cassin's Auklet
Parakeet Auklet
Crested Auklet
Least Auklet
Whiskered Auklet
Rhinoceros Auklet
Horned Puffin
Tufted Puffin
Pigeon Murrelet
Iceland Gull
Black-headed Gull

PIGEONS TO SWIFTS

White-crowned Pigeon
Red-billed Pigeon
Spotted Dove
Ground Dove
Inca Dove
White-fronted Dove
Thick-billed Parrott
Mangrove Cuckoo
Flammulated Owl
Hawk Owl
Snowy Owl
Gerruginous Pygmy Owl
✓ Spotted Owl
Great Gray Owl
Pauraque
Blake Swift
Chimney Swift
Vaux's Swift
White-throated Swift
✓ Short-eared Owl
Smooth-billed Ani
Groove-billed Ani

YELLOWSTONE FIELD RESEARCH EXPEDITION IV

Report prepared by Frank C. Craighead, Jr.
Environmental Research Institute

I attended Yellowstone Field Research Expedition IV with a number of objectives in mind, the principle one being to determine the feasibility of telemetering temperature conditions of the winter environment of the Brine fly (Ephydra brucei). A homemade temperature probe¹ consisting of a transistorized transmitter pulsed by a thermistor with a 70⁰ F. resistance of 100,000 ohms was used to telemeter changing temperatures of the Brine fly environment. This provided an approximate accuracy of 1⁰ F. A colony of flies at Anemone Geyser was selected as a suitable spot for the experiments. The data gathered have not yet been analysed. However, temperatures were telemetered for a distance of one-half mile employing this transmitter with an output of approximately 90 mw and a 1 watt walkie-talkie receiver. The work revealed that with this simple ^{and inexpensive} equipment it would be entirely feasible to continuously telemeter conditions of temperature, light intensity and humidity from nearby geysers to the barracks a mile away. With a little more sophistication, the data could be automatically recorded. Such a system could be set up in subsequent years to gather environmental data relative to both plant and animal microclimates. The area is particularly well suited for such studies.

The entire temperature probe including the 8.4 volt mercury penlight battery was encapsulated in silastic 882. This protection was later removed from the thermistor to see if the response to temperature changes would be altered. The thermistor was sprayed with a waterproof material, but un-

1. Constructed by Hoke L. Franciscus (WSELV) Carlisle, Pennsylvania, Environmental Research Institute.

fortunately this combination of heat and caustic properties of the water disintegrated the seal and altered the resistance of the thermistor. Information on both encapsulating and future design was obtained.

One finding of interest was the considerable and rapid variation in temperature of both the Brine fly egg mass in the air and the water habitat of the fly itself. This led me to check the environment simultaneously with two thermometers. An example may be of interest:

Over a forty minute period air temperatures at the egg mass one inch above the water level varied from 63° F. to 86° F. for a difference of 23° F. Eight inches from this same egg mass and one inch above the water, the temperature varied from 77° to 92° F. during the same period--a variation of only 15° F. The air temperatures during an eight minute period varied by 13° F. and at the same time water temperatures varied 7° F. or from 124° to 131° F. On occasion temperatures at the egg mass rose and fell 3° to 5° F. in less than a one minute interval. Both air and water temperatures were influenced by the degree of geyser activity and the direction and velocity of air movement. Ambient temperatures were relatively mild (24° -- 35° F.) during the time temperatures were recorded. With surrounding temperatures well below zero, the temperature extremes of the Brine fly environment over a 24 hour period might be considerably greater.

Pertinent information relative to the adaptations of life to exotic environments might be obtained by conducting an intensive study of this

subject. A more sensitive temperature recording instrument, possibly accurate to $1/2$ to $1/10$ of a degree, might be desirable.

In addition to the work on the Brine fly environment, I took the temperatures of the habitat of some water algae, as well as nearby land lichens. Water and soil temperatures were also recorded where isolated areas were free of snow and where sedges and water cress were being utilized by elk and buffalo.

Another objective was to immobilize a grizzly bear that we had tracked into hibernation by means of radio. The grizzly went into hibernation November 5, 1963. A reconnaissance of the den indicated that immobilizing the grizzly in order to obtain a blood sample would be too dangerous for both the grizzly and the researchers. The deep snow and a right angle turn in the den tunnel made it impossible to immobilize the bear without going deep into the den.

We had planned to reinstrument the grizzly if possible, but instead immobilized an elk in the Lamar Valley and instrumented it to obtain information on elk movements on the winter range. This initiates a radiotracking phase of an elk research program involving the National Park Service, the Montana Cooperative Wildlife Research Unit, and the Environmental Research Institute.

Of decided value to me was the opportunity to meet and talk with scientists from other fields, to observe their experiments first hand and to participate in the evening seminars. From this I obtained at least three ideas on how their research methods and equipment could be adapted to some of my own research programs.

This was an extraordinarily well conducted and planned program, yet quite informal and flexible. It was evident to me, and I believe

to all who participated, that there was great merit in using this unique area for atmospheric research. Of equal value was the opportunity to become familiar with the research work of the participants. There seems no doubt but what findings of value and interest are coming and will continue to appear from research conducted in this area.

November 24, 1964

Dr. Vincent J. Schaefer
R.D. #3 Box 36
Schenectady, N. Y. 12306

Dear Vince:

We had a prolonged stay in Yellowstone as the final snows that put the grizzlies in hibernation were late in arriving. However, we successfully tracked two grizzly families to their hibernation dens.

I arrived home just a few days ago and found your forms for the Yellowstone Expedition. I filled these out as requested and sent them on to you. Both John and I hope that we can spend a week or so in Yellowstone this winter.

I assume that you already have lined up the people for the various periods this winter. Just in case you have a cancellation, I thought I might mention someone who could make some interesting contributions to your program. Mr. C. Pen Edwards and his associates at the electronics laboratory in Bozeman are doing some very interesting work in the telemetering of a number of variables that effect avalanching. They are, also, involved in a number of other projects involving the collection of meteorological data. I think that some of their work would be of great interest to you and believe it would be well worthwhile to invite Pen or one of his associates to the Expedition this winter.

In case you are interested or have an opening, Pen's address is as follows:

Mr. C. Pen Edwards
Electronic Research Laboratory
Montana State College
Bozeman, Montana.

I am looking forward to meeting with you and the Kettering people at your convenience sometime this fall or winter. I am enclosing a kodachrome slide taken in the canyon when you visited us this summer. Have you sent out a report on last year's expedition? I would be interested in seeing one if you have any available.

Sincerely,

Frank C. Craighead, Jr.

FCCJR/rwg
enclosure

February 22, 1964

Dr. Vincent J. Schaefer
Atmospheric Sciences Research Center
R.D. #3 Box 36
Schermerhorn Road
Schenectady, New York

Dear Vince:

I am enclosing a copy of my Yellowstone report but have not been able to include photographs as I had hoped. There was a mix-up at the Geographic regarding these pictures when a new man took over while my contact was on vacation. I will be able to provide you with black and white photographs, but it may be another week to ten days before I can get them. While in Washington this week, I discussed your interest in preparing a Geographic article with several members of the staff. My suggestion is that you either write or see Mr. Chuck Allmon - Illustrations Division. If you send material to him, it would be well to describe the subject of an article in a few short paragraphs and send a representative selection of pictures. If you visit the Geographic, it would be well to see not only Chuck but Mr. Herb Wilburn - Chief Illustrations Division - and Mr. Andy Brown of the editorial staff.

If I can be of any further help to you in this matter, don't hesitate to let me know as I will be making trips to Washington fairly regularly this winter.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg
encl.



STATE UNIVERSITY OF NEW YORK
ATMOSPHERIC SCIENCES RESEARCH CENTER



Office of
Dr. Vincent J. Schaefer
R.D. 3 Box 36
Schenectady, N. Y. 12306

February 29, 1964

Dr. Frank C. Craighead, Jr.
President, Outdoor Recreation Institute
Route #1
Boiling Springs, Pennsylvania

Dear Frank:

I deeply appreciate receiving from you and John the "Field Guide to the Rocky Mountain Wildflowers." This fills a long felt need and you may be sure it will be well used! Lois and I have been frustrated for a long time by not having a handy guide available while in the West. As soon as I opened it I forgot time for an hour or more as I checked up on a host of flowers I had found in the San Francisco Peaks area of northern Arizona. You didn't fail me at all!

Many thanks for your report and for the information relative to National Geographic. I hope it may be possible to see you this summer or fall. Do you plan to be at your Moose, Wyoming, Research Laboratory this summer?

Sincerely,

Vincent J. Schaefer

Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center
VJS:k

*Pictures
etc?*

March 7, 1964

Dr. Vince Shaefer
R.D. 3 Box 36
Schenectady, N.Y. 12306

Dear Vince:

I am enclosing two photographs that you may wish to use in your report. Number 1. is a close up of the temperature probe or transmitter. It is encased in Dow-Corning Silastic 882. Number two shows the hand-held walkie talkie transceiver used to pick up the signal pulsed by the thermistor. Temperature conditions in the hot spring were telemetered a distance of $\frac{1}{2}$ mile for two days . I have not yet received the print I ordered showing an elk being instrumented. It will not now arrive before I leave for the Wildlife Meetings in Las Vegas. If you would like this picture drop me a note and I will send it to you on my return.

Both John and I are planning to continue with our work in Yellowstone this summer. We have not yet worked out all the details, particularly the financial ones but I am sure you will find me at my cabin at Moose. I hope that we can arrange to get together this summer if not sooner.

Sincerely,

Frank C. Craighead Jr.



STATE UNIVERSITY OF NEW YORK
ATMOSPHERIC SCIENCES RESEARCH CENTER

Office of Dr. Vincent J. Schaefer
R.D. 3 Box 36, Schenectady, N.Y. 12306
February 10, 1964



Dr. Frank C. Craighead, Jr.
Route #1
Boiling Springs, Pennsylvania

Dear Frank:

I greatly appreciate the fine cooperation you and the rest of the fellows gave me during the fourth annual Yellowstone Field Research Expedition held at Old Faithful January 7 - February 4, 1964. I hope you enjoyed the Expedition and Seminars as much as I did.

Now that the Expedition is over I have the job of paying the bills and writing a report. Your cooperation in helping me finish these necessary chores will be deeply appreciated. Please send me by return mail the following:

1. A signed and dated statement (original and 2 copies) of any expenses you incurred relative to the travel to and from Old Faithful that you cannot cover from other sources. Include, if possible, receipts. If no claim is contemplated a note to this effect will be welcome. Statement should be made to

✓ { The Research Foundation of State University of New York
c/o Dr. Vincent J. Schaefer
R.D. 3 Box 36 - Schermerhorn Road
Schenectady, New York 12306

2. A brief report in duplicate covering your activities and any preliminary findings you would like to report at this time. One to three typewritten pages will be about the right length. If necessary include inked charts of good contrast (1 of each) such as you would send for publication.

In the event I am successful in having the expedition grant renewed by NSF I'll contact you sometime during the coming Fall.

I look forward to seeing all of you from time to time in various places.

Again many thanks for your help!

Sincerely,

Vince Schaefer
Vincent J. Schaefer

Director of Research, ASRC
Leader, Yellowstone Field Research Expeditions
VJS:k

February 10, 1964

The Research Foundation of
State University of New York
c/o Dr. Vincent J. Schaefer
RD 3 Box 36 - Schermerhorn Road
Schnedectedy, New York 12306

Dear Vince:

I very much enjoyed my participation in the fourth annual Yellowstone Field Research Expedition held January 7 to February 4, 1964.

This proved to be a very rewarding experience as I was able to test some of my equipment for telemetering environmental data and in the process gathered some interesting information. I obtained numerous ideas on the use and application of the equipment and research technics employed by other participants. This will prove quite helpful to research projects the Institute is conducting.

I found the association with scientists from other fields to be quite stimulating. I also for the first time fully realized the uniqueness of the Old Faithful area for conducting atmospheric research. My general observations and my discussions with the scientists led me to believe that valuable scientific contributions are resulting from this program.

I was impressed with the efficient manner in which you organized and conducted the expedition while providing individual freedom and flexibility of work.

At this time I will enclose only the expense statement and receipts you requested. I will shortly send you a report covering my activities and preliminary findings.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

encl.

STATEMENT

To: Research Foundation of State University of New York
c/o Dr. Vincent J. Schaefer
R.D. 3 Box 36 - Schermerhorn Road
Schenectady, New York 12306

From: Dr. Frank C. Craighead, Jr.
Route #1
Boiling Springs, Pa.

Subject: Expenses incurred in travel from Boiling Springs, Pa.
to Old Faithful, Yellowstone National Park, January
7 to February 4, to participate in the Expedition of
the Atmospheric Sciences Research Center.

My expenses incurred relative to travel to Old Faithful
are as follows:

Air Travel (ticket)	\$ 266.96
Excess baggage(equipment)	14.50
	<u>2.25</u>
Total	\$ 283.71
Motel	<u>10.00</u>
Total Expenses	\$ 293.71

These are expenses that I personally paid for, and I would
appreciate it if you would reimburse me for the amount of
\$ 293.71.

Dr. Frank C. Craighead, Jr.

February 10, 1964

Dr. Frank C. Craighead, Jr.



STATE UNIVERSITY OF NEW YORK
ATMOSPHERIC SCIENCES RESEARCH CENTER



Office of
Dr. Vincent J. Schaefer
R. D. 3 Box 36
Schenectady, N. Y. 12306

December 16, 1963

REMINDER

To: PARTICIPANTS OF YFRE-4
From: Alice K. Klopfer, Secy to Dr. Schaefer
Subject: Participant's Report for Dr. Schaefer's Interim Report 1964

Please plan to submit to Dr. Schaefer, as soon as possible after the termination of your participation in the 1964 Yellowstone Expedition, an ORIGINAL AND ONE CARBON COPY of your typewritten report.

A final copy as it will be included in the Interim Report will be mailed to you for your approval before it is sent to the printer.

AKK



STATE UNIVERSITY OF NEW YORK
ATMOSPHERIC SCIENCES RESEARCH CENTER



Office of
Dr. Vincent J. Schaefer
R. D. 3 Box 36
Schenectady, N. Y. 12306

Telephone
Area Code 518
EX-3-8978
December 13, 1963

Dr. Frank C. Craighead, Jr.
President, Outdoor Recreation Institute
Route #1
Boiling Springs, Pennsylvania

Subject: 1964 Yellowstone Field Research Expedition (YFRE-4)

Dear Frank:

I am indeed pleased to learn that you will join us at Yellowstone in late January and will be equipped to explore the possibility of telemetering ambient temperatures. As you probably know, the brine fly environment in which I have a deep interest ranges from 90° to 140°F. Your slides on your bio-telemetry work will be most appropriate for one of our nightly research seminars.

We will plan to assume your travel costs, but it will suit our purposes best if you can arrange to submit your expenses at the end of your period of participation. If this is not convenient (and I am aware of some of the problems), we may be able to provide you with flight tickets. If the latter is needed, please send immediately your flight information to:

Schenectady Travel Bureau, Inc.

328 State Street

Schenectady, New York 12305

attention of

Mrs. Robert J. Hardter

or

Mr. Robert J. Hardter, President

or

Mr. Joel Epstein, Vice President

Telephone Number: FR-7-8506

Office Hours:

Mon., Tues., Wed., Fri. - 9:00 a.m. - 5:00 p.m.

Thursday 9:00 a.m. - 9:00 p.m.

Saturday 10:00 a.m. - 12 noon

The Schenectady Travel Bureau will send you the tickets and charge them to the account of:

The Research Foundation of

State University of New York at Albany

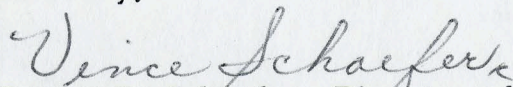
via Dr. Vincent J. Schaefer, Director of Research, ASRC

R.D. 3 Box 36, Schermerhorn Road

Schenectady, New York 12306

I look forward to meeting and working with you.

Sincerely,



Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center

VJS:k

P.S. - You may be interested in the enclosed report of another program I have underway.

Enclosure: ASRC Publication Number 19

cc:(with encl) Dr. John J. Craighead

cc:(no encl) Mr. Joel Epstein, Schenectady Travel Bureau, Inc.

Route # 1
Boiling Springs, Penna.
Dec. 6, 1963

Dr. Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center
R.R. 3, Schermerhorn Road
Schenectady 6, N.Y.

Dear Dr. Schaefer:

Thank you for your letter of November 30 inviting me to join your Yellowstone Expedition for the period January 28 - February 4, 1964. I would be delighted to participate in this program and look forward to meeting you and the other members in January.

I have been experimenting with equipment for telemetering ambient temperatures as well as light and moisture conditions of the environment. This has been pursued in connection with our grizzly bear study and radiotracking work. I am sure that this might have some valuable application in connection with your brine fly research. It will be interesting to see what we can do in the hot water zone. I am working with a number of different temperature sensing units but the best one from the standpoint of range (distance) is most accurate between twenty and ninety degrees fahrenheit. I expect to have several other temperature transducers by January that will be accurate over a wider range of temperatures.

I will plan to bring a variety of telemetering equipment with me and will also bring along some colored slides illustrating some of the bio-telemetry work John and I have been doing.

I will represent the Outdoor Recreation Institute and perhaps the National Geographic Society, at least informally. At the present time I have no funds for travel and thus would appreciate it if travel funds could be arranged.

Sincerely,

Frank C. Craighead Jr.

Route # 1
Boiling Springs, Penna.
Dec. 6, 1963

Dr. Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center
R.R. 3, Schermerhorn Road
Schenectady 6, N.Y.

Dear Dr. Schaefer:

Thank you for your letter of November 30 inviting me to join your Yellowstone Expedition for the period January 28 - February 4, 1964. I would be delighted to participate in this program and look forward to meeting you and the other members in January.

I have been experimenting with equipment for telemetering ambient temperatures as well as light and moisture conditions of the environment. This has been pursued in connection with our grizzly bear study and radiotracking work. I am sure that this might have some valuable application in connection with your brine fly research. It will be interesting to see what we can do in the hot water zone. I am working with a number of different temperature sensing units but the best one from the standpoint of range (distance) is most accurate between twenty and ninety degrees fahrenheit. I expect to have several other temperature transducers by January that will be accurate over a wider range of temperatures.

I will plan to bring a variety of telemetering equipment with me and will also bring along some colored slides illustrating some of the bio-telemetry work John and I have been doing.

I will represent the Outdoor Recreation Institute and perhaps the National Geographic Society, at least informally. At the present time I have no funds for travel and thus would appreciate it if travel funds could be arranged.

Sincerely,

Frank C. Craighead Jr.



STATE UNIVERSITY OF NEW YORK
ATMOSPHERIC SCIENCES RESEARCH CENTER



Office of
Dr. Vincent J. Schaefer
R. 3 Bx. 36
Schenectady, N. Y. 12306

November 30, 1963

Dr. Frank C. Craighead
Route 1
Boiling Springs, Pennsylvania

Subject: ASRC Yellowstone Field Research Expedition (YFRE-4)

Dear Frank:

A letter from your brother John indicates you might have an interest in joining our Yellowstone Expedition this winter.

A spot has just become available since one of the scheduled participants has had a change in plans, hence this letter. The period available is January 28 - February 4, 1964.

Enclosed is pertinent information to help you make a decision. In the event you require travel expenses I believe this can be arranged. All expenses at Yellowstone are covered by the grant under which we operate.

John suggested you might be interested in developing a technique for telemetering air temperature in the hot water zone where our brine flies live. This would be a very interesting as well as important project.

I look forward to hearing from you.

Sincerely,

Vincent
Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center
VJS:k

under separate cover: ASRC Publication Number 13 re YFRE-3
enclosures: Information Memorandum. Questionnaire with return envelopes addressed to vjs and akk.

INFORMATION MEMORANDUM

4th Yellowstone Field Research Expedition
January 7 - February 4, 1964

Prepared by
Vincent J. Schaefer
Expedition Leader, ASRC

RENDEZVOUS

All participants should meet in the Hotel Bonneville, Idaho Falls, Idaho, not later than 0730 JANUARY 7, 14, 21 or 28, according to period of participation.

It is recommended that, in so far as arrival schedules permit, participants plan to spend Monday night in Hotel Bonneville.

Please inform me, not later than DECEMBER 15, your plans for arrival.

Rented cars will be used to go from Idaho Falls to West Yellowstone, leaving 0800, Tuesday. The same cars will be driven back to Idaho Falls, arriving Tuesday evening.

There is no bus service beyond Idaho Falls.

At West Yellowstone, 110 miles north of Idaho Falls, transfer will be made to two Snowmobiles for the final leg of 30 miles over the snow.

SNOWMOBILE TRIPS ARE SCHEDULED TUESDAYS ONLY. A participant requiring a non-scheduled trip may make arrangements with HAROLD YOUNG. The minimum charge is \$50 and must be assumed by the participant.

TRAVEL ASSISTANCE

Economy or Coach accommodations should be utilized, where possible, by participants who have indicated a need for travel assistance to and from Idaho Falls.

Meal and Room costs in the Hotel Bonneville, Idaho Falls, should be charged to the account of V. J. Schaefer.

RESEARCH EQUIPMENT

Do not send via Air.

Keep within minimum weight and volume.

All essential equipment that cannot be carried should be shipped ahead, allowing two weeks if possible, by Parcel Post or Truck Freight as follows:

UNDER 40 POUNDS via PARCEL POST:

c/o Mr. Harold Young
P.O. Box 358
West Yellowstone, Montana

OVER 40 POUNDS via TRUCK FREIGHT:

c/o Garrett Freight Lines
Salt Lake City, Utah

routed by way of Pocatello-Idaho Falls-West Yellowstone

Outlets for 110-Volt, 60-cycle power are located at the clearing several hundred yards from Old Faithful. Outlets are also available at the Bunkhouse, Cold Room and Ranger Station. Due to the wide variety of interests of the participants it is not possible to have "back up" equipment. Therefore each participant should have suitable tools, etc., for fixing his equipment.

SEEDING MATERIALS

We plan to have a supply of dry ice on hand throughout the period, to be used for seeding when specific tests of other materials are not planned.

PHOTOGRAPHIC MATERIAL

In planning for photo supplies, it is suggested that you bring about double your normal quota.

SLEEPING AND EATING

Sleeping bags are supplied by ASRC.

Meal periods: 0600-0700; 1200-1300; 1800.

WEARING APPAREL

Warm boots are essential. I use 10"-high, rubber-bottom, leather-top, Bean Boots with innersoles obtainable from L. L. Bean, Freeport, Maine. \$14.85. They should be sufficiently large to accommodate 2 pairs of wool socks. Several extra pairs of socks are recommended.

Several layers of wool clothing are desirable. Almost all of us use lightweight, so-called "thermal" underwear. A windproof parka will be found useful, as well as a woolen or insulated jacket reaching to the knees. Ear protection is important, as well as a woolen scarf. Temperatures during January-February 1963 ranged from -45° to $+54^{\circ}$ F. Woolen gloves protected with leather mittens are recommended.

SEMINARS

Seminars are held every evening. To help you in telling us something about your current research activities, bring with you

illustrative material or other items. A small library of books pertaining to Yellowstone will be available.

GENERAL INFORMATION

The animals in the area are wild and must be considered dangerous at all times.

The hot springs in some cases are superheated and some have thin rock projections that may collapse.

Temperatures are generally below 0°C . and at times drop to -45°C .

The responsibility of coordinating winter research in Yellowstone Park has been assigned by the National Park Service to the Atmospheric Sciences Research Center of the State University of New York at Albany.

Participants in the Yellowstone Field Research Expedition must adhere to a few simple rules established by the Park Service and reviewed by the local rangers, Gordon Boyd and Ken Linfors. All natural features are to be protected from damage, so research activities must be planned accordingly. Plans for outdoor experiments should be discussed with the expedition leader.

SCHEDULE OF PARTICIPANTS
(Several more will probably be added)

January 7 - 14, 1964

Begun
Buxton
Cronin
Tank
Zopf

January 7 - January 21

Falconer
Goyer
McLean
Watson

January 14 - January 21

Gokhale
Grant
Hagen Henderson
Hindman
Layton
Williams

January 21 - January 28

Blanchard
Draginis
Eaton
Goetz
Lodge ~~plus 2 others~~ Fischer
Rinker Ryan
Saint-Amand
Zettlemoyer

January 21 - February 4

Mee

January 28 - February 4

~~Day~~ Beaumont or Peak
 Lamar
Miller
Moore Mahoney
Sartor
Scott
Went

Vincent J. Schaefer, Leader

November 20, 1963

Dr. Vincent J. Schaefer, Director of Research
Atmospheric Sciences Research Center
R.D. 3, Box 36
Schenectady 26, New York

Dear Vince:

I know you will be interested to learn that we finally tracked a grizzly bear "into hibernation" with the use of our radio tracking equipment. It went into hibernation at the head of Trout Creek just over the divide from Old Faithful. We hope to make one or more visits to the den this winter but plans are not firmed up yet.

I discussed your program with my brother, Dr. Frank Craighead, and he expressed a desire to join your group for about a week this winter. I wondered if you had completed your plans for participants and whether you might wish to consider Frank.

In addition to checking on the black and grizzly bears with Maurice and me he is interested in attempting to telemeter temperature in micro environments. I described your brine fly study and suggested that he might attempt to telemeter the air temperature just above the water surface. This can be done without too much difficulty and a continuous record obtained. It might be of interest in connection with your brine fly study.

I cannot speak for Frank and do not know whether he would be able to assemble the equipment to do this but believe that even a pilot experiment along these lines might be very worth while. If this suggestion interests you, Frank could be contacted at: Dr. Frank C. Craighead, Route 1, Boiling Springs, Pennsylvania.

Maurice and I are certainly looking forward to visiting with your group this winter. The same bear we immobilized and ear tagged last year is back in the den. The three of us crawled back in the den with her and attempted to get another blood specimen but were unsuccessful. We had quite a time. Will give you the details when I see you.

Kindest personal regards,

John J. Craighead,
Leader

JJC:AB

Telemetry of Dolphins

Mackay's excellent report [*Science* 144, 864 (1964)] on radio telemetry of physiological variables of an untethered dolphin prompts me to call attention to an earlier physiological measurement made on a free-swimming porpoise by other means [C. E. Hendrix, *U.S. Naval Ordnance Test Station Tech. Note* 304-50 (1960)]. The purpose of this particular measurement was to determine skin temperature, but the principle appears applicable to other slowly changing variables for which adequate transducers exist.

C. E. HENDRIX

*Space-General Corporation, 9200
East Flair Drive, El Monte, California*

16 June 1964

*Suppose this
referred article
you wanted -
never could find
it. Probably destroyed it*

Institute of Technology) presented in molecular terms the mechanisms and structures involved in virus multiplication. The identifiable specific effects of the introduction of the poliovirus genome were described as the formation of two virus capsid proteins, inhibition of host cell RNA, destruction of host cell polyribosomes, direction of polymerase production by virus specific polyribosomes, and organization of viral RNA-associated lipoprotein structures in the cytoplasm. Samuel Dales (Rockefeller Institute) traced infecting vaccinia viral DNA under conditions specifically affecting initial phagocytosis, uncoating of the viral core, and release of DNA for incorporation within the cytoplasmic matrix. By studying the herpes virus in an insensitive tissue culture system, Bernard Roizman (Johns Hopkins University) approached the mechanisms of persistence and recurrence of herpes virus in the immune host. He postulated a "static state" of persistence in which virus multiplication can be reversibly arrested at a specific stage early in the multiplication cycle.

The majority of papers dealt with various aspects of relationships be-

March 31, 1964

Dr. J. Doyne Sartor
National Center for Atmospheric Research
Boulder, Colorado

Dear Dr. Sartor:

Thanks for your latest paper on the "Electromagnetic Emission From Warm Clouds", as well as the information you sent me relative to the organization of the National Center for Atmospheric Research.

I greatly enjoyed my visit with you this winter and hope that we will have a chance to get together in Yellowstone again. I am enclosing a paper that may be of interest to you.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

encl.

February 18, 1965

Dr. Vincent J. Schaefer
R.D. 3 Box 36 - Schermerhorn Road
Schenectady, New York 12306

Dear Vince:

I have just been roughing out a report of the week's work in Yellowstone and will send you the completed copies within a week. I am having a few black and white photographs made up and will mail these at the same time. The bio-telemetry work we did will be of value in our later studies, and I think we picked up a bit of information hitherto unknown. I have only checked the literature briefly but as far as I can tell there is no mention of elk using the dwarf mistletoe of lodgepole as a winter food. The conditions at Old Faithful are ideal for initial experiments in telemetering physiological variables and we are planning to undertake a program of this nature next winter.

I am enclosing travel expense vouchers and receipts. If you need any additional information, please let me know. I appreciated the opportunity to participate in your Research Expedition and greatly enjoyed the companionship of the visiting scientists. I expect to spend the next week in Washington, and I am tentatively planning to return to Yellowstone during the month of April. I am looking forward to seeing you this spring or early summer before you head west.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg
enclosures

April 9, 1965

Mr. Vincent J. Schaefer
R.R. 3, Schermerhorn Road
Schenectady, N.Y. 12306

Dear Vince:

I am enclosing an article written by my son, Lance, that may interest you in that it somewhat parallels the type of work you are doing through your Natural Sciences Institute. Each summer we have had between 4 and 7 highschool students working on research projects in Yellowstone. This, of course, is in addition to the undergraduate and graduate students. Some of these highschool students are now working on research projects of their own leading to advance degrees.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg
enclosure

December 1, 1970

Mr. Frederick G. Vosburgh
Vice President and Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

Through the December issue of the National Geographic Magazine I learned of your retirement as editor of the magazine.

I want to wish you good health and pleasure in your retirement. I hope you will find the opportunity to fulfill many of your personal desires that your busy career has undoubtedly prevented you from enjoying.

John and I are sorry to see you resign, but know that your successor, Gil Grosvenor, will continue the fine job that you have done for the Geographic over the years. I especially want to thank you for the interest you have shown in the articles that John and I have written for the Geographic, and for the very excellent editing and suggestions you have always made. We greatly appreciate the help and consideration that you have given our work, as well as our articles. Both of us look forward to seeing you when we again return to the Geographic. I assume that you will be spending at least part of your time in the offices of The Society. At any rate, I will look forward to seeing you again on one of my now infrequent visits to Washington.

Regards,

Frank C. Craighead, Jr.

FCC,Jr/pjf

March 10, 1970

Mr. Frederick G. Vosburgh
Vice President and Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

We received the 1500 reprints of our white-water article published in the February 1970 National Geographic Magazine. We have already distributed a large number of these and are daily getting requests for wild river information and for reprints.

We were pleased with the article and believe that it has stimulated considerable interest in the preservation of our wild and scenic rivers. The follow up with the television special has made quite an impact and it has been especially helpful to have reprints to send to the many people who have written us relative to the television film.

Thanks very much for your generous help in providing us with the reprints.

Best regards,

Frank C. Craighead, Jr.

FCC,Jr/pjf

A
d
O
G

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND EDITOR

November 28, 1969

Dr. Frank C. Craighead, Jr.
P. O. Box 156
Moose
Wyoming 83012

Dear Frank:

It is a pleasure to tell you that your request for 1500 reprints of your Wild Rivers article in the February Geographic has been approved. The \$850 cost will be borne by the Society so that you may have these for the scientific purpose set forth in your letter of November 20.

I am always glad to see another article by the Craigheads appear in the National Geographic and feel sure that both your Wild Rivers story and the television program on February 10 will meet with an enthusiastic reception as valuable contributions to conservation.

Yours sincerely,

F. G. Vosburgh

FGV:bts

*Best wishes of the season
to you and John and
your five families.*

November 20, 1969

Mr. Frederick G. Vosburgh
Vice President and Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

The National Geographic article on wild rivers accompanied by the television show on the same subject will result in a tremendous increase in our correspondence requesting information on this subject. In the past, you have very generously provided John and me with reprints of our Geographic articles for distribution to the scientific community and to others. I wonder if you could do this again for us concerning our forthcoming article on, Wild Rivers? You sent us 1500 reprints of our grizzly bear article and we had no difficulty in distributing this number to interested parties. Both John and I would greatly appreciate it if we could again receive reprints of our most recent Geographic article.

We have enjoyed doing this, Wild River, article for the National Geographic Magazine. We certainly appreciate your interest in it as well as your recognition of the tremendous importance of informing the public and of doing something about our wild rivers before its too late. I am certain that you will receive a very favorable response to our article on this subject. John and I look forward to seeing it in print and hope you will find it possible to again supply us with reprints.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND ASSOCIATE EDITOR

May 17, 1966

Dr. Frank C. Craighead, Jr.
Environmental Research Institute
Route #1, Boiling Springs
Pennsylvania

Dear Frank:

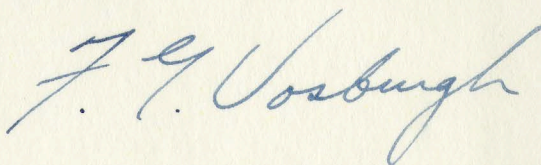
As you requested yesterday on the phone, we have ordered 1500 reprints of the excellent Grizzly article by you and John in the August Geographic. These will be made available free of charge for scientific use by the authors and Montana State University. They will be ready probably about the last week in July.

At your convenience please send us the address, or addresses, to which they should be sent.

Many thanks to you and John for your usual careful cooperation in preparing this contribution for publication. I believe this is your ninth Geographic article and I hope there will be many more.

Best regards to you and John and to your fine families.

Sincerely,



FGV:hc

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND EDITOR

September 22, 1969

Mr. Frank C. Craighead, Jr.
Post Office Box 156
Moose, Wyoming 83012

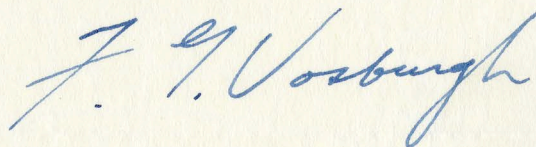
Dear Frank:

It's always good to hear from the Craigheads, and I was interested to learn from your letter of September 12 and enclosure that Lance expects to be assigned to Peace Corps work in the Fijis.

As I am writing him, I think the prospects of publishable material are sufficiently good to warrant our providing film, loaning camera equipment, and perhaps providing some expense money to give him a little added mobility.

I look forward to seeing soon the results of the work you and John have done on the Wild Rivers. Best regards to you both and your families.

Sincerely,

A handwritten signature in blue ink, reading "F. G. Vosburgh". The signature is written in a cursive style with a large, sweeping "V" and a long, trailing "h".

FGV:crd

September 11, 1969

Mr. Fredrick G. Vosburgh
Vice President and Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

I have applied to and been accepted by the Peace Corps for a secondary education program in the Fiji Islands. Having heard of the National Geographic Society's interest in the Peace Corps and the job it is doing, I wonder if you would be interested in supporting me to write an article from a volunteer's point of view.

My assignment at this time is not well defined. I will begin training in Hawaii on October 14 and my assignment will be determined there. I am currently slated to teach biology in Fiji's Secondary School system and will have other work when school is out.

I wrote an article several years ago for the National Geographic School Bulletin, and ofcourse have taken many slides and movie shots for the Geographic. Several of my slides (stills) were printed in, "Grizzly" and some will appear in, "Wild Rivers". Some of the movie scenes I shot and helped to shoot will also be used in the Wild Rivers TV Special.

If you would be interested in an article about the Peace Corps from the inside, I would be delighted to hear from you. If not, I would be pleased to have a photographic assignment from the National Geographic if there are other subjects in Fiji that I could cover.

I had roughly considered following my personal experiences in training and on the job with perhaps my impressions of other jobs the Peace Corps is doing in Fiji. Any suggestions you might have would be very helpful.

Sincerely,

Lance Craighead

LC/p

September 12, 1969

Mr. Fredrick G. Vosburgh
Vice President and Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

As you have perhaps already learned from Gorden Young, we managed to meet the deadline on the Wild Rivers article. John and I wrote it considerably longer than it will probably appear in the magazine with the idea that we would edit and cut, and that this was easier to do than to try to add more material at a later date. As soon as we receive the retyped copies of the article from Gorden, John and I will concentrate on editing and polishing the article for final publication.

The picture selection has not yet been made as both John, I and Dick Durrance took quite a few stills during our last trip on the Salmon River. We also had some material from this trip that we felt was important to include in the article. We are looking forward to getting out an interesting and informative article on the subject that we feel has both reader interest and national significance for people of our time and future generations.

Under separate cover, my son, Lance, has written you a letter inquiring as to your possible interest in pictures and an article on the Fiji Islands and his participation in the Peace Corps activities in that part of the world. If you are interested in Lance's proposal, I think that probably all he would need would be camera equipment and film.

We have completed almost all of the movie sequences for the, Wild Rivers, television program and believe that we have material for an excellent show. We are now looking forward to the time when we can help with the final editing stages.

Regards,

Frank C. Craighead, Jr.

FCC,Jr/pjf

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

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

UNIVERSITY OF MONTANA
MISSOULA, MONTANA 59801
May 11, 1967

Mr. Frederick G. Vosburgh
National Geographic Society
16th and M Sts., N.W.
Washington, D. C. 20036

Dear Mr. Vosburgh:

I just had a very interesting session with one of your new writers, Mr. Sherwood Kahn. We cleared up some points in the golden eagle article and I think it should now be in good shape. I enjoyed very much working with Mr. Kahn. I think that our getting together briefly did speed up the work.

This is really just a note to let you know that I would like to place an order for reprints of the golden eagle article. I believe between us Frank and I received 1,500 reprints of the grizzly bear article. Frank and I between us could very easily use as many reprints of the golden eagle article as we received on the grizzly bear. I know that Frank will want to distribute a large number and I have a mailing list already prepared. Please let me know if I should make a more specific request for reprints.

I hope you will like the golden eagle article. I want to take this opportunity to thank you and your staff for making it possible for Charlie and Derek to take the photographs. Bill Garrett certainly deserves a lot of credit for his help in inspiring the boys. They are all fired up to begin another photographic adventure.

If you and your wife by any chance should come west this summer, please drop in to see us in Jackson Hole. I am relatively free of my research responsibilities this summer and can guarantee you some good fishing.

Kindest personal regards,

John J. Craighead

JJC:AB

ENVIRONMENTAL RESEARCH INSTITUTE
Field Station
R #1
Boiling Springs, Pa.

June 14, 1966

Mr. Frederick G. Vosburgh
Vice-President & Associate Editor
National Geographic Society
Washington, D. C. 20036

Dear Mr. Vosburgh:

Both John and I wish to thank you and other members of the Geographic staff for making available to us reprints of our August 1966 article on the grizzly bears. We anticipate a considerably greater demand for these than for our last article and plan a wide distribution to scientists and others interested in the subject.

I would appreciate it if you would have one-half of the reprints sent to me - box 156, Moose, Wyoming - and the other half to Dr. John Craighead, Leader, Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana. I enjoyed working with members of the Geographic staff while getting the article in final form for publication. I am looking forward to seeing this in print and, once again, I wish to thank you for your effort and influence in expediting this publication.

Sincerely,

Frank C. Craighead, Jr.

FCCJr/rwg

August 3, 1966

Mr. F. G. Vosburgh
Vice President and Associate Editor
National Geographic Society
Washington, D.C. 20036

Dear Mr. Vosburgh:

Your letter of July 1st is at hand and I wish to apologize for not answering it earlier. However, I have been out of the office for the last two months and just returned to catch up on the paper work.

You may recall we discussed your letter briefly when I was in Washington; however I think perhaps I should explain a little more fully some plans Frank and I are developing for publishing some of our work on the grizzly bear.

First, your understanding regarding the Life article is correct. The article will be about Frank and me and our work with the grizzly bear and would not be an article we wrote for Life on the subject. Many of the illustrations would be by Life photographers; however we would submit some of our own and we have cleared this arrangement with Dr. Payne.

Our arrangement with the National Geographic is that the Society had first selection rights on all of our photographs taken on the grizzly bear project. After the Geographic has published an article, however, we are then free to use the other pictures and they are returned to us for this purpose.

The writing of a book ~~about~~ the grizzly or about our experiences studying grizzly bears is another thing. We have commitments to a number of supporting agencies to eventually write a number of scientific papers and perhaps eventually a monograph. We plan to seek a grant from the Geographic's Committee on Exploration and Research that will help to finance some of our scientific writing.

We have had a number of requests from publishers to do a popular book on the grizzly bear and eventually we hope to write such a book. We have no immediate plans but several months ago I discussed this with the people in your Book Department. It is possible that we could in the future work out some arrangement to publish a popular version of our work through the National Geographic Society.

The big problem is one of finances and royalties. As you know, I am working on a government salary but Frank is essentially free lancing and it would be necessary for him to be reimbursed for a book of a popular nature. As far as our plans are concerned, we do not anticipate getting to a popular writing on the grizzly bear for a year or two.

You can be sure that when we do, we'll explore the matter in detail with members of the Geographic staff and see if it is feasible to do a book for the Geographic series.

I'm sure you understand that the information we have gathered over the years has been obtained through support from a number of organizations including, of course, the National Geographic. However, we have not been and cannot be wholly committed by any single organizations

Very sincerely,

John J. Craighead

JJC:AB

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND ASSOCIATE EDITOR

April 19, 1966

Dr. Frank C. Craighead, Jr.
Environmental Research Institute
Route #1
Boiling Springs, Pennsylvania

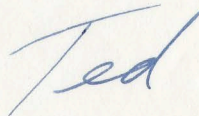
Dear Frank:

Your note of March 29 was appreciated. If I was able to hasten publication of the grizzly bear report by you and John I am certainly glad because this project is fascinating and I know the story will be of great interest to our readers. Melville Grosvenor was most enthusiastic about the picture dummy and I think that the article as now revised and edited conveys, as you say, all the essential facts.

I note your postscript saying you hope to go into a couple more dens shortly, and trust you will keep us up to date so that we can include anything worthwhile that may develop right up to the point of release to the printer. Text changes will probably be possible as late as a month from now.

Best regards to you both and to your families.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ted", with a stylized, cursive script.

FGV:bts

Copy to Dr. John Craighead, Missoula, Montana

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND ASSOCIATE EDITOR

October 6, 1965

Drs. Frank and John Craighead
Box 128, Canyon Station
Yellowstone National Park
Wyoming

Dear Frank and John:

It was certainly a pleasure for Mrs. Vosburgh and me to see you both a few weeks ago, John at Canyon and Frank at the Jackson Hole cabin. We very much enjoyed meeting your fine families and seeing and hearing something of the exciting and important work you are doing with the grizzlies and elk.

I would have written you sooner but for several weeks after our return I was laid up with a bad muscle spasm or charley horse in the thigh. Now that I am back at my desk and beginning to get a little caught up, I have read your manuscript, "Radiotracking Grizzly Bears," and think you have done an excellent job. Andy Brown and other members of our staff may have suggestions for improving it slightly, but I see no need of major revision--except, of course, to bring it up to date and include any important observations and experiences up to the time when winter drops a curtain on your efforts in a month or so.

Meanwhile, I feel that we should indeed make at least partial payment, and I notice that Andy Brown, who is away, has left a notation that he plans to send you a check as soon as he returns on Monday. Perhaps one of you can scribble us a quick note indicating whether you would prefer a check sent you now while you are in Yellowstone, or wait until you return home, and also how the check should be made out--a check for half the total amount to each of you, or one check made out to you jointly, or in some other way.

It was good to know that you are hard at work on the film, and we are all looking forward eagerly to your lecture on December 16 and 17.

I am most anxious to get your grizzly story edited and published and very much hope that we can find a spot for it some time in the first half of next year. I am sure that it will be as deservedly popular as your other memorable contributions to the Geographic.

Drs. Frank and John Craighead

-2-

October 6, 1965

Highest regards to you both and to your families.

Sincerely,

F. G. Vosburgh

FGV:bts

✓ *F.C.C.
Will dictate letter*

National Geographic Society

WASHINGTON, D. C. 20036

FREDERICK G. VOSBURGH
VICE PRESIDENT AND EDITOR

February 13, 1970

Dr. Frank C. Craighead, Jr.
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Frank:

The 1500 reprints of the splendid article by you and John, "White-water Adventure on Wild Rivers of Idaho," published in the February National Geographic, should have reached you by now, since they were scheduled to be shipped from R. R. Donnelley, our printers in Chicago, about February 4. Please let me know if they have not been received. We are happy to provide these for your scientific purposes and trust they will be helpful.

We are getting many fine comments on your article and also on the "Wild River" television program shown on Tuesday night. Bob Doyle, Chief of our Television Service, tells me that the show received a 42% share of the viewing audience, with NBC receiving 16% and ABC 32%. "Wild River" had a 22.7 rating, while NBC had 8 and ABC 17.4. These are the Nationwide Overnight Arbitron results; it will be at least a couple of weeks before we get the Nielsen results.

Best regards to you and John and your families.

Sincerely,

F. G. Vosburgh

FGV:bts

*Sent
letter of
thanks*

June 11, 1971

Mr. John Lavin
Forest Supervisor
Shoshone National Forest
Cody, Wyoming 82414

Dear John,

I was out in the Pacific for about six weeks spending most of the time in the Fiji Islands. I am just now attempting to catch up on back correspondence.

I hope that something can be worked out regarding the transplanting of grizzly bears and I would be interested in helping or participating in whatever way might be possible.

I don't have the addresses of companies that are providing transmitter and receivers that could be used on mountain sheep but I'll see if I can obtain this for you. The radio system that we are using would work well and it might be that we could provide you with some equipment if you are interested. We are heavily scheduled right now in our development of our electronic equipment and I would have to discuss this further with our electronics engineer before I could give you a positive answer.

I am definitely planning to get over to the Clark's Fork sometime this summer but will probably have to fit it in when there is a break in my schedule.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr;mh

October 15, 1971

Dr. C. Wayne Cook
Department of Range Science
Colorado State University
Fort Collins, Colorado 80521

Dear Wayne:

I received your memorandum and the rough first draft of the report of the Wild Horse Advisory Committee. I am rushing to get off on a trip, so will reply to your memorandum now in order to make sure this reaches you by the 22nd. I would vote yes to all of the nine recommendations. There are, however, a few changes that I would suggest in a number of them

In number 1., after "the Tillitt-Sikes spring land," I would put a comma and would add: "land west of upper Crooked Creek and BLM and deeded land on the top of the mountain, north of the uppermost boundary of the present horse range."

In recommendation 7., after "horse food habits," I would add "horse genealogy." I think that it is important that everything possible be done to obtain horses with the mustang that is Barb and Andalusian characteristics.

I will again study the recommendations more at my leisure, and if I have any other changes or suggestions, I will pass them on.

Sincerely,

Frank Craighead

FC/skr

Department of Zoology
University of Georgia
Athens, Georgia 30601
28 May 1971

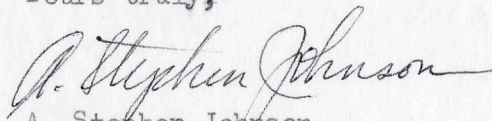
Dr. Frank C. Craighead, Jr.
Environmental Research Institute
Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

I am a graduate student in ecology, studying under Dr. Eugene P. Odum. For my Ph.D. thesis, I am attempting to devise a quantitative rating model for Georgia rivers, based on ecological characteristics, and use it to determine an order of priority for a State Scenic Rivers System. It will be somewhat similar to Dr. Luna Leopold's study of dam sites in Idaho.

I understand that you have done similar work. I would greatly appreciate any suggestions you could give me as to references or other persons with similar interests. I am particularly interested in anything with a quantitative, rather than purely descriptive aspect. Thank you very much.

Yours truly,


A. Stephen Johnson

June 30, 1971

Mr. A. Stephen Johnson
Department of Zoology
University of Georgia
Athens, Georgia 30601

Dear Stephen,

I am sending you a copy of "River Systems, Recreational Classification, Inventory and Evaluation" that my brother and I published in 1962. This includes a rating system and rating forms used in an attempt to quantify the recreational resources of river systems. This may be of value to you in your thesis work.

We have applied this system to evaluate rivers throughout the country and the method has been used to evaluate rivers such as the Cossatot in Arkansas and Hell's Canyon of the Snake. This information was then presented in testimony in Federal Court or at Power Commission hearings.

If you can have a copy made of this I would appreciate it if you would return the magazine. I now have only a few copies remaining. Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr:mh

July 8, 1971

Mr. John Rogers
Environmental Defense Fund
162 Old Town Road
East Setauket, New York 11733

Dear John,

I looked through much of my literature on pesticides and bird poisons without finding anything that might help you with thallium.

Both my brother and I have worked for many years on both the ecology and mechanics of raptor predation. I am sending you several of the reprints I mentioned. In addition to this you might like to look over the book we wrote on the ecology of raptor predation. The title is "Hawks, Owls and Wildlife" and it is published in paperback form by Dover Publications Inc., New York.

If you write to my brother, Dr. John Craighead, Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, Montana you can get a mimeographed report on the ecology of the Golden Eagle by one of John's students, Jerry McGahan. Another paper he could send you is one titled "Food Requirements of the Golden Eagle" by H.R. Fevold and John J. Craighead.

I have only a few publications left that I am sending you so would appreciate your returning them should you find it convenient. I will keep a lookout for references to thallium and if I find anything of interest I will send it along.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr:mh

August 23, 1971

Congressman John P. Saylor
House of Representatives
Washington, D.C.

Dear Congressman Saylor,

I learned from Trev Pevah that you will not get out here this summer. I was looking forward to seeing you and discussing a number of subjects including the research and bear management situation in Yellowstone.

The main purpose of my letter is to tell you that I think your statement "Butchered Wildlife: A Preventable Tragedy" is an excellent summary of the situation in regard to predators. If you have additional copies available of this Congressional Record statement I would very much like to have a few for distribution.

As you perhaps know, my brother and I have spent a good many years working and writing on the mechanics and function of predation both raptor and mammalian. I think that the time has finally come when some changes in control policy can be made. If I can be of any help to you on this subject please let me know.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

August 23, 1971

Dr. Dave Worley
Montana Veterinary Research
Bozeman, Montana

Dear Dr. Worley,

A few days ago I was talking with Dan Quilling at West Yellowstone concerning the control on the grizzly bear and the work being done on the carcasses of those that had to be killed. He mentioned that you had found heavy infestations of trichinosis, about 75% with the grizzly and 25% with the black bear.

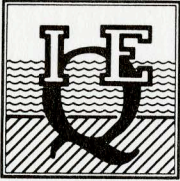
In our early work with the grizzlies the Hamilton Laboratories ran tests for us, and as I recall, we got ^{no} trichinosis or very little. I suggested to Dan that the greater incidence of trichinosis (if this is actually the case) might result from the fact that the bears are cannibalistic and are eating the carcasses of the animals that are killed. Numerous black bear have been killed over the last three or four years and the grizzlies have certainly consumed most of these. Generally grizzlies tend to drive the blacks away, at least until their hunger is satisfied thus the higher percentage in grizzlies. This might be a factor which you might want to explore relative to the spread and high incidence of infection in these animals.

I would appreciate any information you might send me on the trichinosis work you are doing and I would particularly appreciate a copy of a report or paper when it is available. Thank you.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh



INSTITUTE FOR ENVIRONMENTAL QUALITY

THE UNIVERSITY OF MICHIGAN
2200 NORTH CAMPUS BOULEVARD
ANN ARBOR, MICHIGAN 48105

August 3, 1971

Dr. Frank C. Craighead, Jr., President
Environmental Research Institute
Box 156
Moose, Wyoming 83012

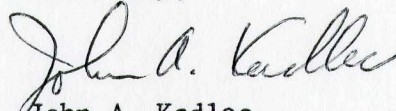
Dear Dr. Craighead:

The President's Council on Environmental Quality, in cooperation with the U. S. Department of Interior, has appointed an Advisory Committee on Predator Control. The Committee and its charge are described on the enclosed page. On behalf of the Committee, I am writing to invite your organization to submit a statement of its views on the predator control problem. We would also appreciate data or documented evidence on any aspects of the issue.

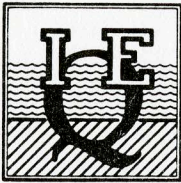
We regret that our deadline of October precludes any possibility of a formal series of hearings or field inspection tours. However, the Committee membership is reasonably well distributed geographically and I am sure any member would welcome a personal contact. If you would like to discuss the problem with me or any Committee member please feel free to call or write.

I would like to emphasize that the Committee's goal is to produce recommendations for actions, primarily at the Federal level. However, any recommendation we make must be based on a solid foundation of factual evidence concerning attitudes and operations regarding the predator control problem. We solicit your assistance in providing a broad and comprehensive base of information.

Sincerely,


John A. Kadlec
Deputy Chairman

JAK/ia



INSTITUTE FOR ENVIRONMENTAL QUALITY

THE UNIVERSITY OF MICHIGAN
2200 NORTH CAMPUS BOULEVARD
ANN ARBOR, MICHIGAN 48105

STANLEY A. CAIN, DIRECTOR
(313) 763-3515

Advisory Committee on Predator Control

The Committee is jointly sponsored by the Council on Environmental Quality and the Department of the Interior, with a contract to the University of Michigan's Institute for Environmental Quality. Stanley A. Cain, Director of the Institute, is Chairman of the Committee. Membership of the Committee includes John A. Kadlec, Michigan; Durward Allen, Indiana; Fred Wagner, Utah; Maurice Hornocker, Idaho; Richard A. Cooley, California; and A. Starker Leopold, California.

The contract requires the report of the Committee by the end of October. As a consequence, it will be unable to gather original data but will bring together from many sources the facts that bear on the problems of predator control.

The Committee has been asked to report on the distribution, status, and the role in the environment of the major predator species doing economic damage to private enterprises. It will also seek information on federal, state, and non-governmental programs and policies; on control chemicals, devices and methods and their impact on target and non-target species; and on the economics of the situations.

In addition to the above, we are seeking information on the modification of current programs, alternative possibilities, including possible legislative proposals, insurance programs, and other variants of the present situation.

September 7, 1971

John A. Kadlec
Institute for Environmental Quality
University of Michigan
2200 North Campus Boulevard
Ann Arbor, Michigan 48105

Dear Dr. Kadlec,

Deadlines, field work and pressing activities have prevented me from keeping up with my correspondence. As requested in your letter of August 3 I would like to submit a statement of the views of the Environmental Research Institute on the predator control problem. I will not be able to get to this for awhile, but in the meantime I am sending you some publications that may be of interest.

I also suggest that you might wish to review some of the findings, conclusions and recommendations in the book "Hawks, Owls and Wildlife" now published by Dover. Much of this work on raptor predation was conducted at the University of Michigan.

My view on the predator control program is that a sweeping review and vast changes have been greatly needed for some time. I feel that use of poisons and indiscriminate killing of predators should be abolished but I do not think that this can be done without simultaneously considering prey species and their control. Though major changes in policy are needed I feel that neither new policy or legislation on this subject should be too rigid. It requires a certain degree of flexibility as specific control or rather management is and probably always will be needed in some instances where economic considerations are involved.

-2-

Predator control should be a finely calculated emergency operation employed only until more basic remedies can be applied. There is little or no justification for any type of wildlife management that attempts to reduce any predator population by means of concerted exterminating campaigns.

This is just a hurried note stating my general philosophy. I will try to get a statement off to you before long.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

August 31, 1971

Dean Gerald E. Meyer
University of Wyoming
College of Arts and Sciences
Laramie, Wyoming 82070

Dear Dean Meyer,

Thank you for your informative letter concerning the environmental research center and program. Through the Environmental Research Institute located here at Moose, Wyoming and in collaboration with the University of Montana and the State University of New York I have been conducting ecological research in Yellowstone Park since 1959. This is of course one of the reasons that I am interested in the University of Wyoming program.

I would, through the Environmental Research Institute, like to explore the possibility of affiliating or collaborating with you on research in Yellowstone and in the Rocky Mountain Area.

Under separate cover I am sending you and ERI brochure and a few available reprints of some of our bio-telemetry work.

Sincerely,

Frank C. Craighead Jr.
Adjunct Professor of Ecology
State University of New York

FCC,Jr/mh

August 31, 1971

Dear Gerald E. Meyer
University of Wyoming
College of Arts and Sciences
Laramie

September 14, 1971

Dr. Valerius Geist
Environmental Sciences Center
University of Calgary
Calgary
Alberta, Canada

Dear Dr. Geist,

From Hal Buechner I learned that there may be a session on radio or satellite tracking of animals at the November 1 to November 7 Calgary meeting. I am hoping to be present at least part of the time and would appreciate learning on what day the animal tracking discussion will be scheduled. I would definitely want to try to be present for this.

John and I, along with Dr. Buechner, have tracked an elk in the Jackson Hole area in Wyoming using the Nimbus 3 Satellite and we also monitored a black bear den. I would be glad to bring along some slides and discuss this informally. Some of the work that we have done with telemetering 24-hour body temperature patterns of free-roaming elk and also behavior data using activity transmitters might be of interest to the group. This work was done a number of years ago but we have not yet published on it. Our work in this area was abruptly terminated when the Superintendent of Yellowstone decided that there would be no more marking of animals in Yellowstone. At any rate I look forward to attending the meeting and would appreciate any information you can send me concerning it. Thank you.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

September 16, 1971

Mr. Kurt Rademacher
1132 Walnut Street
Berkeley, California 94707

Dear Kurt,

I appreciated getting the prairie falcon egg that you left at the house this summer but was disappointed that I didn't get to see you. I thought I'd run in to you before the summer was over but I guess our paths just didn't cross.

I have been pretty well tied up opposing the Park Service over the issue of freedom to conduct independent research in Yellowstone National Park and publish without harassment and retaliatory actions. We have also been greatly concerned over the current grizzly bear control program.

This summer I was also involved in looking over and evaluating the Teton River with the objective of trying to prevent impoundment of the canyon by the Bureau of Reclamation. I made my second trip to the Clark's Fork of the Yellowstone and hope to see this river placed in the Wild and Scenic River System.

I believe you wrote me a letter last year requesting information on grizzly bears. I'm not sure whether I answered it. At the time, I know, I was pretty well bogged down with correspondence and deadlines on proposals and articles. If you are still interested, I'll try to send you reprints of all of our grizzly bear material.

Regards,

Frank C. Craighead Jr.

FCC,Jr/mh

October 6, 1971

Mr. Frank Dunkle
Director, Montana Fish and Game Department
Helena, Montana 59601

Dear Frank:

I was disappointed that I didn't get more time to talk with you at our wild horse meeting. I was particularly interested in your brief statement that a large number of grizzlies that had been moved out of the Park had already been shot. If you could give me any information on this, I would greatly appreciate it, as I am trying to keep some record of the total loss of grizzlies in Yellowstone and surrounding areas this year.

If you prefer to call rather than write, phone collect person-to-person. My number is 307-733-3387.

Thanks.

Sincerely,

Frank Craighead

P.S. It was good to see you feeling so chipper and looking so well.

October 8, 1971

Dr. George Sprugel
Illinois Natural History Survey
Natural Resources Building
Urbana, Illinois 61801

Dear George,

Under sepearte cover I am sending you a copy of a Grizzly bear paper. It gives some idea what the Park Service is doing in mismanaging the grizzlies. This has continued again this summer but the Park Superintendent has prevented us from gathering information. As far as we can determine an equal number of grizzlies have been killed this year. This loss, if continued over a few more years, could really put the grizzly in a critical situation. Black bears have also been reduced in numbers so that thousands of visitors now go through Yellowstone without seeing a black bear. Most of these have been killed and no records kept. The park administration is misinforming the public, congressman and interested people inquiring as to the status of both the black bear and grizzly.

I hope your work is going well and should you get out this way please be sure to stop by. We completed our final report for NSF on the radio tracking and bio-telemetry work. I greatly appreciate the help that you gave us in this project and wish to express my thanks.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

October 8, 1971

Dr. George Sprugel
Illinois Natural History Survey
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Urbana, Illinois 61801

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Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

October 15, 1971
October 15, 1971

Mr. Austin Hogan
~~Atmospheric Sciences Research Center~~
~~State University of New York at Albany~~
~~138 State University Road~~ of New York
Scotia, New York 12302

Dear Austin:

I am sending you a pair of folding scissors that I picked up in Fiji. I found them very useful to carry along when fly-fishing. I hope you will find an opportunity now and then to use them.

I have been writing most of the summer but have had an opportunity to take a few days at a time to look over some of the nearby rivers that are about to be destroyed. One of these is the canyon of the Teton just over the mountains; another is the Clark's Fork of the Yellowstone. I hope that you might have the chance to see both of these some day when you are out here.

The gloves you sent me were just perfect for this climate and I am already getting ready to use them again this winter. We still have very fine fall weather, but it won't last much longer.

I hope all is going well for you. Drop me a note if you get time.

Regards,

Frank Craighead

FC/skr

The Dude Ranchers' Association

P. O. BOX 1363

PHONE (406) 245-7511

BILLINGS

MONTANA 59103



October 20, 1971

Frank C Craighead
Box 156
Moose, Wyoming 83012

Dear Friend:

The Dude Ranchers' Association is holding their 46th Annual Convention in Missoula, November 18, 19 and 20.

On Friday, the 19th a very important panel is scheduled for the morning session. We feel we need you to add to it's importance. As of now we have several from the Wyoming Coordinating Council, Jack Lavin Forestry Service, Cliff Merritt of Wilderness Society, Denver, Jack Anderson, Park Service, John Turner, Wyo Legislature, we have invited a member of Stockgrowers, and Dr. Wayne Cook, Range Management Specialist from CSU, these have not replied as yet.

Dr. Dewey Dominick of Cody has been the committee for the arrangements of this panel, along with Mrs. Leslie Peterson of Dubois. If you would notify Dr. Dominick and Leslie of your intentions with copy to me we will then know if you can serve. If you cannot, we'll try for your brother.

I do hope you can accept as we are all eager to have a good panel. We look forward to your reply.

Cordially,

Peggy S.

Mrs. Peggy Schaffer
Executive Secretary

October 29, 1971

Dr. Dewey Dominick
The Dude Ranchers Association
Cody, Wyoming 82414

Dear Dr. Dominick:

I received a letter from Mrs. Peggy Schaffer inviting me to participate in an important panel at your meeting in Missoula on Friday, November 19. I believe I will be free at this time and would be delighted to attend your panel meeting.

I would appreciate knowing just what subjects might be covered, and it would also be helpful to know whether any expenses for the trip from here to Missoula can be paid by your organization. If not, I will try to dig up the funds elsewhere.

I have just completed a letter to Jack Lavin again proposing the Canyon of the Clark's Fork for Wild River status. I hope that he will act favorably on my suggestions.

I'm looking forward to getting together again with you before long.

Sincerely,

Frank Craighead

FC/skr

copy to Mrs. Peggy Schaffer



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P. O. Box 22505, Sacramento, California 95822

MID-WEST OFFICE: 316 Minnesota Avenue • Kansas City, Kansas 66101

EAST COAST OFFICE: P. O. Box 35 • Kings Park • Long Island • New York 11754

CAPITOL OFFICE: Suite 520 • 1629 "K" Street N.W. • Washington, D.C. 20006

November 18, 1971

Dr. Frank Craighead, Jr.
Director
Environmental Research Institute
Moose, Wyoming.

Dear Dr. Craighead:

We have received numerous requests from students, from the elementary to graduate level, this year for information on wildlife conservation. Thus, we are constructing a wildlife conservation research kit with particular emphasis on efforts to preserve the vanishing species. Our kit will include reprints of the vanishing species article which appeared in the November edition of EARTH magazine.

Do you have any papers, articles or other materials which you could contribute for our kit? We will reproduce the materials at our own expense, of course. Our membership is nationwide and includes many teachers who have undertaken ecology electives or who have incorporated ecology sections into their regular classes. Any contributions you can make will be appreciated.

As you may not be familiar with our organization, I am sending you the current edition of Mainstream, our quarterly magazine.

FOR THE ANIMAL PROTECTION INSTITUTE, INC.

Most sincerely,

Susan A. Lock
Susan A. Lock
Program Coordinator

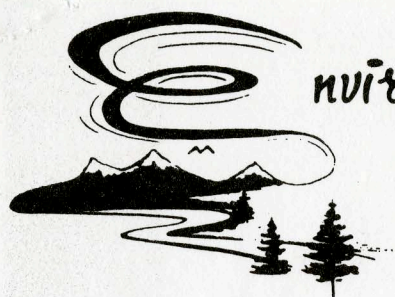
Enc.

MEMBER



WORLD FEDERATION
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ALL CONTRIBUTIONS ARE DEDUCTIBLE FOR INCOME AND ESTATE TAX PURPOSES



Environmental Research Institute

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Moose, Wyoming
83012

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December 2, 1971

Susan A. Lock
Program Coordinator
Animal Protection Institute of America
5894 South Land Park Drive
Sacramento, California 95822

Dear Susan,

I was interested in looking over your current issue of Mainstream and in learning that you are including reprints of the November Earth magazine in your kit. I'm not sure just what type of articles or material you want but I am enclosing a number of reprints that may be of interest. The one on Coyote Predation, though old, is still relevant and reveals a broad picture of the biological and economic situation in regard to coyote predation.

The article on the "Ecology of Raptor Predation" treats the mechanics and function of raptor predation and as such involves both endangered species and those not yet in this situation. The raptor reprint is part of a much more comprehensive study prepared in book form, "Hawks, Owls and Wildlife" and recently published by Dover in paperback form. The first edition was published by the Wildlife Institute in 1956-the last by Dover Publications in 1969.

I have numerous National Geographic publications, both popular and technical, that I could send if you are interested. I am also including a copy of the 1962 Naturalist with an article on "River Systems, Recreational Classification, Inventory and Evaluation". This publication preceded some of our later work on the scenic and wild rivers and initiated the program which eventually resulted in the Wild and Scenic Rivers Act.

-2-

I would appreciate the return of the Naturalist as I have only two file copies. Thank you.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

November 30, 1971

Dr. Dewey Dominick M.D.
Seven D Ranch
P.O. Box 109
Cody, Wyoming 82414

Dear Dewey,

I greatly enjoyed my visit with you and Lee at Missoula and appreciate your hospitality. I also wish to thank you for the check you sent me to defray expenses of the trip. I am continuing to work towards getting the Clark's Fork considered as a Wild River and will keep you informed on the progress of my efforts. I am enclosing a copy of a letter that I sent to Jack Lavin sometime ago. You may wish to keep it in your files.

Some of the information that I discussed on the Grizzly Bear has been reprinted from BioScience in Earth Magazine which is distributed to universities and colleges throughout the country. If you get an opportunity you might like to look at the November issue.

If you and Lee come over this way give us a call as I would like you to stop for a visit and meet Esther.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh

November 30, 1971

Mrs. Paul D. Shell
Shell Associates
809 East 83 St.
Kansas City, Missouri 64131

Dear Mrs. Shell,

Thanks for sending me a copy of your letter written to Senator Lee Metcalf. You have done an exceptional job of analyzing the grizzly bear situation in Yellowstone and have presented the information and expressed your views superbly in this letter. I wish to congratulate you on a very excellent piece of writing.

If you have several additional copies of this I would appreciate getting two to send to interested people. One of them is Dr. Vincent Schaefer, Director of the Atmospheric Sciences Research Center at the State University of New York. The other person is Jules Bergman, Science Editor ABC. If you do not have copies available and don't mind my making copies I will try to have several duplicates made of the letter you sent to me. If you prefer not to have this distributed say so. I'll understand.

I arranged to have some of the information from our BioScience article published in the November issue of Earth Magazine. You might wish to look this up in the library. I'd be interested in Senator Metcalf's reaction to your letter.

Sincerely,

Frank C. Craighead Jr.

FCC,Jr/mh



THE ACADEMY OF NATURAL SCIENCES

NINETEENTH AND THE PARKWAY, PHILADELPHIA, PENNSYLVANIA 19103

Phone LO 4-3921 Area Code 215

February 7, 1968

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Dr. Frank C. Craighead, Jr.
Moose
Wyoming

Dear Dr. Craighead:

In Mr. Bodine's absence I am hastening to get the copy to you that we believe would be suitable in promoting your lecture to our 3,000 members. We don't like to trouble you with details but we would appreciate it very much if you would let us know of any changes that you would like to see made.

Perhaps you would find it quickest to jot your suggestions down on the enclosed sheet itself. I am enclosing a return envelope for your convenience.

To save unnecessary correspondence, we will assume that you are in accord with the enclosed material unless we hear from you to the contrary by February 15, the date on which we have to mail to our printer.

Thank you very much, indeed.

Cordially,

Mackarness H. Goode
Vice President

MHG:hz

P. S. To further explain a statement in Mr. Bodine's letter of February 2, the excursion rate can be used on Sunday morning before noon, since this satisfies the terms of the airlines requirement of returning the next week. This flight leaves Philadelphia at 7:15 a.m. and arrives in Denver at 11:37 a.m.

February 13, 1968

Mr. Mackarness H. Goode
Vice President
The Academy of Natural Sciences
Nineteenth and the Parkway
Philadelphia, Pennsylvania 19013

Dear Mr. Goode:

With reference to your letter of February 7 relative to advance publicity of Dr. Craighead's lecture, you will find enclosed a revised copy of the news release. Also, I am forwarding a release that was used last summer in the Jackson-Teton area.

Thank you.

Sincerely,

Phyllis J. Seiter, Secretary
to: Frank C. Craighead, Jr.

PJS

Enclosures (2)

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

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SYMBOLS

DL=Day Letter

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Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination

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DR FRANK C CRAIGHEAD JR
MOOSE WYOMING

YOUR ACCRPTANCE IN WRITING FOR SPEAKING ENGAGEMENTS AT THE ACADEMY OF
NATURAL SCIENCES M4: #22 and 23 REQUIRED BEFORE THEY CAN PROCEED WITH SENDING
OUT INVITATIONS AND MAKING FURTHER PLANS PLEASE SEND AS QUICKLY AS POSSIBLE
BEST REGARDS
FRANK GOODYEAR

February 9, 1968

Mr. John W. Bodine
The Academy of Natural Sciences
19th Street and the Parkway
Philadelphia, Pennsylvania 19103

Dear Mr. Bodine:

I am receipt of your letter of February 2 and regret that you were unable to contact me by phone.

You will find enclosed Dr. Craighead's biographical sketch which will know doubt be of help in your advance publicity.

Regardless of Dr. Craighead's other lecture commitments during the month of March, he understands and agrees that the Academy will pay half of his travel expenses.

Thank you.

Sincerely,

Phyllis J. Seiter, Secretary
to: Frank C. Craighead, Jr.

PJS

January 29, 1968

Mr. John W. Bodine
The Academy of Natural Sciences
19th Street and the Parkway
Philadelphia, Pennsylvania 19103

Dear Mr. Bodine:

I would like to acknowledge receipt of your letter of January 15, 1968 relative to Dr. Craighead's scheduled lecture in Philadelphia on March 22 and 23. Enclosed you will find the signed carbon copy of the letter mentioned.

The delay in signing your letter was due to a lecture at the University of British Columbia in which Dr. Craighead was a guest speaker at a telemetry workshop. Since Dr. Craighead is presently doing winter field work in Yellowstone National Park, he has asked me to also advise you of the following flight information pertinent to the lecture scheduled in March.

From Jackson, Frontier Airlines does not have excursion flights to Philadelphia so we have tentatively scheduled the following flight arrangements:

Leave Jackson, Wyoming on March 21 at 11:35 a.m.
Arrive Philadelphia at 8:23 p.m.

Flight rate \$261.50

If you are in agreement with these arrangements in every way, please reply in the affirmative. Upon receipt of affirmation, I will forward the biographical information that you requested. Dr. Craighead would like to receive copies of publicity material prepared prior to publication to check accuracy and to give approval.

Sincerely,

Phyllis J. Seiter, Secretary
to: Frank C. Craighead, Jr.

PJS
cc: Frank H. Goodyear

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

FOUNDED 1812

NINETEENTH AND THE PARKWAY, PHILADELPHIA, PENNA. 19103 LOCUST 4-3921

JOHN W. BODINE
PRESIDENT

H. RADCLYFFE ROBERTS
DIRECTOR

February 2, 1968

Miss Phyllis J. Seiter
c/o Dr. Frank C. Craighead, Jr.
Moose, Wyoming

Dear Miss Seiter:

Thank you for your letter of January 29, enclosing the copy of my letter of January 15, 1968, signed by Dr. Craighead.

I was surprised to learn from yours of January 29 that apparently Dr. Craighead does not intend to leave Jackson until March 21. One of the important aspects of our plan was that I thought Dr. Craighead had a speaking engagement at the Explorers' Club in New York on March 15 and that they would accordingly pay one-half of the travel costs. If the engagement in New York is now off, and if we are therefore expected to pay the entire travel costs, this could put a further expense on us than we had agreed to.

I tried to telephone you about this today and was told that Dr. Craighead would not return to Moose until Thursday, February 8, and that you would not be available until Monday the 5th. I tried to call your home but there was no answer. Unfortunately, I will not be here on the 5th or 6th.

Perhaps you were not familiar with Dr. Craighead's plan to be in New York on March 15th. Or perhaps even if the New York engagement is off, he is only expecting us to pay half the fare. After all he seems satisfied on the point, as he signed the copy of my letter of January 15 specifying that we would pay half the fare.

I can well imagine that there may be some problem with regard to the excursion fare on the plane, as I gather that the air lines are reluctant to disclose that they have such arrangements. In any case, we have talked again today with the local office of United Airlines, which we believe has the best service between Denver and Philadelphia, and they confirm that although there is indeed no excursion rate between Jackson and Denver on Frontier, there is a reduced rate between Denver and Philadelphia regardless of whether the initial flight is eastbound or westbound and regardless of whether there is an additional flight tacked on between Jackson and Denver. As you probably know, the excursion rate applies to round trips that take more than a week and that do not fly on Saturday or between 7 p.m. on Sunday and noon on Monday. From what I

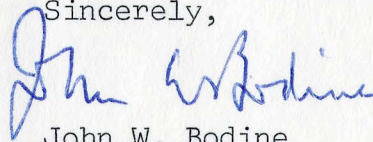
-2-

know of Dr. Craighead's plans for his trip East, I gather that he could quite conveniently fit within these limits. So, as I said in mine to him of January 15, I hope he can work it out to use the excursion rate.

We are working on the publicity material and hope to send it to you in time so that Dr. Craighead can approve it on his return to Moose next Thursday. I do hope it will be possible for him to let us have his approval promptly, as we need to go to press very soon if we are to have the good turn out for his presentation that we all hope for.

If only we were somewhat closer geographically these arrangements would no doubt be easier to work out, but for my part I appreciate very much your evident desire to cooperate and hope that all can now be settled in a manner that will be agreeable to you and to Dr. Craighead.

Sincerely,



John W. Bodine
President

JWB:mcm

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

FOUNDED 1812

NINETEENTH AND THE PARKWAY, PHILADELPHIA, PENNA. 19103 LOCUST 4-3921

JOHN W. BODINE
PRESIDENT

H. RADCLYFFE ROBERTS
DIRECTOR

January 15, 1968

Mr. Frank C. Craighead, Jr.
Moose,
Wyoming

Dear Mr. Craighead:

Since last talking with you I have talked with Frank Goodyear and he has agreed that under all the circumstances it is best for us to plan your appearance here on Friday evening, March 22, 1968, and Saturday afternoon, March 23, 1968. We understand that at each appearance you will run your new 80-minute film on your work with grisly bears, which by that date will not have been shown on TV, and which by that date will not have been shown in the Philadelphia area. We understand that the film has a sound track and that your oral presentation will probably be limited to whatever introduction you would like to make. I am sure you realize, however, that your appearing in person to make the introduction will constitute a great deal of the attraction to our members.

We will be pleased to mention in the advance publicity that your appearance here has been arranged through the cooperation of the Environmental Research Institute, and we have no objection to your having brochures of the Institute available here at the time of your two appearances, nor to your mentioning the Institute in your introduction to the film.

As I told you in our last telephone conversation, the Academy will pay you \$350 for the two appearances, plus one-half of your round trip travel from Jackson to Philadelphia. Our inquiries of the air lines indicate that the first class and economy round trip fares are each a little over and a little under \$300, as you thought, but they offer an "excursion" rate which may suit your schedule perfectly well which only costs about \$230 round trip between Jackson and Philadelphia. I therefore hope that it will be possible for you to use the less expensive excursion rate.

As I wrote before, we have standard 16 mm projectors and P.A. system but if you think you will need any special equipment, we hope you'll let us know in plenty of time. It probably would be a good idea if you would plan to come here earlier in the day on Friday, say in the morning or the early afternoon, so that our projectionist can run your film through and so that you can familiarize yourself with the auditorium, the P.A. system, etc. It may be a relief to you to

January 15, 1968

2

know that our Women's Committee turned thumbs down on the idea of requiring black ties at dinner on Friday night - they said their husbands would never approve! So we will all be in business suits.

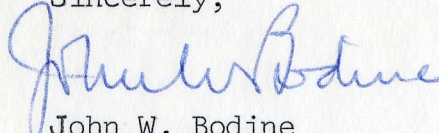
We would be very pleased if you could send us just as soon as you can any biographical information you have or other material that is available that might be of use to our public relations people.

I hope very much that the arrangements as set forth in this letter are satisfactory to you in all respects. In order to be sure that there is no misunderstanding, I would greatly appreciate it if you would let me know in writing that this is agreeable to you. In an effort to make this less troublesome for you, I have included a copy of this letter and a stamped, addressed envelope, so that if everything is OK, you have only to sign the copy of this letter and mail it back to me.

We are very pleased that you can come and especially glad that you are willing to appear after a dinner meeting in the evening for our adult audience and again on Saturday for family groups. We believe it is very important for the Academy to be available to all ages and we are glad that you sympathize with this.

I look forward to hearing from you soon, so that we can get our publicity started and our other arrangements made.

Sincerely,



John W. Bodine
President

cc: Mr. Frank Masland
Mr. Frank Goodyear

THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

FOUNDED 1812

NINETEENTH AND THE PARKWAY, PHILADELPHIA, PENNA. 19103 LOCUST 4-3921

JOHN W. BODINE
PRESIDENT

H. RADCLYFFE ROBERTS
DIRECTOR

March
22-23

December 26, 1967

Mr. Frank C. Craighead, Jr.
Moose, Wyoming

Dear Mr. Craighead:

I am sorry to be so long in writing to you about the plans for your appearance here in April which I understand Frank Goodyear has been arranging with you.

We now expect you here to lecture on Friday evening, April 5, and on Saturday afternoon, April 6. We understand from Frank Goodyear that you will present on each occasion a new 80 minute film on your work with grisly bears, different from the one which has been recently telecast on TV.

The Academy is always itself looking for money to keep our programs going, but we feel we have an obligation to do what we can to help organizations with similar aims, and it is all right with us if you wish to make incidental mention of the Environment and Research Institute and its need for support.

We have two standard 16 mm projectors capable of reproducing a standard sound track, and a P. A. system for your use in making whatever introduction you would want to make. If you think you would want any special equipment, please be sure to let us know in plenty of time.

We have material from the National Geographic article about the work you and your brother have been doing, but if there is any additional material we could use in our publicity, we would certainly appreciate having it from you.

I understand you will be staying with Frank Goodyear, but if there is any way we can help with accommodations for you, please let us know.

I told Frank Goodyear that the Academy would be willing to pay you \$300 for the two appearances here, plus our fair share of your two-way travel costs between Wyoming and the East coast. Since I

- 2 -

understand that the Explorers Club will be paying at least half of your travel costs, I assume the Academy would not have to pay more than half of those costs.

We are delighted that you can come. We would really very much appreciate it if you would be kind enough to write me as soon as you can to confirm the arrangement. We want to get started on our publicity and it is really quite important for us to know without any doubt, that this plan is satisfactory to you before we go overboard on any announcements, and yet the sooner we can begin to get the news of this important engagement out, the better the attendance and the greater enjoyment we will provide.

It will be great to have you appear here in the evening for our adult audience and again the next day in the afternoon for our family groups, as many members of the Academy like to bring their children to these affairs, and we believe it is important to make clear to our young people ideas about conservation and the kind of work scientists and others are doing along these lines.

I look forward very much to hearing from you, and am very pleased that these arrangements are under way.

Sincerely,

John W. Bodine

John W. Bodine
President

JWB:en

cc: Mr. Frank Goodyear

Mr. Frank F. Masland, Jr.

{ March 22-23 -
March 15 - Expl. Club -

Excursions - \$111
229

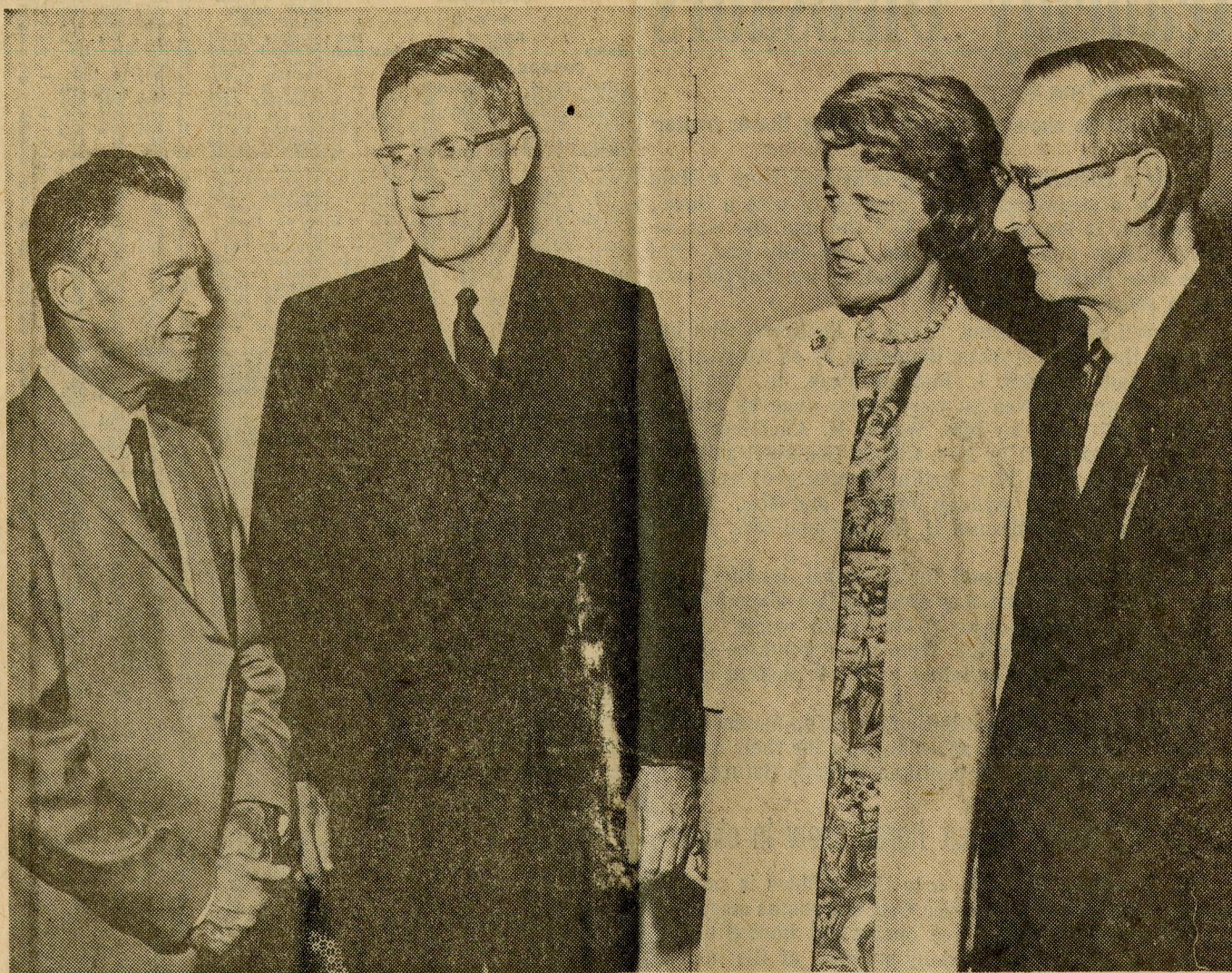
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Literature
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Inquirer Photos by Gervase J. Rozanski, Staff Photographer

At the Academy of Natural Sciences, where Dr. Frank Craighead showed his film, "The Grizzly, a Threatened Species," are (from left) Dr. Craighead, Mr. and Mrs.

Frank H. Goodyear, of Bryn Mawr, and Lawrence M. Stevens, who heads the Academy's new Dinosaur Club. Dr. Craighead is from Moose, Wyo.



Mrs. John W. Bodine, wife of the president of the Academy of Natural Sciences, chats with Academy board member Frank E. Masland

(center), and Academy board chairman Lane Taylor. Cocktails and dinner were served to member subscribers prior to the film.

The Philadelphia story

Academy Dinosaurs Have giant party

By RUTH SELTZER

Inquirer Society Editor

A few dozen of Philadelphia's much-alive dinosaurs drank dinosauric cocktails at the Academy of Natural Sciences. There were 270 people at the Academy party—the dinosaurs (those who contribute \$100 or more to the Academy) as well as regular members.

Investment banker Lawrence M. Stevens, of Rittenhouse Square, heads the Dinosaur Club.

After a standing rib roast dinner, dinosaur contributors and other subscribers remained anchored to their chairs while they saw Dr. Frank Craighead's film, "The Grizzly, a Threatened Species."

Dr. Craighead is with the Environmental Research Institute in Moose, Wyo. He has been working like a bear to keep the grizzly, monarch of the American wilderness, from disappearing.

While in Philadelphia, Dr. Craighead was a house guest of Mr. and Mrs. Frank H. Goodyear in Bryn Mawr.

The Academy's Dinosaur Club is very alive and growing. It is making new tracks in the old, old valley of the Delaware.

Academy Dinosaurs

Continued from Page 23

(cosponsor of the show) and some stunning flower centerpieces.

While a customer fingered a tablecloth from a Main Line home, a straw-hatted lady breezed in with a flower arrangement. It looked exactly like the one she was replacing. "These don't look too bad," the lady said. "But they've been sitting here all weekend. So we thought we'd bring in some fresh flowers."

Caldwell vice president Frank L. Schlichter, who has been with the firm 53 years, happened by as we gazed at the table done by Mrs. L. Rodman Page, Jr., and Mrs. Hans L. Carstensen. Nearby were tables done by Mrs. H. Cameron Morris, Jr.; by Mrs. Walter H. Annenberg and Mrs. Boyd T. Barnard; by Mrs. Claude Campbell and Mrs. G. Elliott Krusen; by Mrs. Arthur Synnestvedt and Mrs. Helen Boggess; Mrs. Sydney Jelinek and Mrs. Henry Lear, and by Mrs. Benjamin H. Barnett and Mrs. Robert S. Lovett.

The tables were dressed for breakfast, luncheon and dinner. We must say that they gleamed like diamonds. Or, as they say at the Academy of Music, the whole thing is symphonic. Members of the Women's Committee of the Philadelphia Orchestra certainly are taste-makers in this community.

Visitors to the table exhibition are being handed printed ballots. They are being asked to vote for their favorite tables. The exhibition will continue through Saturday.

ITINERARY

Date	Location	Contact
March 14, 1968	New York City, N.Y.	Explorer's Club a/c 213 628-8383 Hotel Westbury New York City a/c 213
March 15, 1968	Explorer's Club Lecture-	46 East 70th St. a/c 213 628-8383
March 16, 1968	Chappaqua, New York Reader's Digest	Jean Craighead George a/c 914 CE 8-8279
March 16 or 17	Fly to Harrisburg	
March 17-20	Boiling Springs, Pennsylvania	Hoke Franciscus (Home) a/c 717 CH 9-1925 Office a/c 717 CH 3-3411
March 21, 1968	Philadelphia (Travel)	Frank Goodyear a/c 212 LA 5-6264 215 Mi 9-3653 Office 215 LA 5-0554
March 22-23	Lecture-The Academy of Natural Sciences	Mr. John W. Bodine a/c 215 LO 4-3921 or/ Frank Goodyear
March 24 or 25	Travel to Albany	Dr. Vincent J. Schaefer a/c 518 393-8978 or a/c 518 457-3223-office
March 25-26	State University of New York at Albany	Same as above
March 26, 1968	Travel to Homestead, Florida	Frank C. Craighead, Sr. a/c 305 Ci 7-6084

Dept. of Biol. Sci.
Univ. of St. Of N.Y. at Albany
1223 Western Ave.
Albany, N.Y.
Feb. 20, 1967

Dr. Frank C. Craighead, Jr.
Environmental Research Institute
Box 156
Moose, Wyo.

Dear Dr. Craighead:

I was most pleased to receive your letter today. The summer position that you describe is just what I have been looking for. However, due to some scheduling difficulties here at Albany St. it is impossible for me to accept your offer at this time. Because you mentioned that you occasionally have positions open for full time work for persons with a M.S. I am including a list of facts that may be pertinent.

<u>Undergraduate Courses</u>	<u>Hours</u>	<u>Graduate Courses</u>	<u>Hours</u>
Botany	8	Paleontology	3
Zoology	4	Minerology	3
Genetics	3	Histology	3
Seminar	1	Cytogenetics	3
Micro. Biol.	3	Physiological Genetics	3
Ornithology	3	Aquatic Biology	3
Field Zoo.	3	Ecology	3
Field Bot.	3	Biology Seminar	2
Nature Std.	3	Genetics Seminar	1
Inorg Chem.	8	Parasitology	3
Org and Bio. Chem.	8	Education	6
Math	12	Research	6
Physics	8		
Total	67	Total	39

In addition to the courses taken I have had considerable experience in the field. While I was in high school I rode for days at a time in the western Alleghenies doing serveys of fish, game, and trees for the Penna. Fish and Game Comm. I have worked at ranches both teaching riding and breaking horses. In addition to this I have done a lot of camping, hunting and fishing.

I will be finishing my M.S. on Aug. 20, 1967 and any leads you may have about full time empñoment there will be recieved most happily.

Sincerly yours,

Robert D. Beck

Robert D. Beck

Box 156
Moose, Wyo.
Febr. 16, 1967

Mr. Robert D. Beck
Dept. of Biol. Sciences
State University of New York
1223 Western Ave.
Albany, New York

Dear Mr. Beck:

I have delayed answering some of the specific questions in your letters as my own plans for the forthcoming summer are still shaping up. I also have been waiting to see just what funds might be available.

Under an NSF Biotelemetry Research Grant we have funds for a student field assistant for a four month period. The total amount is \$1200. The field work would involve various duties relative to instrumenting and monitoring instrumented elk, black bear, and perhaps grizzlies. A fairly large portion of the work would be devoted to monitoring body temperature from wild free-roaming elk and correlating this with activity over 24-hour periods. Other aspects of the work include testing equipment--various types of transmitters, relays, transmitters for birds, and environmental probes. If you are interested I can offer you this summer position.

We have a field laboratory at Canyon in Yellowstone Park. The number of people here has ranged from 3 or 4 to about 20. Some work is also being done from a field laboratory here at Moose. In the past we have either prepared our own meals at the Canyon Lab, taking turns at the various jobs, or when funds were available we have hired a cook. Married couples have lived in nearby cabins and have preferred to do their own cooking. The cabins are small, not too well furnished, but adequate in students supply their own bedding (sleeping bags), camp stoves and cooking equipment.

If you are interested in doing your post graduate work in ecology with emphasis on biotelemetry methods, I think that a summer out here where you can see and participate in some of

the work underway would give you a fine opportunity to get valuable field experience. It would also serve to help you decide on a area of independent research for your thesis requirements. If you can obtain some of the telemetering devices you mentioned, I am sure there would be an opportunity to test these, do some work with them, and perhaps make comparisons with the biotelemetry equipment we have in operation.

I now come to some of the last questions in your first letter. It would be possible to enter a University out here. The University of Montana has excellent courses in zoology, ecology, and wildlife techniques. The University of Wyoming has quite an active group in biomedical telemetry.

I assume you will have your course requirements fulfilled for your master's degree by summer and are interested in starting or evolving into work for a master's theses. Is this correct and if so in what subjects are you specializing? Have you had much experience in field work and are you experienced in taking care of yourself out-of-doors for a number of days at a time? Could you send me a listing of some of the courses you have taken?

The duration of our Yellowstone work is from June to November but we continue some aspects of the work throughout the year. We have done considerable research with elk in winter and we have made periodic winter trips to grizzly bear dens. This winter we instrumented and monitored the body temperature from a hibernating black bear.

There are possibilities for funds for longer periods of time. We have hired some assistants with master's degrees for periods of a year or more. However, there is no way these funds can be used for a student to pursue his own individual research. Some work could be accomplished along these lines, but the positions are full-time jobs with definite responsibilities and certain contractual objectives that we must fulfill.

I am enclosing some references regarding the telemetering of body temperature that may interest you.

Sincerely,

Frank C. Craighead, Jr.

Dept. of Biol. Sciences
Univ. of St. of N. Y.
1223 Western Ave.
Albany, New York

Dr. Frank Craighead, Jr.
Environmental Research Institute
Box 156
Moose, Wyo.

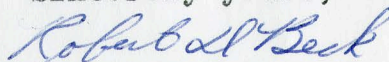
Dear Dr. Craighead:

You mentioned in your letter of Dec. 6, 1966 that there might be a possibility of hiring me for the summer at Yellowstone, to assist you in your work, which is in the field of my own interest. As the time is at hand for me to make a commitment for next summer, I would appreciate having a decision about working at Yellowstone as soon as possible.

You also mentioned that there may be a possibility that funds to carry on a longer project might be available. Could you inform me as to where these possibilities lie? It may be of interest to you to know that I have contacted a company that is willing to submit a bid on the telemetering devices we discussed previously. If possible, I wish to continue work in this field for my Ph. D. .

Any information about housing, salary, ect. for the summer would be gratefully recieved so that I may plan accordingly.

Sincerely yours,



Robert D. Beck



STATE UNIVERSITY OF NEW YORK AT ALBANY
ALBANY, NEW YORK, 12203

November 28, 1966

Dr. Frank Craighead
Environmental Research Institute
Box 156
Moose, Wyoming

Dear Dr. Craighead,

Dr. Allen has informed me that he has written you about my interest in your work. I hope this letter will give you some information as to my background and interests as well as give me a chance to ask some questions that are puzzling me.

In a thumbnail sketch, my biography reads as follows: 1964 graduate from Slippery Rock State Teachers College, Pennsylvania; 1964-1966 teacher of Biology at Ballston Spa Central Schools, New York; September 1966--assistant at the State University of New York at Albany as master's degree candidate.

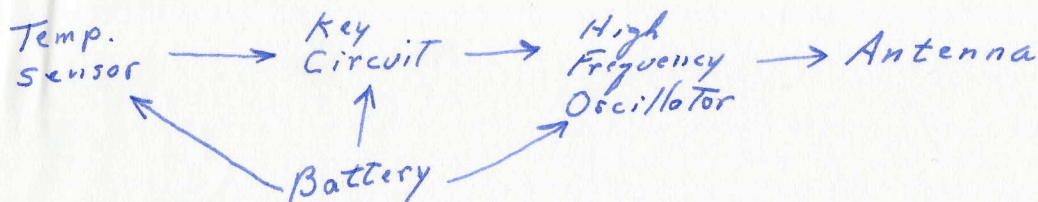
Because I wish to teach I feel that it is important to get as broad a background as possible in all fields. Starting in January I will be working either with the New York Game Department or in the laboratory with serum hepatitis. I am hoping to do my Ph.D. work in Ecology and feel that your work could be a place of great interest.

When Dr. Allen mentioned you about a month ago, I started to work on some ideas. After reading your article in National Geographic, I pursued the idea of sub-cutaneous telemetric devices. I do not know if you have equipment already, but I went ahead and tried to figure out what type of device would be needed. After consulting with my brother, who is Senior Electronic Development Engineer for Air Research in Los Angeles, we feel we have a solution to the problem.

Three general comments can be made at this point:

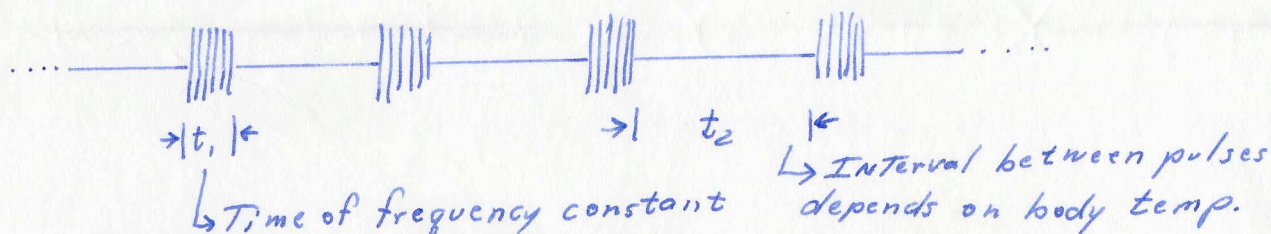
- 1) Standard electrical equipment will not work in a 2 oz. (my choice of weight) telemeter system.
- 2) Energy supply will have to be contained in the package so efficiency must be at a maximum.
- 3) The antenna will have to be small so good carrying distance of the system is considerably short.

Bearing these things in mind it appears that a relatively new thing called Integrated Circuits is the answer. A block diagram would look something like this:



2

The signal sent can be calibrated like this:



Each sending unit can be built for as little as \$50. A receiver capable of tuning in on 20-30 units can be had for about \$400.

Each unit would have a maximum sending distance of about 5 miles. I thought, therefore, that it might be possible to insert them in bears you have already "bugged" for long range location and then on closer observation to record changes in temperature for several activities such as eating, sleeping, fighting, matinc, etc.

My questions to you are varied, and I would appreciate your answer. What are the opportunities for acquiring a grant to follow this work for my Ph.D.? Do you have assistantships that are available during the summer of 1967, and if so, how much do they offer? If it is possible I would like to bring my wife and daughter with me. Any information about housing and camping facilities would be helpful. Would it be possible to enter a university there to continue graduate studies? What is the duration (the dates) of your work at Yellowstone during the summer, and do you work there in the winter too?

I await your reply anxiously.

Sincerely yours,

Robert D. Beck

Robert D. Beck
 Department of Biological Sciences
 State University of New York at Albany
 1223 Western Avenue
 Albany, New York

7.C.41

Box 156
Moose, Wyo.
December 6, 1966

Mr. Robert D. Beck
Dept. of Biology and Sciences
State University of New York at Albany
1223 Western Ave.
Albany, New York

Dear Mr. Beck:

I will attempt to answer your letter of November 28 only in a general way at this time. I will answer your more specific questions later.

I would be interested in giving you some help and guidance in the field of biotelemetry and ecology as it may relate to your postgraduate research. At the moment I cannot state what might be available in the way of funds but I will look into the possibilities.

In the past student support has been via fellowships from Montana State University ^{or} as seasonal (summer and fall) ~~or~~ year round salary from research grants. These research contracts are with agencies such as the National Science Foundation or the Atomic Energy Commission. The funds are earmarked for student assistance in biotelemetry research projects. The on-the-job experience provides training and background for interested students prior to undertaking independent research in this area. In some instances some of the information obtained can be and has been used in student theses. However, at the present time it is not possible to utilize these funds solely for the support of student research. There is a possibility that I could hire you on a summer project as has been the case with other students. Arrangements could be made for you to work primarily in your specific field of interest. Travel funds are not and have not been available.

You mentioned your interest in telemetering body temperatures and correlating these with animal activity. Dr. John Craighead and I have been doing this using externally fastened transmitters and implanted probes. We have also been experimenting with different equipment approaches to the problem and have obtained

24-hour temperature rhythms from elk correlated with activity patterns. We plan to do the same with hibernating black bear this winter.

We have not yet fully analyzed our data nor have we published it. The potentialities, however, seem promising. We are working toward a capability of using implanted transmitters with a range of 8 to 10 miles, now obtainable with our external transmitters. We are also developing integrated circuit transmitters for some aspects of our biotelemetry research. Exploration of possibilities and development of equipment along these lines with concurrent field use to obtain information of ecological significance would, I believe, be well worth pursuing.

I am enclosing a few notes on the use of temperature sensitive and body temperature transmitters that were written for Dr. Vincent Schaefer's Yellowstone Field Research reports for 1965 and 1966.

Sincerely yours,

Frank C. Craighead, Jr.

Box 156
Moose, Wyoming 83012
December 7, 1966

Dr. Robert D. Allen
Professor and Chairman,
Department of Biological Sciences
State University of New York at Albany
Albany, New York 12203

Dear Dr. Allen:

I received your letter as well as an inquiry from Mr. Robert Beck concerning possibilities of his doing some biotelemetry research in pursuing his master's degree. I am enclosing a copy of my reply.

Specifically financing a student's research is difficult. Giving him on-the-job training with salary or providing guidance and aid in the specialized field of biotelemetry more nearly fits the pattern of past operations. In most cases, students who have obtained experience while working on our ecological or biotelemetry research projects have gone on to continue similar work on their own through financial aid that my brother and I have helped them obtain. Such help, however, is usually forthcoming from a University.

I am presently shaping up next summer's research program, which is dependent upon continuing grants and, of course, influenced by available funds. Now that I know of Mr. Beck's interest I'll see what can be worked out. I'll also try to provide him with information that may be helpful to him in deciding on a research project.

Sincerely,

Frank C. Craighead, Jr.



STATE UNIVERSITY OF NEW YORK AT ALBANY

ALBANY, NEW YORK, 12203

November 23, 1966

Dr. Frank Craighead
Environmental Research Institute
Box 156
Moose, Wyoming

Dear Dr. Craighead:

One of our graduate students, Mr. Robert Beck, has expressed interest in joining your group during the coming summer (1967). I have asked Mr. Beck to write you directly, and you should be hearing from him shortly. He will want to know what research programs are in progress during the summer, what he might engage in in pursuing a master's degree, and what financial assistance, if any, is available. He will undoubtedly require money for transportation and support, since these are not available through the department here.

I will greatly appreciate your giving Mr. Beck the information he needs. Thank you very much.

Sincerely,

Robert D. Allen
Professor and Chairman
Department of Biological Sciences

RDA:jh

Box 156
Moose, Wyoming 83012
December 7, 1966

Dr. Robert D. Allen
Professor and Chairman,
Department of Biological Sciences
State University of New York at Albany
Albany, New York 12203

Dear Dr. Allen:

I received your letter as well as an inquiry from Mr. Robert Beck concerning possibilities of his doing some biotelemetry research in pursuing his master's degree. I am enclosing a copy of my reply.

Specifically financing a student's research is difficult. Giving him on-the-job training with salary or providing guidance and aid in the specialized field of biotelemetry more nearly fits the pattern of past operations. In most cases, students who have obtained experience while working on our ecological or biotelemetry research projects have gone on to continue similar work on their own through financial aid that my brother and I have helped them obtain. Such help, however, is usually forthcoming from a University.

I am presently shaping up next summer's research program, which is dependent upon continuing grants and, of course, influenced by available funds. Now that I know of Mr. Beck's interest I'll see what can be worked out. I'll also try to provide him with information that may be helpful to him in deciding on a research project.

Sincerely,

Frank C. Craighead, Jr.

June 16, 1967

Mrs. Fred Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana

Dear Jimmy:

Thanks for your letter of June 7. I have filled in the employment form that you enclosed and am returning it to you.

I will be on the payroll for June only, unless you hear from me to the contrary. You better make this definitely understood by the University so that I am not paid for additional months unless I let you know.

Thanks for your help. I know that you have been quite busy as well as upset with the problems that have arisen.

I am delighted to learn that you and Fred have purchased some property at Polson and I look forward to seeing it on my next visit to Missoula.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/ps
Enclosure

January 22, 1968

Mrs. Alvina Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear Jimmy:

I am enclosing a statement of expenditures under the AEC grant during the year 1967. This includes equipment, supplies and communications. I have had some travel expenses in connection with this research but have not included them as it is possible that John and Hank have approached or exceeded the amount allotted. If not, I would appreciate it if you would let me know and I will send in a statement on travel.

The total of the expenses listed comes to \$52.70. These are expenses that I have paid for so I would appreciate it if you would have the University write me a check in this amount. Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/p
Enclosures

November 30, 1967

Mrs. Alvina Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana 59801

Dear Jimmy:

We have finally worked up the expenses and receipts relative to the biotelemetry work under our NSF grant for 1967.

As in the past, I am enclosing a statement of expenses with accompanying receipts. These are expenses that I have incurred and paid for myself. I would appreciate it if you would send these on to the business office and ask them to issue me a check in the amount \$300.47. Before long I will send you a similar statement of expenses incurred in the AEC work. This amount is considerably less so that there should not be much of a problem in working this up.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjs
Enclosures

June 8, 1967

Mrs. Fred Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana

Dear Jimmy:

I am enclosing the expense statement that I mentioned in my last letter. This probably winds up the expenses that I will incur under the AEC grant. I now will be working primarily on the NSF research and will send in expenses and receipts after these have accumulated over a period of several months. I realize that we are probably beginning to run low on the AEC funds until this contract is renewed so if there are any problems involved in payment, drop me a line or give me a call.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/ps
Enclosure

EXPENSES
Frank C. Craighead, Jr.
AEC RESEARCH GRANT

TRAVEL

April 19-29/67 Trip from Moose, Wyoming to
Missoula and return to work on AEC report.

820 miles .07¢/mi.	\$ 57.40
Motel (Salmon, Idaho)	7.21
Meals (9)	<u>17.25</u>

\$ 81.86

PUBLICATION

AEC report-photographs	5.25
Reproduction work (AEC report)	<u>15.80</u>

21.05

RENTAL

February 20-21/67 Ski-doo rental for trip
to Black Bear den

<u>20.00</u>	<u>20.00</u>
--------------	--------------

\$122.91

Submitted by,

Frank C. Craighead, Jr.

FCC, Jr/ps
June 8, 1967

*Received
payment
F.C.C.*

June 2, 1967

Mrs. Fred Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana

Dear Jimmy:

During the next months "June", I will devote my time primarily to the research we will be conducting under the NSF grant. Therefore, I would appreciate it if you would inform Mrs. Sterling and have the University pay my salary for this month from the National Science Foundation research fund. I am on a nine month employment basis with the State University of New York. At the end of the academic year, I am switching over to this budget. I am enclosing expenses and travel over the last few months and will designate on each where the funds should be drawn from.

In Idaho Falls, I purchased from Lafayette Radio Sales some equipment for our continued radio-tracking research. You will soon get this bill and have the University pay it from the NSF funds.

I hope all is going well at the University. Why don't you take a few days off this summer and visit us at Canyon.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/ps
Enclosure

PS. I am running short on the last radio-tracking report with the Environmental Research Institute cover. I would appreciate it if you could ship some more of these to me.

Did not send receipts & expenses

July 19, 1967

Mrs. Alvina Barclay
Montana Cooperative Wildlife Research Unit
University of Montana
Missoula, Montana

Dear Jimmy:

Would you please check with Mrs. Sterling and tell her to continue to keep Mrs. Phyllis Seiter on the payroll until you hear from me to the contrary.

I hope John is not piling up too much work for you.

Plan to come over and see us when John drives up in August.

Sincerely,

Frank C. Craighead, Jr.

FCC, Jr/ps

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

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

UNIVERSITY OF MONTANA

MISSOULA, MONTANA 59801

May 7, 1968

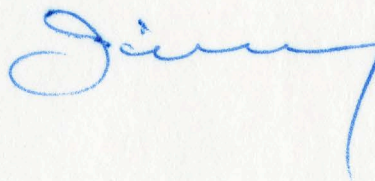
Dear Phyllis:

I have taken care of the change in rate so that you should receive the \$50 for April and \$300 for May at the end of this month.

When salary payment is made through state institutions, the Montana state tax must be deducted. However, I am sure you could claim a refund at the end of the year or when turning in your income taxes. This would be done through Helena. I don't know whether it is too late to do so for last year or not, but I'd certainly try it.

We're having an awful time trying to get some spring - new snow on the hilltops this morning and a dreary day. I've had enough. I want the sun to beat down on me.

Regards,



May 20, 1968

Mr. Neal L. Blair
Education Specialist
Game and Fish Commission
Cheyenne, Wyoming 82001

Dear Mr. Blair:

I would like to acknowledge receipt of your letter of May 8 with reference to your desire to obtain a couple of grizzly bear skins to be used in your education programs in the public schools and with youth groups.

Your letter has been forwarded to my brother, John, at the University of Montana.

We will see what we can do about obtaining these skins for you and keep you advised.

Sincerely,

Frank C. Craighead, Jr.
President

FCC,Jr/ps
cc: Dr. John J. Craighead

COPY OF BLAIR'S LETTER SENT ALSO

STANLEY K. HATHAWAY, Governor

WALTER REYNOLDS, Pres., Douglas
SAM KELLY, JR., Vice Pres., Rawlins
LESTER NIELSEN, Thermopolis
CHARLES M. CROWELL, Casper
JACK O. CORSI, Etna
FRANK B. CURTIS, Wolf
JOE L. BUDD, Big Piney



JAMES B. WHITE
State Game and Fish Commissioner
EARL M. THOMAS
Assistant State Game and Fish Commissioner
HOWARD W. ROBINSON
State Game Warden
W. DONALD DEXTER
State Fish Warden
PHIL F. LESLIE
Chief Clerk
GEORGE A. KAMINSKI
Chief I. & E.
CHESTER C. ANDERSON
Chief Research & Development

GAME AND FISH COMMISSION
CHEYENNE 82001

May 8, 1968

Mr. Frank Craighead
Box 156
Moose, Wyoming 83012

Dear Mr. Craighead:

During our brief conversation while you were in our office recently, we mentioned our desire to obtain a couple of grizzly bear skins to be used in our education programs in the public schools and with youth groups.

The size of the skins, etc., is not important. We will have them tanned to be used with our fur collections in classroom lectures.

Whatever you can do will certainly be appreciated. Wherever or whenever you have a skin available, please contact us and we will make arrangements to pick it up.

It was good to visit with you, though briefly. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Neal L. Blair".

Neal L. Blair
Education Specialist

NLB/jmj

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

4 August 1970

Dr. Frank C. Craighead, Jr.
President, Environmental Research Institute
Headquarters
P. O. Box 156
Moose, Wyoming 90312

Dear Dr. Craighead:

Regarding the Symposium on Animal Orientation and Navigation, the author order has been altered as requested.

Dr. John Busser has all of the information regarding the grizzly bear display. He is now on vacation; the first time that I shall have an opportunity to speak to him will be at the Symposium where we shall track him down together.

Most sincerely,

Mary-Frances Thompson

Mary-Frances Thompson
Coordinator, Special Science Projects

MFT/mdd

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

22 June 1970

MEMORANDUM

TO: Participants: Symposium on Animal Orientation and Navigation
Wallops Station, Virginia; 9-13 September 1970

FROM: Mary-Frances Thompson
Coordinator, Special Science Projects

PRESENTATIONS: The program is in preparation and will be mailed to you upon completion. Half an hour has been allotted for each paper; one hour for each review. Open discussion periods will follow each session.

PUBLICATION: The proceedings will be published. Please have a copy of your presentation (typed, double spaced) available for me at the meeting. If you are showing slides, vugraphs, etc., one set of glossy prints in a form suitable for final publication is required.

TRANSPORTATION: Air Travel: Direct flights are not available to Wallops Station. The nearest airport serving the area is Salisbury, Maryland. Flights leave from Washington's National Airport and Baltimore's Friendship Airport. If you are arriving at Washington's Dulles Airport (Maryland) you must take the airport limousine to the National Airport (\$2.50). This leaves hourly and takes approximately one hour. There is no direct service between Dulles and Friendship. Should this be necessary, however, take the airport limousine to the Airlines Bus Terminal at 12th & K Street, N. W., Washington, D. C., (\$2.50, one hour travel time) and then, the limousine to Friendship (another hour, another \$2.50). For those arriving in New York City from Europe, connecting flights to Salisbury are generally made through the Baltimore airport.

The Allegheny Airlines Commuter schedule (from the June 15 Official Airline Guide) to Salisbury from Washington's National Airport and Baltimore's Friendship Airport follows (\$15.75 one way):

<u>Day</u>	<u>Airport</u>	<u>Departure</u>	<u>Arrival</u>	<u>Flight #</u>
Except Saturday, Sunday	Baltimore	7:30 AM	8:05 AM	2
Except Sunday	Baltimore	9:21 AM	9:56 AM	4
Except Sunday	Baltimore	11:00 AM	11:35 AM	70
Except Sunday	National	11:40 AM	12:20 PM	6
Everyday	Baltimore	1:34 PM	1:59 PM	16
Everyday	Baltimore	3:10 PM	3:45 PM	8
Except Saturday	Baltimore	5:15 PM	5:50 PM	65
Except Saturday	Baltimore	7:15 PM	7:50 PM	12
Except Saturday	National	8:55 PM	9:35 PM	14

Return schedule: Salisbury to Washington's National Airport and Baltimore's Friendship Airport.

Except Saturday, Sunday	Baltimore	6:45 AM	7:20 AM	1
Except Sunday	National	8:25 AM	9:00 AM	3
Except Sunday	Baltimore	10:10 AM	10:45 PM	5
Except Sunday	National ✓	11:45 AM	12:20 PM	19
Everyday	Baltimore	12:30 PM	1:05 PM	15
Everyday	Baltimore	2:25 PM	3:00 PM	7
Except Saturday	Baltimore	4:25 PM	5:00 PM	9
Except Saturday	Baltimore	6:05 PM	6:40 PM	11
Except Saturday	National	8:05 PM	8:40 PM ✓	69

The Salisbury Airport is 40 miles north of Wallops Station. Wallops will provide shuttlebus service provided your arrival time is known to the AIBS.

Avis rental cars are also available at the Salisbury Airport (not reimbursable by the AIBS).

Bus Travel to Wallops Station from Washington, D. C.: The bus leaves the Greyhound Bus Terminal (1110 New York Avenue, N. W., Washington, D. C.) daily at 11:00 AM and arrives at 2:10 PM at Oak Hall - Tee's Corner (\$7.25 one way). This is merely a large intersection three miles from Wallops Station. Transportation will be provided upon request to the AIBS. In an emergency, call the Wallops Station operator (824-3411) and state that you are a Symposium participant and require transportation.

The return bus to Washington, D. C. leaves at 2:55 PM daily and arrives at 3:40 PM.

7:15

All participants must check in at the Base Main Gate where you will be provided with lodging information if you are staying on the base or with directions if you are staying off of the base.

ACCOMMODATIONS: Rooms are available, for gentlemen only, at the Wallop's dormitories, \$2.00 per night. Each room accommodates two people; the bath will either be shared by four or will be dormitory style (common facilities), depending upon the building. The rooms are adequate but quite modest. The guard at the gate will direct you to the dormitory registration desk.

Should you wish to stay off base or if you are bringing your family, motel accommodations are available. These are listed below with approximate costs. You are requested to make your own arrangements. Remember that all of these are a distance away and will require private means of transportation to and from the base.

Chincoteague, Virginia 5 miles away
The Mariner Motel
Maddox Road
(703) 336-6565
AAA: Good; \$16-18 single; deposit required

Pocomoke City, Maryland 14 miles away
Holiday Inn
U. S. 13
(301) 957-3000
AAA: Very good; \$12-14 single

Quality Courts Motel of Pocomoke
U. S. 13
(301) 957-1300
AAA: Very good; \$10-12 single

Accomac, Virginia 21 miles away
Whispering Pines
U. S. 13
(703) 787-1300
AAA: Good, \$10-12 single

MEETING ROOM LOCATION: The meeting will be held in the Board Room, Building E-2.

MEALS: Meals will be available in the Station Cafeteria (Building E-2) at a very reasonable cost. The service will be at:

Breakfast	7:00 AM - 8:00 AM
Lunch	11:30 AM - 1:00 PM
Dinner	4:30 PM - 6:00 PM

MAIL: If you will be receiving mail it should be addressed as follows:

Your name
c/o M. F. Thompson/AIBS Symposium
Wallops Station
Wallops Island, Virginia 23337

LOUNGE FACILITIES: The Station Lounge will be available for you and your family. Hours are from 4:30 PM to 11:30 PM. Mixed drinks and beer are sold.

CAMERAS: Cameras are allowed on the Base. Should you go into an area where they are prohibited, you will be notified in advance.

DRESS: Casual. The mean temperature for September is 70°F with a high of 75° and a low of 65°.

GEOGRAPHY AND CLIMATE: Wallops is comparatively flat, sparsely wooded, sandy and semi isolated. It is on the rural Eastern Shore of Virginia, five miles from the Atlantic Ocean, on the east. Nearby places of interest include Chincoteague, Virginia (famous for its wild ponies) and the Chincoteague Ocean Beach on Assateague Island, a swimming, surf-fishing area.

Wildlife abounds ... ducks, racoons, deer, birds, rabbits, the ponies and mosquitos. Remember to bring insect repellent.

WALLOPS STATION: Wallops Station is comprised of three areas: the Main Base, Wallops Island, and the Wallops Mainland. The Main Base, a three and one-half square mile tract of land, contains administration and engineering offices; Range Control Center; fabrication, calibration, instrumentation, and inspection facilities; an airport; and other support facilities. Wallops Island, a barrier island six miles long and one-half mile wide, is seven miles southeast of the Main Base. Launch sites, assembly shops, blockhouses, and dynamic balancing facilities are located on the Island. The Wallops Mainland, a half-mile strip of land separated from Wallops Island by tidal marshland, is the location of long-range radars, optical tracking sites and transmitter facilities. For those interested, a two hour tour of the facilities is scheduled for the morning of the 14th.

A map of the area is enclosed.

REMUNERATION: Reimbursement for travel, subsistence and miscellaneous costs will be made through the AIBS in accordance with AIBS policy.

Transportation: Travel by air is limited to air coach or tourist accommodations. The airline ticket stub must be attached to your expense voucher. U. S. A. carriers should be used where possible. Private car may be used with compensation of ten cents per mile with total charges not to exceed the cost of roundtrip air coach accommodations.

Subsistence: If you are staying in the dormitories at Wallops Station a per diem (room and meals) of \$12.00 per 24 hours, unitemized, can be claimed. If you are not staying in the government quarters \$20 per 24 hours, unitemized, is allowable or \$25 per 24 hours with detailed, receipted, itemization. The per diem is calculated from the time of your departure from home to your return, on an hourly basis.

Miscellaneous costs: taxicab, limousine and bus fares are reimbursable provided they are individually itemized.

Complete instructions for the preparation of your travel expense voucher are found on the back of the form. Three copies of the voucher are enclosed. Complete and return to me, in duplicate, for reimbursement upon your return.

Travel advances are available upon request.

.

Should you have any questions pertaining to the program, accommodations, travel, etc. please write or telephone me. My secretary, Michele Du Bois, will also be at the meeting to render any assistance which you may require.

October 12, 1970

Miss Mary-Frances Thompson
Coordinator, Special Science Projects
American Institute of Biological Sciences
3900 Wisconsin Avenue, N. W.
Washington, D. C. 20016

Dear Miss Thompson:

This letter deals with the reimbursement for travel, subsistence and miscellaneous costs in connection with Dr. Frank C. Craighead, Jr.'s recent trip to Wallops Island to attend the symposium on Animal Orientation and Navigation.

I inadvertently in haste billed the Smithsonian Institution for reimbursement. I have notified Dr. Helmut K. Buechner's office of this error. Dr. Buechner's secretary, Mrs. Duell, has possibly forwarded these travel expenses to you. I am enclosing a corrected copy in accordance with AIBS policy.

I am sorry for any inconvenience this error has caused you.

Thank you for your help.

Sincerely,

Phyllis J. Farrell
Administrative Assistant

PJF/
Enclosure

October 12, 1970

To: Miss Mary-Frances Thompson
From: Dr. Frank C. Craighead, Jr.
Subject: Travel reimbursement to attend Wallops Island
symposium on ~~Animal~~ Orientation and Navigation.

Monday, September 7, 1970

Travel from Jackson, Wyoming to
Washington, D. C.

(Leave Jackson at 9:21 a.m.

Arrive Washington 7:00 p.m.)

\$254.00

Overnight in Washington, D. C.

20.00

Tuesday, September 8, 1970

Drove to Wallops Island, Md.

Stayed in Government housing

12.00

Wednesday, September 9, 1970

At Wallops Island, Md.

Stayed in Government housing

12.00

Thursday, September 10, 1970

At Wallops Island, Md.

Stayed in Government housing

12.00

Friday, September 11, 1970

Drove to Washington, D. C.

Overnight in Washington, D. C.

20.00

Saturday, September 12, 1970

In Washington, D. C.

Overnight

20.00

Sunday, September 13, 1970

Travel to Jackson, Wyoming

10.00

(Leave National Airport at
8:25 a.m.

Arrive Jackson, Wyoming
at 3:57 p.m.)

Total.....

\$360.00

Approved by,

Frank C. Craighead, Jr.

FCC,Jr/pjf

September 17, 1970

To: Montana Cooperative Wildlife Research Unit
From: Dr. Frank C. Craighead, Jr.
Subject: Travel Expenses - NASA-Smithsonian Project

Monday, September 7, 1970

Travel from Jackson, Wyoming to
Washington, D. C.

Overnight in Washington

20.00

Leave Jackson at 9:21 a.m.

Arrive Washington 7:00 p.m.

\$254.00

Tuesday, September 8, 1970

Drove to Wallops Island, Md.
with Dr. Helmut K. Buechner

Per Diem

~~12.00~~
20.00

Wednesday, September 9, 1970

At Wallops Island, Md.

Per Diem

~~12.00~~
20.00

Thursday, September 10, 1970

At Wallops Island, Md.

Per Diem

~~12.00~~
20.00

Friday, September 11, 1970

Drive to Washington, D. C.
Overnight in Washington

Per Diem

20.00

Saturday, September 12, 1970

In Washington, D. C.
Overnight

Per Diem

20.00

Sunday, September 13, 1970

Travel to Jackson, Wyoming

20.00

Total..... \$394.00

Signed by,

Frank C. Craighead, Jr.

FCC,Jr/pjf

CORRECTED
COPY SENT
10-12-70

FLIGHT SCHEDULE

Monday, September 7, 1970

Leave Jackson, Wyoming Frontier Flight #527	9:21 a.m.
Arrive Denver, Colorado	11:05 a.m.
Leave Denver TWA Flight #480	12:00 NOON
Arrive National Airport Washington, D. C.	7:00 p.m.

Friday, September 11, 1970

Leave Salisbury, Maryland Allegheny Airlines Commuter Flight # 19	<i>leave with Dal</i> 11:45 a.m.
Arrive National Airport	12:20 p.m.

Sun
Saturday, September 13, 1970

Leave National Airport United Flight #421	8:25 a.m.
Arrive Denver, Colorado	11:35 a.m.
Leave Denver Frontier Flight #528 #532	2:30 p.m. 5:15 p.m.
Arrive Jackson, Wyoming	3:57 p.m. 6:20 p.m.

12:25 hr Datto
1045 1 hr
limosine
8x 3-5343
12th R

Round-trip fare \$294 to Washington only. This does not include the airfare from Salisbury, Maryland to Washington, D. C. on Friday September 11.

8-26-70 CONFIRMED

April 7, 1970

To: Montana Cooperative Wildlife Research Unit
From: Dr. Frank C. Craighead, Jr.
Subject: NASA Expenses

March 20, 1970		
Travel to Chicago, Illinois		\$266.00
March 21, 1970		
March 22, 1970 (Per Diem)		20.00
Travel from Chicago, Illinois to Washington, D. C.		
March 23, 1970 (Per Diem)		20.00
NASA-Smithsonian meeting in Washington		
March 24, 1970 (Per Diem)		20.00
Meeting with Dr. Hal Buechner		
March 25, 1970 (Per Diem)		20.00
Meeting with Jim Lynch		
March 26, 1970 (Per Diem)		20.00
Travel from Washington, D. C. to Jackson, Wyoming		
Arriving at 5:30 PM		
March 31, 1970 (Per Diem)		20.00
April 1, 1970 (Per Diem)		20.00
Reinstrumentation of elk National Elk Refuge		
Travel for 3-31-70 and 4-1-70 60 miles at .12 per mile		7.20
		<u>\$413.20</u>

Submitted by,

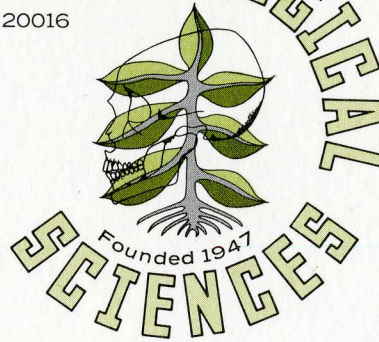
Frank C. Craighead, Jr.

FCC,Jr/pjf
Enclosure

A
d
o
g

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

16 October 1970

Dr. Frank C. Craighead, Jr.
Environmental Research Institute
P. O. Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

Enclosed is our check in the amount of \$340.00 for your travel expenses during your trip to Wallops Station, Virginia on 9-13 September 1970 to attend the AIBS/NASA Symposium on Animal Orientation and Navigation.

The amount is less than requested. We were not able to reimburse you for your overnight stay in Washington, D. C. on Saturday, 12 September.

On behalf of the National Aeronautics and Space Administration and the AIBS, may we take this occasion to thank you for your services.

Most sincerely,

Mary-Frances

Mary-Frances Thompson
Coordinator, Special Science Projects

MFT/mdd

Enclosure

It was nice meeting with you.

M E M O R A N D U M

To: Mary-Frances Thompson
Coordinator, Special Science Projects

From: Dr. Frank C. Craighead, Jr.

Subject: Flight Schedule for Monday, September 7, 1970

I plan to leave Jackson, Wyoming on Monday, September 7, 1970 arriving in Washington, D. C. at 7:00 p.m. on the same date.

I will plan to stay overnight in Washington on the 7th and drive to Wallops Island on Tuesday, September 8, 1970 with Dr. Helmut K. Buechner.

Will you please made dorm reservations for me for the nights of September 8, 9 and 10?

I will leave Wallops on Friday September 11 via the shuttle bus to Salisbury (40 miles) in time to connect with Allegheny Airlines Commuter at 11:45 a.m., Flight #19 arriving at National Airport at 12:20 p.m.

My return flight to Jackson, Wyoming will leave National Airport on September 12, 1970 at 8:25 a.m.

The round-trip fare is \$294.

FCC,Jr/pjf

M E M O R A N D U M

To: Dr. Helmut K. Buechner
From: Dr. Frank C. Craighead, Jr.
Subject: Flight Schedule for Monday, September 7, 1970

I plan to leave Jackson, Wyoming on Monday, September 7, 1970 arriving in Washington, D. C. at 7:00 p.m. on the same date.

I will plan to stay overnight in Washington on the 7th and drive to Wallops with you on Tuesday, September 8.

FCC,Jr/pjf

SYMPOSIUM ON ANIMAL ORIENTATION AND NAVIGATION

Please complete this form and return to M. F. Thompson, AIBS, 3900 Wisconsin Avenue, N. W., Washington, D. C., 20016, U.S.A., as soon as possible.

NAME

Dr. Frank C. Craighead, Jr.

AFFILIATION

President, Environmental Research Institute

MAILING ADDRESS

P.O. Box 156
Moose, Wyoming 83012

TRAVEL ARRANGEMENTS

I shall arrive at Wallops by:

_____ Air
_____ ☒ Automobile
_____ Bus

My time of arrival:

Afternoon _____
_____ 9-8-70 Day

I shall require transportation to Wallops from:

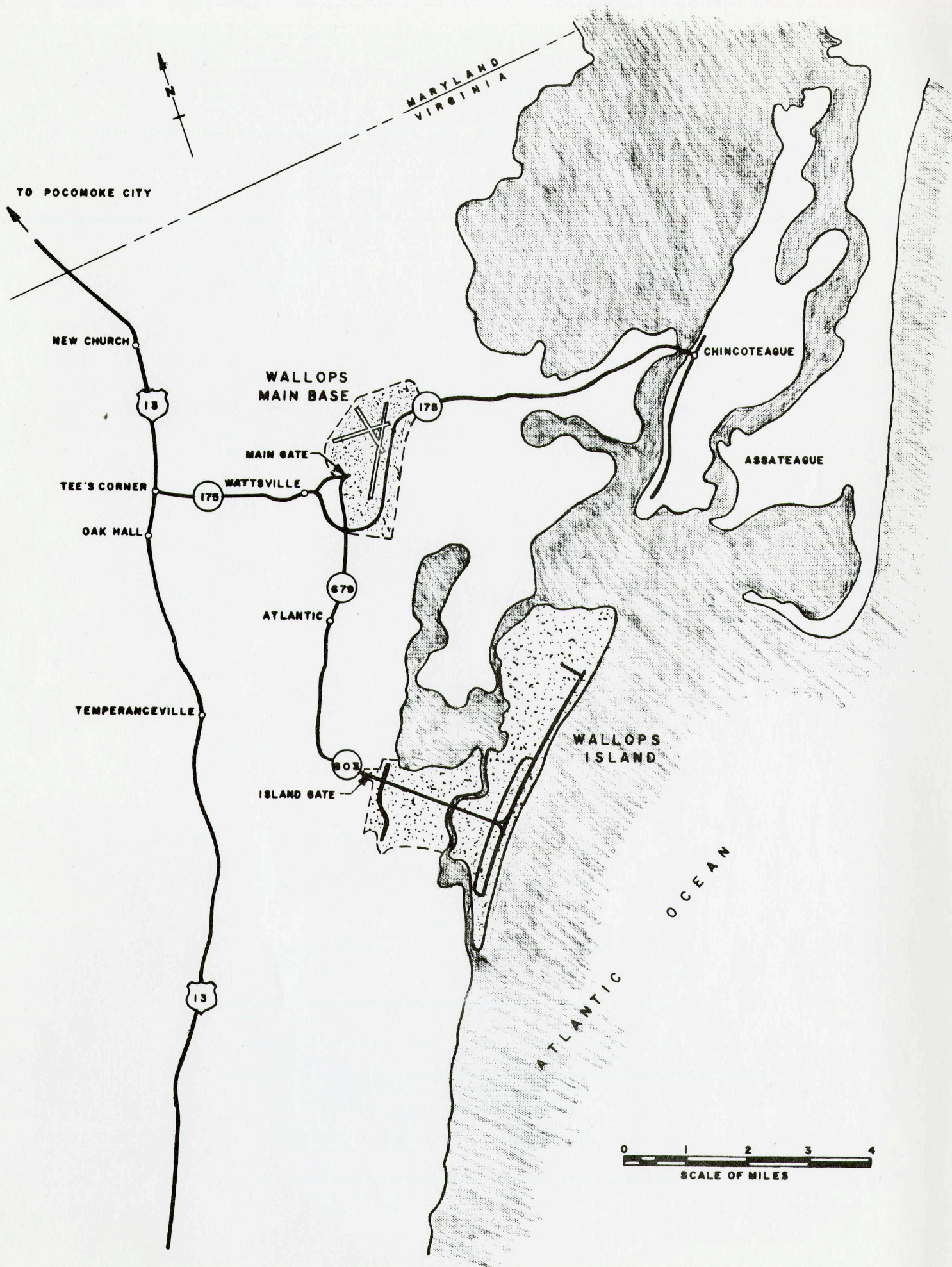
_____ Salisbury Airport
_____ Tee's Corner

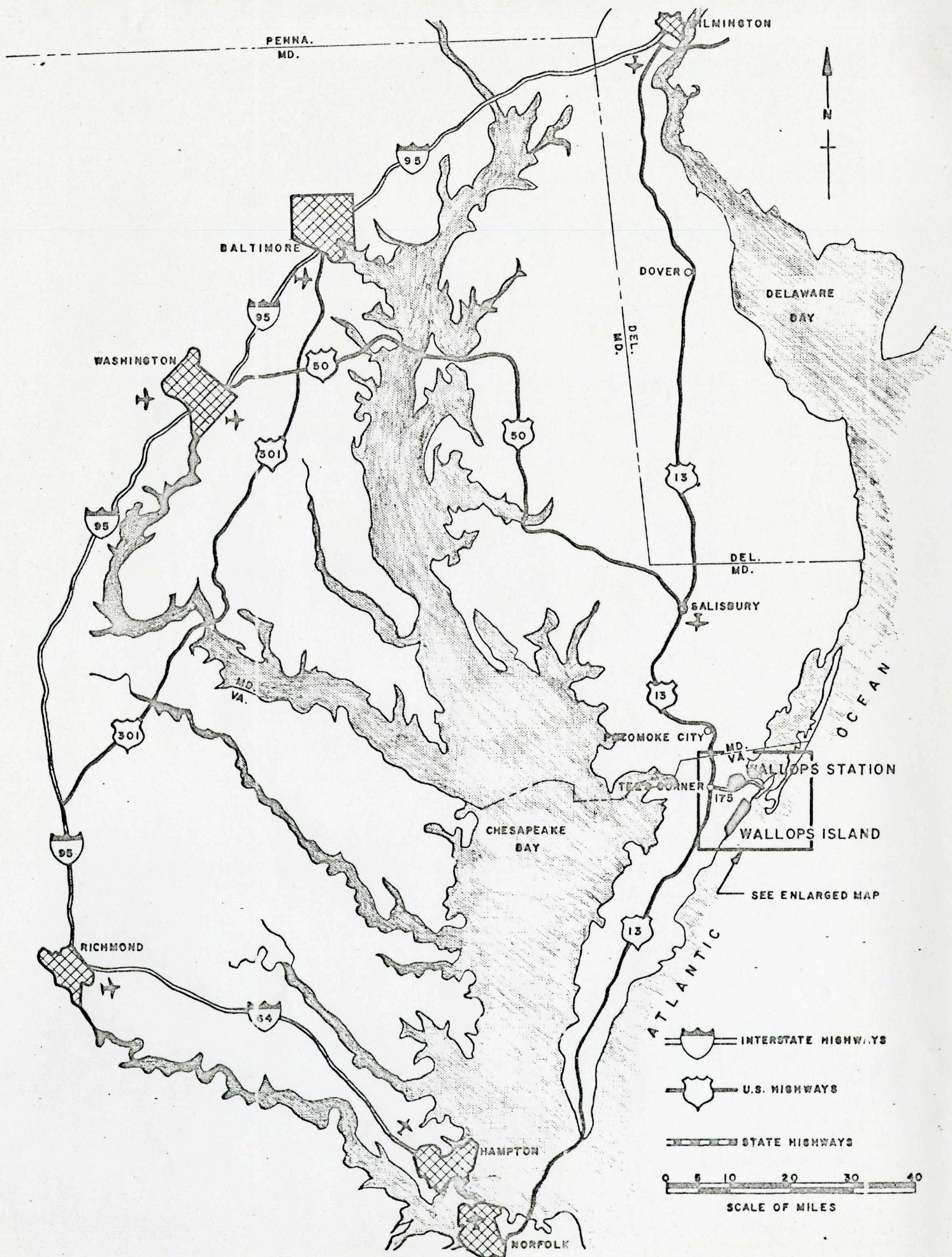
ACCOMMODATIONS

Dormitory housing is requested:

_____ for the 8, 9, and 10

I shall arrange for my own lodgings:





AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

MEMORANDUM

TO: Participants, Animal Orientation and Navigation Symposium

FROM: Mary-Frances Thompson
Coordinator, Special Science Projects

- (1) The preliminary program is enclosed. Please send any corrections regarding your presentation to me as soon as possible.
- (2) For those taking the Greyhound bus from Washington, D. C. to Tee's Corner and return, the schedule has been changed as of 25 June and most probably will be changed again in September.....there is no way of obtaining this information and having it for you, in time, prior to the immediate meeting dates. For what it is worth, however, the summer schedule follows:

Greyhound Bus Terminal
110 New York Avenue, N. W.
Washington, D. C.
(202) NA8-8000

Leaves Washington

8:00 AM

11:00 AM

Leaves Tee's Corner

2:00 PM

Arrives Tee's Corner

12:20 PM

3:20 PM

Arrives Washington

6:30 PM

Most probably the 11:00 AM to Tee's Corner will continue to be in service in September with the return trip scheduled between 2 PM and 3 PM.

*Hal will contact Thompson AIBS
& get paper in name of all of us - F.C.C. J.J.C.
Bredner*

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

MEMORANDUM

TO: Participants, Animal Orientation and Navigation Symposium

FROM: Mary-Frances Thompson
Coordinator, Special Science Projects

- (1) The preliminary program is enclosed. Please send any corrections regarding your presentation to me as soon as possible.
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Greyhound Bus Terminal
110 New York Avenue, N. W.
Washington, D. C.
(202) NA8-8000

Leaves Washington

8:00 AM

11:00 AM

Leaves Tee's Corner

2:00 PM

Arrives Tee's Corner

12:20 PM

3:20 PM

Arrives Washington

6:30 PM

Most probably the 11:00 AM to Tee's Corner will continue to be in service in September with the return trip scheduled between 2 PM and 3 PM.

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

30 July 1970

Dr. Frank C. Craighead, Jr.
President, Environmental Research Institute
Headquarters
P. O. Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

We are most pleased to have your participation in the Symposium on Animal Orientation and Navigation.

Helmut Buechner had informed me of your change of plans. Since the elk experiment is a focal point of the meeting, the time has been extended to one hour. The discussion period follows immediately - this would be an appropriate time for you to discuss the bear experiment.

Most sincerely,

Mary-Frances Thompson

Mary-Frances Thompson
Coordinator, Special Science Projects

MFT/mdd

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS
202/244-5581

24 June 1970

Dr. Frank C. Craighead, Jr.
Box 156
Moose, Wyoming 83012

Dear Dr. Craighead:

The American Institute of Biological Sciences is pleased to invite you to participate in a Symposium on Animal Orientation and Navigation to be sponsored by the National Aeronautics and Space Administration in collaboration with the Smithsonian Institution. The meeting, which will be chaired by Dr. Klaus Schmidt-Koenig, of the University of Gottingen, will be held September 9th through 13th at NASA's Wallops Station, Virginia.

WED. SUN.

The intent of this Symposium is to foster an interchange of recent research findings and to acquaint the participants with technological developments which may accelerate progress in understanding the mechanisms of orientation and navigation. The Symposium will be particularly timely. The years, since the last major meeting, have seen much progress in research and a new public awareness and appreciation for the ecological values of biological science.

The program is presently in preparation. In view of your contributions to this area, Dr. Schmidt-Koenig has asked that you be invited to attend the meeting.

Travel and per diem costs will be paid by the AIBS. Further information regarding reimbursement and meeting accommodations is enclosed.

We look forward to an enjoyable and productive Symposium.

Sincerely yours,

John R. Olive
John R. Olive
Director

JRO/MFT/mdd

Enclosures

July 29, 1970

Miss Mary Frances Thompson
American Institute of Biological Sciences
3900 Wisconsin Avenue, N.W.
Washington, D. C. 20014

Dear Miss Thompson:

I have just received a copy of Dr. Buechner's letter to you concerning the elk satellite tracking paper. Hal mentions the order in which this paper will be co-authored. This is a mistake in that it should be in the following order: Frank C. Craighead, Jr., John J. Craighead, Charles E. Cote, and Dr. Helmut K. Buechner.

I would be interested to know how the display with the grizzly bear pictures has worked out and whether this is a continuing project. As you will perhaps remember, I mentioned in a letter that we would be interested in getting the enlargements when you have finished using them in this educational display program.

I am looking forward to the meeting in September and assume that you will be attending.

Thank you.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

July 23, 1970

Dr. John R. Olive, Director
American Institute of Biological Sciences
3900 Wisconsin Ave., N.W.
Washington, D. C. 20016

Dear Dr. Olive:

Your letter of June 24 inviting me to the Symposium on Animal Orientation and Navigation was answered by my secretary. She conveyed the contents of your letter to me and on a basis of the subject of the symposium, I felt that I would not be able to attend particularly in view of other commitments. However, since receiving the preliminary program, I find that a great deal of the conference is being devoted to biotelemetry research and techniques and to satellite-tracking and monitoring. I feel that I could contribute substantially to this symposium, so am rearranging my schedule and would like you to reconsider your invitation for me to participate.

I could present a paper on the feasibility experiment: The Satellite-Tracking of an Elk. I would give this jointly with my brother Dr. John J. Craighead, Dr. Helmut Buechner and Chuck Cote. I have discussed this with Hal Buechner and probably the best way to work this out would be for Dr. Buechner and I to present the paper for the four of us. If this is satisfactory to you, I will plan on attending the symposium in September.

My brother, Joel Varney, Chuck Cote and I monitored a bear den environment by satellite and simultaneously obtained 24-hour body temperatures using ground equipment. We might discuss this informally.

I am looking forward to seeing you again and to participating in a symposium that carries on the work that many of us reported on at the New York meeting quite a few years ago. Thanks for the invitation.

Sincerely,

Frank C. Craighead, Jr.

FCC,Jr/pjf

A
d
o
g

July 7, 1970

American Institute of Biological Sciences
3900 Wisconsin Avenue, N. W.
Washington, D. C. 20016

ATTENTION: John R. Olive
Director

Dear Dr. Olive:

I would like to acknowledge receipt of your letter of June 24 relative to the Symposium on Animal Orientation and Navigation to be sponsored by the National Aeronautics and Space Administration in collaboration with the Smithsonian Institution.

Dr. Frank C. Craighead, Jr. has been involved in a horse accident resulting in a broken ankle and a fractured skull. Although, he is home from the hospital and his prognosis appears to be good, his summer and fall commitments will be markedly altered.

I regret to inform you that Dr. Frank C. Craighead, Jr. will not be able to attend this symposium

In the near future, Dr. Craighead will formally acknowledge your invitation.

Sincerely,

Phyllis J. Farrell
Administrative Assistant

PJF/

A
d
o
c

AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES

3900 WISCONSIN AVE., N.W. • WASHINGTON, D. C. 20016



AIBS

202/244-5581

PRELIMINARY PROGRAM

SYMPOSIUM ON ANIMAL ORIENTATION AND NAVIGATION

Wallops Station, Virginia
9-13 September 1970

Sponsored by

The National Aeronautics and Space Administration

The Smithsonian Institution

The American Institute of Biological Sciences

PRELIMINARY PROGRAM

9 September 1970

- 9:00 OPENING ADDRESS
Chairman: Klaus Schmidt-Koenig
Zoologisches Institut der Universität, Göttingen
- 9:05 NASA WELCOME
Robert L. Krieger
Director, Wallops Station
Orr E. Reynolds
Director, Bioscience Programs
Office of Space Science and Applications
- 9:15 KEYNOTE ADDRESS
Smithsonian Institution

SESSION I: TECHNIQUES

Session Chairman: *John R. Busser, The American Institute of Biological Sciences*

- ✓ 9:45 A TECHNIQUE FOR ANIMAL TRACKING
AND MONITORING USING SATELLITES
James C. Maxwell
The Smithsonian Institution
- ✓ 10:15 LONG-RANGE RADIO-TRACKING OF TURTLES'
PATH BEHAVIOR
POLAR BEAR INSTRUMENTATION
Howard A. Baldwin
The University of Arizona
- ✓ 11:00 TECHNIQUES FOR LONG-DISTANCE TRACKING OF BIRDS
William W. Cochran
Illinois Natural History Survey
- 11:30 RECENT STATISTICAL METHODS FOR ORIENTATION DATA
Edward Batschelet
The Catholic University of America
- 12:15 SUMMARY - STATE OF THE ART
John R. Busser
The American Institute of Biological Sciences
- 12:45 DISCUSSION

SESSION II: ANIMAL TRACKING

Session Chairmar: *Robert Galambos, The University of California, San Diego*

- ✓ 2:30 SEA TURTLE PATH BEHAVIOR
POLAR BEAR TRACKING
Howard A. Baldwin
The University of Arizona
- ✓ 3:30 SATELLITE TRACKING: THE ELK EXPERIMENT
Helmut Buechner
The Smithsonian Institution
- 4:00 DISCUSSION

10 September 1970

SESSION III: RADAR TRACKING OF BIRDS

Session Chairman: *Donald R. Griffin, The Rockefeller University*

- 9:00 TRACKING RADAR STUDIES OF BIRD MIGRATION
Timothy C. Williams, Janet M. Williams
The State University of New York, Buffalo
- 9:30 FLIGHT DIRECTIONS OF PASSERINE MIGRANTS IN DAYLIGHT AND
DARKNESS: A RADAR AND DIRECT VISUAL STUDY
Sidney A. Gauthreaux, Jr.
Clemson University
- 10:00 INFORMATION ON BIRD NAVIGATION OBTAINED BY BRITISH
LONG-RANGE RADARS
Peter R. Evans
The University of Durham
- 10:30 METHODS IN QUANTITATIVE AND QUALITATIVE ANALYSIS OF
BIRD MIGRATION WITH A TRACKING RADAR
B. Bruderer
The University of Basel
- 11:00 ORIENTATION OF MIGRATING BIRDS IN OR NEAR OPAQUE CLOUDS
Donald R. Griffin
The Rockefeller University
- 11:30 DISCUSSION

SESSION IV: BIRD MIGRATION AND HOMING

Session Chairman: *H. Charles Walcott, State University of New York, Stonybrook*

- 2:00 THE IMPORTANCE OF CELESTIAL ROTATION IN THE
DEVELOPMENT OF MIGRATORY ORIENTATION CAPABILITIES
Steven T. Emlen
Cornell University
- 2:30 ORIENTATION RESPONSES OF BIRDS (MALLARD AND EUROPEAN
TEAL) AFTER TRAINING UNDER ARTIFICIAL STAR-SKIES
Hans G. Wallraff
Max-Planck-Institut
- 3:00 A HYPOTHESIS FOR THE DEVELOPMENT OF NAVIGATION IN BIRDS
Frank C. Bellrose
The Illinois Natural History Survey
- 3:30 TOPOGRAPHY AND PIGEON ORIENTATION: FOLLOWING PIGEONS'
FLIGHT BY HELICOPTER
G. Wagner
- ✓ 4:00 A MODEL FOR *HYLOCICHLID* THRUSH MIGRATION IN NORTH AMERICA
William W. Cochran
The Illinois Natural History Survey
- 4:30 DISCUSSION

SESSION IV - continued: BIRD MIGRATION AND HOMING

Session Chairman: *Helmut E. Adler, The American Museum of Natural History*

- 9:00 HOMING IN PIGEONS
Klaus Schmidt-Koenig
Zoologisches Institut der Universität, Göttingen
- 9:30 CAN HOMING PIGEONS USE SUN NAVIGATION
H. Charles Walcott
State University of New York, Stonybrook
- 10:00 METHODS OF STUDY FOR POLAR MIGRATORY BIRDS
William J. L. Sladen
The Johns Hopkins University
- 10:30 SOME ASPECTS OF THE USE OF VISUAL CUES IN
DIRECTIONAL TRAINING OF HOMING PIGEONS
Dennis L. McDonald
Duke University
- 11:00 SOME OPERANT TECHNIQUES IN THE ANALYSIS OF
ORIENTATION
Richard J. Herrnstein
Harvard University
- 11:30 ENDOGENOUS TIMING FACTORS IN BIRD MIGRATION
Eberhart Gwinner
Stanford University
- 12:00 DISCUSSION

SESSION V: SENSORY MECHANISMS: MECHANICAL SENSES

Session Chairman: *Kenneth D. Roeder, Tufts University*

- 2:00 NEUROPHYSIOLOGICAL ANALYSIS OF ECHOLOCATION
IN BATS
Nobuo Suga
Washington University
- 2:30 NEUROPHYSIOLOGICAL ASPECTS OF ACOUSTIC
ORIENTATION IN BATS
O'Dell W. Henson, Jr.
Yale University, School of Medicine
- 3:00 THE DEVELOPMENT OF SOUNDS IN YOUNG BATS WITH
PARTICULAR EMPHASIS ON MATERNAL-INFANT
COMMUNICATION
Edwin Gould
Johns Hopkins University
- 3:30 ECHOLOCATION IN MARINE ANIMALS
- 4:00 DISCUSSION

12 September 1970

SESSION V - continued: SENSORY MECHANISMS

OPTICAL SENSES

Session Chairman: C. A. G. Wiersma, *The California Institute of Technology*

- 9:00 VISUAL ORIENTATION PERFORMANCES OF DESERT ANTS,
CATAGLYPHIS BICOLOR, TOWARDS SUN-COMPASS
DIRECTIONS AND TERRESTRIAL CUES
Rudiger Wehner
Zoologisch-Vergl. Anatomisches Institut der
Universität, Zürich
- 9:30 VISUAL DIRECTION FINDING BY FISHES
Talbot H. Waterman
Yale University
- 10:30 VISUAL ACUITY IN CRUSTACEANS
- 11:00 DISCUSSION

CHEMICAL SENSES

Session Chairman: *Howard E. Winn*, *The University of Rhode Island*

- 2:00 ORIENTATION THROUGH CHEMO-RECEPTION IN FISHES
Herman Kleerekoper
Texas A&M University
- 2:30 EVIDENCE FOR OLFACTORY PILOTING BY MIGRATING
SEA TURTLES
Archie F. Carr, Jr.
The University of Florida
- 3:00 A MECHANISM OF HOMING ORIENTATION IN SALAMANDERS
INVOLVING CHEMICAL CUES
Dale M. Madison
The University of Maryland
- 3:30 DISCUSSION

13 September 1970

SESSION V - continued: SENSORY MECHANISMS

OTHER SENSES

Session Chairman: M. Lindauer, *Zoologisches Institut der Universität, Frankfurt*

- 9:00 ANEMOMENOTACTIC ORIENTATION IN BEETLES AND SCORPIONS
K. Eduard Linsenmair
Zoologisches Institut der Universität, Frankfurt
- 9:30 AZIMUTH ORIENTATION OF THE DRAGONFLY *SYMPETRUM*
Mituhiko Hisada
Hokkaido University
- 10:00 EXPERIMENTAL PROBLEMS IN STUDYING MOON ORIENTATION OF TALITRID AMPHIPODS
James T. Enright
Scripps Institution of Oceanography
- 10:30 ORIENTATION IN CRUSTACEANS
- 11:00 DISCUSSION

ELECTRICAL AND MAGNETIC CUES

Session Chairman: Frank A. Brown, Jr., *Northwestern University*

- 1:00 MAGNETIC EFFECTS ON DANCING BEES
M. Lindauer
Zoologisches Institut der Universität, Frankfurt
- 1:30 ABOUT THE INFLUENCE OF MAGNETIC TOTAL INTENSITY AND INCLINATION ON DIRECTIONS PREFERRED BY MIGRATING EUROPEAN ROBINS, *ERITHACUS RUBECULA*
W. Wiltschko
Zoologisches Institut der Universität, Frankfurt
- 2:00 EFFECTS OF MAGNETS ON PIGEON HOMING
William T. Keeton
Cornell University
- 2:30 ELECTRICAL FISH
- 3:00 DISCUSSION

CLOSING SESSION

Chairman: Klaus Schmidt-Koenig

- 3:30 A LOOK INTO THE FUTURE
Smithsonian Institution

SYMPOSIUM ON ANIMAL ORIENTATION AND NAVIGATION

CHAIRMAN

Klaus Schmidt-Koenig
Zoologisches Institut der Universität, Göttingen

SYMPOSIUM PLANNING COMMITTEE

Chairman: *Klaus Schmidt-Koenig*
Richard E. Belleville, National Aeronautics and Space Administration
John R. Busser, American Institute of Biological Sciences
James T. Enright, Scripps Institution of Oceanography
Robert Galambos, University of California, San Diego
Donald R. Griffin, Rockefeller University
Richard Herrnstein, Harvard University
George J. Jacobs, National Aeronautics and Space Administration
Dale W. Jenkins, Smithsonian Institution
Talbot H. Waterman, Yale University

SYMPOSIUM PROGRAM ORGANIZERS

Richard E. Belleville, National Aeronautics and Space Administration
Mary-Frances Thompson, American Institute of Biological Sciences

WALLOPS STATION ARRANGEMENTS

Philip Ryan

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

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

UNIVERSITY OF MONTANA
MISSOULA, MONTANA 59801
September 30, 1970

Dr. H. K. Buechner
Museum of Natural History
Smithsonian Institution
Washington, D.C. 20560

Dear Dr. Buechner:

Enclosed are two statements of expenses from the Environmental Research Institute, both for plane rental, and each in the amount of \$189.00 for a total of the two of \$378.00.

Also enclosed is a statement from Frank Craighead for travel expenses on his recent trip to Washington. Attached is his plane ticket and he has also included two hotel receipts which you probably will consider irrelevant in view of the per diem claimed. However, I felt you should have them along with the plane ticket in case you did need additional verification. The total of this travel claim is \$394.00.

Could you see that checks in the amount of \$378.00 (payable to Environmental Research Institute) and in the amount of \$394.00 (payable to Frank Craighead) are forwarded to Frank?

Thanks for your help.

Yours very truly,

Rae M. Dabbert

Rae M. Dabbert (Mrs.)
Secretary

Enclosures

Copies: Dr. Frank Craighead ✓
Mr. Phillip H. Babcock

National Geographic Society

WASHINGTON, D. C. 20036

September 15, 1965

BOOK SERVICE
MERLE SEVERY CHIEF

Dr. Frank Craighead
Route 1
Boiling Springs, Pennsylvania

Dear Dr. Craighead:

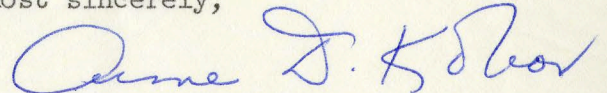
In just a few weeks we should be seeing the first advance copies of "Water, Prey and Game Birds." I am sure you are as anxious as we are to see the finished product.

I am enclosing the six transparencies which were used in the book; they have just been returned from the engraver. They are:

Falconing (5)
Anhinga (1)

I hope you had a successful summer. With all best wishes,

Most sincerely,



(Mrs.) Anne Dirkes Kobor

ADK:ln
Enclosures (6)



United States Department of the Interior

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

WASHINGTON, D.C. 20240

May 25, 1970

Dr. Charles Abernathy
Children's Hospital Medical Center
300 Longworth Avenue
Boston, Massachusetts

Dear Dr. Abernathy:

In accordance with your wishes, as expressed to me by telephone last week, we have explored further the possibility of using an elk at the National Bison Range for your study of antler tips.

John Craighead advises that it would probably be necessary to kill the elk at the National Bison Range rather than tranquilizing it. Because of incipient public relations problems, the difficulty of disposing of the rest of the carcass in a way suitable to local people, and still other complex considerations, it does not seem feasible to kill the elk there.

Accordingly, we invite you to take advantage of the alternative arrangement Dr. Stebler and others proposed to you earlier. Dr. J. B. Low, Leader of the Utah Cooperative Wildlife Research Unit at Utah State University, Logan, will be glad to help you secure the antler tips from locally-penned elk. It would be relatively easy to secure more antler tips from more than one elk at Logan, if you need them. Because of an accident, one of the penned elk at Logan was killed last week. Dr. Low was able to secure the antler tips and freeze them for you, if you can put them to use.

I am sorry that the arrangement at Logan is less convenient for you, but it seems to be the most expeditious way for us to help you.

You can call Dr. Low at the Utah Cooperative Wildlife Research Unit, Area Code 801-752-4100, Ext. 421.

Sincerely yours,

Thomas S. Baskett
Chief, Division of Wildlife Research

WRes:TSBaskett/osh

cc: Regions 1 & 2
Drs. John and Frank Craighead
Dr. L. B. Low, Utah
Dr. Stebler
Div. Refuges

February 17, 1970

Dr. Charles Abernathy
Research Associate In Surgery
Harvard Medical School
Children's Hospital Medical Center
300 Longwood Avenue
Boston, Massachusetts 02115

Dear Dr. Abernathy:

I would like to acknowledge receipt of your letter dated February 11 to Dr. Frank C. Craighead, Jr.

Upon Dr. Craighead's return to the office, I will bring your letter to his attention. He has been conducting a field research project in Yellowstone National Park during the past week.

Sincerely,

Phyllis J. Farrell
Administrative Assistant

Office of:
Dr. Frank C. Craighead, Jr.
P.O. Box 156
Moose, Wyoming 83012

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

*Received phone call
3/9/70
need material from 3 or 4 animals
Time growing out there?
Permission. Y. N. Park, Bison Range
Pay expenses of fieldman?
Talk to Jim White
April - some growth old bulls
most growth May & June*

HARVARD MEDICAL SCHOOL

DEPARTMENT OF SURGERY



CHILDREN'S HOSPITAL MEDICAL CENTER
300 LONGWOOD AVENUE
BOSTON, MASSACHUSETTS 02115

February 11, 1970

Mr. Frank Craighead
Jackson Hole, Wyoming

Dear Mr. Craighead:

We at the surgical laboratory of the Children's Hospital Medical Center here in Boston are engaged in basic cancer research. Recently, Dr. Judah Folkman and myself have embarked on an extensive program to isolate a factor that is present in cancer that elicits blood vessel growth into the cancer from the host. We have used several human tumors and animal tumors to extract this factor. As I am sure is obvious to you, this is very important work and may well develop a whole new line of cancer therapy.

The reason we are writing to you is because of my own knowledge of the work you have done with wildlife particularly elk; and after we have addressed ourselves to the problem of studying tissue that was not cancerous but was of a very rapidly growing nature, we reviewed the rather extensive literature on deer and other antler growth. We found to our surprise that Dr. Wislocki who has been for many years Chairman of the Department of Anatomy here at Harvard had written a very elegant series of articles in which he studied various aspects of the blood supply and nerve supply of the growing deer antler. It is our thinking that we might obtain very valuable information about this "factor" that we are beginning to isolate from tumors by studying the "velvet" from a rapidly growing elk antler. This, of course, is where we need your assistance.

It is our present thinking that if we could obtain a sample or samples of the small area of rapid growth at the tip of the velvet where presumably all of the growth and the blood vessel proliferation is taking place and also get a sample of velvet further down on the antler or tine that was not proliferating as rapidly as that at the tip that we might compare these two with our assay and preliminarily determine if the factor was present in this normal rapidly growing tissue. The details of how this would have to be harvested from the animal would, of course, have to be worked out utilizing both your knowledge of the animal and our knowledge of how the tissue might be prepared in order to extract the factor from it. It is our present thinking that at least for the preliminary studies if a few samples could be taken from the velvet and perhaps a

February 11, 1970

separate sample of the germinal cap (that is the beginning bone) just under the velvet at the tip of the antler and these samples could be immediately placed in dry ice and shipped to us via air, that, we hope, the factor if present could be found by our methods. Obviously as in any kind of research of this nature there will be snags and other modifications may well need to be worked out concerning the handling of the tissue.

If you are at all interested in what we think is a rather exciting project, we would be more than happy to collaborate with you on it; and we feel that you are perhaps the only man in American with the knowledge and access to the wildlife that we would need. We think that you will agree that it would be a rather marvelous thing if an animal such as the elk could contribute in this way to medical science. We are anxious to hear from you and will be happy to furnish more details of the specifics of processing and handling or any other information that you might wish about the project. We also would be prepared to handle any financial expense concerning obtaining, shipping, etc. providing, of course, that this was not exorbitant. We will anxiously await your reply.

Sincerely,

Charles Abernathy, M.D.
Charles Abernathy, M.D.
Research Associate In Surgery

CA:arc

Please give my greetings to your wife whom I met while she was having hip surgery at the Colorado General Hospital in Denver as I was a surgical resident on the wards at that time. I hope that she has fared well with her hip problem.

2-17-70 COPY TO JOHN

March 16, 1970

Dr. Charles Abernathy
Research Associate in Surgery
Harvard Medical School
Children's Hospital Medical Center
300 Longwood Avenue
Boston, Massachusetts 02115

Dear Dr. Abernathy:

I have read with interest your letter of February 11 and in response to this and your phone call of March 9, I will try to provide information that will help you with your most interesting cancer research project. I would like to collaborate with you in this work and will plan to do so to the extent that my rather busy schedule throughout the spring and summer permits.

The best place to obtain samples of the growing tip of an elk's antler would undoubtedly be in Yellowstone National Park. However, as I mentioned to you over the phone, the present situation here in regard to independent research is such that I cannot give you encouragement. Hopefully, the situation will have improved by May or June. At any rate, I will explore the possibilities.

My brother, Dr. John J. Craighead, I and/or graduate students working with you could rather readily obtain the samples you need in Yellowstone. However, permission to do so would be required and is not likely to be forthcoming.

Incidentally, I sent a copy of your letter to my brother, John, and he may have some thoughts on the matter that would be helpful.

The second choice for obtaining samples would, I believe, be the Bison Range at Moise, Montana. The Refuge Manager is Mr. Kaschke. He has been very helpful to us in the past and I am sure would cooperate in this project in so far as he is able. At the Refuge, they presently have a number of elk in large enclosures. Possible permission could be given to take a sample from one or more of these animals. My brother, I or our assistants would be glad to work with you in immobilizing the animal and obtaining the necessary material.

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During late spring and summer, a number of elk are kept in a large enclosure on the National Elk Refuge in Jackson, Wyoming. These animals are held here primarily as an attraction for the tourists. It might be possible to obtain samples from one or more elk in this group. To do so, it would be necessary to get the permission of the Wyoming Game and Fish Commission. This could be obtained by writing:

Research Associate
Harvard Medical School
Children's Hospital
300 Longwood Avenue
Boston, Massachusetts

Mr. James White
Director
State Game & Fish Commission
Cheyenne, Wyoming 82001

and by writing to:

Mr. Don Redfearn
Refuge Manager
National Elk Refuge
Jackson, Wyoming 83001

I doubt if Don will give you permission unless authority to do so comes down through Bureau channels. I would suggest that a start in getting this permission would be to write to:

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Dr. Charles Loveless
Bureau of Sports, Fisheries,
and Wildlife
Division Wildlife Research
513 Matomic Building
1717 H. Street N. W.
Washington, D. C. 20001

and asked him if he could help expedite permission to take samples from a few elk in this area.

Some antler growth in old animals starts in April, but most antler growth of elk in this area occurs during the months of May and June.

I will be meeting with my brother in a few days and will discuss this subject with him. It may be that through his ties with the Fish and Wildlife Service, he can suggest a better approach.

Sincerely,
Frank C. Craighead, Jr.
FCC,Jr/pjf

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