Senate Hearings

1971

Before the Committee on Appropriations

Predator Control and Related Problems

92*d* CONGRESS, FIRST SESSION

Fiscal Year 1972

PREDATOR CONTROL AND RELATED PROBLEMS

HEARINGS

BEFORE THE

SUBCOMMITTEE ON AGRICULTURE, ENVIRONMENTAL, AND CONSUMER PROTECTION

OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-SECOND CONGRESS

FIRST SESSION

Printed for the use of the Committee on Appropriations

U.S. GOVERNMENT PRINTING OFFICE

65-903 O WASHINGTON : 1971

SUBCOMMITTEE ON AGRICULTURE, ENVIRONMENTAL, AND CONSUMER PROTECTION OF THE COMMITTEE ON APPROPRIATIONS

GALE W. McGEE, Wyoming, *Chairman*

JOHN STENNIS, Mississippi
WILLIAM PROXMIRE, Wisconsin
ROBERT C. BYRD, West Virginia
MIKE MANSFIELD, Montana
DANIEL K. INOUYE, Hawaii
ALLEN J. ELLENDER, Louisiana
Chairman

ROMAN L. HRUSKA, Nebraska
MILTON R. YOUNG, North Dakota
KARL E. MUNDT, South Dakota
HIRAM L. FONG, Hawaii
J. CALEB BOGGS, Delaware

EX OFFICIO MEMBERS FROM THE COMMITTEE ON AGRICULTURE

HERMAN E. TALMADGE, Georgia
JAMES O. EASTLAND, Mississippi

JACK MILLER, Iowa

PREDATOR CONTROL AND RELATED PROBLEMS

WEDNESDAY, JUNE 2, 1971

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room 1318, New Senate Office Building, Hon. Gale W. McGee (chairman) presiding.

Present: Senators McGee and Ellender.

ENVIRONMENTAL PROTECTION AGENCY

DEATHS OF EAGLES IN THE STATE OF WYOMING

STATEMENT OF WILLIAM D. RUCKELSHAUS, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY

ACCOMPANIED BY:
DAVID DOMINICK, ASSISTANT ADMINISTRATOR
CHARLES SCOTT, RESEARCH SPECIALIST

SURVIVAL OF QUALITY LIVING

Senator McGEE. This session of the Senate Appropriations Subcommittee on Agriculture, Environmental, and Consumer Protection will come to order.

The purpose of this hearing is to inquire into the recent and sudden flurry of casualties in the eagle population of this country. The question obviously is, in order with the world coming apart at the seams and power politics of the Nation dominating the headlines, so what are another 50 or so eagles?

I think the real point of it is that man, in his quest for political survival in a world without law, likewise must insist upon the survival of quality living at the same time, and by quality living I mean the opposite of what Rachel Carlson once called the Silent Spring.

The disappearing species in the land, when we think back to buffalo, trumpeter swan, whooping crane, each in its turn, should remind us that we may be next if we neglect life on this planet.

U.S. STATUTORY PROTECTION OF BALD AND GOLDEN EAGLES

The Congress of the United States had seen fit in 1940 to legislate protection for the American bald eagle, and soon thereafter for the golden eagle. The bald eagle, itself, is a symbol of the land, symbolism adopted as far back as the deliberations of the Founding Fathers.

RECENT FINDING OF DEAD EAGLES

The incidents of the last few weeks show that perhaps as many as 50 bald and golden eagles have been found dead through an assortment of causes, but the prevailing cause in the majority of the cases has been through poisoning. One cluster of them of 15 were or had been electrocuted from a storm where there were high wires in the area. I have yet to hear anyone proposing we abolish electrical power to save them from that fate.

Those are the kinds of casualties one would measure against the chances of a species surviving.

HIGH INCIDENCE OF EAGLE DEATHS RESULTING FROM POISONING BY THALLIUM SULFATE

But we are disturbed about the high incidence of dead eagles due to poisoning by thallium sulfate, which the experts from both the Federal level and the State of Wyoming level have verified as being the particular chemical item that is the culprit in this instance.

Now, you people can come over and take your seats in the front row.

APPARENT LEGAL SHIPMENT OF THALLIUM SULFATE DESPITE FEDERAL AGENCY DECLARING IT TO BE DANGEROUS PRODUCT

We have received correspondence from at least one agency or one corporation, American Smelting & Refinery Co. of New York City, that they had made available thallium to individuals or groups in the State of Wyoming, and it is my understanding there are perhaps as many as five or six producing organization that makes thallium available.

The point of it is why it was available in these circumstances. Thallium, I am advised, not only is capable of killing eagles, but if administered in irresponsible or ignorant ways, is a lethal toxic factor that would have serious repercussions on human life as well.

We have no way of knowing whether the use of it at the present time has spread to other bird life or to animal life, because of the suddenness of its development here, and the point of this hearing is to determine who is responsible for doing what to make sure that this does not continue.

So far in our questioning we have found a gray area or a limbo between the Federal agencies and State officials, and the shipment of thallium seems, because of one loophole or another, not to have been an illegal operation, even though Federal agencies had declared it a dangerous product and had not been advocating its use since at least 1966 or 1967, but that does not stop it from being used or made available to the appropriate persons at the local levels.

EAGLE POPULATION: NATIONAL CONCERN AND INQUIRY INTO DEATHS AND SEARCH FOR RESOLUTION

We are also advised that there are approximately 800 eagles left in the United States, both the bald and the golden eagle, I believe that is pairs, pairs of both species, and if we removed from the collection 45 or 50 in an interval of a very few weeks, I think it is proper that that becomes a matter of concern in its symbolism.

So, with that in mind, we are proceeding to interrogation of Federal agencies first in our quest for an explanation of how the problem suddenly exploded on us and what we ought to do about it.

FREEZING OF 1971 APPROPRIATION FOR ACCELERATED PREDATORY CONTROL RESEARCH

This very subcommittee, incidentally, a year ago made available to the Federal Government, Department of Agriculture, at that time, an extra $100,000 for stepped-up research in predator control, with this as one of the targets, because of the new consciousness over the complications to the environment from chemical items that had been used for predator control as well as the strains in agricultural areas, and we thought this ought to be intensified.

But that $100,000 was never committed. The Congress ordered its use, but it fell into that bag that we have repeated here so often in Agriculture appropriations hearings. It was frozen.

Now, I would not want to suggest that if only we had taken that step, somehow this would not have happened to the eagles, because I am sure that is not the case.

But what is the case is that had that $100,000 been put to work, we might have been one step closer to a wise solution to this problem.

I am sure that the members of this subcommittee will not only insist upon that $100,000 being thawed within the next 30 days, but will add to it in the hope that we can get with it.

CARELESS INDIFFERENCE TO ENDANGERED SPECIES OF ANIMALS AND BIRDS

It would be difficult to exaggerate the implications of this question in the minds of many people, not merely again the substance of 50 bald and golden eagles, but because of what it reflects in the carelessness of the indifference of man in regard to the endangered species of animal and bird life that is still in witness on this planet.

INTRODUCTION OF ASSOCIATES

Senator McGee. Now, our first witness this morning is Mr. Ruckelshaus from the new Environmental Protection Agency, and we are glad to have you with us here this morning, sir, and you may proceed in whatever way you deem appropriate in addressing yourself to this question.

Perhaps it would be appropriate for you first to identify the members of your staff who have accompanied you here this morning, with special emphasis on Dave, because of his Wyoming roots.

Mr. Rukelshaus. Thank you, Mr. Chairman. I have with me this morning, as you mentioned, Mr. David Dominick, the designated Assistant Administrator for categorical programs of the Environmental Protection Agency, who will be, upon assuming his new duties, in charge of, among others, our pesticide office, which is intimately involved in the subject of this hearing. As you state, he does have roots in Wyoming.

I also have on my left Mr. Charles Scott, who is a research specialist in the Office of Planning and Management of the Environmental Protection Agency, also with roots in Wyoming.

As a matter of fact, these very eagles that were involved in this tragedy have been followed by him and his family very closely for years. His father is president of the Audubon Society chapter in Casper, Wyo., and he personally has been involved in several counts of these very eagles on his farm or his ranch in Wyoming, so probably he knows as much as anyone in the country about these very birds.

Senator McGee. Perhaps, if I can interrupt, I would like to borrow him for a few days to answer the mail I have received from the Audubon Society on this question. It is very voluminous.

Mr. Ruckelshaus. We have gotten a letter or two ourselves.

GREATER ENVIRONMENTAL PROTECTION REQUISITE

I am pleased to be here today to testify concerning the recent deaths of golden and bald eagles in Wyoming, the circumstances of which emphasize with urgent clarity the need for more protection of our environment. Your concern for this matter is particularly appreciated by the Environmental Protection Agency because we know that our efforts can only be successful with the support of the Congress, other Federal agencies, and an aroused and informed public.

PRESENTATION FORMAT

I would like to begin my remarks by describing the sequence of events of the eagle deaths as we understand it, the environmental significance of these deaths, and the way in which they occurred. I will then specify the involvement of this agency in the matter, and end with comments concerning the relevance of this situation to our legislative proposals.

DISCOVERY OF DEAD EAGLES

On May 1 seven dead eagles were discovered in Jackson Canyon on the west end of Casper Mountain approximately 10 miles west of Casper, Wyo., by Bruce Wampler and Gordon Krause, two high school students. The next day Wampler and Krause guided a party of members of the Murie Audubon Society, the local chapter of the National Audubon Society, and a representative of the National Audubon Society to the area. The party found 13 eagles, of which 12 were recovered.

On subsequent days further searches in Jackson Canyon and in Little Red Creek Canyon, 4 miles to the east, recovered additional eagles.

In addition, a local landowner turned in an eagle found on April 24 in Matheson Creek Canyon, immediately adjacent to Jackson Canyon. A total of 21 eagles were found. Eleven were bald eagles, eight adults and three immatures, and 10 golden eagles.

I have photographs of some of the eagles that I would like to show to the committee. The first two show individual bald eagles found dead in Jackson Canyon. That is these two right here.

The third photograph shows the initial 12 eagles recovered lined up before being sent to the lab for analysis. The seven birds in the top

row with the white heads and tails are adult bald eagles. Three of the five birds in the bottom row, these three here, are immature bald eagles, two are golden eagles.

WYOMING EAGLE BREEDING POPULATION

Senator McGee. I might add at that point, if I may, while that is devastating, I just came from Jackson, Wyo., last night, and I did see two, there are still two breeding that we know of somewhere around the State.

Mr. Ruckelshaus. Coming up in the car I was talking to Charlie Scott, and he indicated that by his count there were some 50 bald eagles, still existing in Wyoming prior to this incident.

Senator McGee. Fifty?

Mr. Scott. That would be my best guess.

Senator McGee. That is pairs?

Mr. Scott. That is individuals. It would be my best guess on the wintering population, which would be probably different from the birds you saw in Jackson, which would be our breeding population.

Senator McGee. Some of our Audubon people from Casper suggested they thought perhaps there were as many as a couple of hundred moving around the State. Can you explain why there is a possibility of a wide discrepancy there in the figures?

Mr. Scott. They probably have better figures than we.

Senator McGee. We hope they are right and we hope you are wrong. I assume that is a fair statement.

Mr. Scott. Yes, sir. It depends on which part of the population you are counting. You have two separate populations, the wintering population which is considerably larger than the summer population.

DISCOVERY OF ADDITIONAL DEAD EAGLES

Mr. Ruckelshaus. Since the initial find, additional dead eagles have been found in other locations in Wyoming. To date, 48 dead eagles have been found. It has been determined that a significant number of these eagles have died as a result of poisoning.

Mr. Reed, who will testify next, has a map which will show in detail the areas involved.

LABORATORY TESTS: LETHAL CONCENTRATIONS OF THALLIUM SULFATE AND NO OTHER APPARENT CAUSE OF DEATH

Seventeen eagles from the Casper Mountain area were tested by the Patuxent Wildlife Research Center of the Department of the Interior. All showed lethal concentrations of thallium sulfate. All were in good condition and showed no other apparent cause of death. Four eagles were tested by a Wyoming State laboratory in Laramie, Wyo., and they, too, showed lethal concentrations of thallium sulfate.

EPA JURISDICTION AND PARTICIPATION IN INVESTIGATION

Because of the environmental implications and because thallium sulfate comes within the regulatory jurisdiction of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), an Act adminis-

tered by the Environmental Protection Agency (EPA), we have been participating in the investigation of the incident.

Our participation has included the assignment of field personnel to Wyoming and Colorado to determine the actual possession and use of technical thallium sulfate by known purchasers. During our investigation we have worked closely with the Department of the Interior's Bureau of Sport Fisheries and Wildlife, which has authority for protection of endangered species and for predator control.

LOCAL COOPERATION

The States of Wyoming and Colorado, the National Audubon Society, and local concerned citizens have been actively cooperating in the study. I am glad to report that there has been good cooperation and exchange of information among these parties. I think this investigation is a good example of how the government and private citizens can work together to protect our environment.

Senator McGee. I can report also out there they feel the cooperation back here was very considerable and no friction has developed in terms of jurisdiction and that sort of thing.

Mr. Ruckelshaus. I am glad to hear that, sir.

INTERSTATE MOVEMENT OF THALLIUM SULFATE

Our investigation has centered primarily upon the interstate movement of thallium sulfate from manufacturers to purchasers in the States of Wyoming and Colorado. We have also sought to determine the manner in which thallium sulfate may have been used by the persons to whom it was shipped. Our investigation of this latter matter is still going on and we do not have a complete report at this time.

Senator McGee. Can you give us an indication of what your investigations have developed this far?

Mr. Ruckelshaus. Yes; later on in the statement I elaborate on it.

Senator McGee. All right. Thank you.

Mr. Ruckelshaus. Before elaborating on what we have found in our investigation, I would like to describe to you how our authorities under FIFRA affect the registration and availability of economic poisons in general and thallium sulfate in particular.

REGISTRATIONS REQUIRED BY FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT

Under FIFRA, economic poisons, which are known generally as pesticides, must be registered with EPA in order to legally move in interstate commerce. When a manufacturer requests registration from this agency, he must present certain data on the pesticide. The Administrator is authorized to refuse to register an economic poison if the data presented are insufficient to support the claims made for it, or if its proposed labeling does not comply with the various provisions of the act. The labeling of economic poisons is required to bear those directions for which are necessary and, if complied with, adequate for the protection of the public; and warnings or cautions adequate to prevent injury to man, vertebrate animals, vegetation, and useful invertebrate animals.

The Administrator also may suspend the registration of a product upon a finding of imminent hazard to the public; and he may cancel a registration if a product is in violation of the act or upon a determination that use of a product presents a substantial question of safety.

The act does not provide any direct controls over the use of economic poisons; nor does it contain prohibitions against misuse—that is, the use of a product contrary to its registration or for a purpose other than that for which the product is registered.

THALLIUM SULFATE REGISTRATIONS: SHIPMENTS TO WYOMING AND COLORADO

Thallium sulfate is a metallic poison used primarily as a rodenticide. Five companies hold registrations for the technical material. Technical thallium sulfate is the concentrate used as the active ingredient in formulated products. Our investigation has disclosed that four of these companies made no shipments into the area in question. One company, the American Smelting & Refining Co. of New York, has made shipments to various consignees in Wyoming and Colorado. These shipments have been made from the American Smelting & Refining Co. plant in Denver, Colo.

Senator McGEE. May I ask, do your records show where the other companies may have shipped their shipments? I would suppose from the experience in Wyoming, it might be helpful to find out where the rest of it has gone.

Mr. RUCKELHAUS. Technical thallium is to be used in the manufacturing of products containing thallium, so the actual sale of technical thallium is supposed to be only to manufacturing concerns or the Government or to pest control operators for their own use. In the case of a manufacturing company, sale is for the use in a particular product itself, of which thallium is a portion.

We have no evidence that any of these other companies have been doing other than selling it to a manufacturing concern for purposes of use in another product.

Senator McGEE. In other words, you have vertified that, with regard to the other companies, none of it would have become available to individuals or instrumentalities of local government for predator control?

Mr. DOMINICK. Mr. Chairman, our investigations thus far have only gone to the five-State area of Montana, Wyoming, Colorado, New Mexico, and Texas. The other four companies involved do not show any evidence of having shipped thallium for the purposes that we believe the American Smelting & Refining Co. had shipped thallium to the individual ranchers.

Senator McGEE. Is American Smelting confining its shipments to those five States? Is that what you are saying?

Mr. DOMINICK. We only investigated for this particular instance in those five States. We will continue our investigation for the overall use of thallium, but in the interest of time and in attempting to get at the root of the problem, we concentrated on those five States.

Senator McGEE. You intend to pursue it further to make sure of this?

Mr. DOMINICK. Yes.

Possible Additional Wildlife Deaths

Senator McGee. It is possible we may find some more deaths of wildlife in other areas once people become conscious of what is happening.

Mr. Dominick. That is certainly true, and I am certain that Assistant Secretary Reed and his staff will testify on the extent of the investigation for this.

Senator McGee. We will leave that part of it for Secretary Reed.

Restriction of Product to Manufacturing Use

Mr. Ruckelshaus. The registration of the product shipped into the Wyoming-Colorado area is severely restricted to manufacturing use only.

The label accepted in connection with the registration specifically states: "For Manufacturing Use only"; "Not for Sale to the General Public"; "For Use in Household Rodenticides or Insecticides by Government Agencies Only."

Absence of Ultimate Use Control: Pending Legislation

Senator McGee. Who is responsible to enforce it? Whose responsibility is it to make sure it is lived up to?

Mr. Ruckelshaus. I tried to address myself to this at the end of the written testimony. This is precisely the problem we are having, that the only way we can control these pesticides and substances is by controlling ultimate use, and we have no authority or virtually no authority to do so now.

Senator McGee. Would you like statutory authority or legislative authority?

Mr. Ruckelshaus. That is right. We have a bill pending in both Houses of Congress to give us that authority.

Shipments to Wyoming-Colorado Area Ranchers

Notwithstanding these registration restrictions, shipments have been made to ranchers in the Wyoming-Colorado area—persons obviously not manufacturers or formulators of finished thallium products.

Six shipments of technical thallium, 65 pounds in total, were made to ranchers in Wyoming during 1970 and 1971. Four of these ranchers used the thallium to bait carcasses. In Colorado, one purchaser, the Craig Wool Warehouse and Co., Craig, Colo., purchased 250 pounds of the technical thallium in 1968 and 120 pounds in 1970.

Statutory Prohibitions

We are reviewing this matter from the standpoint of whether FIFRA has been violated. The prohibitory sections of the act relate to the interstate shipment of economic poisons. It is a violation of the act to ship or deliver for shipment from one State to another any economic poison which is not registered, is not properly labeled, or is adulterated. The evidence which we have obtained thus far shows that the product in question was registered under FIFFA and was labeled with the label accepted in connection with such registration.

It is also a violation of FIFRA to receive an unregistered, mislabeled or adulterated economic poison in interstate commerce and thereafter deliver or offer to deliver that to another person in the original unbroken package.

The act further prohibits the interstate shipment of an economic poison if any of the claims made for the product or any of the directions for its use differ in substance from the representations made in connection with the registration. We are directing our attention to these sections of the act to determine whether a possible violation of FIFRA has occurred and our Office of General Counsel is conferring with the Department of Justice to determine whether prosecution is possible and warranted.

STUDY BY SECRETARY OF THE INTERIOR FOR POSSIBLE CRIMINAL CHARGES

Senator McGee. May I ask, I noticed the other day the Secretary of the Interior suggested a close look at the possibility of a criminal indictment in this regard. Is this a category here that concentrated on those who shipped it or those who may have received it and broken it up in packages for resale?

Mr. Ruckelshaus. I think he was referring specifically to the eagle agent under their jurisdiction.

Senator McGee. Rather than this section?

Mr. Ruckelshaus. Yes, and I must confess we are not at all sure we can show any violations of this act under the present terms of the act. We are studying it closely to determine if there is violation, but at this point we are simply not prepared to say whether or not a violation is there and whether we can prove one.

STATUTORY REQUISITE: PENDING LEGISLATION

Senator McGee. But we must be sure to draft an act, a violation of which would be conspicuous and not possible to evade.

Mr. Ruckelshaus. I don't think there is any question about it. I think the bill which we have presently pending would give us clear authority to move in this situation, and we, as I state here later on, are going to review that bill to make sure that any loophole that might have occurred in this instance will be closed.

VIOLATION OF SPIRIT OF EXISTING STATUTE

I might add at this point in time it is apparent to us that the spirit, not the letter, of the act has been violated by virtue of shipments made to purchasers for purposes which clearly went beyond manufacturing or reformulating uses. The very label on the shipment that was sent out says "For Manufacturing or Reformulating Use Only." The people who bought it obviously didn't have that intention when they purchased it, but there may not be any violation of the act under present terms.

At this point in time it is apparent to us that the spirit if not the letter of the act has been violated by virtue of shipments made to purchasers for purposes which clearly went beyond manufacturing or reformulating uses.

INTERIM REMEDIAL ACTION: COMPANY SUSPENSION OF SALE OF THALLIUM SULFATE

Pending a final determination of whether possible violations of the FIFRA occurred in this case—and immediately upon determining the probable source of the thallium sulfate which led to the eagle poisonings investigated—EPA undertook direct remedial action. The most effective action in cases of this nature is to seek removal of the product, thallium sulfate in this case, from the market and to assure that no further misuse of this product is allowed to recur.

To this end, we contacted the American Smelting & Refining Co. in both Denver and New York and urged the company to voluntarily suspend any further sale or shipment of thallium sulfate.

LETTER OF COMPANY

Senator McGEE. We have received a letter from the company in which they pledged to suspend further shipments of this material pending the outcome of this study.

Mr. RUCKELSHAUS. Yes, sir, very good.

REQUEST FOR COMPANY TO RECALL THALLIUM IN POSSESSION OF PURCHASERS

Mr. RUCKELSHAUS. We urged the company to begin immediate recall of all unused thallium sulfate which is still in the possession of purchasers. To the best of our knowledge, the company has notified all such purchasers and advised against the further use of thallium. Further, we believe that the company will agree to our recall request.

Senator McGEE. Do they have authority to recall? Can this be compelled in any way?

Mr. RUCKELSHAUS. It cannot be compelled. I suppose only if there is agreement by the manufacturers will they repay the purchase price, and I don't think the manufacturer can force the purchaser to send it back. There is a provision in our bill which would give us this authority.

Senator McGEE. I suppose it is not likely that the shipping lanes will be crowded with returning thallium.

Mr. RUCKELSHAUS. There really is not very much in terms of poundage being used. It does not take very much. But, we are hopeful, because of this incident, that the recall will be effective.

STATUTORY SUSPENSION PROCEEDINGS

Finally, to preclude any further misuse of poison from this source, the Environmental Protection Agency has undertaken suspension proceedings under FIFRA for the products registered by American Smelting & Refining Co. where we have reason to believe were the sole cause of the eagle poisonings under question.

REVIEW OF ALL PRODUCTS USED IN PREDATOR CONTROL

We are also initiating a review of all products used in predator control to determine what action is needed to prevent damage to the environment through the killing of nontarget species. One thing this incident shows is that if predator control work is left to private indi-

viduals, the result will be the indiscriminate killing of nontarget species.

The poisoned carcasses often used in predator control will kill all species that eat carrion, both target and nontarget species if the species are susceptible to the poison and the dosage used. Our review will determine what action we should take—under both our existing legislation, the FIFRA, and the pending legislation we have proposed—to prevent poisoning of nontarget species and to insure the proper operation of any future predator control operations.

PROOF OF CRIMINAL INTENT

Senator McGee. I gather it would have to be pinned down tightly to the mere possession or application of thallium, let us say, to a carcass, rather than as to the intent?

One of the blind spots I am told is that it is difficult, for prosecution purposes, to prove that somebody put thallium in a carcass in order to get the eagles and therefore merely the use of the thallium would become the crime?

Mr. Ruckelshaus. That is exactly right. That is precisely what our bill is aimed at, and I might explain just how we control the use of pesticides or economic poisons.

Senator McGee. There is one allegation that one of the carcasses was located in one circumstance, which, if I am advised correctly, 2 or 3 or 4 ounces of thallium was sufficient to kill predators it was aimed at, but that 4 pounds of thallium may have been applied in this instance.

Mr. Ruckelshaus. I think that is what our evidence shows.

DANGEROUS PRODUCTS AND STATUTORY IMPERATIVE

Senator McGee. This itself either suggests total stupidity, ignorance, irresponsibility, or militant intent to do something. I would think the consequences of that high a concentration in any case ought to make it imperative that we follow through with what many of our people in the Federal agencies apparently have known for a long time, that is, this was a very dangerous product which somehow was allowed to slip through the fingers by administrative procedures.

Mr. Ruckelshaus. Mr. Chairman, there is a dangerous product here, and I think in truth we have a number of dangerous products, which, if misused, would produce the same results, and to try to deal with this situation on a product-by-product basis is very difficult. What we need is control over the ultimate use of pesticides, strict control and strict sanctions that can be applied very clearly in the event a product is misused, because as Secretary Morton suggested, the quickest way to stop people from killing eagles is to prosecute a few and throw some stiff fines and jail sentences at them.

We don't have that authority, but if we had and could use it, no matter what kind of substance or method they used to kill them, I think we would be in a position to see some results.

PRIOR REQUESTS FOR STATUTORY AUTHORITY

Senator McGee. Do we have any record of prior requests by appropriate agencies—and I know yours is a new one—but of other appropriate agencies for such authority or power because they were mindful of the lethal nature of these materials? I think the record ought to show whether there are agencies, some of which you may have now inherited, which have made requests for this kind of legislation.

Mr. Ruckelshaus. The results of the toxic substances studies made by the Council for Environmental Quality in 1970, which show situations such as this, in addition to many other kinds of situations arising through misuse of not only pesticides but all kinds of toxic substances, have given rise to two pieces of legislation that have been submitted by the administration this year, the toxic substances bill and the amendments to pesticides law. These would give us the kind of control over toxic substances and pesticides to solve this kind of situation.

As to what sort of legislation has been suggested prior to this by the agencies that have responsibility for these types of programs, I am afraid I would have to leave it to those agencies involved to testify.

Senator McGee. You have now preempted in this new organization several of those divisions within the larger agencies. It occurred to me, since you now have them in one place that it might be possible to have some of your people put that together for us.

Mr. Ruckelshaus. We would certainly be glad to.

Senator McGee. It would be easier than to try to collect the information from two or three departments. If we could do this, it might be appropriate to make this information a part of the record; we shall examine it for this purpose.

Mr. Ruckelshaus. In the pesticide area, the pesticide control authorities from Agriculture, and Interior and HEW are now under one umbrella. We would be glad to submit for the record all legislation which has been passed by these agencies.

Senator McGee. I am not requesting information as to requests which have been enacted into law. The information I want would get some of them off the hook as far as Congress is concerned, if there were recommendations for legislation which should have been enacted. We have to know what that record is. If there has been a gap between verification of the danger of the poison and a followup with requests for requisite statutory authority commensurate with that danger, the information would help us also to determine the responsibility for such lapse.

(The information follows:)

ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 17 1971

OFFICE OF THE ADMINISTRATOR

Honorable Gale W. McGee
Chairman, Subcommittee on Agriculture,
Environmental and Consumer Protection
Committee on Appropriations
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

I am pleased to provide you with information you requested during the Administrator's June 2nd testimony before your Subcommittee relating to the deaths of eagles due to poisoning by thallium sulfate, a registered pesticide.

Your question concerned past legislative proposals by Federal agencies for greater control over pesticides sale and use. We have determined that during the 90th Congress, USDA submitted a legislative proposal to the Congress. The legislation was proposed to strengthen the administration of the Act as follows:

(1) Require that every person who owns or operates any establishment in any State, Territory, or the District of Columbia, engaged in the manufacture, preparation, propagation, compounding, or processing of an economic poison register with the Secretary of Agriculture his name and places of business and all such establishments he operates;

(2) Permit inspection of (a) establishments in which economic poisons or devices are manufactured, processed, packed, or held for distribution or sale in any Territory or the District of Columbia or in interstate or foreign commerce, or held after such distribution or sale, and (b) any means of conveyance being used to transport or hold any economic poison or device in any Territory or the District of Columbia or in interstate or foreign commerce;

(3) Provide that an economic poison shall be deemed misbranded if it is manufactured, prepared, propagated, compounded or processed in an establishment not duly registered;

(4) Provide that an economic poison is adulterated if the methods, controls, or facilities used for manufacturing, processing, packaging, or holding such economic poison are not in conformity with good manufacturing practice;

(5) Empower Federal courts to issue injunctions to enforce, and restrain violations of, the Act;

(6) Amend the present penalty provisions by adding civil remedies.

The proposed legislation was introduced as S. 2057 and H.R. 11846. There was no further action taken on either bill.

The legislative proposal outlined above was submitted to the 89th Congress, and was introduced as S. 2470. No action was taken.

Prior to the 92d Congress, there had been no proposals to control "actual use" of pesticides by applicators, farmers, or other persons.

We have further determined that the Department of the Interior has made no proposals for legislation which would impose use-controls over pesticides.

As the Administrator explained during his testimony, the Administration has proposed a pesticide use-control bill in this session of Congress titled, "The Federal Environmental Pesticide Control Act of 1971" (S. 745; H.R. 4152). The bill would provide for a system of classifying pesticides according to their effects on health and the environment. Pesticides highly toxic to man would be restricted to use by or under the supervision of licensed applicators only. Pesticides having adverse effects on the environment could be used by permit only. Other use-controls are also provided.

We would be pleased to work with your staff on this or related matters if desired.

Sincerely yours,

R A Hellman

Richard A. Hellman
Acting Legislative Counsel

REGISTERED USES OF THALLIUM

Senator McGee. What are the registered uses of thallium? You referred to the fact that people get it and don't use it for what it was intended.

Mr. Ruckelshaus. In the case of technical thallium, the substance we are dealing with is more or less pure thallium. It's registered use is for reformulation in manufacture. Also, technical thallium can be sold licensed pest control operators and to Government agencies. Those are the registered uses for technical thallium. There are other thallium sulfate products which are registered for specific uses and which are principally rodenticide uses.

MISUSE OF REGISTERED PRODUCT: CONTROL INADEQUACY AND PENDING LEGISLATION

Mr. Chairman, I might finish the statement.

What we appear to have in this situation is the misuse of a product; that is, the use of a product for a purpose not approved in connection with its registration. And, as I mentioned earlier, the FIFRA contains no prohibitions against misuse.

This situation graphically illustrates the inadequacy of the present law—we do not have at the present time the controls over the use of environmentally hazardous pesticides that we so clearly need.

We strongly believe that the administration's proposed Federal Environmental Protection Act of 1971—which would greatly strengthen the authority of this agency in regulating pesticides by providing for controls over their use—represents an essential remedial step. I would like to close my remarks by explaining in what ways the proposed bill would have influenced the circumstances of this incident.

BILL PROVISIONS

The proposed bill would correct the most important deficiency of present law by extending our regulatory authorities to the use of pesticides, or economic poisons. Federal authority presently is focused only on controlling the entry of hazardous or ineffective products into the marketplace. A more limited control of the use of an economic poison is achieved by specific instructions on the label. Actual control of use by these methods is far from adequate. In order to remedy these insufficient administrative tools, the bill would allow this agency to apply more focused controls by imposing controls on the use of a pesticide once acquired by the user.

The controls are based on a system of clarifying economic poisons or pesticides according to their effects on health and the environment. Pesticides having minimal effects would be classified as being for general use.

Pesticides whose use could result in an injury to the applicator or which need care in application to protect the environment would be classified as being for "restricted use." Such pesticides could be applied only by or under the direct supervision of an approved pesticide applicator who is licensed as a result of meeting standards prescribed by the Administrator.

65-903 O—71——2

Further, the bill requires that:

No approved pesticide applicator shall use any registered pesticide except in accordance with the labeling accepted in connection with the registration.

Where thallium sulfate is registered for restricted use, it could only have been applied by an approved pesticide applicator, and then only for a use approved in connection with its registration.

Those pesticides whose pattern of use without the controls of a permit program would not protect health and the environment would be clasified under the bill as being for use by permit only. Such pesticides could be used or made available for use only if a permit were issued by a pest management consultant licensed as a result of meeting standards prescribed or approved by the Administrator, such standards to include sufficient knowledge of environmental and health effects to avoid any unnecessary hazard to the public or other parts of the environment.

Possible Bill Amendments

In view of this tragedy, we are making a careful review of the pesticides legislation which we have pending before the Congress. If we find any inadequacies in it with regard to preventing a recurrence of this type of situation, we will imediately make approprate recommendations to the House and Senate committees which are considering this legislation.

In my remarks today I have attempted to present the facts as we know them, relate the facts to our present authorities, and describe how the administration's proposed bill would bear advantageously on the situation. I cannot stress too strongly that such incidents as that subject to today's inquiry tell us with urgency that if we are to continue to use pesticides—which have proven so valuable to our agricultural productivity—we must become far more discrete and environmentally conscious in our use of them. The proposed bill represents our best thinking as to how the necessary balance between continued pesticides use and protection of the environment can be achieved.

Mr. Chairman, this completes my prepared statement. I will be pleased to answer any questions.

APPROPRIATIONS FOR PESTICIDE RESEARCH

Senator McGee. May we assume that properly added to your statement as its conclusion would be that moneys appropriated for research in this area could be quickly and immediately committed by your agency if available?

I am going backward now to the fact that we committed an extra $100,000 last year and it was not asked for, and we thought it was important, but it was frozen because of a feeling obviously at the administrative level that this was not really urgent. Can we assume now the urgency of this has been dramatized sufficiently to put a blowtorch to that cake of ice that surrounds the $100,000?

Mr. Ruckelshaus. I don't know of the specific $100,000. It is not in our Agency, Mr. Chairman, because none of the funds we have are subject to any freezing order at this point.

AGENCY JURISDICTION

Senator McGEE. That was appropriated last year, and you were not in existence, but let me ask this question next: Will you have the responsibility for these matters in the future or will it be divided between your agency and such agency as Agricultural Research?

Mr. RUCKELSHAUS. Pesticides research?

Senator McGEE. Yes.

Mr. RUCKELSHAUS. There is some division of research on toxic subjects generally between our agency and HEW. Most of the pesticides research in terms of environmental effects and damaging health effects is in our Agency at this point. There is still some research done as to efficacy of a particular pesticide in the Agriculture Department.

Senator McGEE. And some of the responsibility is in ARS for this sort of thing?

Mr. RUCKELSHAUS. In terms of whether a particular pesticide does what its manufacturers claim it will do.

Senator McGEE. I would hope, if we should deem it advisable to increase your budget request for such research in the new fiscal year, some hearings on which we have already held, that it might receive a warm reception by you and the administration.

Perhaps, for the record, it would help to eliminate a little of the confusion concerning the reorganizing that is in process, if you would advise us what pesticides authority and responsibility you have received and from which agency.

Mr. RUCKELSHAUS. We have received from the Agriculture Department the responsibility for the registration of products in which are contained substances that control pests.

In other words, all of the responsibilities under FIFRA have been transferred to Environmental Protection, so that when products are registered for a particular use, our Agency is the registering agency; we received this from the Agriculture Department.

We have received the responsibility for setting of tolerances in foods of pesticides from the Department of HEW.

We have received certain responsibilities involving the effects of pesticides on fish and wildlife from the Interior Department.

ADMINISTRATION OF PENDING LEGISLATION UPON ENACTMENT INTO LAW

Senator McGEE. If we were to enact this new legislation, as you described it for us, would you have to depend on other agencies to collaborate with you on its application and controls that it would envisage or cover; or would you have the responsibility in your hands alone?

Mr. RUCKELSHAUS. We alone will have responsibility for administration of this act. We do have in the act a good deal of connection with the State agencies, of which we don't have enough now. We can assure that the State pesticide control agencies are doing their job as they should and if they don't, we would have authority to move in.

We have, and I presume we will continue to have, a good deal of interfacing with other governmental agencies in light of investigations of all toxic substances, particularly with HEW. While we would

have primary responsibility for research and for administration of the entire pesticide program, under amendments to the act, we would still have, in terms of health effects and research of all toxic substances, a good deal of responsibility jointly held with HEW, and we would also need to continue to have in terms of efficacy and the need for particular pesticides a good deal of communication with the Department of Agriculture.

But as far as administration of that act, itself, and controlling the ultimate use of pesticides, it would be in EPA. I think the crux of our bill, is that if we can't control the use of these pesticides, then no matter how much we try to control individual products, incidents like this will continue to occur.

PURCHASES OF THALLIUM BY INDIVIDUALS

Senator McGee. It appears obvious from your testimony that an individual can now acquire thallium. In obtaining thallium, is an individual required to make any statement or representation as to its intended use or purpose?

Mr. Ruckelshaus. He does not legally. There are some companies which, before selling certain products which have high toxicity if misused, would require the purchaser to sign an affidavit that he is only going to use these products pursuant to representations on the label.

That affidavit does not really have any legally binding effect. What it is intended to do is absolve the seller. At least I am sure that is the purpose of the affidavit. Although on the label itself it is clearly stated what the restrictions are in use of the technical thallium, we have no sanction against anybody who uses it in violation of that label. There is nothing we can do about it.

That is true of any pesticide that is sold. This is a voluntary system of control once the label is put on the bottle.

Senator McGee. The only protection manifested is that which protects the responsibility of the seller, that is, the American Smelting & Refining Co., in this instance.

CRIMINAL PROSECUTIONS

So would not the enforcement responsibility fall upon the Justice Department in cases where the evidence is basis for criminal prosecutions?

Mr. Ruckelshaus. Well, that, of course, is true now, Mr. Chairman, and it would be true in our proposed bill.

Senator McGee. You still couldn't enforce it, but you could administer it so that the violation would be so conspicuous it would require prosecution.

Mr. Ruckelshaus. Yes, but where we have prosecution involved, we would contact the U.S. attorney or the Justice Department, which happens to be the case here, to request prosecution.

PENDING LEGISLATION: FEDERAL-STATE COOPERATION

Senator McGee. How serious is the gap in the regulation of pesticides between your Federal agency and the appropriate State agencies?

Mr. RUCKELSHAUS. I am not sure I understand your question as to gap.

Senator MCGEE. If I understand it correctly, the reasons the existing gray area is that, even though at the Federal level there was recognition of this as an extremely dangerous substance—so dangerous that it was agreed that it was not to be used by Federal agencies over the past 5 or 6 or 7 years—it was used at the State levels. wherever they acquired it and for whatever legal reasons?

Mr. RUCKELSHAUS. I understand thallium sulfate is registered in the State of Wyoming.

Senator MCGEE. Yes. I understand also that the appropriate agricultural authority in the State had discontinued its use at the State level. That is not your headache at the present time. With this kind of gap at the State level in mind, how much of a block does it pose for you as you envisage the pending legislation?

Mr. RUCKELSHAUS. Well, in the new legislation, what we are attempting to do is to create a very closely coordinated effort betweeen the State and Federal agencies so that the actual control over the use of a product will be effected by the State licensing of pest control operators or applicators and pest management consultants, as they are called.

We review very carefully the State programs to be sure they are protecting the public and protecting the environment, and where they are not, we have authority to move in and assure that the products cannot be registered in a State where they do not have adequate controls over the product, for instance.

We now register products in a much too loose manner. We have very little control over registering products and zeroing them into specific areas wherein a particular pesticide might be needed; we need to prevent broad environmental difficulties through a nationwide registration system which will restrict registration carefully.

That authority is requested in the legislation that is pending.

DISPROPORTIONATE INTERESTS OF FEDERAL AND STATE AUTHORITIES

Senator MCGEE. We have had experience in other areas in which the enthusiasm with which a State went after a problem was very uneven. This is what concerns us.

One newspaper article I saw suggested that, in States where there are aggravated predator problems, one could find less enthusiasm and a less vigorous assault on that problem even under the tent of Federal legislation than in States having predator problems of less severity.

Mr. RUCKELSHAUS. I think that is true, and I think it is true throughout the environmental area. Where States find a concern about the environment runs into a competing interest of the State, whatever that interest might be, often the environment plays second fiddle. It is for that reason that the Federal Government has moved more into water and air pollution and into this area of toxic substances and pesticides, because the States in the past have not been the best kind of regulators across the board. Some of the States have good programs in some areas and not in others, and it usually results when competing State interests run into the environment interest concerned.

EXPOSURE OF OTHER PROBLEM AREAS AND SUBSTANCES

Senator McGee. We have learned about this gap or this gray area only after the fact, after a series of incidents which exposed the gap.

Have you taken any steps to pursue the possibility that there may be other similar lurking problems which have not been exposed simply because nobody has been tending to them, and have you followed through on other possible areas and substances which might pose the same type of questions down the road ahead of us?

Mr. Ruckelshaus. We have done it in a number of ways, Mr. Chairman. I would be less than candid with you if I would say we are being universally successful, because incidents not exactly like this but similar problems with toxic substances keep cropping up on almost a daily basis.

The first and broader approach is to get much more careful control over introduction of toxic substances into the environment. That is through the toxic substances bill and the pesticides bill.

Our more immediate short-term efforts has been to try to identify these types of products ahead of time, to stop them before they slip by. It is difficult to do.

MISUSE OF PRODUCTS: PENDING LEGISLATION

In the case of a toxic substance, for instance, although by suspending immediately the interstate shipments of thallium, say, into Wyoming from Colorado and assuring this particular source does not result in the same kind of tragedy, there are any number of substances that are still on the market and, although in and of themselves when properly used do not cause difficulty, with misuse will result in the same kind of tragedy.

Senator McGee. You are able to verify a list of other toxic substances than thallium or in addition to thallium that would be suspect, for example, of this kind of problem?

Mr. Ruckelshaus. The list is very long. Strychnine is one. There are certain hard pesticides.

Senator McGee. Cyanide?

Mr. Ruckelshaus. Yes, cyanide. There is dispute over "1080," but when it is used in larger doses than necessary, the same kinds of things result. There are some hard pesticides which, if misused, can have precisely the same kind of results.

Senator McGee. Does your legislation envisage their control, also?

Mr. Ruckelshaus. It envisions getting at this misuse, which is, in our opinion, the only way really to control it, so if somebody misuses a pesticide or any kind of hazardous substance, we can get at it and impose strict and strong sanctions quickly.

I think when this kind of activity occurs, then people will know we mean business, and they will know they are not to misuse these substances.

Now nothing happens to them when they misuse them.

STATUS OF LEGISLATION

Senator McGee. What is the status of the proposed legislation that you have submitted? Can you tell us that?

Mr. RUCKELSHAUS. It is pending in the House and Senate Agriculture Committees. We have had hearings in both committees, and it is my understanding the committees now have the bills under consideration and are reviewing them.

Senator McGEE. The hearings have been held on the legislative aspects of them?

Mr. RUCKELSHAUS. That is right, in both committees.

INVESTIGATION OF THALLIUM USE IN WYOMING

Senator McGEE. Has it been determined as to the purposes? Have you been able to verify the purposes of the use of the thallium in your investigation in Wyoming? Has that been pinned down strictly on predatory control, coyote control?

Mr. DOMINICK. Mr. Chairman, I might say, at the outset, the leadership of the Department of Interior in this matter has been very important and very significant. They have dispatched personnel to the scene, and Assistant Secretary Reed has taken personal control of this entire investigation. He has done an excellent job in tracing down the sources of the thallium and the uses to which they were put.

The information that we have, which was collected in cooperation with the Department of the Interior, is that most of the purchasers of thallium did purchase it for the purpose of baiting animals for predator control use, and the predators to which they were most directed, of course, were the coyotes, because those are the predators that the sheepmen feel are the most damaging to the lamb flocks during this time.

EAGLES AS PREDATORS OF SHEEP AND LAMBS

Senator McGEE. Did you find any belief that the eagles were the predators of sheep and lamb?

Mr. DOMINICK. It is very hard to have someone testify either formally or informally that they are baiting carcasses for eagle control. Most of the people that our field people discussed this with did maintain they were aiming the control at the coyote population.

Senator McGEE. There were charges being made, particularly around Casper, where there is a conscious—I am afraid I will have some legal action brought against me. There is a deep feeling that the eagles are certainly a serious problem for ranchers, particularly in the lambing season?

Mr. DOMINICK. Yes. The sheepmen in Wyoming and in our Western States have repeatedly expressed concern that eagles are significant predators. This, I think, is contrary to all of the scientific information we have, and Charlie Scott can speak to that point from personal experience.

Senator McGEE. Mr. Scott.

Mr. SCOTT. I would like to say, first, that there is considerable opinion among certain sheepmen that they have a predatory eagle problem. I would like to point out it is a divided opinion.

For instance, Joe Burke, a leading woolgrower, was quoted, both in the Casper paper and Rocky Mountain News in Denver, as saying he did not regard it as a significant problem.

The evidence is that eagles will eat dead sheep, and any sheep operation will have a significant number of losses from natural causes. This

will happen on the open range, and the eagles will feed on the carcasses.

A number of sheepmen have, of course, seen this during the course of the operation and have jumped to the unwarranted conclusion that the eagles killed the sheep. There has been no reliable signs which we have been able to uncover that show the eagles will ever take a living sheep and feed on it, but they feed strictly on carrion.

There have been claims of eagles being predators on sheep, but nobody has been able to substantiate it.

Senator McGee. I think what you just said suggests there might be a straining of the kinds of crimes they blame on the eagle, and it ought to be looked at in more depth and the necessary time taken to do so.

The ranchers are understandably concerned about the predator question. I do think that most of them at least understand also the implications of something like thallium and its companion substance. If the misuse of them is to visit upon them far more serious implications than simply the target they have in mind, I would think that the ranchers themselves would not carry the case for the abuses.

This comes down to what Bill Ruckelshaus was saying, that it is the use, or the way in which it isused, which becomes a real part of the problem.

Mr. Scott. I think we can say with some confidence that the great majority of ranchers in Wyoming would certainly feel that way, but we would also need the laws to get at the small minority because one poisoning can do a tremendous amount of harm.

EXISTING STATE CONTROL STATUTES

Senator McGee. In other data submitted to this subcommittee, you indicated that 48 States have legislation pertaining to pesticides, patterned after the new format. Which two States of the 50 do not have such legislation?

Mr. Scott. I believe the States of Delaware and Alaska.

Senator McGee. Delaware and Alaska. I guess an eagle would not have a good time in Alaska because his wings would ice up.

THALLIUM DOSES

Assuming that considerable quantities of thallium were placed in an eagle or sheep or lamb on the range, assuming also a possibility of an antelope having it, what result would they expect to follow?

Would you have someone develop it? I understand there is a difference between just 2 or 3 ounces and much larger doses of up to 4 pounds in one case?

Mr. Ruckelshaus. I think, Mr. Chairman, Secretary Reed has some lengthy testimony on that.

Senator McGee. Why don't we reserve it for the Secretary then so we don't duplicate that particular question.

I have another line of questioning which deals in that area and perhaps this is more appropriate, also, for Secretary Reed.

I wanted to introduce at this time the only eagle here this morning, and the only qualification I have is I was the control leader of the Eagle Patrol in the Boy Scouts; that is my one qualification for expertise, but

I want to introduce here at this time the silent member of this hearing, if you will bring him in here.

A lot of people, except in the zoos, have not seen these handsome birds, even dead. They are dramatic specimens, particularly the adult, which sometimes get a wingspread, I think Charlie can say better than I, even 7 feet occasionally.

Maybe we can have the bird brought down here and have Administrator Ruckelshaus have a look at these specimens we have.

(Discussion off the record.)

DEPARTMENT OF THE INTERIOR

STATEMENT OF NATHANIEL P. REED, ASSISTANT SECRETARY OF THE INTERIOR FOR FISH AND WILDLIFE AND PARKS

ACCOMPANIED BY:

SPENCER H. SMITH, DEPUTY DIRECTOR, BUREAU OF SPORT FISHERIES AND WILDLIFE

F. VICTOR SCHMIDT, ACTING ASSISTANT DIRECTOR, OPERATIONS

CHARLES H. LOVELESS, ACTING ASSISTANT DIRECTOR, RESEARCH

CHARLES H. LAWRENCE, CHIEF, DIVISION OF MANAGEMENT AND ENFORCEMENT

JACK H. BERRYMAN, CHIEF, DIVISION OF WILDLIFE SERVICES

BREWSTER CHAPMAN, SOLICITOR

PRESENTATION PROCEDURE

Senator McGee. Mr. Secretary, you have had the advantage of looking over Bill Ruckelshaus' shoulder at the birds here, and you have a prepared statement which goes into the professional side of this matter more so than the administrative side?

Mr. Reed. That is correct.

Senator McGee. And perhaps it would be more to the point if you would select out those areas, if it is permissible, that seem to add to or apply to the revelant areas of the earlier testimony, and if that is not a fair suggestion, then you proceed as best you can.

I just wanted to clear up one of the discrepancies that we had down front when examining the bodies of these golden eagles and bald eagles.

WASHINGTON POST ARTICLE

From the Washington Post on May 28, 1971, which is last Friday, I read from the Washington Post now:

> Appearing with Secretary Morton at the press conference regarding the killing of eagles, Assistant Secretary Nathaniel P. Reed said there are now about 800 pairs of bald and golden eagles in the United States, and that the poisoning, shooting, and hunting from the air is reducing the number.

Now that was the reason why we finally made a reference in my remarks.

Mr. Reed. I remarked that my statement was incorrect.

Senator McGee. Your statement has to be corrected.

Mr. Reed. That is correct, and I will give a briefing as to numbers and distribution of bald eagles and so on.

Senator McGee. All right. Proceed with your statement first.

SYMBOLISM AND MAJESTY OF EAGLES

Mr. REED. I will try to bring out the salient points.

Thank you for inviting me here this morning for a discussion of the problems that have beset us in recent weeks regarding bald and golden eagle populations in the State of Wyoming.

The death by poison of 22 of these majestic birds—and the bald eagle, as you know, Senator, is the symbol of our Nation, and the golden eagle symbolizes to the Indian courage and bravery in the field, and that is why their feathers are represented to an Indian chief or to an Indian brave as a physical factor of bravery and courage, which I think is of significance with the bird itself.

Senator MCGEE. I had a man in the northern part of Wyoming on the weekend say to me he had witnessed an eagle attack a mallard duck in flight. That seems to me to be an inconceivable feat, ducks fly so fast.

Mr. REED. In a helicopter flying over the Everglades we disturbed a flock coming off of the water at a great speed, and unannounced to us in the sun was a bald eagle, and he came down, and with one magnificent move, removed one from the air and carried him to his perch.

Senator MCGEE. It was with his claws?

Mr. REED. Yes.

Senator MCGEE. I watched hawks in flight kill a pheasant in flight, but he is slower except when you shoot at him, and then he goes 90 miles an hour.

NUMBER OF DEAD EAGLES DISCOVERED

Mr. REED. I welcome this opportunity to discuss with you the facts, as we know them, concerning the unfortunate deaths of these 22 majestic birds, and to tell you what we in the Department of the Interior believe can and should be done to help prevent any such further occurrence. Additionally, one bird was killed by gunshot and we have found the decomposed carcasses of 16 other eagles near Worland, Wyo., approximately 140 miles from the site of poisoning deaths.

DEATHS BY ELECTROCUTION

Fifteen of these apparently have died over a period of years as a result of electrocution from contact with high tension wires. The problem is the high tension wires and poles where they can perch. but in taking off when they spread their wings, the wingspread which extends over 6 feet, creates an arc between the two wires and consequently the birds electrocute themselves.

The corrective measure is for the power company to quickly begin to further separate the wires so that the arcing effect will not take place, and the needless loss of eagles through electrocution can be avoided.

Senator MCGEE. You have approached the power companies?

Mr. REED. Yes, and they have done this before in other parts of the Nation, and I am confident they will do it at Worland.

It was not possible to perform chemical analysis on these birds. In most instances only skeletons remained. It is my understanding that the power companies are taking action—with our assistance in some instances—to reduce powerline hazards where this is possible.

In any event, these deaths cannot be considered to be related to the recent poisoning episodes in Wyoming.

INTRODUCTION OF ASSOCIATES

Sir, I want to introduce, and I am probably late on this, my senior staff, who are with me today.

On my left is Spencer Smith, formerly Acting Director of the Bureau, now promoted to full Deputy. On his left is Charles Loveless, Acting Assistant Director of Research, who, I am delighted to announce, will be Assistant Director. On his left is Charles Lawrence, Chief of Management and Enforcement; and on my right, Mr. Chapman, our Solicitor, and on his right is Victor Schmidt, Acting Director of Operations, and again, he will be Director of Operations; and on his right, Jack H. Berryman, Chief of the Division of Wildlife Services.

Senator McGee. We have everything now except a deputy director of eagles.

DISCOVERY OF POISONED EAGLES IN JACKSON CANYON

Mr. Reed. If you will please direct your attention toward the map, let me begin by describing the area—Jackson Canyon, some 12 miles southwest of Casper, Wyo.—where the poisoned eagles were found.

The canyon has long provided an ideal winter roosting site for bald and golden eagles. It is approximately 3 miles in length, narrow, and wooded with ponderosa pine. Several large dead pine trees provide ideal roosting perches for the eagles.

In the nearby Platte River Valley, an outcropping of smooth rock rises from the valley floor, at an angle of about 60 degrees, to a height of 300 to 400 feet, and creates air currents attractive to the eagles. They have been observed soaring and gliding unfettered in the thermals for hours on end.

I think it has been explained by Mr. Ruckelshaus, and it will be explained further, how the dead eagles were found.

Senator McGee. I might add, everybody is looking for eagles now out there. They will probably find more, and whatever they might have died from, they will get a headline on it.

Mr. Reed. I want to express my personal thanks to the Department of Interior and to those boys who have given so much time in helping us in every way to locate eagles and have been a constant help during the investigation period.

Senator McGee. The man you had in Wyoming was very cooperative.

PATHOLOGICAL EXAMINATIONS OF DEAD EAGLES

Mr. Reed. As the poisoned eagles were found, all except four were quickly air expressed to the Bureau of Sport Fisheries and Wildlife, Patuxent Wildlife Research enter, at Laurel, Md., for pathological examination. The remaining four were retained by the Wyoming Game and Fish Commission for examination by State scientists.

The Department of the Interior moved as quickly and responsively as possible once the eagle losses were known. Ten Bureau of Sport Fisheries and Wildlife personnel were assigned to the field investiga-

tions and 12 others to laboratory studies. Additional back-up support is being supplied by numerous other departmental personnel.

We, of course, maintained close liaison with the State people. In addition, our tests and examinations were monitored at our invitation by a representative of the National Audubon Society and the Animal Health Division of the U.S. Department of Agriculture.

At the laboratory all the birds were first checked for gunshot wounds. It was found that only one had been shot. One bird was discarded because it was too decomposed for accurate testing. The remaining 18 birds were autopsied, including examination for gross condition and signs of disease.

Each bird was examined under ultraviolet light for fluorescence to determine whether it had ingested marked strychnine or sodium fluoroacetate (1080) baits used by our Bureau in its program. In addition, all birds were tested for thallium sulfate, a chemical sometimes used by private individuals to kill coyotes and other predators.

Absence of Strychnine and 1080 Ingestion

To date, all have been tested for strychnine, and six for 1080, and tests for 1080 are continuing.

Senator McGee. Does that mean you may have good reason to suspect 1080?

Mr. Reed. I don't suspect. I know there was 1080 in this area.

The birds were generally in good condition, showing no obvious signs of disease. However, they had little or no material in the digestive tracts, suggesting that the birds may have ingested poison.

One bird exhibited suspected fluorescence. However, subsequent chemical tests revealed that neither strychnine nor 1080 was present in the bird. In fact, thus far, readings for strychnine and 1080 are negative for all the eagles tested.

Thallium Tests

The only one of the 18 birds tested for thallium that did not show any was the one that had been shot. Concentrations ranged from 14 parts per million in the kidney of one bird to 152 parts per million in a mixture of tissues from another.

In addition to the 39 eagles accounted for above, nine new finds have been made and are currently being tested. This makes a total of 48 birds to date.

Senator McGee. May I ask how many parts of thallium by your measuring would be fatal?

Mr. Reed. Later on, if I may, we will give a breakdown on how this chemical was misused.

Senator McGee. Thank you.

BUREAU OF SPORT FISHERIES AND WILDLIFE UTILIZATION OF LETHAL DEVICES AND POISONS IN PREDATOR CONTROL PROGRAM

Mr. Reed. Parenthetically, I might add at this point that the few lethal devices and poisons—strychnine, cyanide, and 1080—employed by the Bureau of Sport Fisheries and Wildlife in its predator control work are identifiable by our markings or tracers. Consequently, we generally are in a position to know, when an animal dies, whether the

death was caused by us or someone else, and in virtually every recent instance where we have received a complaint, particularly in cases involving rare and endangered and other nontarget species, death was not caused by Bureau devices. This also is proving to be the case with these eagles.

THALLIUM SULFATE LETHALITY: HIGHLY TOXIC CUMULATIVE POISON

We do not know precisely what dosages of thallium are lethal to eagles. It is known, however, that thallium sulfate is a cumulative poison, highly toxic to many forms of vertebrate animals.

Studies have shown that the breast tissue of a mallard that died several days after eating thallium-tested grain contained 15 parts per million. A cat that died from thallium poisoning showed 6 parts per million in muscle tissue, much below our readings on various tissues from the Wyoming eagles.

Senator McGee. Your lowest reading on the eagles is 14 parts per million?

Mr. Reed. Correct.

Senator McGee. You found a cat, you say?

Mr. Reed. An ordinary household cat with 6 parts per million.

Senator McGee. A cat out our way means other kinds of cats, not that kind, I mean a wildcat.

Mr. Reed. About 1 gram will kill a 155-pound man.

Senator McGee. Then what would 4 pounds do to a man?

Mr. Reed. Four pounds would kill a considerable portion of the human population in Wyoming. We are dealing with something that is hazardous and extremely toxic.

What kind of chemical is thallium? Does it have other uses besides animal control? Thallium was originally developed in 1920 by the Germans for use in rodent control, and was first tested by the Bureau of Biological Survey in 1924. During the late twenties and early thirties, it was used in rodent control operations.

In 1932, a Mexican laborer in California illegally obtained a 100-pound bag of thallium-treated barley and distributed its contents to several families. Products such as tortillas were made from the grain and fed to various members of the families. As a result, six persons died from acute thallium poisoning.

About the same time, Dr. Jean M. Linsdale, writing in "Condor," posed some serious questions about accidental poisonings of birds and mammals in the California ground squirrel control program. Reports of dead animals were numerous and there was a great deal of controversy about the use of thallium-treated grain.

Thallium is highly toxic, particularly to man. It is not readibly degradable. It is cumulative and is a broad spectrum poison; that is to say, unlike some poisons which can be used in such a way as to only effect a particular species, thallium will effect virtually all species alike.

TERMINATION OF ALL BUREAU USES AND STORAGE ON MAY 25, 1967

Because of its dangerous properties, the Bureau of Sport Fisheries and Wildlife has not used it in animal control work in the continental United States in the past 15 years. Official and final termination of all Bureau uses and storage at field stations was ordered on May 25, 1967.

Chemical and Neurological Symptoms and Neurological Manifestations of Thallium

In humans the chemical symptoms of thallium resemble arsenic intoxication and are associated mainly with the gastrointestinal tract and nervous system. After large doses, gastroenteritis is evident in about 12 to 14 hours, while neurological symptoms may be delayed 2 to 5 days. Gastrointestinal infestation includes severe paroxysmal abdominal pain, vomiting, diarrhea, loss of appetite, salivation, and weight loss.

Neurological manifestation during the first days of illness may include abnormal burning and prickling sensations, cranial nerve damage, convulsions, delirium, and coma. Vascular collapse and death may occur in 24 to 48 hours, but is usually more prolonged. Death may be caused by respiratory paralysis, pneumonia, or circulatory disturbance.

The pathology for eagle and other bird victims would be similar.

Examinations by Chemical and Bacteriological Laboratory of State Department of Agriculture

Our findings that all but one of the 18 birds we tested died of thallium poisoning were corroborated by other tests of four golden eagles made at the Chemical and Bacteriological Laboratory of the Wyoming State Department of Agriculture at Laramie.

Two of these birds were found in the same general area as six of the birds we tested. Two others were found near Rock Springs, 180 miles southwest of Casper.

The tests at Laramie showed no gunshot wounds, no fluorescence, and no strychnine; but all birds contained large amounts of thallium. The independent conclusion of the Wyoming laboratory was that death was due to thallium sulfate poisoning.

The loss of this many eagles is extremely unfortunate. However, we do not know precisely what impact these deaths will have on the total Wyoming eagle population. Our census data simply are not that accurate.

Bureau Field Investigations to Determine Source of Thallium: Anticipated Prosecutions

In addition to the laboratory analyses, Bureau agents conducted intensive field investigations. As soon as thallium was verified as the lethal agent in the eagle deaths, efforts were made to discover the source of the material.

One of our men covered our investigation of where the thallium came from, who the manufacturers were, and I want to compliment our field force for doing some really good detective work to run this substance down; and it would be my hope, as to the persons unknown who killed these birds, that we will be able in the near future to bring prosecution against them.

Chairman Ellender. What gives rise to the investigation?

Mr. Reed. What gave rise to the investigation was the discovery of dead bald and golden eagles, and laboratory testing showing thallium sulfate in the kidneys, intestinal tracts, and other tissues.

Chairman Ellender. How long did it go on before, the death of the birds, how long was it before you attacked the problem?

Mr. REED. As soon as it was brought to my attention by Mr. Charles Callison, of the National Audubon Society, I ordered an intensive investigation by the Bureau of Sport Fisheries and Wildlife; I put our people on 24-hour duty status, and most of them worked around the clock, 16 or 17 hours, and have been since the original notification.

I dispatched men to the field where they found more eagles, and I employed a helicopter and light plane during investigations. And I can give additional information on this a little later, as Mr. Lawrence, who headed the field investigation, is here and will report in detail as to what his findings were.

Chairman ELLENDER. Were you able to discover any ill effects from other birds or animals?

Mr. REED. No, sir; I have not found coyotes, or other birds.

UTILIZATION OF LETHAL POISON BY AMATEUR: POSSIBLE VIOLATION OF BALD EAGLE ACT

Senator McGEE. Your conclusion is that it is lethal enough, in other instances, not here, verified that it had very disastrous consequences for wildlife.

Mr. REED. Yes; we are dealing with a poison enormously lethal, Senator, and it was used in quantities that far, far exceed any reasonable professional use. This was done by an amateur who didn't know how.

Chairman ELLENDER. How is that taken in by the eagles? Is it by eating other birds?

Mr. REED. I would like to speak to that later, but if you wish, I can do it now.

Senator McGEE. All right.

Mr. REED. There is in my statement a list of a number of commercial uses of thallium and other things which I don't think adds anything to the public statement.

The end result of the use of the poison in Wyoming may constitute a violation of the Bald Eagle Act, and, if this proves to be the case, we will indeed prosecute any offenders who are apprehended. This act carries penalties of up to $500 or imprisonment of up to 6 months, or both.

If one thing can be learned from this unfortunate experience, it is that animal damage control work, when left to private individuals, will more likely than not result in indiscriminate and even wholesale killings of not only target species but also of nontarget species.

BUREAU POLICY RESPECTING ANIMAL CONTROL

Animal damage control work has been carried out by the Department's Bureau of Sport Fisheries and Wildlife since 1915. The program is conducted by the Division of Wildlife Services and, beginning in 1965, its activities have been drastically redirected and professionalized. Today our policy is that no animal control work is to be undertaken unless it is clearly justified, and when undertaken, control activities are to be limited to the species causing damage, or where possible only to the individuals causing damage, and in no event is the program

to be undertaken in any locality unless damage or danger actually exists.

No programs are to be conducted unless request therefor is made either by the land managing agency on whose land the work is to be done, or by a State or local government in whose jurisdiction the lands lie, or by stockmen's associations or private operators whose resources, property, or livestock are being damaged.

Mr. Chairman, I am well aware of opposition to our animal damage control program by some prominent national conservation organizations. I am, as you know, new to the Department of the Interior. I intend to see to it that the Bureau personnel administering the program adhere strictly to our policy as outlined above.

Cooperative Agreements

There are over 700 cooperative agreements under which control work is done with Federal, State, county, local municipalities, universites, and private individuals organizations. These agreements have all been renewed and many renegotiated since 1965 to reflect and carry out the new policies and stricter, unified controls, which, while getting the job done, are designed to do so with a minimum of bad side effects, recognizing that all animals have esthetic values, are of importance to the environment, and are resources of inherent value to all the people of the United States. In the last analysis, our basic policy is the stewardship of all forms of wildlife.

Agreement Violations

Agreements between private land owners in the area and the Bureau of Sport Fisheries and Wildlife for predator control services were violated by those individuals who purchased thallium sulfate and used it for predator control purposes.

Federal Law Protection of Eagles

With particular regard to eagles, both golden and bald eagles are protected by Federal law. In the case of golden eagles, the law authorizes the Secretary of the Interior, upon the request of the Governor of a State, to permit their taking for the purpose of seasonally protecting livestock. The Secretary is also authorized to permit the taking of bald eagles under special circumstances.

In the past, blanket permits for seasonally taking golden eagles were issued. This is no longer the case. Today, no permits are issued unless there is a particular showing of depredation, economic damage, and hardship. No permits for such purposes have been issued since March 1970, when the new policy was established.

Eagle Attacks on Livestock

Senator McGee. May I interrupt?

I think this raises a question. The witnesses before you, David Dominick and Charley Scott, testified they knew of no evidence to suggest that eagles would attack sheep or lambs. Has your Department gone into this question?

Mr. REED. Yes, sir; we have. It is an exceedingly difficult question. We are talking about vast open areas of land, and it is difficult to follow even the flight of the active bald or golden eagle.

I think it is safe to say that it is more than likely that certain individual golden eagles will attack livestock, especially kid goats. A young kid, after birth, is sedentary for several weeks and the mother leaves it for extended periods of time. If the golden eagle is in the habit of eating "kids" and finds a "kid," I think it is well recognized that occasionally they will kill them.

Senator McGEE. You are referring to a goat when you say "kid"?

Mr. REED. Yes; as to lambs, golden eagles will occasionally kill them, although it is infrequent, and the total numbers of sheep that stockmen say they lose to eagles is often exaggerated.

Senator McGEE. There is no doubt an eagle will feed on dead carcasses?

Mr. REED. None whatsoever. Both the bald and the golden eagle will eat carrion or freshly killed animals.

CONDITIONS WARRANTING PERMITS TO KILL EAGLES

Senator McGEE. You mentioned in that paragraph you had just completed, the Secretary of Interior is authorized, upon request of a Governor, to make special exceptions in this case so that eagles might be killed.

Now, what would be the special kind of exception?

Mr. REED. If a landowner was having a specific problem with an eagle or pair of eagles, or groups of eagles, causing an economic hardship on his land by killing calves and sheep, et cetera, we would dispatch an agent to examine it, and his recommendation would carry a great deal of weight. And if this particular bird was determined to be a killer, he could grant a permit for the killing of that bird or taking of that bird.

In other words, there is a difference, if we have an eagle killing goats or lambs, the question is, should we kill all of the eagles in the United States or just that specific eagle? And that is what the Department attempted to do and has done, and, as I say, there were no requests for permits for individual taking of birds in the last 3 years.

Senator McGEE. In the last 3 years?

Mr. REED. Yes.

Senator McGEE. No request for a Governor to apply these laws?

Mr. REED. That is correct.

BUREAU OF BIOLOGICAL SURVEY PROGRAM INITIATION

Chairman ELLENDER. How long has this poisoning been in effect which will rid the farm of predatory birds or anything else?

Mr. REED. The Government program under the Bureau of Biological Survey began in 1915.

Chairman ELLENDER. Since 1915. Isn't it necessary to continue a program of this kind with other materials in order to protect the herds of farmers?

Mr. REED. There is no question that coyotes have and will continue to kill sheep. Young lambs are easily caught by a coyote, and I am sure Senator McGee has often seen depredations from coyotes on sheep.

65-903 O—71——3

USE OF DDT IN THE SOUTH

Chairman ELLENDER. I asked that because you know we have a problem in the South, as well as the North, with the use of DDT. I have taken the position that we should go slowly as to the use and nonuse of DDT until we find a substitute. If we permit these bugs to multiply without trying to destroy them, the chances are some day we might go hungry.

In other words, I have taken the position that pollution should be treated at the source, and that before we rid ourselves of the present methods of destruction of insect pests, we should find a substitute.

What is your idea on that?

Mr. REED. Senator, I prefer not to comment on DDT at this time.

EFFECTIVE SUBSTITUTES FOR AND POSSIBLE SUSPENSION OF REGISTRATION OF THALLIUM SULFATE

Chairman ELLENDER. I don't want you to comment on DDT, but all I want a comment on is whether or not it is a good thing for the country to stop a usage which has been effective for quite a while without finding a substitute.

Mr. REED. What I think is most important is, that with thallium sulfate, there are indeed effective substitutes, and thallium sulfate is highly hazardous in the hands of individuals not trained in its use. And regarding the entire program of wildlife services, in my statement I say the following:

To correct the immediate and most obvious problem, we have already recommended to the Environmental Protection Agency, and EPA has agreed, that it may suspend registration of thallium sulfate, and there are other chemicals for the control of damage by predators which are much more effective and easier to use.

COOPERATION WITH COUNCIL ON ENVIRONMENTAL QUALITY

Further, sir, we have been in touch since April with the Council on Environmental Quality and asked to join them in a broad overview of the problem dealing with wildlife depredation and the Department's role.

We have been working in cooperation with CEQ in establishment of the project since April of this year.

Now I think it is time to review the entire depredations control program. I prefer not to do it at this hearing.

Chairman ELLENDER. I don't want to put you on the spot. But the point I am making is this, that if we follow the views of some ecologists, we will stop all methods of control. If that course is pursued, I could see a time when we might not be able to produce enough wheat to satisfy our needs, or cotton or other crops; and it strikes me that before we rid ourselves of the poisons, that some substitutes must be found. Otherwise some people will go hungry and others might go naked.

Senator MCGEE. Could you mention, Mr. Secretary, maybe this is appropriate, perhaps the other options open in lieu of thallium?

Mr. REED. I will ask our staff to comment on it, but I would like to conclude my statement, sir, if I can.

EFFORTS OF WYOMING GOVERNOR TO CONCEAL THALLIUM REGISTRATION

I do want to applaud the continued efforts of Gov. Stanley K. Hathaway, of Wyoming, to cancel registration for use of thallium in Wyoming, and we encourage other western Governors to take similar actions.

Senator McGee. Does it mention the failure of a State legislature to enact legislation when it was submitted?

Mr. Reed. Yes, sir, I am very disappointed in that, and I hope the Agriculture Committee will take it up.

Senator McGee. All right.

SUMMARY

Mr. Reed. Now, to summarize:

1. Thallium sulfate has been identified beyond any reasonable doubt as the agent which killed the eagles tested in State and Federal laboratories.

2. At our request, EPA has moved to ban the interstate shipment of thallium sulfate for animal damage control uses.

3. Action will be started immediately to identify other toxic compounds used in animal damage control which should be similarly banned.

4. We are encouraging the States to take appropriate action on local control of toxic chemicals.

5. A private sector task force will conduct an intensive reevaluation of all existing animal damage control programs and make recommendations for any needed program changes or modifications.

The Bureau will continue its efforts to assign responsibility and prosecute the persons unknown who were responsible for the destruction of Jackson Canyon eagles.

Now I would like to thank, sir, the National Audubon Society for assistance in the field and in the laboratory.

With your permission, I will now ask Dr. Charles Loveless to give the committee a short briefing on the distribution and numbers of both bald and golden eagles.

COOPERATION OF ENVIRONMENTAL PROTECTION AGENCY

Chairman Ellender. Mr. Chairman, may I first ask this question: I understand Mr. Ruckelshaus testified this morning, and he is head of the Environmental Protection Agency.

Mr. Reed. Yes.

Chairman Ellender. Is the Interior Department represented in that Agency?

Mr. Reed. No, sir.

Chairman Ellender. When the Agency was created, I tried my best to get the Department of Agriculture to have a representative there with something to say about it, and I took it up with our present Secretary of Agriculture. All he could obtain was a person on that committee to simply advise without authority to make a firm decision.

I was of the opinion then and am still of the opinion, as far as Agriculture, as well as your Department, somebody should be on this Board with something to say about it.

To me, unless we have proper guidance from those with actual experience, I would think the chances are that a lot of these poisons that are necessary to get rid of aphids and other insects that kill vegetation will affect our production. I don't want that to come about.

Mr. REED. Senator, let me assure you I have, or the Department has received the most cordial useful cooperation of the Environmental Protection Agency. We have been involved in a number of projects together and it has been done a mutual confidence basis, and it has been highly satisfactory from our standpoint.

We are going to be severely tested, certainly, when it comes to reviewing the permits for discharge of the water wastes, and on the whole, the cooperation we have received is excellent.

Chairman ELLENDER. To what extent have they followed your advice?

Mr. REED. As you know, Senator, in Government, sometimes you win and sometimes you lose. I think we have had more than our fair shake of hearings. I think we have had the input.

Chairman ELLENDER. Well, hearings don't count unless you are effective.

Mr. REED. I think we have been very effective with them.

Chairman ELLENDER. I hope they follow your advice in the case I cited.

By the same token, I say about agriculture or any other thing necessary for our life, and I am hopeful instead of being advisory, they will have a say.

Mr. REED. Yes; very much so on the animal control program, Senator.

Senator MCGEE. I must say the Secretary, it is my impression, has been extremely effective on this particular question with the Environmental Agency. The expertise which you mobilized so quickly, I think, was instrumental in inviting the Environmental Agency to proceed with the efforts it has undertaken. It has been exceedingly valuable.

The question, I suspect, is to try to balance these things?

Mr. REED. That is exactly right.

Senator MCGEE. You are not trying to spare predators just because they are alive, but trying to make it relevant to whether they are really predators in that sense or whether it is the figment of somebody's over-eager imagination. I think most everybody will have to admit they are "not caught with their feathers down"; and we are trying to find out what to do about it constructively.

Mr. REED. Yes, sir.

Will you give Senator Ellender a briefing on the range of bald eagles?

Statement of Dr. Loveless

RANGE OF EAGLES

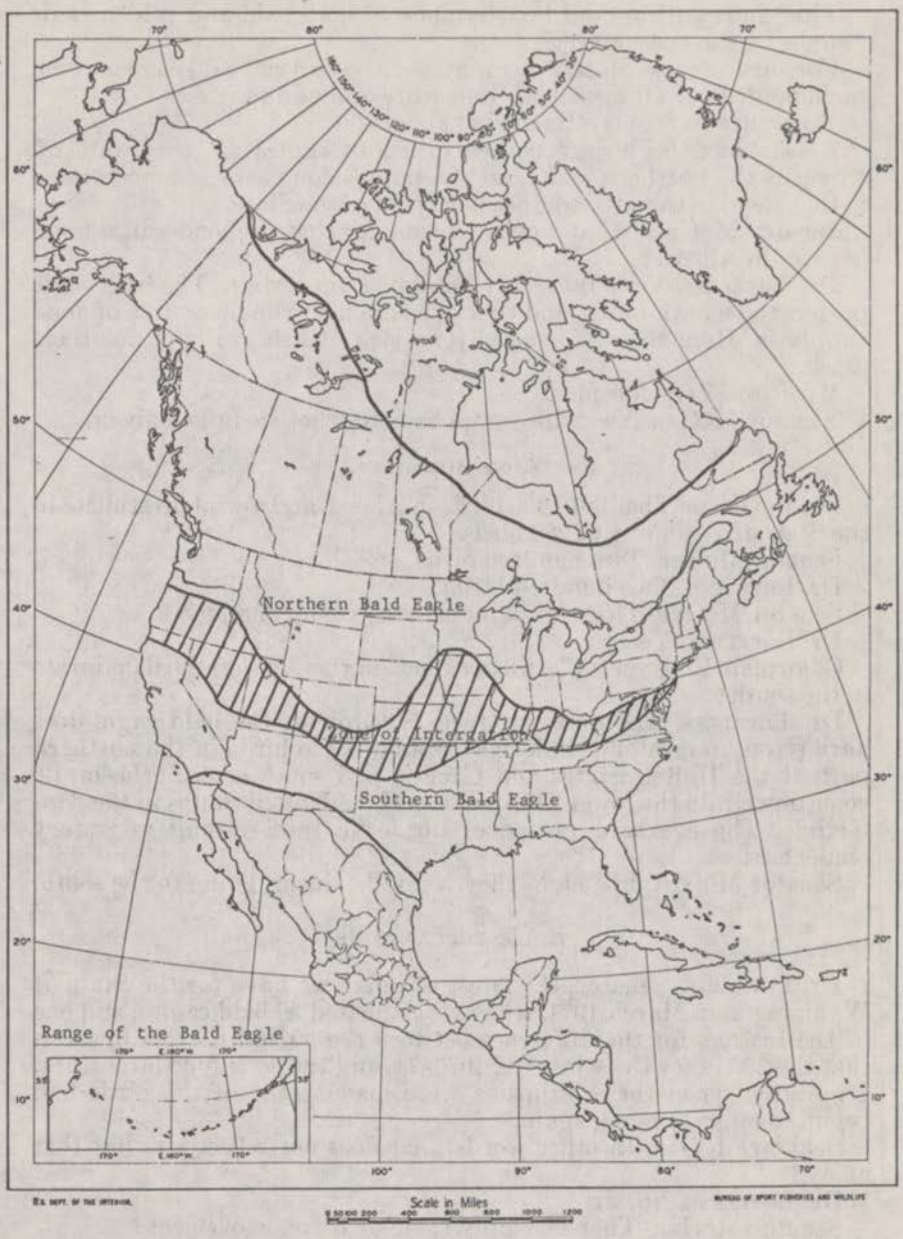
Dr. Loveless. Yes, sir. This map outlines the range of the two races of the bald eagle that are recognized. The northern race in this portion of the continent [referring to map] and the southern one here. This hatched area across the middle of the country is where the two races come together and their ranges overlap.

Senator McGee. I might say you have integration there in the middle.

Chairman Ellender. Intermarriage.

(The maps follow:)


Breeding Range
Range of the Golden Eagle
U.S. DEPT. OF THE INTERIOR
BUREAU OF SPORT FISHERIES AND WILDLIFE
Scale in Miles


Northern Bald Eagle
Zone of Intergradation
Southern Bald Eagle
Range of the Bald Eagle
U.S. DEPT. OF THE INTERIOR
BUREAU OF SPORT FISHERIES AND WILDLIFE
Scale in Miles

EAGLE POPULATIONS

Dr. LOVELESS. Yes, sir.

This chart outlines our best estimate of both bald and golden eagle populations in the country.

For the lower 48 States, we estimate 2,000 to 3,000 bald eagles which include birds of all ages, both immature and adults.

The southern race is estimated at about 300.

Alaska has the largest concentration of eagles we are aware of, which is the northern race, and the population there is concentrated in the Aleutians and the southeastern part of the State.

Senator MCGEE. What would account for that preponderance numberwise in Alaska?

Dr. LOVELESS. Very favorably habitat, I am certain. The bald eagle prefers to be near water, and that is where his primary source of food supply is. Here there is generally no lack of fish available for them to eat.

Mr. REED. Very few men.

Senator MCGEE. Yes; this comes back to what we talked about.

EAGLE MIGRATION

Dr. LOVELESS. That is 10,000 birds in Alaska and a winter estimate in the State of Wyoming of 200 birds.

Senator MCGEE. Two hundred birds, or pairs?

Dr. LOVELESS. Two hundred birds.

Senator MCGEE. That would include the young ones, too?

Dr. LOVELESS. Yes, sir.

Chairman ELLENDER. To what extent do the Alaskan birds migrate to the south?

Dr. LOVELESS. The northern race, Senator, of the bald eagle does have strong migratory tendencies. Many of the birds in the northern part of the United States and Canada and southeastern Alaska, do come down into the lower "48" portion of the United States in the wintertime. The southern race does not have these strong migratory tendencies.

Senator MCGEE. I thought they were like ducks, going to the south.

EAGLE POPULATIONS

Dr. LOVELESS. Senator, the latest estimate we have for the State of Wyoming is in March 1971, when we estimated 90 bald eagles, and one of the reasons for the difference between the 90 and the 200 figure is that the 200 is for the winter of 1970–71, and the 90 is for March 1971. By March when these estimates were made, some of the birds had begun to migrate north again.

Senator MCGEE. In other words, that does not reflect you lost that many?

Dr. LOVELESS. No, sir.

Senator MCGEE. That is simply their own free movement?

Dr. LOVELESS. Yes, sir.

In Natrona County near Casper, where this incident occurred, our best estimate is about 10 bald eagles in March 1971.

Senator MCGEE. That is, there is less now, after the massacre?

Dr. LOVELESS. No, sir; this estimate was made before that.

Senator McGee. Before?

Dr. Loveless. Yes, sir; but we believe this to be a conservative estimate of the number of birds there.

Now, with the golden eagle, there is a quite different situation. The estimate for the lower 48 States is 12,000 to 15,000 birds, and in Wyoming the estimate in March 1971 was 1,800 birds, and in Natrona County 95 birds.

This map outlines the range of the golden eagle. In this part of the continent here (referring to map) is represented the breeding range of the golden eagle, and this is where they are concentrated, but they do occur however in the eastern part of the United States, but only occasionally.

Senator McGee. You referred to the southern range a while ago.

Dr. Loveless. Yes, sir; but that was the southern race of the bald eagle.

Senator McGee. There is not a great number of bald eagles in the south?

Dr. Loveless. No, sir; we estimate about 200 to 300 bald eagles in the South. These birds are the southern race of the bald eagle and the one which is on the endangered species list. The bald eagles involved in the Wyoming incident were the northern race.

Senator McGee. Have you statistics showing the numbers of male and female golden eagles?

Dr. Loveless. No, we do not differentiate races in the golden eagle. The northern race of the bald eagle is slightly larger than the southern race and in the intermediate area where they overlap. They are difficult to tell apart. However, Dr. Chan Robbins of the Bureau's Migratory Bird Population Station has developed a method for doing so based on the width of the beak.

Mr. Reed. If you like, we could have Mr. Lawrence speak on enforcement or on what he found in the way of enforcement.

Senator McGee. Right.

Before you start, Mr. Lawrence, I would like to say, myself, we were impressed with the effective, yet considerate way you dealt with this in our area. All of the people I talked to that you had contact with were laudatory of the efforts that were made and the consideration that was given, and I wanted the record to show, whereas this was a kind of situation that might have had some other elements present in it, nevertheless it was well done.

Mr. Reed. Mr. Lawrence, give the Senator a briefing on what you found in the area.

Senator McGee. Maybe he ought to quit while ahead.

Statement of Mr. Lawrence

RESULTS OF FIELD INVESTIGATIONS

Mr. Lawrence. Mr. Chairman, my name is Charles H. Lawrence, and I am Chief of the Division of Management and Enforcement, Bureau of Sport Fisheries and Wildlife.

If I may, with your permission, sir, I would like to give you a little word picture of the situation as I found it, which I think will contribute toward explaining what happened and why.

EXTREME EFFECTIVENESS AND DANGEROUSNESS OF THALLIUM AS CONTROL AGENT

Thallium is a heavy metal that is white in color, odorless, tasteless, and extremely toxic, selling for $10 a pound, and the proper dosage is one ounce per 100 pounds of meat.

Senator McGee. One ounce per 100 pounds, and that is with an average animal you would have one ounce or less?

Mr. Lawrence. That is quite true, sir.

Now, it was used extensively in the late 1940's and early 1950's in the West as a control agent. It was extremely effective, but determined to be extremely dangerous. For example, the people who are unfamiliar with its toxicity might poison animals, and then if they notice that the coyote has eaten most of them, they might leave them in the area, and shortly thereafter they killed off all of their sheep dogs.

Thallium does not degrade, with the result that bones, animal bones impregnated with thallium, will continue to be poisonous for years.

Senator McGee. If the same, that is, this subsides, for example, a year later, is it less poisonous than when first applied?

Mr. Lawrence. Well, its life is such that it does not break down, as is true of other poisons.

Senator McGee. So it could lie there for several years and still be lethal?

Mr. Lawrence. To the best of my knowledge, yes, sir.

Chairman Ellender. How would it be taken in by eating, if there are no animals there—by the eagle?

Mr. Lawrence. Well, the eagle will eat tissue. It is a salt or looks like it, it is bluish in color, and also a preservative, with the result that an animal that is dosed with thallium does not decompose as is true if no thallium is present.

Birds normally work on these poisoned animals or work on these carcasses when relatively fresh.

Chairman Ellender. How long does an animal remain edible by eagles or other birds?

Mr. Lawrence. Well, in the wintertime, sir, several months.

TV PANEL DISCUSSION OF SHEEP AND CATTLE INDUSTRY

Now, periodically, from Denver, and it could well be from some of the other major Western cities, a panel of stockmen, knowledgeable stockmen, sheepmen and cattlemen, appear on TV and discuss the problems affecting their industry. Well, in November, last year, a group of panelists appeared on TV, and one of them who was held with great respect and knowledge made mention of the fact that it appeared that the Federal predator control program was to be further restricted, and that in all probability the sheepmen who had had access to 1080 might no longer be able to get it, and stated that if the sheepmen were to protect their livestock, they must look to themselves to do it.

Now, there were a number of stockmen who had remembered the effectiveness of thallium some years before, and so they thought, "Well, now, if we must of necessity protect ourselves, we had better lay in a supply of thallium."

PURCHASES OF THALLIUM

That appears to have occurred. Now, there were six individuals in the State of Wyoming who we know for certain purchased thallium. There were five of these in Natrona County, scene of these eagle deaths.

Now, of the six, we had this situation——

Senator McGee. Do you know when those purchases were made?

Mr. Lawrence. Yes, sir; we have a record. The American Smelting and Refining Co. provided us with a record. There was no continuity about it. Some received it last summer, some in January, and some received their shipment in March of this year.

Senator McGee. What about the quantity?

Mr. Lawrence. One cattle company purchased 25 pounds.

Senator McGee. At $10 a pound?

Mr. Lawrence. $10 a pound. Another organization bought 10 pounds. A third bought 10, and a fourth bought 10, and two individuals bought 5 pounds.

Senator McGee. There is no 50-pound case, someone called me on the phone and said they knew of a 50-pound case, and you didn't run into any?

Mr. Lawrence. Not an individual case; no, sir.

PURCHASERS OF 25 POUNDS

Now this is significant, sir. The individual who purchased the 25 pounds found 30 sheep that had been killed by coyotes. He operates a spread of 100,000 acres. He bought 25 pounds of thallium and he dosed 30 sheep, and in addition two cows, and according to my calculations he should have used a total of 3 pounds of thallium. He used the entire shipment of 25 pounds.

Senator McGee. Let me ask you, had he used the 3 pounds, the appropriate dosage, would it still have been sufficient to probably have this effect of lethalness on eagles?

Mr. Lawrence. Yes.

Senator McGee. So it wouldn't have mattered as far as the eagles were concerned, whether 3 or 25 pounds?

Mr. Lawrence. Well, it wouldn't have needed to take much more, the eagles would eat more on these baited animals, then, more frequently, and consume more flesh.

Senator McGee. In other words, one feast would not kill the eagles?

Mr. Lawrence. I do not think so.

OTHER PURCHASERS

All right. The second individual had killed 12 sheep and he used 9½ pounds of thallium. He should have used about 12 ounces.

Senator McGee. A total of 12 ounces?

Mr. Lawrence. Yes, a total of 12 ounces.

The third man had a kill of five sheep, and they were 50-pound lambs, and he should have used 2½ ounces and he used 4½ pounds.

Senator McGee. Did you get an explanation from these individuals as to why they used too much?

Mr. Lawrence. One man said he knew it was effective, but he had not read the directions.

GRANDSON OF TRAPPER WITH KNOWLEDGE OF THALLIUM

The only man who used it and knew how to use it was a grandson of one of our trappers, one of the men who had used it in the 1940's and 1950's, when he had trouble with foxes. Foxes were molesting newborn lambs, and they killed three of them. So he dosed these three 50-pound lambs and used a teaspoonful for all three, total amount.

Senator McGEE. That would still be effective, though, with the coyote predators?

Mr. LAWRENCE. Yes, sir.

He knew that this thallium was dangerous, and he noted that the fox had dragged one of the poisoned carcasses into the den. He saw no further evidence of the fox, so he dug out the den and got the remains of the poisoned lamb that was in there together with the other two, and he buried them so that they would no longer be effective.

COOPERATION OF PURCHASERS IN DESTRUCTION OF BAIT

Incidentally, all of the people who put out the thallium baits—in one instance one man said he put them out in early November, he went back in December and he could find no evidence of the baits, and he found no coyotes or anything else, but he presumed that the coyotes had consumed them.

Well, as soon as we had determined they had used thallium, we told them and asked them if they would take immediate action to find those baits and destroy them, either to burn them completely or to bury them in deep burial plots. All of the people were alerted to the danger of these things being present, and they immediately took appropriate action.

Senator McGEE. You found no instances of noncooperation among those?

EFFORTS TO LOCATE BAIT

Mr. LAWRENCE. No. At the outset, we did not know what had killed the eagles. As soon as the lab report came in indicating it was thallium, that gave us a lead as to what we were looking for. We were looking for a needle in a haystack, sir, and this is tremendously vast and rugged country.

Senator McGEE. I might add we have three people per square mile. That is, they are scattered out, and unless you rolled a steamroller over the State we would have about a fourth of a person per mile.

Mr. LAWRENCE. Now, Jackson Canyon was the nearest—or the nearest point to Jackson Canyon where most of the thallium was used was 50 miles. It didn't seem conceivable that the birds which were roosting in Jackson Canyon would fly that far to feed. They might move 25 miles, but that was the extreme, so we determined we must find something closer in.

With the Secretary's permission, we employed a helicopter and then we used one of our own fixed-wing aircraft, and between the two planes we flew 350 square miles right on the deck, looking for dead animals that might be baited. We found dead sheep, dead cows, dead deer, and finally three dead antelope approximately 12 miles from Jackson Canyon.

Of significance is the fact that there the rock formation in this direction rises out of the plain to a height of about 400 feet and it causes

thermals, and the eagles ride those thermals. Eagles have been observed in this area for many years, and Dr. Oliver Scott, who owns this property, has studied them and he didn't say very much about them because he didn't wish for them to be disturbed.

Now, in our investigation, we found up in this area in the immediate vicinity of the antelope an outcropping of rocks which is named locally "A Chain of Rocks," which is a peculiar formation looking something like a huge picket fence, made up of rocks that stick up like stakes in the plains, and the golden eagles and bald eagles have been there many times, roosting on these rocks.

We found these three animals, took samples of them, sent them to the lab and asked for a No. 1 priority examination. Shortly, we received word that each of the animals had lethal doses of thallium in them.

We attempted then to determine who had put them there.

Senator McGee. The evidence wasn't that the antelope had eaten something with thallium, but the carcass had been used as a "plant"?

Mr. Lawrence. The antelope had been poisoned; yes, by an expert. Whoever had poisoned them had severed the flesh around the front shoulders and laid the shoulder back so that the predator could get at the flesh. They had been split down the middle and had been slit on the inside of the legs. That is the muscle, and meat was exposed.

The method they use to properly bait these things is, one, they use a rubber glove, with respect to what you have in your hand, and then sprinkle thallium into the flesh and force it into the muscle with a pointed stick, and hopefully do not breathe in any of the fumes off the freshly killed animal.

Well, these animals all showed evidence of having been poisoned by an expert. The evidence revealed also they had not been killed at the site. They were all within 30 feet of an old road, little-used road. It appeared that whoever had driven down this trail had just slid them off a pickup truck, and dumped them in the mesquite there.

Two of them were on the land of a man who does not permit predator control to be conducted on his property. The third one was on land leased from the Bureau of Land Management by a man who says he has a mortal fear of poison. There was no evidence that we could collect that gave us any reason to believe these two gentlemen were telling us anything other than the truth. Both were very much suprised and certainly very much disturbed to find those animals being on their property, for two reasons:

This is summer range, and they soon will be bringing in valuable dogs, and they certainly wouldn't want their dogs to be poisoned.

Then we determined that a man was leasing or receiving the privilege of running sheep in the vicinity of those antelope on this cattleman's property. We thought he might be interested in protecting his sheep. We determined from him he didn't want to jeopardize his right to run cattle—or right to run sheep on the property. He knew the owner's attitude toward poisoning, and he certainly had no intention of doing anything to jeopardize his right to run sheep there, so he was not involved.

Senator McGee. Who would want to poison these antelope?

Mr. Lawrence. Well, gentlemen, there are many people who have trouble with predators who feel that certain areas serve as sanctuaries

for the coyotes. It might be a sheepman who feels that the cattleman who lives next door who does not permit control is contributing to his problem.

Senator McGee. Shades of the Johnson County War.

Mr. Lawrence. Yes, sir.

Well, this may be one of those situations wherein sheep or coyotes moving in this direction would be intercepted by the used bait and would protect an area north of where they are located. Now we have some very interesting information that we are pursuing. I cannot say that a certain individual was responsible at this moment.

Requisite Prosecution Evidence

From the standpoint of prosecution, it is extremely difficult for the reason I must of necessity prove that these antelope were the ones that these eagles over here fed on and that the man over here that put them out did so intentionally to kill eagles.

Senator McGee. The coincidence of the the eagles in that area, the only validity in your problem would simply be of circumstantial evidence?

Mr. Lawrence. Yes, sir. I do not believe, or we have no evidence, sir, that anyone was deliberately attempting to kill these eagles. I thought that we might find someone who had a great animosity toward eagles. We talked to people and questioned people, commiserated with people in an effort to find someone who had expressed hatred for eagles.

We ran into a wide spectrum of opinion. Some cattlemen said, "There is no problem of any kind."

Some sheepmen said, "They cause us difficulties once in a while."

Others said, "If they cause me difficulty, I will destroy them, and in the process I must of necessity break the law."

But we found no one who had made threats or stated they were going to kill those eagles or who was going to kill those eagles.

Now, everyone I met, with the exception of the person who put these out here, was deeply concerned with what happened, and they most assuredly wanted no part of a repetition.

I do, sir, believe this was a most unfortunate accident for the reason that predator control has been conducted in this area for many, many years, and these people have frequented these areas for many years, and until the advent of thallium being used by people who obviously did not know how to use it, there was no problem with eagle deaths associated with the poison.

Compound 1080

Senator McGee. Is there any prospect, and I think the Secretary intimated that you cannot rule out 1080 in some instances?

Mr. Reed. No, sir, every one of the birds we have goes through that process, and I will furnish to you, sir, and the Committee the final analysis or, if you would prefer, as we get them—and the process is a lengthy one for 1080 and it induces a number of complicated procedures.

Senator McGee. For the record, just slip in here what 1080 is.

Mr. REED. That signifies the name, well, I will let Mr. Smith give you the name, or Jack Berryman give you the name. We call it 1080.

Mr. BERRYMAN. That is the laboratory number for the compound sodium monofluoroacetate.

Senator McGEE. I had a hard enough time saying "thallium" without that one.

Mr. REED. That is why we call it 1080.

Senator McGEE. Yes, 1080.

LABORATORY ANALYSIS OF EAGLES

Mr. REED. But I will furnish you, sir, and the committee the results of the final lab analysis. These birds are put through these series and the final results are run through, and I am confident that the same pattern will exist as has been shown.

(The information follows:)

Results of Examination and Tests -- Wyoming Eagles; May 1971

Specimen No.	Origin	Species and Sex	Phys. Injury	Fluor-escence	Strych-nine	Thallium (Kidney)	1080	Cyanide
(Patuxent Lab)								
673-1	Jackson Canyon	Golden AD M	none	neg.	neg.	21 ppm		
2	Jackson Canyon	Bald IM F	none	neg.	neg.	22 ppm	neg.	neg.
3	Jackson Canyon	Bald AD M	none	neg.	neg.	68 ppm		
4	Jackson Canyon	Bald IM M	none	positive bluish white	neg.	22 ppm	neg.	
5	Matheson Creek Canyon	Golden	none	(Too decomposed to test)				
6	Jackson Canyon	Bald AD F	none	neg.	neg.	14 ppm	neg.	neg.
7	Jackson Canyon	Golden AD M	none	neg.	neg.	26 ppm		
8	Jackson Canyon	Bald AD M	none	neg.	neg.	28 ppm		
9	Jackson Canyon	Bald AD F	none	neg.	neg.	45 ppm	neg.	
10	Jackson Canyon	Bald IM F	none	neg.	neg.	30 ppm		
11	Jackson Canyon	Bald IM F	none	neg.	neg.	23 ppm		

Continued Patuxent Lab

Specimen No.	Origin	Species and Sex	Phys. Injury	Fluor-escence	Strych-nine	Thallium (Kidney)	1080	Cyanide
12	Jackson Canyon	Bald AD M	possible impact injury--no gun-shot wound	neg.	neg.	29 ppm		
13	Jackson Canyon	Bald AD M	none	neg.	neg.	26 ppm		
675-2	Little Red Creek Canyon	Bald	none	neg.	neg.	59 ppm	neg.	
3	Little Red Creek Canyon	Golden	none	neg.	neg.	59 ppm	neg.	
678-1	Little Red Creek Canyon	Golden	none	neg.	neg.	152 ppm (Assorted Tissue)		
2	Little Red Creek Canyon	Golden	none	neg.	neg.	67 ppm (Liver)		
3	Little Red Creek Canyon	Golden	none	neg.	neg.	41 ppm (Assorted)		
4	Little Red Creek Canyon	Golden	Prob. shot	neg.	neg.	0 ppm		
E-18	Little Red Creek Canyon	Golden	none	neg.	neg.	75.6 ppm (Kidney, liver and breast)		
E-20	Little Red Creek Canyon	Golden	none	neg.	neg.	95.2 ppm (Kidney, liver and breast)		
Rock Springs #1	Near Rock Springs	Golden		neg.		29 ppm (Breast muscle)		
Rock Springs #2	Near Rock Springs	Golden		neg.		61.7 ppm (Kidney)		

65-803 O - 71 - 4

PAPER ON COMPOUND 1080

Mr. LAWRENCE. Do you have questions?

Mr. REID. I will also furnish a briefing paper for the committee to review on 1080.

(The information follows:)

Information Statement on Compound 1080
(Sodium monofluoroacetate) and its use by the
Bureau of Sport Fisheries and Wildlife
Division of Wildlife Services

April 1971

Introduction. Probably no other compound has generated as much controversy and sparked so much emotionalism as "Compound 1080," a chemical used in the control of vertebrate animals that sometimes cause damage to agriculture. Ironically, few chemicals and few methods of application have been studied so carefully, and few can be so effective and selective. In spite of over 25 years of use, it remains a conservation enigma.

Description and Properties. "1080" is the laboratory number for sodium monofluoroacetate, a colorless, odorless, and relatively stable water soluble salt. It decomposes to a harmless residue at approximately 200° C. Monofluoroacetate occurs in nature; being the toxic agent produced by several poisonous plants. It is biodegradable.

Compound 1080 is highly toxic; it is rapidly absorbed through the gastrointestinal tract. It acts upon either or both the cardiovascular and nervous systems in the affected birds and mammals, and on the skeletal muscles of some species. Symptoms generally appear in from 30 minutes to 2 hours and are marked by convulsions; death usually follows in about 2 hours. No effective antidote is known. Cumulative effects; in the usual sense of the word, have not been demonstrated.

History. Sodium monofluoroacetate was produced in the laboratory in 1896, and was being studied in Europe and South Africa prior to World War II. When the war cut off sources of economic poisons,

the Office of Scientific Research and Development directed a crash program to find substitutes to combat rats and other rodents. The OSRD arranged for the Fish and Wildlife Service to sample possible chemicals at the Patuxent and Denver Wildlife Research Centers. By April 1944, Compound 1080 had been tested.

The work expanded and worldwide studies were initiated by the Fish and Wildlife Service, in cooperation with the Public Health Service, the Surgeon General's Office, the Bureau of Medicine and Surgery, the Typhus Commission, the Chemical Warfare Service, the University of Chicago, the Texas State Department of Health, the Pan American Sanitary Bureau, and the British Commonwealth Scientific Sanitary Bureau. Because of the circumstances of its development and testing, a great deal was known about 1080 before its use by the Bureau began. Research has continued in this country and abroad, so that there is a good store of knowledge on 1080.

Registration and Regulation. Compound 1080 is Federally registered by the Bureau of Sport Fisheries and Wildlife for control of coyotes, pocket gophers, ground squirrels, prairie dogs, and field mice.

The Federal land-managing agencies prohibit the use of 1080 predacides on Federal lands except by the Sureau of Sport Fisheries and Wildlife or by Federal agency personnel trained by BSFW. Bureau use of 1080 has concurrence of the Working Group on Pesticides responsible to the Council on Environmental Quality and is further controlled by rigid Bureau regulations. Compound 1080 is perhaps the most rigidly regulated and carefully supervised economic poison in use today.

Production and Distribution. Compound 1080 is produced in the United States by two manufacturers. Both require agreements with purchasers to assure compliance with registration; both require bonding of purchases for public liability; both cooperate fully with the Bureau in providing requested information. Many private users of 1080 are members of the National Pest Control Association. That Association encourages safe use and works with the manufacturers and this Bureau to assure responsible use.

Approximately 42 percent of total production is used by private operators; 41 percent is exported; 7 percent is sold to units of State governments; and 10 percent to the Federal Government. Private domestic use is principally for urban rodent control. Uneaten portions of coyote baits (about 50 percent of each bait is usually eaten) are collected and destroyed by burning at the close of the season.

Bureau Uses. All Bureau purchases of 1080 are made by the Pocatello Supply Depot. Compound 1080 is used as a rodenticide and as a predacide, especially on western public lands, primarily to reduce coyote numbers to protect livestock. It is the latter use that has resulted in controversy.

Bureau use began in 1944. It was immediately hailed as a boon to the livestock industry because of the sharp drop in coyote numbers and in predation. It is more likely that this drop was the result of several factors, including more manpower and a cyclical decline from a peak coyote population, all occurring at once.

In practice, large, 1080-treated meat baits are staked to the ground and are placed usually no closer than 6 miles apart. They are set out in late fall or early winter and retrieved and destroyed in late winter or early spring.

In certain situations, 1080 is preferred over other techniques or chemicals for two reasons: (1) the variable toxicity of 1080 to different species, and (2) the variable travel distances of other meat or carrion-eating species. As an example of the variable toxicity, a coyote (or dog) needs to eat only 1.4 ounces of treated bait to receive a lethal dose. In contrast, a bear must eat over 4 pounds; a man from 3 to 8 pounds; a vulture over 2 pounds; a great horned owl about 1 pound; a golden eagle over 3/4 pound; and for some reason, an opossum over 13 pounds. At the other end of the scale, house cats and magpies are even more vulnerable than coyotes, with less than 1/2 ounce being lethal.

Many other meat or carrion eaters have a home range or travel distance that is much less than that of the far-ranging coyote so that there is a remote likelihood of the smaller carnivores coming into contact with a bait. The safety factor is further increased by putting the stations out at a time when other vulnerable species are either inactive or absent.

These factors all combine to contribute to the selectivity of the use of 1080, its variable toxicity; the time and locaton of placement; the spacing of stations; and the supervision of its use. That this concept of selectivity has worked is evidenced by Robinson's study of population trends of vulnerable carnivores after 20 years' use of 1080, which showed that coyote numbers were down in areas where 1080 was used while the

populations of other carnivores were up. Also, there has not been a single species either extirpated or even threatened during these 20 years, as a result of Bureau use of 1080.

There remains the question of secondary hazards and safety. For the reasons previously stated, an ever-increasing dilution factor works to reduce secondary hazards. The Bureau put out over 150,000 stations during the past 10 years. During that period there were 19 incidents involving domestic animals. The Bureau was at fault in six cases.

Maximum use of this compound occurred in 1964 with the placement of 17,000 stations. The number of stations has now been reduced by about 33 percent without apparent reduction in effectiveness. Compound 1080 is the principal tool for coyote control, especially on public lands and in more remote areas and during seasons when other forms of control are difficult or impractical.

Present Bureau Policy. The major requirements of present policy stipulate: (1) annual evaluation of each station; (2) annual approval of each station at the district supervisory level; (3) annual approval and inspection of district, State, and Regional programs; and (4) annual renewal of requests and description papers. Additionally, there are rigid regulations governing handling, placement, posting, retrieval, use, and distribution.

The Forest Service and Bureau of Land Management concur in and support present regulations and use of 1080 on public lands, subject to annual approval of programs.

Commenting on 1080 in 1964, the Secretary's Wildlife Management Advisory Board (Leopold Committee) indicates "In the open areas of the Western United States, by far the most efficient control method for coyotes is the bait station." The Report continues, "When properly applied, according to regulations, 1080 stations . . .do an effective and humane job of controlling coyotes and have very little damaging effect on other wildlife." More recently, in late 1969, each of the former board members reviewed and concurred in the Bureau's strengthened 1080 policy, which was later approved by the Secretary of the Interior on February 11, 1970.

Alternatives. Compound 1080 remains the most selective and effective chemical available for coyote control. It is not probable that a substitute will be found, since it is unlikely that the same resources will be mustered as were first employed in developing 1080. Further, if a suitable substitute were found, it would be similar to 1080 in its specifications.

To fall back to strychnine, which is highly toxic to most species, would require many more baits, and would increase hazards to small carnivores, meat-eating birds, and man.

Traps and other mechanical devices require far more manpower, are less selective, and require methods that cannot be used where human use has increased.

If we were to abandon the use of 1080, there would be a sharp increase in predation on livestock, followed by indiscriminate use of other tools by those who felt compelled to handle their own problems. The ultimate solution is to find an effective substitute for all poisons. We think repellents hold great promise, and are supporting research in that area.

POSSIBLE EFFECTS OF THALLIUM

Senator McGEE. If we encounter rain or snowfall after application of thallium, shortly thereafter, would there be danger that surface or underground sources of water might be contaminated, let's say, with a 40-pound application; would it be possible?

Mr. LAWRENCE. I would defer to one of our scientific specialists here.

Well, thallium is a heavy metal and I don't know its quality as far as reaching out is concerned.

Mr. REED. We would have to ask somebody, and I don't have anybody at this table with expertise in it.

Senator McGEE. We will raise it later with the witnesses we have coming up.

Mr. REED. It is a heavy metal, and it is an interesting question.

Senator McGEE. If you have some expertise on it, you might provide us with a bit for the record here, as well, if there is a measure in the runoff, what that estimate would be of how long it would prevail in the residual form of some sort.

Mr. REED. We probably would only be able to give you a calculation. It is not used in such quantities that would be readily detectable by standard text methods.

(The information follows:)

THALLIUM SULFATE
(Tl_2SO_4)

DESCRIPTION

Thallium sulfate is an odorless, tasteless, white, crystalline compound resembling common table salt in appearance. Its solubility in water increases with temperature (i.e., 4.9 grams in 100 milliliters of water at 20 degrees centigrade and 18.5 grams in 100 milliliters of water at 100 degrees centigrade).

MODE OF ACTION AND TOXICITY

Pathological effects include severe kidney damage, loss of hair, neurologic lesions, edema and congestion of the lungs, fatty degeneration of the heart and liver, and hemorrhage in the gastro-intestinal tract. Death results from respiratory paralysis, pneumonia, and circulatory disruption.

Acute symptoms often do not develop for several hours after exposure to a lethal dose. These symptoms include nausea and vomiting, loss of appetite, dryness of the mouth, soreness of gums, puffiness of the eyes and face, diarrhea, and abdominal pains. Prolonged symptoms may include insomnia, deafness, blindness, pains in the limbs, and muscle soreness. In a few days paralysis of one or more muscles may occur. Irreversible brain damage may result from exposure to sublethal quantities of this compound. Secondary poisoning hazard to birds and mammals has been demonstrated. The secondary poisoning LD_{50} for Swainson's Hawk was estimated at 113 mg/kg after feeding rodents killed with thallium sulfate to a young specimen.

Thallium sulfate is toxic generally to all forms of terrestrial vertebrates. It is dermally toxic; however, the most frequent source of exposure is by ingestion. Mammalian toxicity is similar to that of zinc phosphide; studies have demonstrated the LD_{50}* for rats, cows, sheep, hogs, and dogs to be in the range of 15 to 50 mg/kg.** Quail appear to be more susceptible with an

*LD_{50} - Computed estimate of toxicant necessary to kill 50% of the test species.

**Mg/kg - Milligrams toxicant per kilogram body weight.

LD_{50} in the range of about 10 to 20 mg/kg. A similar sensitivity of gallinaceous birds is found with zinc phosphide. Ducks, ravens, pigeons, and doves appear to be more resistant to the effects of thallium poisoning with LD_{50}'s ranging from 50 to 100 mg/kg.

The human LD_{50} for thallium sulfate is in the range of 15 to 25 mg/kg; about 1.2 grams will kill a 155-pound man. Human sensitivity to the toxic effects of thallium sulfate increases after age 10 to 12.

BUREAU USE

Rodent Control

Thallium was originally developed in 1920 by the Germans for use in rodent control, and was first tested by the Bureau of Biological Survey in 1924. During the late 1920's and early 1930's it was used in rodent control operations. In 1932, a Mexican laborer in California illegally obtained a 100-pound bag of thallium-treated barley and distributed its contents to several families. Products such as tortillas were made from the grain and fed to members of the families. As a result, six persons died from acute thallium poisoning.

At about the same time Dr. Jean M. Linsdale, writing in "Condor," posed some serious questions about accidental poisonings of birds and mammals in the California ground squirrel control program. Reports of dead animals were numerous and there was a great deal of controversy about use of thallium-treated grain.

Because of the human toxicity, cumulative characteristics, hazard to non-target wildlife species, persistence, and availability of acceptible substitutes, Bureau use of thallium as a rodenticide began to decline during the 1930's. The decline continued during the 1940's and 50's, and by the early 60's thallium was not being used at all.

Predator Control

In 1937, experiments with poison-impregnated bait stations were started

by the Control Methods Research Laboratory of the U.S. Biological Survey in Colorado, Nevada and Wyoming. Thallium was used in the early experiments, and in 1944 sodium monofluoroacetate (Compound 1080) was included. The bait station concept was determined to be an effective technique and was implemented operationally with both toxicants in 1946. By that time, sodium monofluoroacetate had demonstrated greater selectivity and less hazard to humans and non-target species, especially eagles; therefore, its use was preferred over thallium. Thallium sulfate stations were never employed on a large-scale; by the early 1960's, it had been completely phased out as a predator control tool. Use of thallium sulfate was always under close supervision. For example, Central Office authorization was necessary prior to purchase of thallium sulfate by the various States. See attached 1946 Policy Statement. Official discontinuation instructions were issued on May 25, 1967, but, the last known Bureau use in predator control occurred prior to 1965.

Bird Control

Bird damage control experimentation with thallium was primarily directed at reduction of starling and blackbird populations in feedlots. Studies were conducted only after a survey had been made to show that a majority of the affected birds roosted in an isolated area where contamination or secondary poisoning could be prevented. Very little operational work was done using this material and the Bureau never authorized full operational use, nor did the Bureau recommend Federal registration. In 1964, DRC-1339, or "Starlicide," was developed and thallium was eliminated as a bird control agent.

Methods of Bait Exposure

Thallium predator baits were prepared by dusting powdered chemical into slits cut about one inch apart over the surface of a freshly prepared horse, burro, or sheep at the rate of one ounce toxicant per 100 pounds of meat (0.063%). The chemical was then massaged into the incisions. Uneaten portions of treated bait were disposed of by deep burial.

Uses for rodent control normally utilized a grain bait treated at the rate of one ounce thallium to 65 pounds grain (0.095%).

Thallium-treated baits for bird control were formulated by mixing the toxicant with powdered sugar and uncooked french-fried potatoes or other fresh baits at a toxicant concentration of about 0.2 percent.

Termination of Bureau Use

Official and final termination of all Bureau uses and storage at field stations was ordered on May 25, 1967. The memorandum cancelling all Bureau uses of thallium also ordered all stocks to be returned to Pocatello Supply Depot, Idaho. Three formulations of thallium were recovered from the field stations: (1) a technical concentrate of thallium sulfate; (2) a rodenticide concentrate containing 7 parts thallium sulfate to 4 parts tartrate emetic; and (3) a thallium acetate concentrate. In some States, disposition of thallium products on hand (mostly grain baits) was made by the individual State governments since the product was their property.

The Bureau has not used this compound in any cooperative program since the May 25, 1967, cutoff date; the recalled thallium products are still in a secured storage area at Pocatello, Idaho.

COMMERCIAL USE OF THALLIUM SULFATE

In 1965, all Federal registrations were cancelled for thallium sulfate in channels of trade serving the household market. The toxicant continues to move legally in interstate commerce for use by Government agencies and professional pest control operators. It is important to point out that Federal registration pertains only to interstate shipment of toxicants; actual use is regulated by individual State legislation. In Wyoming, for example, thallium sulfate is legally registered by one company.

As near as can be determined, commercial use of thallium sulfate is not widespread; its principal use is in controlling rats and mice. Some of the technical material also is used for predator control. Former uses included pigeon and starling control, mole control, and as an ant and roach poison.

Seven companies in the United States have Federal registration to ship thallium sulfate in interstate commerce for rodenticide purposes. Of these, four provide the toxicant in a technical concentrate of 99.0% and 99.5% active ingredients. The other registrants sell a grain bait prepared with 1.0% to 1.5% thallium sulfate.

Commercial Uses of Thallium Compounds

Thallium (Pure)

Alloyed with mercury and used for switches and closures which operate at subzero temperatures.

Thallium Carbonate

Used in manufacturing imitation diamonds

Thallium Chloride

Used as catalyst in chlorination

Thallium Iodide

Formerly used to treat syphillis

Thallium Monofluoride

Used in preparation of flouro esters

Thallium Nitrate

Used as a reagent in analytical chemistry, especially for determination of iodine in presence of bromide and chlorine: Also used with potassium chlorate, mercurous chloride, and resin for green fire signaling at sea.

Thallium Oxide

Used in manufacturing glass for optical purposes and for artificial gems.

Thallium Sulfate

Used as a poison for pests such as rats, mice, and predatory animals and as a reagent in analytical chemistry.

ENVIRONMENTAL FATE

The persistent nature of thallium has led to instances of local soil sterilization in areas immediately surrounding permanent bait stations used in Hawaii for mongoose control. It was reported that no vegetation was found within several feet of some stations and plant growth did not appear for at least two years after the stations were removed. Apparently thallium is retained in the soil for a number of years. There is no evidence of chemical deterioration in the bait; thus, lethality would persist as long as the bait material is available in an edible form. The dermal toxicity hazard would remain even after the bait carrier was decomposed.

ALTERNATE TOXICANTS

Because of extreme acute and chronic toxic hazards, lack of an antidote, serious sublethal effects, and slight degree of selectivity, thallium sulfate has been replaced by other toxicants in the Bureau's animal damage control program. Alternates include sodium monofluoroacetate, strychnine alkaloid, zinc phosphide, and Starlicide.*

*Registered trademark

EAGLE POPULATION ESTIMATES

BALD

Lower 48 States	2,000-3,000
Southern Race	300+
Alaska	8,000 - 10,000
Wyoming	200 (winter)
Wyoming	90 (March 1971)
Natrona County	10 (March 1971)

GOLDEN

Lower 48 States	12,000-15,000
Wyoming	1,800 (March 1971)
Natrona County	95 (March 1971)

EAGLE - DISPOSITION

Patuxent Wildlife Research Center

Positive for thallium	17
Gunshot	1
Discarded (decomposed)	1
	19

Wyoming State Agriculture Department

Positive for thallium	4
Discarded in field (includes 15 power line)	16
Additional eagles reported	9
	48

Of 39 identified -

11 Bald
28 Golden

Possible Incidental Hazards of Thallium Poisons Used in the Field

1. Translocation in plants and possible effects on wildlife:

During the early 1930's, grain treated with 3-percent thallium sulfate was used extensively in western field rodent control programs. At that time, concern arose about the toxicity of this material to plants. Tests conducted by the California Department of Agriculture showed that grain treated with 3-percent thallium sulfate at a rate of 10 pounds per acre was not toxic to plants.

We know of no studies involving translocation of thallium in plants. However, thallium sulfate is moderately soluble in water, so translocation is a possibility. Accordingly, it is possible that some thallium salts might be present in plant materials eaten by wildlife. However, we know of no cases of thallium poisoning arising in this manner, and think the likelihood is slight because of the relatively small amounts of thallium used in animal control, and the highly localized distribution of thallium baits.

2. Possible Contamination of Water Supplies

Because of relatively small amounts of thallium sulfate used in animal damage control, its localized distribution, and its moderate solubility, we are doubtful that thallium sulfate used in predatory animal control poses a serious hazard to water supplies.

3. Secondary Poisoning of Mammals

Secondary poisoning of mammals with thallium sulfate has been demonstrated under laboratory conditions. In 1931, scientists of the United States Department of Agriculture showed that meat of chickens poisoned by thallium killed experimental rats. Conceivably, secondary poisoning of wild predators could occur if they ate the meat of rodents or other wildlife poisoned by thallium.

65-903 O - 71 - 5

Sage Hens and Ducks

Senator McGee. What about the sage hens? Would they eat the meat and contract thallium poisoning?

Mr. Reed. No; the sage hen is a vegetarian and is not going to bother the meat. If thallium residues were on the vegetation being eaten by sage hens, they could be affected.

Senator McGee. You said you found ducks in some experiment.

Mr. Reed. These were only experimental.

Senator McGee. Were ducks so affected?

Mr. Reed. Well, that was an experiment for us to determine toxicity.

Senator McGee. I see, so they wouldn't be subject to it?

Mr. Reed. Yes; if they had thallium, yes.

Evidence of Bait Consumption by Eagles

Mr. Lawrence. May I add a comment?

We examined these antelope very carefully, and they were partially consumed, and there was every evidence they had been fed on by eagles as compared with coyotes. The manner in which the meat had been removed from the bones and the appearances of the bones indicated that the meat had been shredded off from between the ribs; and we are confident that the eagles fed on them.

Chairman Ellender. I think it might be profitable to put in the record at this point the extent to which thallium is manufactured in that area, and the use of it by the people who sell it.

Mr. Reed. Mr. Ruckelshaus spoke to it this morning.

It is not produced in that area, and it is sold in very limited quantities in the area, and this we feel is exceptional usage.

Chairman Ellender. To what use is it to have a decision?

Mr. Reed. It is used most frequently as rodent control. And it is used also for a number of other things.

Chairman Ellender. You say it is not manufactured there?

Mr. Reed. No, sir; it came from the East. I stand corrected, it did come from the Colorado branch of the firm.

Senator McGee. Of American Smelting & Refinery Co.?

Mr. Reed. Yes.

Department Cooperation and Withholding of Information from Press Pending Developments

Senator McGee. The cooperation you have shown, we very deeply appreciate; and as to you alluding to the cooperation you have received likewise from ranchers out there, I want the record to show that very strongly.

We had great pressures on us to reveal for newspaper purposes who the purchasers were, and it seemed to me to be missing the whole point of it, that this was all legally done under the loopholes of the law that currently exists, and there would be too much of a tendency for someone to jump or to incriminate somebody by headlines rather than by a substantive case, and so I wanted to honor that likewise in this hearing, and we will let whatever evidence you have developed in regard to individuals remain in the province of appropriate authorities.

I just don't happen to think it is helpful, or certainly not wise, to start fishing for prosecution by names.

I have no more questions, and if you have no more, Senator Ellender, this has been very helpful and educational to me. We are going to stick to "1080," and do not, please, invent any new names in a scientific way. I am sorry now that I ducked chemistry when I was in high school, that was too tough, and I took biology so I cound understand these films, and now I need chemistry to understand the problems of predatory control.

SUBCOMMITTEE RECESS

We will resume these hearings at 3 o'clock this afternoon, at which time we will have a Government specialist with a collection of experts, Keith Becker, from Jackson, and two other witnesses.

With that, we will resume at 3 o'clock in this room.

Thank you very much.

(Whereupon, at 12:30 p.m. the subcommittee was recessed, to reconvene at 3 p.m.)

(AFTERNOON SESSION, 3 P.M., WEDNESDAY, JUNE 2, 1971)

U.S. DEPARTMENT OF AGRICULTURE

DEATHS OF EAGLES IN THE STATE OF WYOMING

STATEMENT OF FRANCIS J. MULHERN, ASSOCIATE ADMINISTRATOR, AGRICULTURAL RESEARCH SERVICE

ACCOMPANIED BY HAROLD CARTER, COUNSEL

WITNESS IDENTIFICATION

Senator McGEE. The subcommittee will be in order.

We shall continue the hearings on the moneys involved in the handling of predator control, particularly with toxic substances that have been complicating this problem.

Our witness this afternoon is Dr. Mulhern from the Agricultural Research Service. Perhaps you could identify yourself for the record by submitting your biographical sketch of some sort and who you may be leaning upon for counsel and advice.

Dr. MULHERN. I am Francis J. Mulhern, Associate Administrator for the Agricultural Research Service. I have with me Mr. Harold Carter from our Office of General Counsel.

HEARING PRIOR TESTIMONY

Before we discuss the $100,000 budget item, I would like to make some comments on the testimony this morning.

We agree that everything must be done to prevent eagles from being killed by man unnecessarily. We do not condone anyone who maliciously or deliberately kills eagles.

We also deplore the overdosage used, even if it was there to kill any predator, because it is misuse of pesticides. However, I think it is well to put into the record why sheepmen are concerned.

1968 LOSS OF SHEEP (84,700 BY PREDATORS) IN WYOMING

It is estimated that the sheepmen in the State of Wyoming in 1968, lost 373,000 sheep, of which 84,700 were by predators. We can't help but be sympathetic to these poor defenseless lambs that are torn apart by these predators, just as we have the same feelings for the harm done to the eagles.

ADMINISTRATION OF PESTICIDE ACT: 1965 BILL TO STRENGTHEN FEDERAL INSECTICIDE-FUNGICIDE, AND RODENTICIDE ACT

From our experience in trying to administer the Pesticide Act when it was under our supervision, we also underwent the frustrating

experiences of trying to zero in on the problem as Mr. Ruckelshaus presented this morning.

The question was asked about whether we ever tried to do anything to improve the authority. In August of 1965, S. 2470, the department's proposal, was introduced to strengthen the Federal Insecticide-Fungicide and Rodenticide Act. The Department submitted the same proposal to the Congress in June 1967.

We went through an evolution in administering this act. For several years say, since 1965, we relied very heavily on the instructions on the labels as a basis of assuring safety. We insisted that from the data that was presented at the time these pesticides were registered and if the instructions were followed, that no harm would come from the proper use of the pesticides.

We also were cautious about becoming involved in the areas of the use of pesticides within States feeling that it was a State responsibility.

I can say in this evolution there is an awakening nationwide in regard to pesticides, their use and control. We see this in working with the States. There is a completely different attitude in this area and States are moving in this direction to bring better control over the use.

As Mr. Ruckelshaus said, we have to do something to police the use of the pesticides if we are going to have them available to do the good to agriculture that they are capable of doing.

When we decided that use was the key to maintaining the use of pesticides and the successful benefits to be derived from them, we developed a new proposal for additional legislation in the 91st Congress. This proposal was not cleared by OMB since EPA was coming into being. We were advised that we would have the opportunity to have an input into their new proposed legislation which was introduced in the early part of this year.

We concur with everything that was said this morning that in order to do this job effectively you have to have more authority, you have to have money and people. It can't be done unless the agency that has the responsibility is given that type of resources to do the job.

COOPERATION WITH STATES ON PEST USE MANAGEMENT PROGRAMS: 36 AGREEMENTS

In the meantime, to continue with the evolution on control over use, we have been working with the States on pest use management programs. There are two pilot study areas this year. We hope to expand them next year. These studies basically call for specialists who monitor for pest populations and their significance before pesticides are used on them. Experience has shown that much less can be used and still get good production. In addition we have signed cooperative agreements with the States. These States have pesticide laws on their books about registration, have control over the pest control operators, are taking extra precautions on use of pesticides, particularly on toxic compounds, to see that they are handled differently from other general use pesticides.

We feel that the reactions by the States—there are 36 of them that have signed agreements with us in the use of these pesticides from

this standpoint—indicate the present attitude is to see that greater control over use is a reality.

All I am trying to say here is that there has been a turn-around in the use of these pesticides and in appreciating that they must be handled with a great deal of precaution.

1971 APPROPRIATION FOR ACCELERATED PREDATORY CONTROL RESEARCH: PLACEMENT IN RESERVE BY OFFICE OF MANAGEMENT AND BUDGET

In regards to the comment on the $100,000 in the 1971 appropriation, this was the $100,000 put in reserve by the Office of Management and Budget. So it was not used for research as was intended.

Senator McGee. Did the Bureau of Budget and Management explain what they were holding it in reserve for?

Dr. Mulhern. I have no information as to what was behind it other than I know it wasn't made available to us.

Senator McGee. Welcome to the club. We get the same answers.

Of course, something like this dramatizes short sightedness, when we have an incident such as we had out in Wyoming. But surely we are entitled to learn from it.

ABSENCE OF 1972 BUDGET REQUEST

Are there any moneys in the new budget that are aimed in this direction?

Dr. Mulhern. I am not aware that it is in the 1972 budget either.

Senator McGee. What would account for that?

Dr. Mulhern. The priorities that are established within our department.

Senator McGee. In preparation for the budget for 1972, are you telling me that the Department decided that this wasn't a priority item, or was this shot down from some other level?

Dr. Mulhern. I am sorry. I just don't know.

Senator McGee. It would be helpful for the record to find out whether the Department or the Division even requested it in the first place. You can't fault the Bureau of the Budget if you don't ask for it and attach some significance to it. We simply want the full record on that.

In many instances down at the Department we find there were requests made in urgent areas but you were still victimized by these deep freeze operators in the Bureau of the Budget.

If you could supply that for the record, it would be helpful.

(The information follows:)

History of 1972 Budget Request for Sheep Production Research

For fiscal year 1971, the Senate added $250,000 over the House Bill and Budget Estimate for "acceleration of most essential research on sheep production research by contract or grant." At that time, the Department's position on the possible use of the additional funds in its Conference Notes to the conferees considering the differences between the House and Senate Bills was that "the increase would provide for research under cooperative agreements with appropriate State Experiment Stations in the following areas: (1) $100,000 for research to improve reproductive efficiency of sheep; (2) $100,000 for research to improve feed efficiency for sheep production, and (3) $50,000 for research on methods to prevent poisoning of sheep from ingestion of poisonous range

plants." The Department did not interpret from the description of this item of increase as referred to on page 5 of the Senate Report (N. 91-987), that the Committee intended these funds to be used for predator research of sheep, nor did the Department propse that such funds would provide for research on control of dogs and other predators of sheep.

The conferees subsequently agreed that only $100,000 be appropriated for sheep production research. In view of the overall Federal financial outlay situation and since the $100,000 added in the 1971 Appropriation Act was not included in the 1971 Budget Estimates, this increase together with other nonbudgeted increases totaling $1,740,000 for other than staffing of newly completed research laboratories, was placed in budgetary reserve for 1971.

This item was considered in the formulation of the 1972 Budget Estimates along with other priority research projects. Because of the tight budgetary constraints, it was determined that the $100,000 would be proposed as a decrease item for fiscal year 1972. Funds estimated to be available to ARS for sheep production research related to the decrease proposed in the 1972 Budget Estimate amount to $1,310,900.

1965 BILL TO STRENGTHEN FEDERAL INSECTICIDE-RODENTICIDE ACT

Senator McGee. I want to go back to the proposal that you made in August of 1965 in which you recommended legislation to strengthen FIRA. What was the fate of that proposal?

Dr. Mulhern. There were two bills introduced, but there was no action taken on either of the bills.

Senator McGee. Was there any evidence of the Department lobbying the bills, pressuring them or pressing for their enactment?

Dr. Mulhern. I do know that the Department was in support of the bills.

Senator McGee. What about August of 1967? You have a new Congress. August of 1969? There were no follow-up efforts to close this gap?

Dr. Mulhern. I am sorry I have no record of one in August of 1967.

Senator McGee. I use August arbitrarily because that is when it began in 1965. Any month, any time in 1967 or 1969?

Dr. Mulhern. None, other than our proposal for the 91st Congress which was not cleared by OMB.

BANNING IN HOMES OF THALLIUM BY DEPARTMENT: REGISTERED ONLY FOR USE AS MICE CONTROL

Senator McGee. As I understand it, the Department did ban the use of thallium under its own agency as early as 1965. Is that correct?

Dr. Mulhern. We banned the use in the homes. Since 1965 it was only permitted in homes in an extreme emergency. Then it could only be used by Government agencies.

Senator McGee. You mean houses where people live?

Dr. Mulhern. Yes; because at that time the chief complaint was that the children were being exposed to it when used as a rodent control, which was the only use that it is registered for in homes.

Senator McGee. Even now?

Dr. Mulhern. Yes; it can only be used for mice control in homes during an emergency and when applied by Government agencies.

So the testimony earlier today about ranchers not reading the label before use would not give people dosage for predator control because there was nothing on the label for using this as predator control.

Senator McGee. A coyote would be kind of a maxi mouse in terms of your definition there. (Laughter.)

This is part of the serious area of it. The Department apparently was cognizant of its dangers. Yet, there seemed to have been a laxity between the public recognition of this by the Department, as far back as 1965, and its residence in limbo since then.

FAILURE TO RESTRICT ADEQUATELY OTHER USES: RELIANCE ON ADHERENCE TO LABEL DIRECTIONS

The fact that you did have some consciousness about restraining its use in the home. I would have thought required follow-up in terms of the rest of its implications, because surely its heavy dosages were also warnings where your research people were very cognizant.

Dr. MULHERN. We were relying on the statement that I made earlier and that was we went through this period of insisting that the label was the key to the solution to misuse and we expected the people that were using the pesticides to be responsible and only use according to the directions on the label. The label at this particular time states that it can only be used for manufacturing use, or if it was going to be used in the home, it could only be used by State, Federal or local government agencies.

POISONING OF EAGLES: FIRST KNOWLEDGE OF MISUSE

This we were relying on. As far as we know, this unfortunate situation that happened to the eagles is the first that has come to our attention on the misuse of this product as a pesticide on predator control.

Senator MCGEE. That, of course, may have been just our good luck. We had a group that located them that was sophisticated enough to recognize what was at stake in it. We may have other cases of this around that people just accept as the will of God or the fate of Mother Nature or whatever you call it.

But some of our people in Wyoming there spotted it for what it was. This shook up the bureaucrats here in Washington.

RESPONSIBILITY LAPSE IN CIRCUMSTANCE OF NONCONTROL AUTHORITY

That is the reason that it seems to me that you have an embarrassing gap there from 1965 to the present, particularly in the light of Mr. Ruckelshaus' testimony this morning that they obviously had no power to enforce it, no mechanism for following through on what you recognized was a very dangerous substance and without a recommendation that this be closed, that gap, or these holes be plugged suggests to me that there is some element of complicity on the part of the Department in terms of responsibility that this could come to pass at all.

CONTROL OF OTHER TOXIC PESTICIDES: IDENTIFICATION OF CATEGORIES AND PENDING LEGISLATION

That is why I am wondering that, if in light of this—we all have greater hindsight—this would suggest to the Agricultural Research Service that there are other lines that might well be pursued now in terms of verifying the consequences of other toxic substances that we ought to know about before something happens.

The next time it may be something even more sensitive or serious than eagles.

Dr. MULHERN. This is what I had reference to in pest use management. We plan to identify categories of pesticides so that they are handled differently and that there will be greater control over the use of the more toxic pesticides.

This also is in line with the proposed EPA legislation that recognizes the need to group pesticides into restricted and general use categories. There is presently a working group that has been assigned to this problem by EPA to develop a list of restricted use pesticides or guidelines for setting categories that would place those highly toxic pesticides in a category where they could only be used by qualified personnel.

THALLIUM SUBSTITUTES FOR PREDATOR CONTROL

Senator McGEE. You are satisfied that in the realm of predator control that there are other reasonable options, let's say thallium or even 1080 cyanide.

Dr. MULHERN. From what we know about 1080, apparently, if used according to directions, is a very good alternate.

Senator McGEE. Can you say the same for thallium?

Dr. MULHERN. It is obvious that we can't. We don't have it registered for that purpose.

Senator McGEE. In other words, thallium would be a different category in the sense that even if you administered the dosages to an animal carcass by prescription, that if the meat were tackled by an eagle, let's say, that there would be serious consequences, perhaps over a long period of time, as one of the witnesses testified this morning?

Dr. MULHERN. It is my understanding that its toxicity is due to its cumulative effect by repeated eating of baits containing thallium that causes the harm to the eagles, while with 1080, if used as directed, eagles just don't eat that much bait to hurt them. If they come back to eat more bait the 1080 eaten previously would have been eliminated.

Senator McGEE. They have one taste——

Dr. MULHERN. They don't eat that much at one feeding. Therefore, it is less toxic.

What the evidence may show in the future may be different. But presently we are in the same situation of trying to gather data just as the Interior Department to evaluate whether or not we do have any harm from these predator control pesticides when used according to directions.

RESEARCH FUNDING ADEQUACY PRIORITIES

Senator McGEE. Are you in a position to say whether you are equipped sufficiently with materials and funds to press this without delays, the intensifying of your research efforts in this regard, to learn more than we obviously now know so we can find better answers to these questions?

Dr. MULHERN. I don't think there is any doubt that in a situation like this we have to be responsive. We have to be responsive to this by giving greater emphasis to the problem in setting research priorities.

1968 WYOMING SHEEP DEATHS

Senator McGee. In 1968, you used that year as an illustration, you mentioned there were 373,000 sheep in Wyoming that died for one reason or another, 84,700 by predators. What would have been the predators?

Dr. Mulhern. Our source states coyotes, fox, bear, bobcat, dogs, and eagles.

Senator McGee. Does your agency have any way of verifying this figure?

Dr. Mulhern. I got these from our animal health division. I am sure they would have; yes.

Senator McGee. How would they arrive at a figure like that?

Dr. Mulhern. I am not aware. I don't know whether they got it from Interior or not.

ALLEGED PREDATORY ACTIVITY OF EAGLES: VERIFICATION REQUISITE

Senator McGee. We will follow through on that. I think it might tell us some very interesting things about how you determined the predators.

But we need to know a great deal more about claims of predatory activity, because we can verify instances of dogs as predators, in some instances packs of dogs and coyotes, fox perhaps, in the case of lambs, at least.

We had testimony from the Environmental Agency this morning, suggesting that there is grave doubt that eagles were often involved in this, except for possibly a few derelicts; not packs of eagles feeding or engaged in aggressiveness on the golden eagle, as alluded to.

Does your research reveal anything in regard to the predatory habits of eagles?

Dr. Mulhern. All I can say is we usually yield to the expertise in the Department of Interior when it comes to predators or wildlife. From our relationships with the industry, we hear just as was reported today two sides of it, one that insists that they do, and others that they don't.

The reaction that I had to the testimony this morning by Interior was that they would probably admit in some cases that it does occur. They are questioning how often, or how serious or how do they compare with the different types of predators.

Senator McGee. But the Ruckelshaus agents testified that they knew of no such cases and you think it was verifiable. If anything, it was verifiable to the opposite? In other words, I am not willing to accept as even-Stephen two claims in an attempt to offset these things any more than I am willing to accept the figure of sheep killed by predators, until we see a breakdown. I don't know how they do it. In other words, I am not saying this has been fabricated. I only say I want to know how. Do you find a dead lamb and then conclude that a predator took the lamb? Are there other accidents that animals have, as we know they have all over the West that might be blamed on predators?

I think we ought to be entitled to a refinement of what the real predatory losses are. I think that we have taken them in confidence as a substantial factor.

Now I think we are going to be back up against the wall. I am very uncomfortable with my answers even though I have pursued this in the past very vigorously simply because we have gleaned a modicum of information.

IRRESPONSIBLE BAITING BY AND FEAR OF POSSIBLE REMOVAL OF ALL PESTICIDES OF SHEEPMEN

Dr. MULHERN. My point in mentioning the information that we had received is that it seemed to us that agricultural interest in dealing with the predator problem of this size, as reported to us, needs to be brought into the perspective because the image I was getting was that the sheepmen didn't care too much whether eagles or anything else was harmed by the baits.

For some reason the sheepmen were putting these baits out to destroy predators. Based on the testimony, the first thing that comes to one's mind is how responsible are they? If they are living with this type of a problem, you can see their anxiety if, as was reported here today, they were living under the fear that all of this type of pesticide was going to be taken away from them.

RESPONSIBILITY OF PREDATOR GROUPS

Senator McGEE. Did they give you a breakdown of the relative responsibility of the various predatory groups?

Dr. MULHERN. No; I don't have it.

Senator McGEE. I think that would make a difference, too, suppose you have coyotes that would kill 80,000 sheep and you have five or six other predators altogether that would kill 2,000 or 3,000 sheep. That is a misrepresentation of the problem. Therefore, we need it in perspective if we can get that.

Would you know of anywhere where this might have been broken down?

Dr. MULHERN. No; but I will go to the source that gave me this information and whatever is available we will provide it for the record.

(The information follows:)

SHEEP LOSSES IN WYOMING (1970 SHEEP AND LAMB LOSSES)

[Wyoming—Cooperative Crop and Livestock Reporting Service]

The following is the most recent information on sheep and lamb losses in Wyoming:

Wyoming sheep growers lost 372,000 sheep and lambs during 1970, according to the Wyoming and United States Departments of Agriculture. This is 10 percent less than the 415,000 lost during 1969. Sheep losses were 16 percent below the 1969 level and lamb losses were down 5 percent. Most of the decline is accounted for by more favorable weather and not from changes in inventory. The January 1, 1970 inventory of sheep and lambs was estimated at 1,853,000 head, less than 1 percent below the 1,860,000 on hand January 1, 1969. The number of lambs born during 1970 was 4 percent below the number born during 1969. The decline in total loss combined with lower prices for lambs dropped the estimated value of the 1970 sheep and lamb loss to $5,574,900. This is 10 percent below the value of the 1969 losses.

Cause of Loss: During 1970 predators claimed 130,200 head, 35 percent of the total loss. The remaining 241,800 head or 65 percent were lost to all other causes. Comparable losses during 1969 show 29 percent of the total loss due to predators and 71 percent due to other causes.

Predator Losses: Coyotes were the major cause of loss among all predators. The number of head lost to coyotes during 1970 was 18 percent above 1969. Coyotes

accounted for 73 percent of total predatory losses in 1970 compared to 68 percent in 1969. Losses due to bobcats, dogs, bears, eagles, and other predators were in about the same proportion to total losses as during 1969.

LOSSES OF SHEEP BY CAUSE—WYOMING, 1969 AND 1970 [1]

Cause of loss	Number				Value	
	1969		1970			
	Head	Percent of total	Head	Percent of total	1969, dollars	1970, dollars
Coyotes	21,000	10.5	22,400	13.4	$191,100	$206,100
Bobcats	200	.1	700	.4	1,800	6,400
Dogs	5,200	2.6	3,800	2.3	47,300	35,000
Bears	6,200	3.1	3,000	1.8	56,400	27,600
Eagles			200	.1		1,800
Other predators	400	.2	500	.3	3,700	4,600
Total predators	33,000	16.5	30,600	18.3	300,300	281,500
Unknown causes	25,400	12.7	32,200	19.3	231,100	296,200
All other causes	141,600	70.8	104,200	62.4	1,288,600	958,700
Total loss from all causes	200,000	100.0	167,000	100.0	1,820,000	1,536,400

[1] 1969 revised.

LOSSES OF LAMBS BY CAUSE—WYOMING 1969 AND 1970 [1 2]

Cause of loss	Number				Value	
	1969		1970			
	Head	Percent of total	Head	Percent of total	1969 dollars	1970 dollars
Coyotes	59,600	27.7	72,600	35.4	$1,203,900	$1,430,200
Bobcats	6,900	3.2	7,100	3.5	139,400	139,900
Dogs	2,600	1.2	2,300	1.1	52,500	45,300
Bears	3,400	1.6	2,700	1.3	68,700	53,200
Eagles	6,700	3.1	8,400	4.1	135,400	165,500
Other predators	7,100	3.3	6,500	3.2	143,400	128,000
Total predators	86,300	40.1	99,600	48.6	1,743,300	1,962,100
Unknown causes	32,000	14.9	31,200	15.2	646,400	614,600
All other causes	96,700	45.0	74,200	36.2	1,953,300	1,461,800
Total loss from all causes	215,000	100.0	205,000	100.0	4,343,000	4,038,500

[1] Includes all lamb loss from birth. USDA estimate includes only losses of lambs after docking.
[2] 1969 revised.

LOSSES OF SHEEP AND LAMBS BY CAUSE—WYOMING, 1969 AND 1970 [1 2 3]

Cause of loss	Number				Value	
	1969		1970			
	Head	Percent of total	Head	Percent of total	1969, dollars	1970, dollars
Coyotes	80,600	19.4	95,000	25.5	$1,395,000	$1,636,300
Bobcats	7,100	1.7	7,800	2.1	141,200	146,300
Dogs	7,800	1.9	6,100	1.6	99,800	80,300
Bears	9,600	2.3	5,700	1.5	125,100	80,800
Eagles	6,700	1.6	8,600	2.3	135,400	167,300
Other predators	7,500	1.9	7,000	1.9	147,100	132,600
Total predators	119,300	28.8	130,200	34.9	2,043,600	2,243,600
Unknown causes	57,400	13.8	63,400	17.1	877,500	910,800
All other causes	238,300	57.4	178,400	48.0	3,241,900	2,420,500
Total loss from all causes	415,000	100.0	372,000	100.0	6,163,000	5,574,900

[1] Includes al lamb loss from birth. USDA estimate includes only losses of lambs after docking.
[2] 1969 revised.
[3] Sheep and lamb per head value based on the annual hundredweight prices received by farmers and ranchers. Sheep per head value used for 1969—$9.10; 1970—$9.20. Lamb per head value used 1969—$20.20; 1970—$19.70.

LOSSES OF SHEEP AND LAMBS—PERCENT OF CAUSE BY CROP REPORTING DISTRICT, WYOMING 1970

[In percent]

Cause	Crop reporting district					
	Northwest	Northeast	West	South central	Southeast	State
Coyote	17	16	43	36	17	25.5
Bobcat	1	2	1	2	4	2.1
Dogs	2	2	1	2	2	1.6
Bears	1	1	5	2	(1)	1.5
Eagles	(1)	3	3	3	2	2.3
Other predators	1	2	(1)	1	4	1.9
Total predators	22	26	53	46	29	34.9
Unknown causes	26	19	17	14	13	17.1
All other causes	52	55	30	40	58	48.0
Total loss from all causes	100	100	100	100	100	100.0

[1] Less than 0.5 percent of total.

LOSSES OF SHEEP AND LAMBS—PERCENT BY CROP REPORTING DISTRICT, BY CAUSE, WYOMING 1970

[In percent]

Cause	Crop reporting district					
	Northwest	Northeast	West	South central	Southeast	State
Coyote	11	14	16	46	13	100
Bobcat	5	27	5	28	35	100
Dogs	20	26	5	31	18	100
Bears	9	11	29	50	1	100
Eagles	3	34	10	36	17	100
Other predators	8	29	(1)	22	41	100
Total predators	11	17	14	43	15	100
Unknown causes	25	25	9	26	15	100
All other causes	28	26	6	27	23	100
Total loss from all causes	17	23	9	32	19	100

[1] Less than 0.5 percent of total.

Information Necessary to Proper Action

Senator McGee. Would you determine from what they might tell you if it is possible to refine it a bit? It would be helpful. I am anxious that we not go off halfcocked because of our concern about this problem.

I want to know on what basis we should move in a given direction as we try to bring about, as we mentioned this morning here, a balance of the situation, so that we can exert the maximum of restraints in this, with a minimum of detrimental fallout consequences to other factors in the environment.

We are trying to find that balance as best we can. We cannot do it with in-house or loose estimates appearing on income tax records.

I guess it would be reasonable to say that one is always certain that income tax records might be the valid way to measure a number of things. We have to take for our own any benefit of the doubt. But we do need to know in what proportion this matter of predator retardiness really is in existence and is being practiced at the present time.

Dr. Mulhern. We are in full agreement with that position, Mr. Chairman.

REGULATION RESPECTING USE OF THALLIUM: CANCELLATION OF REGISTRATION FOR HOME USE, EXCEPT BY GOVERNMENT PERSONNEL

Senator McGEE. The 1964 ruling by the Department which canceled the registration for home use of thallium "except by qualified personnel from Federal, State, and local governments." I believe that is the way the regulation reads.

What use would Federal personnel have for thallium?

Dr. MULHERN. There was concern expressed when cancellation of its use was under review that it wouldn't be available as a rodent control if for some reason we had a case of bubonic plague. That was given as an example. If it was to be available, what types of control around the homes would we insist upon when it was applied? It wasn't considered to be in frequent use. It was only to be used if there was an emergency and applied only under Government control.

1965 BILL TO STRENGTHEN FEDERAL INSECTICIDE-RODENTICIDE ACT: SUPPORTING DEPARTMENTAL REPORTS

Senator McGEE. Would it be possible for you to make available for the record, any departmental reports which might have been submitted on the 1965 bills and even copies of the bills themselves?

Dr. MULHERN. We would be glad to supply that.

(The information follows:)

FEDERAL PESTICIDE CONTROL ACT OF 1965

Mr. RIBICOFF. Mr. President, I introduce for appropriate reference, the Federal Pesticide Control Act of 1965. I ask unanimous consent that the bill be printed in the RECORD at the end of my remarks.

On August 13 Secretary of Agriculture Freeman transmitted to the Vice President this bill in draft form. I ask unanimous consent that Secretary Freeman's letter be included in the RECORD at the end of my remarks. The action of the Secretary fulfills President Johnson's pledge of last February 8 when he told Congress in a message on natural beauty that—

The Secretary of Agriculture will soon submit legislation to tighten control over the manufacture and use of agricultural chemicals, including licensing and factory inspection of manufacturers, clearly placing the burden of proof of safety on the proponent of the chemical rather than on the Government.

I am pleased and gratified to be introducing the administration's pesticide control bill. The chairman of the Committee on Agriculture [Mr. ELLENDER] has graciously made these arrangements and I appreciate all he has done.

The administration's bill, Mr. President, has had an interesting history. Some view its origin in Rachel Carson's book "Silent Spring." But, basically, the need for this legislation began the day thousands of years ago when man first turned to poisons to rid his environment of insects and pests. We have come a long way since Xerxes' troops rubbed their bodies with the petals of daisies to keep the insects from interfering with their fighting ability.

Those same daisies today are ground into a fine liquid which is placed in a pressurized can containing an inert base such as water and sold to millions of housewives. We have come a long way from the days that paris green was spilled on the land out of a hole in a pail carried by a farmer. Today thousands upon thousands of acres of farm and forest land can be sprayed with poisons far more deadly than paris green in a matter of hours from the air or mechanized ground equipment.

It is time pesticide law was brought up to date and to face the realities of the situation.

Mr. President, during the 88th Congress the Subcommittee on Reorganization and International Organizations held hearings devoted to the problems of chemical poisons.

During those hearings, we uncovered a serious gap in Federal law wherein a manufacturer could market a pesticide "under protest registration" even if the Department of Agriculture disapproved the product. This gap was closed when the President signed Public Law 88-305 on May 12, 1964, removing the protest registration provision of the Federal Insecticide, Fungicide, and Rodenticide Act.

The bill I am introducing today is a stronger version of S. 2792 which I introduced last year and will give the Secretary of Agriculture more adequate controls to effectively administer that act. These amendments provide for establishment registration, factory inspection, quality controls, civil penalties, and injunctive authority. The need for this legislation became apparent through our 2 years of hearings on the subject and I am pleased the administration has come to grips with this problem. The provision for establishment registration will furnish the Department of Agriculture with the locations of all plants engaged in the manufacture or processing of economic poisons. It will further provide for the suspension of such registration by the Secretary if he finds that the manufacturer or processor is not conducting operations in accordance with good manufacturing practice or is disposing waste in a manner which would result in any pollution that would endanger the public health or welfare.

Authority for factory inspection would make it possible for the Department of Agriculture to inspect the entire manufacturing or processing operation to ascertain whether the proper materials are being used in formulating the various products, whether every precaution is being taken to prevent contamination, and whether adequate controls are being utilized in the manufacturing or processing operation.

The act now provides for criminal sanctions for violations. It also provides that the Secretary is not required to report for prosecution minor violations of the act "whenever he believes that the public interest will be adequately served by a suitable written notice of warning." There are violations of sufficient importance to warrant some action other than the notice of warning, but not of such nature as to warrant criminal prosecution. These could be handled under the provision for civil penalties.

The provision for injunctive authority would make it possible for the Department to more effectively carry out its responsibility to prevent the movement in interstate or foreign commerce of economic poisonse and devices that are not in compliance with the act.

The act presently prohibits interstate movement of products for which the claims made or directions for use differ in substance from the representations made in connection with registration or composition of which differs from the composition represented in connection with registration. However, the act provides no authority for seizures thereof. Not only is there a possibility of the consumer getting an ineffective product, but there is also the possibility that changed directions for use may result in a health hazard.

I would like to point out, Mr. President, that the pesticide industry, especially in the past year, has been paying particular attention to the safe manufacture and use of their products. I ask unanimous consent to insert in the RECORD at the end of my remarks an article from the August 6, 1965, Wall Street Journal entitled "Safer Pesticides: Producers Work To Cut Contamination of Crops, Soil, Water." I do not intend, by introducing this bill, to detract from the private, voluntary efforts of the pesticide industry to give the public as safe a product as possible. I applaud them and encourage them to continue their work along these lines.

But private action—either real or promised—is no substitute for public policy—especially in the field of consumer protection. By introducing this bill—and eventually enacting it—we establish a public policy with regard to pesticides as we already have with regard to drugs. There is no question but that people need protection before they come in contact with the product—not compensation after they suffer injury. That is the key to this bill—public preventive protection—which supplements and works with private efforts to regulate voluntarily.

The VICE PRESIDENT. The bill will be received and appropriately referred; and, without objection, the bill, letter, and article will be printed in the RECORD.

The bill (S. 2470) to amend the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, to provide for more effective regulation under such act, and for other purposes, introduced by Mr. RIBICOFF (for himself, Mr. NELSON, and Mr. DODD), was received, read twice by its title, referred to the Committee on Agriculture and Forestry, and ordered to be printed in the RECORD, as follows:

S. 2470

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. This act may be cited as the "Federal Pesticide Control Act of 1965".

SEC. 2. (a) Section 4 of the Federal Insecticide, Fungicide, and Rodenticide Act (61 Stat. 167; 7 U.S.C. 135b) is hereby amended by adding at the end thereof a new subsection as follows:

"g. Any person who on the date of enactment of this subsection owns or operates any establishment in any State, Territory, or the District of Columbia, engaged in the manufacture, preparation, propagation, compounding, or processing of an economic poison shall, within one hundred eighty days after such date, apply to the Secretary for the registration of each such establishment giving his name and the address of each such establishment operated by him. Any person who begins operation of any such establishment after such date shall, within thirty days after beginning such operation, similarly apply for registration with the Secretary. Except as otherwise provided in this section, the Secretary shall register any such establishment if the operator thereof furnishes the required information. In any case in which the Secretary finds, after notice and opportunity for hearing, that any methods used in, or any facilities or controls used for, the manufacture, preparing, propagating, compounding, or processing of any economic poison, or the disposal of waste resulting therefrom, are in violation of regulations of the Secretary, or otherwise do not conform to, or are not operated or administered in conformity with, good manufacturing and waste disposal practices to assure that such economic poison will meet the requirements of this Act as to safety and will have the identity and strength and meet the quality and purity characteristics which it purports or is represented to possess and to assure that the disposal of waste will not result in any pollution which would endanger the public health or welfare, he may suspend the registration of such establishment until the operator demonstrates compliance with the requirements of this paragraph. No establishment for which a registration has been suspended shall be re-registered during the period of suspension."

(b) Section 2 of said Act (61 Stat. 163; 7 U.S.C. 135) is amended by changing the period at the end of subsection z to a semicolon and adding the word "or" and a new paragraph as follows:

"(i) if it was manufactured, prepared, propagated, compounded, or processed in an establishment for which a registration was not fully effective under section 4g of this Act."

SEC. 3. (a) Section 6a of said Act (61 Stat. 168; 7 U.S.C. 134d) is amended by inserting after the first sentence therein the following: "For purposes of enforcing the provisions of this Act; officers or employees duly designated by the Secretary, upon presenting appropriate credentials and a written notice to the owner, operator, or agent in charge, are authorized (1) to enter, at reasonable times, any factory, warehouse, or other establishment in which any economic poison or device is manufactured, prepared, propagated, compounded, processed, or held for distribution or sale in any Territory or in the District of Columbia or in interstate or foreign commerce, or is held after such distribution or sale, or to enter any means of conveyance being used to transport or hold any economic poison or device in any Territory or the District of Columbia or in interstate or foreign commerce; (2) to inspect, at reasonable times and within reasonable limits and in a reasonable manner, such factory, warehouse, establishment, or means of conveyance and all pertinent data and equipment, finished and unfinished materials containers and labeling therein, and all things therein (including records, files, papers, processes, controls, and facilities) bearing on whether any economic poison is adulterated or misbranded within the meaning of this Act, or which may otherwise bear on whether such Act is being or has been violated; and (3) to obtain samples of such materials or containers thereof, or of such labeling. A separate notice shall be given for each such inspection, but a notice shall not be required for each entry made during the period covered by the inspection. Each such inspection shall be commenced and completed with reasonable promptness. If the officer or employee obtains any samples, prior to leaving the premises, he shall give to the owner, operator, or agent in charge a receipt describing the samples obtained. If an analysis is made of any such sample, a copy of the results of such analysis shall be furnished promptly to the owner, operator, or agent in charge."

65-903 O—71——6

(b) Section 3 of said Act (61 Stat. 166; 7 U.S.C. 135a) is amended by inserting before the semicolon at the end of subsection c(2) a comma and the following: "or to refuse to permit entry or inspection as authorized by section 6 of this Act".

SEC. 4. Subsection y of section 2 of said Act (61 Stat. 163; 7 U.S.C. 135y) is amended by inserting before the period at the end thereof a comma and the following: "or if the methods used in, or the facilities or controls used for, the manufacture, preparation, propagation, compounding, or processing of said economic poison were in violation of regulations of the Secretary or otherwise did not conform to or were not operated or administered in conformity with good manufacturing practice to assure that such economic poison will meet the requirements of this Act as to safety and will have the identity and strength and meet the quality and purity characteristics, which it purports or is represented to possess."

SEC. 5. (a) Section 2 of said Act (61 Stat. 163; 7 U.S.C. 135) is further amended by adding a new subsection (aa) as follows:

"(aa) The terms 'proper court' and 'district court' mean a United States District Court, the District Court of Guam, the District Court of the Virgin Islands, and the highest court of American Samoa."

(b) Section 6 of said Act (61 Stat. 163; 7 U.S.C. 135d) is further amended by redesignating subsection d and e as subsections e and f, respectively, and by adding after subsection c a new subsection d as follows:

"d. The district courts are vested with jurisdiction specifically to enforce, and to prevent and restrain violations of, this Act."

(c) Section 8 of said Act (61 Stat. 170; 7 U.S.C. 135f) is amended by redesignating subsections c and d as subsections d and e, respectively, and by adding after subsection b a new subsection c as follows:

"c. Any person who violates any provision of this Act shall forfeit to the United States a sum, not more than $1,000, for each such violation, which forfeiture shall be recoverable in a civil suit brought in the name of the United States."

SEC. 6. Section 9a(1) of said Act (61 Stat. 170; 7 U.S.C. 135g) is amended by (1) striking out "or" after the semicolon in clauses (c) and (d), and (2) by adding after clause (d) two new clauses as follows:

"(e) if any of the claims made for it or any of the directions for use differ in substance from the representations made in connection with its registration; or

"(f) if its composition differs from the composition as represented in connection with its registration; or".

SEC. 7. Section 2 of said Act (61 Stat. 163; 7 U.S.C. 135) is further amended by inserting before the semicolon at the end of subsection z(2)(c) a comma and the following: "including the protection of living men and other vertebrate animals, vegetation, and useful invertebrate animals".

SEC. 8. Subsection (a): The Secretary and the Secretary of Health, Education, and Welfare shall provide for appropriate coordination of the administration of this Act with the administration of any other Act administered by the Secretary of Health, Education, and Welfare relating to control, prevention, or abatement of air or water pollution.

Subsection (b): Nothing in this Act shall be construed as superseding or limiting the functions of the Secretary of Health, Education, and Welfare under any other law relating to control prevention, or abatement of air or water pollution and no proceeding or determination under this Act shall preclude any proceeding or be considered determinative of any Act administered by the Secretary of Health, Education, and Welfare.

The letter and article presented by Mr. RIBICOFF are as follows:

DEPARTMENT OF AGRICULTURE,
Washington, D.C., August 13, 1965.

Hon. HUBERT H. HUMPHREY,
President of the Senate.

DEAR MR. PRESIDENT: There is transmitted herewith, for the consideration of the Congress, a draft bill entitled "to amend the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, to provide for more effective regulation under such act, and for other purposes."

The bill would (1) require that every person who owns or operates any establishment in any State, territory, or the District of Columbia, engaged in the manufacture, preparation, propagation, compounding, or processing of an economic poison register with the Secretary of Agriculture his name and places of

business and all such establishments; (2) permit inspection of (a) establishments in which economic poisons or devices are manufactured, processed, packed, or held for distribution or sale in any territory or the District of Columbia or in interstate or foreign commerce, or held after such distribution or sale, and (b) any means of conveyance being used to transport or hold any economic poison or device in any territory or the District of Columbia or in interstate or foreign commerce; (3) provide that an economic poison shall be deemed misbranded if it is manufactured, prepared, propagated, compounded, or processed in an establishment not duly registered; (4) provide that an economic poison is adulterated if the methods, controls, or facilities used for manufacturing, processing, packaging, or holding such economic poison are not in conformity with good manufacturing practice; (5) empower Federal courts to issue injunctions to enforce, and restrain violation of, the act; (6) amend the present penalty provisions by adding civil remedies.

The provisions for establishment registration, factory inspection, quality controls, civil penalties, and injunctive authority would considerably facilitate this Department's efforts by adding more effective tools for the administration of the act.

The provision for establishment registration will furnish this Department with the locations of all plants engaged in the manufacture or processing of economic poisons. It will further provide for the suspension of such registration by the Secretary if he finds that the manufacturer or processor is not conducting operations in accordance with good manufacturing practice or is disposing waste in a manner which would result in any pollution that would endanger the public health or welfare.

Authority for factory inspection would make it possible for the Department to inspect the entire manufacturing or processing operation to ascertain whether the proper materials are being used in formulating the various products, whether every precaution is being taken to prevent contamination, and whether adequate controls are being utilized in the manufacturing or processing operation.

The act now provides for criminal sanctions for violations. It also provides that the Secretary is not required to report for prosecution minor violations of the act "whenever he believes that the public interest will be adequately served by a suitable written notice of warning." There are violations of sufficient importance to warrant some action other than the notice of warning, but not of such nature as to warrant criminal prosecution. These could be handled under the provision for civil penalties.

The provision for injunctive authority would make it possible for this Department to more effectively carry out its responsibility to prevent the movement in interstate or foreign commerce of economic poisons and devices that are not in compliance with the act.

The act presently prohibits interstate movement of products for which the claims made or directions for use differ in substance from the representations made in connection with registration or the composition of which differs from the composition represented in connection with registration. However, the act provides no authority for seizures thereof. Not only is there a possibility of the consumer getting an ineffective product, but there is also the possibility that changed directions for use may result in a health hazard. This Department believes that the additional seizure authority would provide more effective control in the administration of the act.

Enactment of the proposed legislation would necessitate additional appropriations of funds in the amount of $300,000.

A similar letter is being sent to the President of the Senate.

The Bureau of the Budget advises that this submission is in accordance with the President's program.

Sincerely yours,

ORVILLE L. FREEMAN,
Secretary.

SEARCH FOR SUBSTITUTES AFTER BANNING OF DANGEROUS INSECTICIDE

Senator McGEE. Senator Ellender?

Chairman ELLENDER. Thank you, Mr. Chairman.

If a pesticide or insecticide is declared to be unusable because it is dangerous to use, to what extent do you search for substitutes in order to do the work after banning the insecticide or pesticide?

Dr. MULHERN. We are doing more research to find alternate approaches to control pests than anyone else. Over $21 million is being spent by ARS on research to develop nonchemical means of pest control. We have had some dramatic breakthrough, as you appreciate, with the screw-worm program down in the Southeast. We would like to take this opportunity to say that these breakthroughs on other uses have been dramatic, but few.

We don't want to be carried away with the thought that we have a lot of other methods readily available. We have a lot of research underway. We are optimistic that we are going to have breakthroughs. But we don't expect them to come overnight.

The other point is that for the past 10 years, the majority of the research on chemicals that is being done was done by the chemical industry primarily. We have concentrated our efforts on the nonchemical and less persistent chemical approaches.

The chemical industries now are pulling out of chemical pesticide research. A certain amount of our research money has been directed toward the development of highly selective chemicals. But generally, we moved most of our research over into the biological areas, relying on the chemical companies to do their own research on chemicals.

We have to reevaluate that now because the companies have drawn out of this area of research.

Chairman ELLENDER. Why have they?

Dr. MULHERN. Because it is a very risky business. They don't know when they produce a product how long they are going to have to recoup their money that they invest in the research. This has come from the present situation in which there are demands to ban pesticides prematurely. In the past, when they produced data and an agency was willing to accept that data, then unless there was new data to substantially show that the original data was not still valid, they could expect to have ample time to continue to sell the product and gain from their investment.

In this phase that we are in now, wherever there is a situation in which there is harm reported there is an immediate clamor to ban.

Also, the image of harm being caused by pesticides is bad from a public relations standpoint. So the corporations are withdrawing from that area rather than expose themselves to adverse publicity.

Chairman ELLENDER. That is what concerns many of us. I recall that the chief target was DDT. As I recall, an effort was made by the Department to point out that, by the use of maybe 10 percent of what was formerly used to kill bugs, you could still use DDT without too much danger.

Are you familiar with that?

Mr. MULHERN. Yes.

Chairman ELLENDER. Are you able to pursue that as to other pesticides and insecticides?

As I said this morning, I fear that we may go too far in one direction and maybe not be permitted to use any kind of insecticides because of the complaints of people involved in the ecology problem.

As I have stated to the Secretary himself when this EPA was organized, I was hopeful that the Department of Agriculture would have a say on the board that was created.

It strikes me that no pesticide should be discouraged unless you have something to substitute.

Mr. MULHERN. I have to agree with you, sir.

Chairman ELLENDER. I am glad you do. That is the thing I have been talking about all along.

DIRECTION OF EFFORTS TO REPLACEMENTS FOR PERSISTENT PESTICIDES

To what extent are you directing your efforts in getting substitutes for pesticides which are dangerous to birdlife, fishlife, or other wildlife?

Mr. MULHERN. All pesticides that are called hard pesticides or the persistent pesticides, we know are not going to be available too much longer and our efforts are being directed at replacements for them.

We have in many cases substitutes but not as effective, or if they are nearly as effective, more expensive so it prohibits their use.

We propose that they will be phased out, and our efforts are to get substitutes for them just as quickly as we can.

IMPORTANCE OF FOOD SUPPLY VIS-A-VIS WILDLIFE

Chairman ELLENDER. I have been advocating that none of these pesticides should be discarded unless and until you get a stubstitute.

Mr. MULHERN. Unless they have been shown to be harmful.

Chairman ELLENDER. Not only harmful, but if you have to choose between the saving of a few birds and fish and food to feed the people of the country, it wouldn't be an easy choice for me.

It strikes me that before any of these pesticides or insecticides are discarded that we should have a substitute for it. In other words, it is very important that we maintain our food supply.

DDT

Mr. MULHERN. I think your point on DDT is very valid, because what we are facing is a decision from the hearings in regards to the use of DDT in that there are certain species of birds that are threatened with the use compared with the adverse effect on 450,000 families that are making their living growing cotton. The alternates immediately available to growers are more expensive and not as effective pesticides.

I am not speaking about the large producers. I am talking about the people who depend solely on cotton for their livelihood. This is what we have to weigh relative to cost benefits of replacing that particular pesticide.

PENDING BOARD HEARING

Chairman ELLENDER. What has been your experience recently with regard to discarding the use of DDT?

Mr. MULHERN. Presently, there is a hearing pending in regard to DDT. Everything is focusing on this as to what the outcome may be.

Chairman ELLENDER. In the meantime, are you attempting to find substitutes for DDT?

Mr. MULHERN. Yes; we have recognized that the time will come when we can no longer use it. Yes, sir; we are trying to find substitutes.

Also, the EPA has proposed cancellation of all uses of DDT. We understand, or interpret that action as an administrative review. They state that their action is to see that all of the information available comes before them before they make a decision to continue the registration of some uses or not.

We will be presenting our evaluation of the situation before a public hearing that they are calling regarding cancellation of all uses of DDT.

Chairman ELLENDER. Do you know to what extent this board has taken into consideration and acted favorably on your recomemndation; that is, that of the Department of Agriculture?

Did they listen to you?

I was told they would.

Mr. MULHERN. I feel that we certainly have presented our side of it to them. I guess we are going to have to wait and see what the final decisions are.

Senator MCGEE. What about Mr. Ruckelshaus' suggestion this morning? They are moving already, aren't they, on new legislation? You seem to have had an input.

Mr. MULHERN. From that particular standpoint, yes.

Senator MCGEE. So at least they listened to you there?

Mr. MULHERN. I should say this. Our communications with EPA are very good, as far as exchange of information and inputs into areas of mutual interest. The effect of that communication, as to what decisions will be reached on proposed cancellation actions, we still have to wait and see.

Chairman ELLENDER. Mr. Chairman, I have nothing further to say, except that I am very hopeful that the Department works hand in hand with this agency to the end that we don't run out of food.

Mr. MULHERN. We intend to do everything we can to present Agriculture's side of the story to the new agency.

Senator MCGEE. Thank you.

You mentioned you don't have any alternatives in the predatory control area, yet. In other words, people talk loosely as if they had all kinds of alternatives.

DEPARTMENT NONCONDONATION OF THALLIUM FOR PREDATOR CONTROL

Would you keep thallium in a little longer?

Mr. MULHERN. Thallium is not registered for use in predator control.

Senator MCGEE. I have news for you. It is used for predator control.

Mr. MULHERN. It is not registered for that use.

Senator MCGEE. That becomes a matter of semantics. It is used for that.

Mr. MULHERN. Yes; but we would not condone the use.

Senator MCGEE. You simply rule it out as anything that ought to be used at any time for predator control?

Mr. MULHERN. That is right, with the exception that it is registered for mice control under the State and Federal Government control.

Senator McGee. I can't imagine how you could break it down into a small enough dose to affect a mouse, without obliterating him from the face of the earth.

LABEL

Mr. Mulhern. There is a copy of this label, if you want that for the record.

Senator McGee. We would like to have that for the record.

Those are all of the questions I have at this time.

If you will supply these other things for the record, we may have to pick your brains again, as we sort through them.

Thank you very much.

STATEMENTS OF:

KEITH BECKER, EXECUTIVE DIRECTOR, WYOMING OUTDOOR COORDINATING COUNCIL

MRS. BARBARA DOBAS, MURIE AUDUBON SOCIETY, CASPER, WYO.

ALEXANDER SPRUNT IV, DIRECTOR, RESEARCH DEPARTMENT OF THE NATIONAL AUDUBON SOCIETY

EUGENE KNODER, NATIONAL AUDUBON SOCIETY

PRESENTATION FORMAT

Senator McGee. We now have several people who will be, I think, serving as a resource group, however they prefer.

Mr. Keith Becker, from Wyoming, who is the newly selected executive director of the Wyoming Outdoor Coordinating Council, Mrs. Barbara Dobas, Casper, and two representatives of the National Audubon Society, Alexander Sprunt and Eugene Knoder.

Mr. Becker. Mr. Chairman, this is rather an impromptu resource group that we have up here. We do have individual statements, I believe, and a good share of background material and we hope we can answer any questions.

I would like to express my sincere appreciation to you, Mr. Chairman, and to the distinguished members of the committee for this opportunity.

We will try and proceed to give you some of the prepared material that we have in the hopes that it will give you a handle on some of the information that you gentlemen would like to have and possibly we can go into some of this resource material with you or provide it for your later convenience and use.

ASSISTANCE AND COLLECTION OF FACTS BY CASPER AUDUBON SOCIETY

Senator McGee. I want to mention for the record at this point that through your efforts, your group, through the members of the Audubon Society in Casper, it was possible to come to grips with this in an enlightened way very quickly. There were all kinds of wild stories around and fragments of whispers.

But it was through the initiatives of the people in Casper that were concerned about this that could raise it to the level of trying to constructively solve the problem.

Mr. Becker. Thank you, Mr. Chairman. That is most charitable.

STATEMENT OF MRS. DOBAS, CASPER-MURIE AUDUBON SOCIETY REPRESENTATIVE, TO PROVIDE INFORMATION OF INCIDENT INVESTIGATION

At this time, I would like to give the microphone to Mrs. Dobas, who represents the Murie chapter of the Audubon Society in Casper and who has been at the very root of the investigation, research, and fact-gathering which has preceded this hearing. I think she has some very good points.

Senator McGee. She is the prettiest eagle we have had here. [Laughter.]

Mrs. Dobas. Thank you, Senator.

Our appreciation for your foresight in calling this sort of hearing and permitting us to come. We are well aware of the positions you have taken on clearcutting and conservation issues that are extremely important to many of us.

I am a member of the Casper Murie Audubon Society. As such, I have been chosen as a spokesman to give you whatever firsthand information you might desire from our investigation into the finding of the eagles and the subsequent events that have led to our being here today.

PREPARED STATEMENT

I have submitted a written statement to you. I will not read that.

Senator McGee. It will be made a part of the record as though delivered in full.

(The statement follows:)

This is a statement of the Murie Audubon Society of Casper, Wyoming, concerning the continued use of Thallium compounds and other matters before the Senate Sub-Committee on Agriculture Appropriations at a hearing being held on June 2, 1971.

Our group is most gratified that this Committee has convened a hearing to study the ramifications surrounding the tragedy of 48 eagles found dead in Wyoming during May.

A number of individual members of this Society have been intimately involved in the discovery and ensuing investigation of the aforementioned eagle deaths and have seen first-hand the grisly effects of Thallium poisoning.

1. We believe that the dead eagles found and the dead eagles not found represent a national disgrace. Their loss constitutes an irreparable damage to our heritage and way of life.

2. It now appears that most of the eagles fell victim to reckless use of one of the most lethal wildlife poisons known to man, Thallium sulfate, and a policy of widespread poisoning throughout the environment.

3. Thallium sulfate is a non-specific, highly stable and persistent, cumulative toxin that not only has killed countless eagles but also indeterminate numbers of other wildlife.

4. Under existing statutory and regulatory directives, it is impossible to determine the number or identity of persons employing poisons, the concentration in which it is distributed, the localities of its placement, the duration of exposure to wildlife or the total effect upon, not only predators, but all forms of animal life, including man.

5. We are unaware of any authoritative study which indicates the interaction of Thallium sulfate with the plethora of other toxic agents in widespread use, and it is logical to believe that such interaction does exist to the detriment of all mankind.

6. The slow, convulsive, agonizing manner of death suffered as a result of consuming Thallium poison is repugnant to all accepted humanitarian ideals.

7. The situation described above epitomizes the lack of control and dereliction of our public responsibility characterized by various poisoning programs of all kinds in this nation—including Wyoming.

Accordingly, it is our fervent recommendation that the Congress of the United States enact appropriate legislation to ban the manufacture, sale, pur-

chase, use and possession of all Thallium compounds by all agencies of the government, or private persons for pesticides or animal control.

It is further recommended that any and all predator control programs should be under the strict control and direction of the U.S. Bureau of Sport Fisheries and Wildlife and that only those programs that are species-specific should be permitted.

We have further resolved that all predator poison control programs are not economically warranted for the nation as a whole.

Respectfully submitted.

MURIE AUDUBON SOCIETY,
By OLIVER K. SCOTT, *President*.

Mrs. DOBAS. I have also some photographs here which I would like to submit for the record.

Senator McGEE. May we keep those here?

Mrs. DOBAS. Yes, you may.

MAP OF WYOMING

Also, I would like to display a map, if I might, and speak from that for a minute. These men have volunteered to be map holders.

This is a map of the State of Wyoming. The total area, as Senator McGee well knows, is about 98,000 square miles. We have designated on here the locations of all of the eagles found dead, from electrocution, from shooting, and from thallium poisoning.

We have other areas of rumored eagle finds. I will touch on that very briefly. As you can see, this is a widespread situation. The hazard to the eagle is obvious. The hazard to the public should be some matter of concern, also.

PUBLIC LAND: SOARING OF BALD EAGLE WILD AND FREE

Over 50 percent of the land in Wyoming is public land. There are national parks, recreational areas, and this is also one of the few places where the national emblem, the bald eagle, can be seen soaring wild and free in a natural setting.

This, as I will repeat, is a matter that concerns all of us who are citizens of the United States and particularly we who are citizens of the State of Wyoming.

For background, I would like to talk for a moment about the golden eagle population in the State and then briefly about the bald eagle.

WYOMING GOLDEN EAGLE

We have estimated 100 nesting pairs of golden eagles. These are mature birds and they are a fairly stable population in the State of Wyoming. They nest in March and the young are born sometimes in April, and usually leave the nest in July.

The immature bird, not the juvenile birds, but the immature birds will go up to age 3 years are the birds that tend to migrate in and out of the State. These birds are known to travel a flyway.

This is the area marked in yellow.

These are the currents, the thermals, the west winds, as they hit these ridges, loft the birds, and they travel throughout the State along this know recorded flyway.

We have kept statistics over the years of the patterns of the birds.

There probably is another flyway. We are still trying to put this information together, but in all probability there is a flyway that goes through the extreme western part of the State.

The immature birds migrate from probably the Canadian Rockies and British Columbia as far south as Texas.

They travel the north-south ridges. They start coming south in November and travel approximately through January. The birds travel through—these are, once again, the immature goldens—fairly rapidly.

When they begin moving north in the spring, it is a more gradual movement. This occurs in about mid-February.

FINDING OF DEAD EAGLES

As you can see, the flyaway extends down the Big Horn Mountain to the pine mountain near Powder River and it narrows at Immigrant Gap. The eagle concentration in the Casper area, which we have been talking about today, Jackson Canyon, is in the narrowing of this flyaway, the neck at Immigrant Gap.

Senator McGee. Is that where those red dots are?

Mrs. Dobas. That is right. These are the poisoned birds from Jackson Canyon and from Little Red Creek Canyon. These are two birds we are still waiting for autopsy reports on.

I offer this thought for you, that the birds were here through January and February. They were in the narrowest known part of the flyaway. They were found dead here.

Senator McGee. That is, you are saying they had been dead since January?

Mrs. Dobas. No; we would speculate that the birds probably died in late February or March, but their known flight pattern would put them in this area at this time.

Senator McGee. Might these have come from as far away as Canada and Alaska?

Mrs. Dobas. Yes; these birds have probably come from British Columbia, the Canadian Rockies.

Senator McGee. That must say something about their winters up there when they come south to Wyoming where it is warmer.

Mrs. Dobas. Some of them keep going. [Laughter.]

The birds then travel on down along the ridges. It compares somewhat with the flyaway of Hawk Ridge in Pennsylvania, if you might be more familiar with that area.

BALD EAGLES

The bald eagle in Wyoming is known to nest in the Yellowstone Park area. This is along the Snake River, Shoshone Lake, Yellowstone Lake. They are also observed in every county of Wyoming.

Some very interesting figures are beginning to be compiled on the levels of concentration of bald eagles in Wyoming. But the greatest concentrations now appear to be in Sublette, Teton, and Uinta counties.

Senator McGee. In the western bank of the State.

Mrs. Dobas. That is correct.

They are known to also have been sighted along the Platte River, along the Green River, particularly the Upper Green River, which is a known area for these birds, a few on the Big Horn and a few on the Tongue River. We have no winter population figures for the bald eagle. We do know that the peak population occurs from January to March, the same period of time we are talking about in which the birds were probably killed.

Nesting Pairs

We estimate that there are 20 nesting pairs of balds in the State. Bald eagles are mated for life, and they tend, if one partner dies, to continue the nesting pattern and rearing of the young year after year—the other one. So there are some fairly well established nests in the area, also.

Senator McGee. Not unlike the Canadian Geese in that respect. I think they have that type of life, even when they fly to Mexico.

Migration Range and Wintering Population

Mrs. Dobas. The migratory range of the bald eagle is slightly greater than that for the goldens. They move more rapidly.

As I understand it, Senator, I don't have complete data on this, but some protection is provided the eagle in Canada by the Canadian Government.

The bald eagle in Casper, this unique group of eagles that we are talking about that we did find, are along the Upper Platte River. They do not nest here. This is a known roosting area in the winter. We have about 50 wintering birds.

Senator McGee. You saw that estimate this morning that there may be 10 left in the Natrona County area, the Casper area?

Mrs. Dobas. We have had a report of one sighting of a bald eagle since then, but it is difficult to say.

The birds, naturally, leave the first 2 weeks in March.

It is conceivable that what we have taken for granted in Jackson Canyon, the wintering of the bald eagle, may never occur again.

Senator McGee. The bald eagles I saw up in the Snake River this last weekend, two of them. I am not sure whether they are going or coming. They are probably going, are they not?

Mrs. Dobas. These birds roost near open water. They are primarily fish eaters. This year, during the census taking of the eagle, we had the largest concentration of eagles in the area.

The bald eagles also have come probably from Canada, likewise Montana, British Columbia, Yellowstone, and Grand Tetons.

Greater Endangerment in Wyoming: Percentage of Immature Birds

We speculate that the bald eagle and the golden eagle are endangered more so in Wyoming than in the Nation as a whole. The national figures say that you should have a percentage of 22 percent immature birds to have a stable——

Senator McGee. Twenty-two percent of what?

Mrs. DOBAS. Twenty-two percent of immature birds and 78 percent mature birds, to have a stable population, to even maintain it. This is the national level, as you know.

The species is designated as endangered. This is a low level.

Senator MCGEE. In other words, to hold their own against the elements and power lines and this sort of thing, it would require that percentage?

Mrs. DOBAS. The mortality rate in Wyoming, we are estimating that we have only 14 percent immature birds and 86 matured.

CASUAL WASTINGS BY SHOOTING, ELECTROCUTION, AND POISONING

Senator MCGEE. What accounts for that?

Mrs. DOBAS. I think that is perhaps a destruction that has gone on for a long time that we have known. There are other casual wastings by shooting, by electrocuting, and by poisoning of the eagles.

DEATHS RESULTING FROM DDT

The national bird's chief cause of death, of course, is DDT. The second greatest hazard is electrocution.

Senator MCGEE. We don't have DDT casualties out in our area?

Mrs. DOBAS. We don't know. When the tests have been completed we will know more about it. But we are assuming that the hazard of DDT would be less likely in the area.

MORTALITY DATA

We do have mortality figures from 1966 that reflect that poisoning is not new.

EAGLE LONGEVITY

Senator MCGEE. What would be the longevity of an eagle's life?

Mrs. DOBAS. As much as 30 years.

KNOWN DEAD BIRDS

We have 48 dead birds known. There is evidence to suggest that there are more.

Senator MCGEE. There might be more? It is sort of like Yuba, Calif., isn't it?

Mrs. DOBAS. It is a pretty devastating body count that we get every day. The poison cited south of Rock Springs along Trout Creek would suggest that we don't know enough about that area. The people went out in Sublette County, which is known to have the highest concentration of eagles, to search; but they were rained out over the weekend.

Senator MCGEE. With our vast areas out there, it is very conceivable that another Jackson Canyon may be discovered.

Mrs. DOBAS. As the weather gets warmer, it is unlikely. If we don't get it done soon, we won't find the evidence that we need; but certainly there is that possibility.

REPORTED SHOOTING OF EAGLES

In the press there was also earlier stated the shooting of eagles, 25 eagles shot from an airplane, in Carbon County.

Senator MCGEE. That was discredited, wasn't it?

Mrs. DOBAS. As far as I know, it was not.

Senator MCGEE. I heard that was a statement made in a bar and that those who were there were satisfied that this figure flowed from a bottle rather than from substance; that there was one bird that they could verify that had been shot.

But the birds turning out—I think they sought more jackals, probably, than eagles.

Mrs. DOBAS. I hope you are right.

Senator MCGEE. I hope so, too. If we can avoid finding any more evidence, we are ahead of the game.

Mrs. DOBAS. Charles Lawrence of the Bureau of Fisheries and Wildlife says it looks highly probable that these birds were shot. I will leave that for the moment and go to the specifics.

Senator MCGEE. But that says something else, too. The witness that we just had said that no one deliberately kills eagles, in his general statement. No one deliberately kills eagles. Do you agree with that?

Mrs. DOBAS. No, sir.

Senator MCGEE. Do you, Keith?

Mr. BECKER. No, sir.

SALE OF EAGLE FEATHERS

Senator MCGEE. It is hearsay, but I know that one of the gimmicks going out West is to con tourists to come West to buy eagle feathers. It is a big racket. Therefore, if you don't run around the desert looking for dead eagles, and thus steal their feathers and sell them to the unsuspecting tourists, you are going to have to get them some other way.

I don't know how many feathers they shed in the course of a season, but I would think this would be a very limited source. I have had described for me in two counties deliberate night missions, hunting eagles with spotlights, in order to supply feathers.

Have you people out there run across anything like that? Maybe it is another bar story. This came, not from a bar source, however.

Mrs. DOBAS. I haven't heard the story. But I have been told there is a $500 fine, if you are thinking of doing it.

Senator MCGEE. You can't commit the act. That is a Federal regulation.

Mrs. DOBAS. The Department of Interior has control over all eagle feathers. We have a file of requests from American Indians asking for eagle feathers as a result of this. They have been referred to the Department of the Interior. They are having a little trouble deciding which group is pseudo Indian and which is real.

CAUSES OF EAGLE DEATHS

For the record, I would like to read this information.

We have 48 dead eagles. We do know that. Fifteen of these birds were electrocuted near Worland, Wyo.; one was electrocuted near Cheyenne, Wyo.; we have four birds that are on autopsy; three of these reportedly came from the office of the Cheyenne Bureau of Sports Fisheries and Wildlife, says they are too decomposed to continue.

Senator MCGEE. That would suggest that they were dead perhaps last fall.

Mrs. DOBAS. It is beginning to warm up, too. It has been a month since we really started looking for them.

THALLIUM POISONING

We have 21 birds dead of thallium poisoning in the Casper area. This is Little Red Creek. Madison Canyon, we have one. And Jackson Canyon, 15.

There are two known birds dead of thallium poisoning on Trout Creek, south and west of Rock Springs, Wyo.

SHOOTING

We have five birds that were shot, one on the Vollan Ranch near Glenrock, Wyo., three near Carpenter, and one at Seminoe, which is north of Sinclair.

BALD EAGLES

Of these eagles, 11 in the Cheyenne area and one in the Casper area and one in the Cheyenne area are bald eagles. We have 12 bald eagles that are dead.

BAIT STATION FINDINGS: SKUNKS AND POODLE DOG

I think it is very significant to point out at this time that none of these birds has died of natural cause. In our findings, we also discovered no coyotes, no foxes. We investigated a Government bait station. This was inadvertently left posted apparently beyond the length of time which the signs should have been removed. In the bait station, there were still the sheep carcasses. These had not been poisoned themselves. The bait station had had perishable strychnin broadcast around it. We also found two dead skunks. The skunks were rather gratefully handed over to the Wyoming game and fish people.

Senator MCGEE. No quarrel over jurisdiction there. [Laughter.]

Mrs. DOBAS. We also have good reason to believe that we have one dead poodle.

I would like to say that the rattlesnakes in Wyoming are alive and well. They used to be the providence of the eagles, I think.

USE OF BROAD CLASSIFICATION OF PESTICIDES IN POISIONING PROGRAM

Within the poisoning program, as we understand it, and as we look into the matter in Wyoming, the things that are being used are the broad classification of pesticides, the subcategory is rodenticides. Some of these things have been mentioned today.

1080 COMPOUND

The use of 1080, this is the 1080 compound, which is the principal thing used by the U.S. Bureau of Sport Fisheries and Wildlife.

Senator MCGEE. Do you agree with the suggestion made here that if it is used by prescription, it doesn't have the fallout consequences for eagles?

Mrs. DOBAS. I am not sure, Senator. I would like to see some more information on this. When we went out with Mr. Reynolds of the Casper bureau, I was a little disturbed when he said that its bait

poisoned with 1080 there were no maggots. There is, for some reason, an absence of insect life in the decomposing process.

I think that for what we do know about 1080 it is highly suggested that there is a great deal we do not know.

Senator McGee. Starting with how to pronounce it. [Laughter.]

Mrs. Dobas. But we do know it is highly stable and that it will cause secondary poisoning. The same is true with the perishable strychnine, which is another thing used.

Cyanide Guns

Senator McGee. What about cyanide?

Mrs. Dobas. Cyanide guns are used. They have refined them a little bit. It is called an M–44 spring loader. But you would know more about that than I would.

Senator McGee. I have shot very little cyanide.

Mrs. Dobas. It has something to do with shooting.

Strychnine

The bait station we did investigate with the perishable strychnine was put for foxes. It was not established for coyotes. As I said, this is where we found the skunks. It was not established for skunks.

Thallium

The properties of thallium have been rather well documented. One thing is certain, that it is stable in tissue and that it regularly allows secondary poisoning. I understand later today we determined that it is soluble in water.

It is nonspecific, as is 1080.

There are 10 different rodenticides which contain thallium. I don't have the brand names of these. Your committee may have that information.

Senator McGee. We don't have the brand names yet. I think we are getting them. We have the company names, the manufacturers of various brands.

Mrs. Dobas. Evidently the person who put out the thallium poisoning was unaware of a couple of things. One, of course, was the dosage, as everything indicates that unless this was some sort of wanton act, that he simply didn't know how much was lethal. The other things he didn't know was that there are permanent 1080 stations in that area.

So what we don't know is how much and what kind of poisons there are scattered in our county or throughout our State. We don't know where they are.

Senator McGee. In other words, there could be some other poison stations that simply haven't had an instance yet or the incident hasn't been discovered.

Mrs. Dobas. This individual or party put out thallium poison in an area where the Government trapper has established permanent 1080 stations.

Senator McGee. What you are saying is if we at least had this identified in advance in any case, if you are going to do it under professional supervision, that you could avoid the mistake of amateur doses that might be scattered around?

Mrs. DOBAS. There is a certain frightening aspect to this sort of casual approach to destruction.

BANNING BY WYOMING AGRICULTURAL COMMISSION OF USE PENDING INVESTIGATION

Yesterday, the Wyoming Agricultural Commission met at Big Piney and they have banned the use of thallium for 6 months pending investigation.

I would like to point out without cynicism intended, but thallium is used in the wintertime. Six months, I think, is bringing us right into the beginning of the snowfalls.

Senator MCGEE. Is it conceivable that 6 months, even though it is only lipservice in a way, dramatizes the problem so that at the end of 6 months the ban might be made permanent?

Mrs. DOBAS. I would hope so. I would hope that the awareness that your committee might bring upon these people would put a permanent ban on this sort of thing.

LETHAL DOSE

Mr. Lawrence this morning—who incidentally has been extremely candid, open and helpful to us—went into the amounts of thallium used in the incident. I don't believe that that is necessary for the record.

He did talk about the total of 65 pounds of thallium being purchased since January of 1970.

Senator MCGEE. By several sources.

Mrs. DOBAS. Yes. And that a lethal dose would be 1 ounce per hundred pounds.

Senator MCGEE. That would be 1 ounce or less per antelope carcass. Certainly it would be 1 ounce or less for an ordinary lamb carcass.

Mrs. DOBAS. Yes. But just per hundred pounds of meat.

Senator MCGEE. We are talking about a very small quantity.

Mrs. DOBAS. This is true. Four pounds used on the antelope tested out at 50 parts per million in the tissue. So it was beyond any kind of recognized measurement for proper usage.

If the 65 pounds of thallium were to be used to poison meat, it should poison 52 tons of meat, or 140,000 pounds. Think how much we could do with that, if they had used it properly.

Senator MCGEE. I am ready to pour it all down the drain.

Mrs. DOBAS. I don't think that is where you want to put it.

Senator MCGEE. That is right. We don't want to say that any more. [Laughter.]

LOCATION OF BAITS: PUBLIC AND PRIVATE LAND

Mrs. DOBAS. The three baits that were found were on public and privately owned land. So we have an interest in this.

OTHER POISONS

I would also request that your committee examine other alternative poisons that have been used by individuals in Wyoming. They are aldrin, indrin and parathyon, all of which are very, very toxic.

WYOMING GAME AND FISH STATUTORY PREDATOR LIST

I would also like to point out that the predator list and the use of the word "predator" is, I find, becoming rather obnoxious. The predator list in the State of Wyoming starts off with the English sparrow for birds and it includes everything, including the stray cat for predaceous animals. The U.S. Bureau of Sport Fisheries and Wildlife does not make up a so-called predator list, but on our list within the State, we include the golden eagle and the brown eagle.

Senator McGee. That is on whose list in the State, when you say "our list"?

Mrs. Dobas. It is in the statutes of the Wyoming game and fish laws. There is a listing of those creatures that are considered predators. It turns out that it is everything that is not a game animal or bird.

RECODIFYING OF LAWS

Senator McGee. Does that go back a long way, do you know? That sounds like something before William McKinley.

Mrs. Dobas. We are now having the game and fish laws recodified, but it is still on the books.

Senator McGee. That mix is an ironic contradiction. Here you have the eagle on the endangered species list, federally protected, and you still find language on the books at the State level classifying them as predators. Would you agree our consciousness of the importance of the preserving the eagle has far outrun the literal statute? We have a lot of curious laws on the State books still, accumulations from the dim, dark past. Nobody enforces them any more. They are still on the books. I would like to be charitable on that for the moment.

Mrs. Dobas. Part of the reason for this designation is the lack of staff, personnel, to manage every creature. Game and Fish protects what they are hired to protect and manage. That is the game animals. I suppose they could not conceivably ever have the personnel to be investigating every jack rabbit that was run over on the highway.

So the list is quite voluminous of those things that are classified as predators.

Senator McGee. You think Mother Nature indicates everything is predatory more or less, except the very tiniest of insects. I guess they would be a predator. As General Sherman once said, "If all of the bedbugs in my bed acted in unison, they would throw me out on the floor."

BROWN EAGLES

Mrs. Dobas. One further comment on the classification called brown eagle. We don't know what that is. But a brown eagle can certainly be the immature eagle of either the bald or gold eagle species.

MULTIPLICITY OF PREDATOR CONTROLLERS

There is obviously lack of accountability in the sort of program we have going in our State and in many other Western States, I am told. But when we have private people administering predator control, we

65-903 O—71——7

have—and by "control" I think that means pretty much killing—then we have county people, we have Federal people. It is very difficult to finally say that one of these agencies or individuals is responsible for it.

We mentioned this morning that Secretary Hickle had initiated the protection of the golden eagle and the bald eagle and Assistant Secretary Reed assured us that he would continue this.

APPLICATIONS OF WYOMING GOVERNOR FOR BLANKET PERMIT FOR KILLING OF EAGLES

I would remind the Senator that Governor Hathaway has repeatedly petitioned for the blanket killing of eagles in Wyoming.

Senator McGEE. For the blanket killing of eagles?

Mrs. DOBAS. Yes, sir.

Senator McGEE. I would think we ought to have something substantive on that. That is a pretty blanket statement, too.

Mrs. DOBAS. Yes, sir.

Senator McGEE. The Governor has instructed, at least now, the agricultural service of the State to ban thallium, for example, to prohibit its use.

INTRODUCTION BY GOVERNOR OF STATE PESTICIDE BILL

It was my understanding that the Governor likewise introduced in the last legislature specific legislation on this which the legislature, the House, the lower House, refused to enact into law. But the Governor had introduced it. I think to keep the whole picture in balance, I should say that.

Again, I can't vouch for all of the details.

Mrs. DOBAS. As we read the bill, we would assure that under the present circumstances, that had the pesticide bill been passed by the Wyoming Legislature, it would not have affected this situation.

Senator McGEE. We found that to be true in the Department of Agriculture, also. I would think we are all learning a little bit from this. So I would predict and certainly hope that we are going to have some very strong legislation with teeth in it in this round.

FINDING AND REPORTING OF DEAD EAGLES BY TWO HIGH SCHOOL SENIORS

Mrs. DOBAS. For the record, I would also like to say that the eagles were discovered on May 1 by Gordon Krause and Bruce Wampler, two 18-year-old high school seniors from Casper, Wyo. They reported this event to the game and fish department and to the landowner and to the Audubon Society, through my husband Dobas, and Dr. Oliver K. Scott. We, in turn, were fortunate to have Bob Turner, the regional director of the Audubon Society with us, because of the environmental congress that was being held at that time.

We accompanied the boys the following day to Jackson Canyon and examined the birds that the boys had sited, and we picked up additional birds.

AUTOPSIES AND FINDING OF THALLIUM

We removed them from Jackson Canyon and immediately got in touch with Charles Callison, president of Audubon. This being a Sunday, Mr. Callison waited until Monday morning and went to Secre-

tary Reed's office and reported the event. From this happening, the birds were then forwarded to Patuxent, to Dr. Lock and to Gene Knoder, of the Audubon Society, where they were autopsied. It was concluded that all of the birds had a lethal dose of thallium. The minimum that I had received from Mr. Lawrence was 11 parts per million. This morning you indicated 14 parts per million, Senator. The maximum was 152 parts per million.

Persons Administering Thallium

From this, there are a couple of assumptions that we can make. One is that although the person who put the thallium in the antelope certainly knew what he was doing as far as butchering that antelope and exposing the viscera might be concerned. He certainly didn't know that this was a nonspecific poison and he didn't know dosage.

Senator McGee. He was in greater danger himself than he apparently realized.

Mrs. Dobas. The individual may or may not have know that it can be carried in the winter months. We also can conclude that circumstances permitted the discovery of these eagles, such as the cold weather preserving them, the attention these young men had to the find, the awareness that they had.

Senator McGee. The decomposed birds might be difficult to verify in some cases, I suppose.

Position of Murie Audubon Society

Mrs. Dobas. The significance of the eagle killings appears to the Murie Audubon Society to be that the eagles are merely an indicator of the widespread threat to overall quality of animal life in Wyoming and that thallium sulphate is only one of many nonspecific poisons available to reckless users.

Use of Poisoning in Predator Control

Poisoning as a control technique, however, appears to have at least two serious shortcomings as now practiced in Wyoming.

One is that coyotes, the principal target species, is very frequently not the species killed as a result of it. Whether by design or by accident, poison is frequently dispersed in alarming concentrations.

The species affected by this poisoning, I think, have an international range in implication.

Possible Casualties of Other Categories

Senator McGee. Does the society have any evidence out in Wyoming of specifics, of the casualties in other categories, the sage hens, doves, whatever?

Mrs. Dobas. It is ironic that all of the many, many hours we have spent combing the canyons in the area, we did not find, with the exception of a couple of magpies, anything else.

Senator McGee. How about small animals? Of course, many of them would not try meat anyway. No others. That seems rather unusual, doesn't it?

Mrs. DOBAS. It may speak very well for the predator control program.

Senator MCGEE. When properly handled, you mean, it does not——

Mrs. DOBAS. It seems very effective.

Senator MCGEE. We know there are other animals around.

If you don't find any dead ones that were victimized by poison it would show the other side of the predator control; in other words, that it hit the target rather than hitting unintended targets.

That is why I was groping here for what other evidence you might have: Small game, bird life, wherever you might find some fallout because of predator control toxic substances. If there are none of those, that answers the question.

Mrs. DOBAS. We have only the evidence that the perishable strychnine station killed two skunks.

USE OF POISON EFFECTIVE ON REASONABLY CLASSIFIED PREDATORS

My group does not categorically oppose predator management. In Wyoming such management probably is realistic and logical, and it may be desirable. The use of poisons for killing may even be ligitimately included if, and only if, poisons can be employed that are effective only upon those specific species that are reasonably classified as predators, meaning that the poison should be species specific.

Predator poisoning cannot be a haphazard system of local control.

Senator MCGEE. Which it has been, obviously, in the past, very haphazard.

Mrs. DOBAS. Yes. The public must be assured there is a rational basis for the life-death decisions made upon nature's wildlife.

RECOMMENDATION OF FEDERAL LEGISLATION

We would recommend Federal legislation be required to restrict the sale, use, distribution, possession, and transportation of all poisons. It would appear the only logical agent authorized to conduct predator management and research in the Bureau of Sport Fisheries and Wildlife.

The Bureau of Sport Fisheries and Wildlife must be limited to the use of poisons that are species specific.

Thank you, Senator McGee.

Senator MCGEE. Thank you very much for the depth with which you have examined this question, particularly because it is one of the rare occasions where we have documentation at the working level where the problem is rather than laboratory evidence or speculation.

You have been very helpful in this presentation.

Keith, do you want to put your statement in the record?

STATEMENT OF MR. SPRUNT

UNIVERSITY STUDIES IN WEST TEXAS

Mr. BECKER. Senator, if I may, I will go ahead and turn it to the research arm of the National Audubon Society, Mr. Eugene Knoder, for his statement and save a sort of a brief of my testimony for the conclusion of this hearing, if possible.

Senator McGee. All right. If you can digest it in any way, it would be appreciated. We have another target at 5 o'clock.

Mr. Sprunt. Senator McGee, I am going to abbreviate my statement as much as possible in view of the lateness of the hour.

I am Alexander Sprunt, director of the research department of the Audubon Society and Mr. Knoder is my associate director.

We particularly are grateful for this opportunity to present testimony before you. I have been personally involved in research on bald and golden eagles for the past 11 years. The society has been conducting this research. I have been responsible for directing it.

We have placed our major effort on the bald eagle, our national symbol, but we have also been active in the study of golden eagles and livestock relationships. This matter has come up a number of times in testimony today. We have supported two studies, primarily in west Texas, because this was one of the first places that golden eagles came in loud conflict with the sheep interest in the United States.

Probably you will recall the squabble we had a few yars ago when a golden eagle was placed as an amendment to the Bald Eagle Act and protected.

We have supported two studies in west Texas, one by Colorado State University, and one by Texas Tech. The Texas Tech study was somewhat interesting, because it was supported jointly by the Bureau of Sport Fisheries and Wildlife, National Audubon Society, and the National Wool Growers Association. It will give you an example of trying to work with everybody to come to rational ideas about what the situation between eagles and sheep actually is.

GOLDEN EAGLE PREDACITY OF SHEEP

One of the things that we tried to ascertain during these studies, particularly with the sheep and golden eagles, was the extent and the seriousness of the golden eagle's predacity upon sheep. In these two studies, the actual predation of golden eagles on sheep turned out to be rather slight. I think in the study that was carried out by the Colorado State people, we found that the average predation on sheep by the golden eagles in west Texas was something less than 2 percent of the lamb crop might have been killed.

Senator McGee. Two percent of the lamb crop killed?

Mr. Sprunt. Two percent of the total lamb crop was killed by golden eagles.

This can be contrasted with about 15 percent of the lamb crop that was still born, and another 13 percent roughly that were abandoned by their mothers and died of starvation.

So you can see that it is not nearly as important a drain on the lamb crop as some people would have you believe.

Senator McGee. What about other predators?

DECLINE OF BALD EAGLE

Mr. Sprunt. This was not an integral part of the study of the golden eagle. When we turned our attention to the bald eagle, we found that the bald eagle was declining alarmingly, at least in the lower of the 48 States, and that this was primarily caused by three different factors. The first of these was the loss of habitat to the eagles. This is the same

thing that has been happening to eagles ever since the white man came to North America, where they have been pushed out of their ancentral habitat, by urban sprawl, people liking waterfront lots, and so forth.

The second cause of loss to the bald eagle population is direct loss through shooting and poisoning, such as the example that we are discussing here today.

Senator McGee. Do you have any figures?

Mr. Sprunt. Yes, I will get back to that.

The third, and probably most serious threat to the bald eagle as a whole, as has been brought out in testimony previously, is environmental pollution by hard pesticides and other substances.

But we are not going to consider that at any great length today. The one factor we might mention, however, is because of this stress that is on the bald eagle population, because of the pollution problem, losses such as we have seen here in the Casper poisoning case became of considerably more import to the species than they would be if the species were in a healthy State.

In other words, we have a population of birds which is stressed already by being under difficulties because of environmental pollution. Then when we have added losses by man, brought about by shooting or poisoning, this becomes of considerably greater import to the species as a whole.

COOPERATION OF DEPARTMENT OF INTERIOR

The Department of the Interior, of course, has been active in the management of eagles and is the agency which is responsible for the protection of the bald and golden eagles under the act which protects them. I would like to certainly join the others that have mentioned the fact today that the Bureau has certainly been outstanding in its cooperation in this present incident.

Everybody, from Assistant Secretary Nathaniel Reed on down through the group of people that you have heard from today and had here in the hearing have been most cooperative with us and with Mr. Knoder during our stay at the Patuxent Wild Life Research Center during the autopsy and chemical analysis period.

INCIDENTS OF EAGLE POISONING

I would like to say, though, that the poisoning of the more than 20 eagles in this case is not an isolated incident. I am afraid it is rather the tip of an iceberg beginning to show. We have over the last 10 years during which I have been personally involved with eagles—I have heard repeatedly from all over the west of incidents where eagles have been poisoned by bait stations for animal control.

These, as you will readily understand, are extremely hard to verify. But it is a recurring theme throughout the contacts that we have made with outdoors westerners.

Because of the recurring theme of this death of eagles from poisoning, we have dug into it as much as we possibly could. And we have come up with records from the Bureau of 14 individual eagles which have been analyzed and which prove to contain levels of poison sufficiently to cause their death.

Senator McGee. These 14, were where?

Mr. Sprunt. In South Dakota, Colorado, and Nebraska. They have no connection with the present group of eagles. This was between 1965 and 1969.

Of these birds, 11 golden eagles contained 1080 in their tissues; one bald eagle contained 1080; one golden contained strychnine, and one golden contained cyanide. So you see these other poisons have been a factor in killing eagles.

Senator McGee. Does that strike you as a very small number, spread over 6 years?

Mr. Sprunt. Yes; it does indeed. But it strikes me that most of the eagles that die from this cause never come to light. I do have some indication that this is true.

This is not altogether hearsay.

Range of Eagles

Senator McGee. Do you have some master chart or map that shows you where the seasonal or typical habitat of eagles would be? It would seem to me that it might be possible to at least eliminate the odds to some degree and know where you intend to find more.

Mr. Sprunt. That might be true. Unfortunately, both bald and golden eagles move across the Western United States, not entirely homogeneously, but they would cover almost all of the Western areas during some time of the year, either during their wintering, breeding, or migrating periods.

So it would be a little difficult to do that.

Possible Reports of Additional Killings

Senator McGee. Have you had any calls or other notifications of the location of dead eagles because of the surfacing of this story in the last month, from other parts of the United States, in the last 4 or 5 weeks?

Mr. Sprunt. No, sir; I have not. But I have been moving so much that I might have some in my office and not be aware of it.

Senator McGee. I was thinking if any had been located, somebody might relate the information.

Mr. Sprunt. I wouldn't be at all surprised if eagles aren't going to be turning up from all over.

Senator McGee. In all shapes and conditions.

BAITING BY DIVISION OF WILDLIFE SERVICES, BUREAU OF SPORT FISHERIES AND WILDLIFE WITH POISONS

Mr. Sprunt. Yes, indeed.

I might, pursuing this business of 1080, strychnine, and other poisons, give you a couple of figures here that might be surprising to you. These figures were taken from graphs prepared by the Division of Wildlife Services of the Bureau of Sport Fisheries and Wildlife. During 1970 they placed 10,800 1080 baits in the Western United States, They also placed 805,000 strychnine baits, and 32,933 coyote getters with cyanide guns. This is a considerable amount of poison to be spreading around.

Using the figure that the Wildlife Services Division of the Bureau uses, they place 10,800 bait stations. These 10,800 bait stations would be sufficient, according to the Division, to adequately poison 248,832,000 acres for coyote control. That is an awful lot of poison in an awful lot of places.

Senator McGee. Would it be accurate to conclude from that that likewise there have been surprisingly small casualties?

Mr. Sprunt. Again, sir, let me say there have been surprisingly few casualties turned up.

The Division of Wildlife Services does make attempts to control these extremely toxic substances. As you know, they have removed thallium from their arsenal of poisons in 1967 because of the hazards inherent in its use. They have also promulgated strict policies for the placement and handling of 1080, which shares with thallium of its lethal qualities. These policies laid out at the higher echelon of the administration unfortunately do not always filter down to the field level.

MEMORANDUM OF DIVISION OF WILDLIFE SERVICES

I have in my possession a Government memo indicating some of these problems in which I would like to quote. It is from a regional supervisor of the Division of Wildlife Services to one of his State supervisors. It is dated January 30, 1967, and the subject is 1080 placement.

Our current 1080 placement is very sound. However, in the past we have been somewhat lax in adherence to the time of placement. The end results in some of these situations have been an embarrassment to the Bureau. The embarrassment has been brought about as a result of killing eagles or having some hunter, rock hound, hiker or tourist observe a freshly placed 1080 station or 1686 sign during their travels. Such eagles or observations are reported immediately to the public. These reports greatly affect the public relations aspect of any animal control program.

We must adhere closely to the current 1080 policy and not place out our 1080 stations until the tourists, rock hounds, fishermen, hikers, hunters and picnickers have ceased visiting such areas. The delay in the placement of the 1080 stations will also contribute greatly to reducing the hazard to eagles.

Eagles will have a difficult time obtaining a lethal dose of 1080 treated meat once the bait station is frozen. A 1080 station placed out late in the season should be more attractive to predators as at that time food is scarce and they should feed on the bait more freely.

You are to be complimented for your close adherence to the 1080 policy this season. Such endeavor should provide the Bureau with a better public image.

NATIONAL AUDUBON SOCIETY RECOMMENDATIONS

These instances show that alarming amounts of highly toxic substances are being introduced into the environment annually and are having a serious impact on many species of wildlife, including eagles of both species. The potential for the degredation of the environment is very great in this situation and certainly deserves the scrutiny that we are directing toward it today.

The National Audubon Society recommends the following corrective measures, some of which can be accomplished by the administrative action, others requiring legislation by Congress.

1. We urge strict Federal control—stricter than is now possible under existing laws—of the manufacture, distribution, and use of the economic poisons.

2. We further urge the outright ban of such highly hazardous, nonspecific toxicants as thalium, strychnine, and compound 1080 in open environmental situations, as in the operations that have killed eagles and other nontarget animals in the Western States.

3. We believe that any animal control operation aimed at wildlife, or affecting wildlife ecology, should be conducted only by Federal agents and then only by such agents as are professionally trained. However, we strongly urge a major reduction in the extent and volume of present Federal operations which result in the widespread distribution of poisons and other lethal devices in totally unjustified situations. In other words, our own Government conducts too much predator and rodent control and too often in the wrong places.

4. States, county, and private control programs, too often carelessly carried out, should also be brought under strict Federal control.

5. Several years ago an advisory board to the Secretary of Interior, a group of scientists known as the Leopold committee, recommended creation of a board of review to provide continuing advice to the Secretary concerning predator and rodent control policies and practices. We believe such a review board should be established now, and perhaps it should be within the Environmental Protection Agency.

6. The Bureau of Sport Fisheries and Wildlife should file environmental impact statements, as required by the National Environmental Policy Act, for each separate animal control project or operation, with specific reference to its effect upon wildlife and other environmental values in each county, watershed, or range.

Thank you very much.

PREPARED STATEMENT

Senator McGee. We will insert your prepared statement in the record at this point.

(The statement follows:)

Mr. Chairman and Members of the Committee:

I am Alexander Sprunt IV, Director of the Research Department of the National Audubon Society. I am pleased to testify before you today because the National Audubon Society has been conducting research on eagles for the past eleven years, and I have directed this research since its inception.

We are particularly grateful to have the opportunity to comment on the recent eagle poisoning in Wyoming. Information which has been gathered as part of our research on the bald eagle indicates that this case of poisoning has wiped out essentially all of the normal wintering population of bald eagles along the section of the North Platte River in the vicinity of Casper.

I wish to present a brief history of our research program dealing with eagle ecology and then show the relationship between pertinent research findings and the tragic massacre of bald and golden eagles in Wyoming.

Our major research effort has been devoted to the bald eagle, but we have also contributed to major studies on the golden eagle. We provided financial support to Colorado State University for a five-year study on golden eagle ecology in West Texas. This study dealt primarily with the relationship between livestock and wintering eagles. The National Audubon Society also contributed, along with the Bureau of Sport Fisheries and Wildlife and the National Woolgrowers Association, to a similar study conducted by Texas Technological College.[1] Our involvement in these golden eagle studies reflects our deep concern over the status of this species, and our desire to work cooperatively with other groups to solve problems in a rational manner.

However, our main research has been directed toward our national emblem, the bald eagle. Because so little was known of the ecology of this species and because we were receiving many reports of alarming population declines, we launched our Continental Bald Eagle Research Project in 1960.

The first phase of the project was concerned with determining the present status of the bald eagle throughout its range, both where it breeds and where it winters, and how many eagles remain. We found that declines in numbers had taken place throughout the whole range of the species, but that in certain areas the decline had been much more serious, even catastrophic. The extent of decline in some cases gave serious question as to whether the species could survive. At present we estimate that not more than 1000 breeding pairs of bald eagles are to be found in the contiguous 48 states.

A second phase of our studies was concerned with the reasons for the observed decline in population. We found

---

1. "Golden Eagle - Livestock Relationships; A Survey," Special Report No. 20, International Center for Arid and Semi-arid Land Studies, Texas Technological College, Lubbock, Texas, April, 1969.

three underlying causes. The first of these is habitat destruction which has been going on ever since the white man came to the new world. It continues today at an acclerated rate as man moves out in his urban sprawl pre-empting prime waterfront eagle habitat.

A second cause of loss to the eagle population was found to be direct shooting and poisoning of the birds themselves. Unfortunately, we have a prime example of this type of loss in the situation under investigation today.

The third and probably most serious threat to bald eagle populations, however, is that of environmental pollution, pollution by hard pesticides, heavy metals and other substances introduced by man. We now know that the pollution causes direct mortality and also reduced rates of reproduction in eagles and prevents adequate replacement as older individuals are lost.

While the present situation is not of this latter type of hazard to the eagles, it is given even more importance by the fact that the species as a whole is under considerable stress from pollution. Healthy populations of wildlife can stand the removal of a certain number of individuals, but when populations are under stress from other causes, as is the case with the bald eagle in the lower 48 states, the direct loss of individuals by shooting and poisoning becomes a critical factor.

Besides our involvement with research, the Society has also been active in conservation and education programs designed to aid the eagle. We cooperated closely with the U. S. Forest Service in drawing up their pioneering set of guidelines for the management of bald eagles, still the most comprehensive management plan on public lands and one which has been adopted by a number of large, private land-owners.

We have also prepared and distributed films, T.V. spots and literature bringing the plight of the eagle to the attention of the public and asking their cooperation in protecting them.

The Department of Interior has also been active in the management of eagles on its National Wildlife Refuges and, of course, has the responsibility for protecting eagles of both species under the Bald Eagle Act and the amendment to the Act extending protection to the Golden Eagle.

Despite these constructive efforts, eagles are still declining at a rapid rate due in part to programs in which our own government participates.

The poisoning of more than twenty eagles in Wyoming is but the tip of the iceberg. Eagles have been dying from poisons, as well as shooting and other direct causes, for some time. During the past decade, during which I have been personally involved with eagles, we have heard repeatedly from ranchers, foresters, hunters, game agents and other outdoorsmen from all over the western United States of deaths of eagles due to poison baits which are

placed for animal control of one kind or another. These deaths are hard to verify, but a number of cases have been investigated and the cause of death determined by the Bureau of Sport Fisheries and Wildlife. These deaths were caused by a variety of poisons -- Compound 1080 (sodium monofluroacetate), strychnine, cyanide and now, thallium.

We have records from the Bureau of 14 eagles which upon analysis proved to contain levels of poison sufficient to cause death. These included 11 golden eagles containing 1080 in their tissues, one bald eagle containing 1080, one golden eagle containing strychnine, and one golden eagle containing sodium cyanide. It is of interest in this context that there is also a record of a California Condor, one of our rarest birds, containing lethal amounts of 1080. The Wyoming cases of thallium poisoning of eagles is only another in the regrettable chain of incidents. From personal contact with many people in the western states we are convinced that these reported and verified cases represent only a very small fraction of the eagles and other species affected by the lethal poisons.

There are examples of eagles being killed during the heavy application of thallium for rodent control as far back as 1928 in California (Linsdale)[1] where golden eagles were only one of 60 species of both wild and domestic animals which were killed as by-products of a ground squirrel control program. This same time period in California brought records of losses in a number of wild bird species, geese, ducks, quail and doves (Shaw)[2].

It is not realistic to consider thallium as a separate entity in the present context. It is only one of several highly toxic substances which are being introduced into the environment, legally or illegally, for so-called "animal control" in such a way that both "target" and "non-target" species have ready access to them. All of these poisons, thallium, 1080, strychnine and sodium cyanide, have been spread widely through much of the west for decades. Since thallium was dropped from use by the Bureau of Sport Fisheries and Wildlife, the extent of its use is difficult to estimate, but figures on the other poisons from 1970 will give some idea of the extent of their use. These figures are taken from graphs prepared by the Division of Wildlife Services and are rounded off:

1080 baits	10,800
strychnine baits	805,000
coyote getters (cyanide)	32,933

To help you visualize just what these figures mean, I would like to take one of them, the 1080 baits, and show

---

1. "Facts Concerning the Use of Thallium in California to Poison Rodents--Its Destructiveness to Game Birds, Song Birds and other Valueable Wildlife," by Jean M. Linsdale, The Condor, Vol. 33 (3) 92-106, 1931.

2. "Studies on Thallium Poisoning in Game Birds," by Paul A. Shaw, California Fish and Game, 1932, 18 (1)29-34.

the area that is covered by this effort. According to the Division of Wildlife Services, one bait station is sufficient to control coyotes on one township. Using this, we can calculate that the 10,800 1080 baits set out in 1970 were sufficient to poison 248,832,000 acres for coyote control.

These figures represent only the poison placed by the agents of the Division of Wildlife Services and do not contain such "do it yourself" efforts as we are apparently faced with in the thallium deaths of the eagles under consideration today, or the efforts of other government control programs conducted by state and county governments.

The Division of Wildlife Services does make attempts to control these extremely toxic substances. They removed thallium from their arsenal of poisons in 1967 because of the hazards inherent in its use. They have also promulgated strict policies for the placement and handling of 1080 which shares with thallium many of its lethal qualities. These policies laid out at the higher echelon of administration, unfortunately do not always filter down to the operator in the field. I have in my possession a government memo which indicates some of these problems and which I would like to quote in part. It is from a Regional Supervisor of the Division of Wildlife Services to one of his State Supervisors:

"Subject: 1080 Placement

Our current 1080 policy is very sound. However, in the past we have been somewhat lax in adherence to the time of placement. The end results in some of these situations have been an embarrassment to the Bureau. The embarrassment has been brought about as a result of killing eagles or having some hunter, rock hound, hiker or tourist observe a freshly placed 1080 station or 1080 sign during their travels. Such eagles or observations are reported immediately to the public. These reports greatly affect the public relations aspect of any animal control program.

We must adhere closely to the current 1080 policy and not place out our 1080 stations until the tourists, rock hounds, fishermen, hikers, hunters and picnickers have ceased visiting such areas. The delay in the placement of the 1080 stations will also contribute greatly to reducing the hazard to eagles.

Eagles will have a difficult time obtaining a lethal dose of 1080 treated meat once the bait station is frozen. A 1080 station placed out late in the season should be more attractive to predators as at thattime food is scarce and they should feed on the bait more freely.

You are to be complimented for your close adherence to the 1080 policy this season. Such endeavor should provide the Bureau with a better public image."

The above memo contains one statement with which I would take issue. In paragraph 3, it says that eagles would have difficulty in obtaining a lethal dose after the bait is frozen. This is not so. The temperature

extremes in South Dakota vary widely during the winter and on many occasions the bait would be readily available to the eagles.

These instances show that alarming amounts of highly toxic substances are being introduced into the environment annually, and are having a serious impact on many species of wildlife including eagles of both species. The potential for the degradation of the environment is very great in this situation and certainly deserves the scrutiny that we are directing toward it today.

The continuing destruction of both "target" and "non-target" wildlife in the guise of "animal control" certainly warrants a close look by Congress at the present practices of the federal government, other government and privates operators. The National Audubon Society strongly recommends the following corrective measures, some of which can be accomplished by administrative action, others requiring legislation by Congress:

1. We urge strict federal control -- stricter than is now possible under existing laws -- of the manufacture, distribution and use of the economic poisons.

2. We further urge the outright ban of such highly hazardous, non-specific toxicants as thallium, strychnine and compound 1080 in open environmental situations, as in the operations that have killed eagles and other non-target animals in the western states.

3. We believe that any animal control operation aimed at wildlife, or affecting wildlife ecology, should be conducted only by federal agents and then only by such agents as are professionally trained. However, we strongly urge a major reduction in the extent and volume of present federal operations which result in the widespread distribution of poisons and other lethal devices in totally unjustified situations. In other words, our own government conducts too much predator and rodent control and too often in the wrong places.

4. State, county and private control programs, too often carelessly carried out, should also be brought under strict federal control.

5. Several years ago an advisory board to the Secretary of Interior, a group of scientists known as the "Leopold Committee," recommended creation of a Board of Review to provide continuing advice to the Secretary concerning predator and rodent control policies and practices. We believe such a Review Board should be established now, and perhaps it should be within the Environmental Protection Agency.

6. The Bureau of Sport Fisheries and Wildlife should file environmental impact statements, as required by the National Environmental Policy Act, for each separate animal control project or operation, with specific reference to its effect upon wildlife and other environmental values in each county, watershed or range.

CONTINUANCE OF HEARING

Senator McGee. I am due down at another Federal agency at 5 o'clock. That is my problem. Is it possible to continue this tomorrow? I am embarrassed to do this. What is the prospect? I want to hear this out.

Mr. Becker. Mr. Chairman, at what time tomorrow?

Senator McGee. It would be soon after lunch. We have Russell Train coming in in the morning. That is a rather rigid time, because of other commitments that he has to be on. When we set this up, I didn't allow the time, obviously, for this. That is the reason I am embarrassed now. I will try to rearrange times so we can hear it out compleely.

If I were to say 2:30——

Mr. Becker. We appreciate your commitments and we also greatly appreciate this opportunity. It seems to us that as Mr. Sprunt has just pointed out, we would rather unearth an iceberg. I am sure that a great deal more time could be devoted to this. I could either, at your pleasure, summarize very quickly or if you prefer to go into some of this at more depth, I would be very happy to appear at 2:30.

Senator McGee. I don't dare summarize it even for 1 minute now. I am due there at 5. I am not going to be able to buck the traffic quite that skillfully. I would hope it might even enrich the summary that you make by hearing Russell Train in the morning, trying to have the overview of everybody that has something to say on this. Then we could have the benefit of your sort of recap of some of the issues.

Mr. Becker. We would very much appreciate that opportunity.

Senator McGee. You have priority in that you have a real record of expertise in this business and a second priority being from Wyoming. Those are the things we have to set up the order of things on.

I have to confess to the miscalculation this afternoon.

Mr. Becker. I will be here at 2:30.

SUBCOMMITTEE RECESS

Senator McGee. We will recess this session then until 9:30 in the morning. The first witness will be Mr. Russell Train. We will reassemble in the afternoon at 2:30.

(Whereupon, at 4:55 p.m., Wednesday, June 2, the subcommittee was recessed, to reconvene at 9:30 a.m., Thursday, June 3.)

PREDATOR CONTROL AND RELATED PROBLEMS

THURSDAY, JUNE 3, 1971

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 9:30 a.m., in room 1318, New Senate Office Building, Hon. Gale W. McGee (chairman) presiding.

Present: Senator McGee.

EXECUTIVE OFFICE OF THE PRESIDENT

COUNCIL ON ENVIRONMENTAL QUALITY

DEATHS OF EAGLES IN THE STATE OF WYOMING

STATEMENT OF RUSSELL E. TRAIN, CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY

ACCOMPANIED BY DR. LEE M. TALBOT, SENIOR SCIENTIST, COUNCIL ON ENVIRONMENTAL QUALITY

IMPLICATION OF LOSS OF EAGLES

Senator McGEE. This session of the subcommittee will come to order.

The witness this morning is the Honorable Russell Train, Chairman of the Council on Environmental Quality.

Russ, we will proceed any way you prefer. Either you can read your statement or you can speak to it or from it, however you want to emphasize what you have to state.

Mr. TRAIN. Thank you, Mr. Chairman. I think in this case I will read the statement if you will bear with me.

Senator McGEE. All right. Fine.

Mr. TRAIN. When you go to appropriations hearings later, I will not read that statement but speak to this point.

PREPARED STATEMENT

Mr. Chairman, members of the committee, I appreciate the opportunity to appear before you today to discuss the implications of the tragic loss of eagles, and to tell you of the actions which we have taken in connection with the serious problems which this situation exposes.

Mr. Chairman, I was shocked, as I am sure and know you were, when I first heard of the large-scale loss of these great birds. But I

65-903 O—71——8

must admit that I was not surprised. In the First Annual Report of our Council, we wrote:

> As a group, the large predators stand in greatest danger of extinction. The belief that most predators should be exterminated was central to the early days of ranching and wildlife management. In some areas this unfortunate belief endures. There are still strong pressures on State and Federal wildlife agencies to continue predator control programs for certain bird and mammal species, despite their diminishing numbers . . .

In the testimony you have already received, you have heard detailed descriptions of this specific incident—or set of incidents—which has involved the unfortunate killing of some of these great birds by the use of the poison, thallium sulfate, and by shooting. I do not intend to cover the same ground.

I regard the loss of these birds as tragic; the more so since both our species of eagles are declining species, seriously threatened throughout most of their range by habitat change, by the pervasive spread of pesticides throughout the environment, and by direct persecution by man.

We must recognize that although the number of eagles already found dead is distressingly large, in all probability this number only represents a part of the total toll. In rough and extensive terrain, such as the part of Wyoming in which the dead birds have been discovered, it is likely that only a part of the total number of birds which have been killed will be found.

The fact that the bald eagle is our national emblem makes these killings all the more reprehensible to the American people, and this incident has served to focus public attention on three separate, but related problem areas of Federal responsibility: the control of poisonous materials, predator control, and conservation of endangered species.

These have been matters of serious concern to this Council, and I shall address my remarks to them.

Present Legal Protection

First, let us examine the present legal protection of the eagles. The Bald Eagle Protection Act, as amended (Public Law 87-884, 16 U.S.C. 668–668d) prohibits the taking of bald and golden eagles within the United States. "Taking" is defined as including wounding, killing, pursuing, or otherwise willfully molesting or disturbing the eagles.

The weakness illustrated by the present situation lies in the requirement to prove intent. It would be difficult to prove that a poisoned bait was intended specifically for eagles, when there may be a wide spectrum of bird and mammal carnivores and scavengers which could take the bait and for which it could be claimed that the poison was intended.

Section 668a of the act allows the Secretary of the Interior, after investigation, to issue permits under regulations which he is authorized to prescribe, for the taking of bald or golden eagles "for protection of wildlife or of agriculture or other interests in any particular locality."

Further, on the request of the Governor of any State, the Secretary of the Interior may authorize the taking of golden eagles "for the purpose of seasonally protecting domesticated flocks and herds."

Assistant Secretary Reed has stated to your committee that the policy of the Department of the Interior is that such permits will only be granted in particular circumstances where substantial harm has been demonstrated.

If a permit is issued, shooting from the ground—not from aircraft—is the only method permitted, and prior to issuance of such permits, an investigation will be made by personnel of the Bureau of Sport Fisheries and Wildlife to insure the validity of the claim. No such permits were in force in Wyoming at the time of the recent eagle killings.

Bald eagles are protected by State law in all States, and golden eagles are protected by all States except Wyoming and Montana. Of the American eagles, only one subspecies, the southern bald eagle, is listed by the Department of the Interior as a species which is threatened with extinction. Golden eagles and other bald eagles are not so listed.

However, such listing under the Endangered Species Conservation Act of 1969 (16 U.S.C. 668aa(c)) does not afford protection against the types of killing involved in the Wyoming case. Consequently, the only direct Federal legal protection afforded the eagles comes from the Bald Eagle Protection Act, as amended, which has the requirement to prove intent in cases of poisoning.

Use and Control of Thallium Sulfate

Because the poison thallium, was the agent identified in most of the Wyoming birds, there has been much attention, perhaps a disproportionate amount, directed to its use and control. Thallium is a very hazardous substance and has been used in animal control for many years, but because of undesirable qualities, the Department of the Interior discontinued its use for predator control several years ago.

However, as previous testimony has shown, it is being manufactured, sold, and used for animal control, with the devastating results we are now considering.

A convincing case can be made for prohibiting the use of thallium for predator control purposes, but while such action would be desirable, it would only deal with one small part of the problem. Many other poisons are available and some are widely used for predator control purposes.

Strychnine, cyanide, and 1080—sodium monofluoroacetate—for example, have been found in eagles which have been poisoned within the past 5 years. Therefore, there should be an immediate review of all poisons used for predator control to determine if there are others which should be withdrawn from such registration because of the hazard they pose.

Poor Uses of Poisons

However, Mr. Chairman, we believe that it is not sufficient merely to identify and control individual poisons. There are legitimate needs and usages for various poisonous materials. In most cases where there is a problem with poisons, it is not due to their existence but rather to their use. With this principle in mind, the Council developed the Federal Environmental Pesticide Control Act of 1971, which was submitted to the Congress in February as part of the President's environmental legislative program.

Mr. Chairman, as you are aware, the responsibility for formulating the President's environmental programs was given to this Council, and we brought together the relevant agencies to exchange ideas and to work on the drafting of the legislation. In the development of the pesticide bill, the Council worked closely with the Departments of Agriculture, Commerce, the Interior, HEW, and EPA in every stage of the bill's development.

New Poison Control Laws

Had this administration bill been in force at the time, it quite possibly could have prevented this incident. Thallium is now regulated under the existing pesticide authority—the Federal Insecticide, Fungicide, and Rodenticide Act—and it would be regulated under the new law.

One of the major purposes of the administration's proposal is to control the actual use of pesticides, and particularly to prevent their being used for unregistered purposes. Thallium is not registered for predator control, or needless to say, for killing eagles.

It is quite likely that under the proposed new pesticide law any highly toxic and persistent chemical like thallium would be registered either for "restricted use," in which case it could be used only by a trained and licensed applicator or for use "by permit only," or both.

Licensing of applicators and issuance of permits would be done primarily by the States. A trained applicator would probably be subject to having his license revoked if he used a toxic pesticide for an unregistered use, and similiarly, the State of licensed consultant would not issue a permit for use of thallium or other poisons for an unregistered use.

I noted previously that the Department of the Interior had discontinued its use of thallium in predator control programs. Within the Federal Government, the use of pesticides, which includes their use to control predators, is reviewed by the Interagency Working Group on Pesticides. The Working Group reviews each individual agency program in detail. So far this year, it has reviewed 2,357 projects from 36 agencies, and 592 projects remain yet to be reviewed.

A check of the Working Group's records over the past 3 years indicates that no programs involving the use of thallium have been approved.

Mr. Chairman, the proposed Federal Environmental Pesticide Control Act of 1971, coupled with the existing interagency working group on pesticides which deals with the Federal Government usages, should go a long way toward control of the poisons and their uses. But these controls do not get at the basic root causes of the problem.

On the one hand, there is strong feeling among some of the Wyoming ranchers that the eagles and other predators are a menace to them, and that they are not adequately protected by Federal action, so that they need to take the matter into their own hands. The dead eagles are one result.

On the other hand, there is the strong and clear will of the American people that eagles should be protected, and the dead eagles are tragic evidence that this protection is not adequate and that there is a basic conflict between these two views which must be resolved.

Predator Protection

In the early days of this country, Americans regarded nature as an object to be fought, to be conquered, or exploited. Resources were thought unlimited. Land, water, timber, wildlife were squandered. Farmers prided themselves on wearing out several farms in their progress west; market hunting exterminated the passenger pigeon, and the buffalo nearly followed; any animal thought to compete with man or threaten him was ruthlessly hunted, trapped, or poisoned.

The philosophy that "the only good varmint is a dead varmint" led to the extinction of 16 races of bear, two of wolf, a fox, and a cougar, and it has helped bring most of our remaining larger predators to the point where they are considered endangered.

Changing Attitudes Concerning Environment

Fortunately, throughout most of the Nation these early attitudes have changed, as the realization of the importance of our environment has grown, along with an appreciation that our resources are indeed limited.

This awareness is epitomized by the purposes stated in the National Environmental Policy Act of 1969 which are "to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation."

Mr. Chairman, the old idea that "the only good varmint is a dead varmint" simply is no longer defensible. However, at the same time, if government protects predators while some of our citizens are in fact subjected to real loss through the activities of predators, the government has a responsibility to see that they are treated fairly.

During the past year, this Council has made a preliminary survey of the question of predator control and wildlife policies and program in general. We have found a great deal of emotion on all sides of this question, with extreme views ranging from demands to abolish all predator control at all levels on the one hand, to demands to exterminate all predators on the other.

Factual information on the existence or extent of damage caused by predators, as well as on the information on predator control activities themselves, is difficult to obtain. The problem is complex, involving the programs of the various Federal, State, and local agencies, plus the actions of the individuals.

Initiation of Predator Control Study

There has never been a comprehensive study and evaluation of the whole predator control situation in this Nation. Our preliminary examination has shown clearly the need for such intensive study, and consequently, we have initiated it. This study will consider such areas as the nature and extent of the damage by predators; the predator control programs of the various Federal, State, and local agencies and individuals; the environmental and economic implications of these activities.

The results should provide us with a better understanding of what the present situation is and should provide us guidance so that we can develop specific proposals on what improvements in policy and possible legislation are needed.

Hopefully, one result would be to assure that situations illustrated by the Wyoming eagle incident are not repeated. The study will be conducted by a panel of distinguished consultants. Planning began in March, and we hope for a draft final report next fall. The Council is sponsoring this study in cooperation with the Department of Interior, with whom we have been working on this since April. There will also be collaboration with the other departments and agencies which are involved, including the Department of Agriculture and the Environmental Protection Agency.

In addition to the specific study on predator control, the Council has initiated other wildlife studies, some parts of which focus on depleted or endangered species and on nongame species. The results of these studies could have application to some aspects of the current Wyoming situateion.

CONCLUSION OF STATEMENT

Mr. Chairman, I hope that from these remarks it is clear that the Council warmly supports your objectives in calling this hearing to consider the tragic loss of eagles in Wyoming. We consider the eagle incident to have implications far beyond the communities and the wildlife involved in this particular situation. During the past year we have initiated a series of actions which are intended to help put us in a better position to assure that such needless losses as occurred in Wyoming will become a thing of the past.

I greatly appreciate the opportunity to appear before you on this matter, about which I know we all feel very strongly, and I will be happy to answer any questions.

Senator McGEE. That was a fine statement.

While this is on my mind here I would like to enlist your efforts and your scrutiny in reference to the practice of clearcutting, which is another issue. The fact that you are recommending that we have a sweeping review of this whole matter is precisely what we have been trying to get the Secretary of Agriculture to agree to in some timber practices because they are interlinked inescapably with wildlife, recreation, esthetic conditions, soil chemistry, and all of this sort of thing. They are all tied together, and you can't separate this particular thing from all of these other factors, so one of these days I will bend your ear on that.

Mr. TRAIN. I expect that, Mr. Chairman.

Senator McGEE. Now on page 5 of your statement you talk about an immediate review of all of these things and pinning this enforcement down so that we could know the truth about predator controls and the options we have and that sort of thing.

Where would you pin the jurisdiction for that, that is, responsibility to conduct that review?

Mr. TRAIN. Well, I think that we have assumed responsibility in the Council for undertaking such an overall review of predator problems and predator control programs, and we will be looking, not only at Federal programs, but also at State programs and private actions.

I say we have assumed responsibility. We are doing this in close cooperation with the agency which has particular administrative responsibility in this area, namely, Department of the Interior.

LEGISLATIVE CONTROL OF PESTICIDES

Senator McGEE. Under proposed new law or regulations that you refer to there, how would you insure against use for unregistered purposes by unauthorized personnel?

Could you have a Federal enforcement agency? Would you leave it to the States?

Mr. TRAIN. I believe you are referring to the proposed Pesticide Control Act as submitted by the President.

Senator McGEE. Yes.

Mr. TRAIN. The thrust of that legislation is to provide guidelines through both the statute and the Environmental Protection Agency for implementation to be carried out by the States.

Now, in the event that a state either failed to implement the statute, in accordance with the guidelines, or in implementing the statute it plainly failed to enforce its own provisions, the Federal Government would be authorized to undertake its own control program, but the thrust of the act is utilization of State authority.

So, to get to your question, the pesticide control legislation cannot give any ultimate assurance that substances such as thallium will not be misapplied or misused. I pointed this out in my testimony.

On the other hand, I do make the point in the testimony that if there are cases of abuse of the permit authority, or the licensing provisions, that presumably the regulations would provide for withdrawal of the offender's authority to act in the field, so there are sanctions that would be involved.

Senator McGEE. I heard said once, "The best government is no government, and if you had everybody as good as I am, you wouldn't need government," but then we build it up in levels, and I think our history shows that the emergence of Federal agencies and Federal controls has come after the fact, that is, after the States have forfeited, after the States have refused to act in large areas, which is the history of our regulatory commissions in this country.

That is the reason it occurred to me that it might require some insurance, guarantee over the top of the States, to make sure this was not abused or just neglected through indifference at the State level.

Mr. TRAIN. If I may interject, Mr. Chairman, you have put your finger on a very important element in this very complex problem, and that is the jurisdictional overlaps and splits, if you will.

Resident animal species have been traditionally subject primarily to State control and management, that is one of the principles that has been applied to wildlife management, and yet the use of these poisons which are shipped in interstate commerce is very much a

matter of Federal concern, so we have competing interests and perhaps conflicts of interests involved here.

So I think this is a matter or one aspect of the problem that I think must be clearly resolved so that we do know who is responsible.

Senator McGee. Our problem right now, as everybody I think agrees, even though we try to prohibit killing of eagles, it is the difficulty of proving the intent. That is the blind spot.

Declare Substances Illegal

As I gather from your suggestions, you would make illegal, the use of certain substances like thallium for any predator control programs. The use then would become the crime, and they could be prosecuted for having used thallium, regardless of what it has done, even killing no eagles, or is that putting it too strongly?

Mr. Train. Once a certain poison is no longer registered for a particular use, if used for that purpose, it could be made subject to penalty. I think this is the way to get it involved.

One thing I did point out; I think we should be careful, simply because thallium is the villain in this particular case, not to let our attention only focus on thallium as the problem because it is not the only problem, but the problem is a range of poisons.

Senator McGee. I remember 1080, cyanide, and strychnine.

Mr. Train. That is correct. Presumably if one should be banned we might be creating only an incentive or pressure to shift to other perhaps more dangerous poisons.

Senator McGee. Yes, I hope we would not be as blind to concentrate on thallium. Thallium is the vehicle that we are using to make this point, but somewhere in here there is a wise stand that we must take and be prepared to enforce. It does raise a question of balance in this. I gather from your remarks you are not advocating that we eliminate all predator control efforts?

Mr. Train. We are not suggesting it at this time certainly.

Balanced Control

Senator McGee. We are seeking a balanced way to control predators and at the same time avoid the excessive or extreme consequences of some of the more dangerous substances, and you agree with me on that?

Mr. Train. Exactly.

Senator McGee. In your judgment, the particular substances that we have described, or which you referred to here in addition to thallium, such as 1080, cyanide, and strychnine, this does not exhaust the options that are available for predator control?

Mr. Train. Not at all, and. of course, there is not only a range of poisonous substances, but there are biological and ecological controls, if you will, that are the substance of good resource management.

I think that we probably ought to be paying a lot more attention to those approaches to these problems.

Other Control Substances

Senator McGee. In the words of a distinguished American, I am glad you brought up that point.

Last year, we appropriated $1 million in this committee, and the subcommittee recommended it, for further research in nonchemical ways to control pests and predators, $1 million to speed it up, and we proposed in addition, and made available to the administration, an additional $100,000 that was specified to bore in depth into the predator question; and in both instances these were frozen downtown by those guys in the black hats in the Office of Management and Budget.

The point of my observation here is that, here we have come up with a very hopeful and positive, constructive, new undertaking here under your leadership, which gives us all great hope, and at the same moment that we shoot down the efforts to achieve what you have so articulately spelled out here.

It is this that makes us worry about the gap between the rhetoric and performance.

We are delighted at what you said here today, but we have to put our budget commitment where our rhetoric is, and so far it has come up a little short.

Maybe we ought to make you Director of the Budget, and then we could get some things done. It would be a thankless job, but at least we can close some of that gap.

I interjected that just because you said "all of the right things," and you mean them, because I have known you for a long time, you mean what you say, but you are still going to be hamstrung, I fear, by the fellows in that other place.

Mr. TRAIN. Mr. Chairman, let me interject, if I may, at this point, I was not familiar with that particular $100,000 item that you mentioned, and I assure you that we will look into that problem and certainly will look into the entire state of financing programs in the predator control and wildlife management field generally as part of the studies I described.

It may well be, and I may have to assume there is good reason why the $100,000 was blocked. Perhaps the implementing program really had not been put together in a satisfactory shape. This is something that we will look into and, as I said, I have no judgment on it because I do not know about it now.

WOOL AND SHEEP INDUSTRY INTEREST

Senator McGEE. Well, further on that point, the wool industry and sheep industry took some initiative in that.

I think this belongs in the record. They were looking for alternatives in this, recognizing there was an importance to be attached to bringing balance in this business, and they certainly carry no advocacy, for, let us say the use of thallium, because it clearly does not fit into this picture of some other extreme practices, but they also have a proglem of predator control, and they were the instigators of the extra $100,000 which Congress applied to speed up research in that area.

The reason given to us, of course, for freezing the funds, as I recall, having nothing to do with implementing because all implementers were standing around waiting and they were drooling, but it was simply it might be inflationary, but in the next breath we got a request for $200 million for the Penn Central and $250 million for Lockheed, and we couldn't add those things together, we couldn't

believe this was really a straightfaced rationalization for freezing of these funds.

I know you have to make your choices, but if you are going to make your choices, we all had better give up a little and try to live up to that.

I am afraid this kind of freezing set us all back in ways that are already lost. I mean that time is lost. That ground is lost.

We could have been a step closer to some of these other options that were here, which would have put us that much closer to reaching objectives that you have always declared and have always worked toward. That is why I think we ought to nominate you; you are my candidate for Director of the Bureau of the Budget.

Mr. TRAIN. Well, I am not running for the job.

EXCEPTIONS GRANTED UPON REQUEST

Senator MCGEE. I don't blame you, I assure you I have another question on a point you made in terms of exceptions that exist even under present law where the Secretary of the Interior can, in several cases, initiate exceptions in, let us say, the case of eagles. Governors, upon request, can be granted exceptions at certain times in this instance. And is it the view of your group that this ought to be continued in this way or ought we close those gaps, too?

What is your feeling on this?

Mr. TRAIN. I think it probably would be a mistake for me to prejudge that particular question, since we are just getting our study underway, so I think it is plainly a kind of thing that we would want to look at.

I would say it is a gap we certainly ought to close, unless there is exceedingly strong evidence why we should not. I think the burden here is all on those who would continue this exception. But I don't want at this time to say how I feel we should come out.

Senator MCGEE. Yes, prejudging of a circumstance may have considerable leeway as to a more probable decision on it.

Mr. TRAIN. I know when I was in the Department of the Interior first, I first heard about permits of taking Golden Eagles, and I remember the first letter crossing my desk I was shocked that such a process was even in existence, so it has been a matter I have had some interest in for quite a while.

STATE RESTRICTIONS ON EAGLE KILLING

Senator MCGEE. How serious is the factor of State laws regulating those things? You made note that all of the States prohibited killing of bald eagles and all but two of the States, Montana and Wyoming, prohibit killing of golden eagles. Is it a fact that these States which have not prohibited it complicate or affect the overall national pattern in this?

Mr. TRAIN. Speaking somewhat off the cuff, I doubt whether those two exceptions would overly complicate this situation, because I would imagine that the absence of any such State laws in Montana and Wyoming probably had little or nothing to do with the poisoning incidents that are involved here directly.

They may evidence a climate of opinion in those States which perhaps does not discourage antieagle action, but I don't think it probably has a direct effect.

Predatory Dangers of Eagles

Senator McGee. How serious do you regard the predatory aspects of the eagle, or certain predatory dangers of the eagles as far as livestock?

I gather they are fairly dangerous to jackrabbits.

Mr. Train. Of course, this is something we want hard data on. I am not sure of what was submitted by other witnesses, but it will be an important element in the study we are doing now.

The preliminary information I have, and I cannot say I can verify this, is that the loss of lambs, for example, to eagles is really very minimal. There is evidence that eagles on occasion do take a small lamb, but as an element in the overall predation on sheep, it is a very minor factor, almost insignificant.

It is my understanding that eagles take carrion to a great extent and also a variety of small rodents, squirrels, jackrabbits, as you say, snakes, and doubtless provide a useful function in those respects.

Impact of Eagle May Be Overrepresented

Senator McGee. It may be that the case has been overrepresented here, I guess only careful study would tell us, in regard to the capabilities or the real impact of the eagle on the question of livestock, particularly on lambs.

I remember having my own notions changed only in a much larger scale in regard to killing instincts of lions on the great animal herds of Africa, discovering over there that the real predator as far as the loss of life was the hyena. The lion moves in and takes over the carcass because he is the big guy and does not have to work that hard.

I think the eagle probably lives on killings by others, or casualties, whatever they might be, they could be all sorts of things, which has a tendency to associate itself apparently with a predatory activity.

There may have been overreaction, but I think there must be ways to pin it down more tightly than we have up to now.

Mr. Train. I think we can get a good body of evidence together on this. It would always be subject to differences of opinion, I am sure, but it is the kind of situation where you cannot always have an observer or eyewitness on hand to view the particular incident.

Predation Small Proportion of Mortality

It is my information that predation generally represents a small proportion of the total mortality amongst sheep. I don't know the percent, but I heard something in the order of 10 percent, and it probably does vary from area to area, not only geographically, but depending upon the management technique employed.

Of that 10 percent, again, I would, or a comparable proportion, I would emphasize that eagles certainly are responsible for a very small proportion of that.

Senator McGee. Well, it has been suggested that a controlled study was undertaken that shows 2 percent might be attributed, as far as the deaths of birds, to the eagles. It was a small or limited undertaking, though.

INTRODUCTION OF ASSOCIATES

Mr. Train. Mr. Chairman, I forgot to identify the gentleman next to me, who is Dr. Lee M. Talbot, who is senior scientist with the Council on Environmental Quality, and he is an ecologist, and your question reminded me of the fact that some of Dr. Talbot's earliest work in Africa was on the wildlife populations and included the early work which showed that hyena were really effective predators.

If you would like to pursue any questions on hyenas in the Ngorongoro Crater or areas of east Africa, I am sure he is the best man to inquire of.

Senator McGee. I followed the hyenas in Ngorongoro, and the mountain lion, who I understand, is the laziest, but so far we have not had a single complaint as far as hyenas in Wyoming, so I think we are still off the hook on that one.

We ran into wild dogs for the first time; I don't mean the kind of dogs we have trouble with, with the sheep, but I mean genuine wild dogs, which wander on these plains.

POTENCY OF THALLIUM

I have one other question I want to pursue. That is, with application of thallium or something like it, in the extreme overdosages which we had described for us yesterday, where it was described that one ounce per 100 pounds will be more than adequate to control a situation, and they found an application in one instance of 4 pounds in one carcass, do we have any evidence on the implications of what it will mean when we have a heavy snow and runoff, or runoff of a stream, whether this is so diluted then and dispersed that, if when it happens, there will be no other consequence or concern, let us say downstream or downhill?

Most of these are dry areas, and it would have to be taken up with the runoff.

Mr. Train. I will ask Dr. Talbot to comment on that. I would say, though, by way of preliminary comment, that the use of a dosage of that sort, that it would indicate a complete lack of any responsible effort or concern to limit the use of a bait to a target predator species such as a coyote, and it is that kind of dosage which then moves through a broad spectrum of animal and bird life, which is absolutely reprehensible. That is without any shadow of justification whatsoever.

Senator McGee. One of the witnesses yesterday explained that one gram of thallium would be sufficient to do in a man, and a 4-pound concentration seemed a trifle excessive. There is concern, whether, because of its great potency to destroy, whether we had also a reason for others to get into this to see what the runoff capabilities would be in the event of a spring thaw or something like that. Would you care to comment on it, Doctor?

Dr. Talbot. Yes, Mr. Chairman. Thallium, is a material that is exceedingly persistent, exceedingly long-lived and very highly poisonous to a broad spectrum of living things.

For example, in Hawaii, where it has been used on bait stations for mongooses, it has killed the plants in a rather large circle and the land has remained sterilized for 2 or more years following the application. I think this is an indication of the potency of the stuff.

Human Ingestion of Thallium

We don't, as far as I know, have evidence of thallium as such affecting humans, from its use in predator control, that is, through runoff or something of that sort, but it is possible that the reason we don't have evidence is we just don't have enough information.

Using amounts as great as that which you were describing, and that were described in testimony yesterday, poses a very real threat. This material will last after, for example, the carcasses that have been used for bait have decomposed, and this could indeed get into runoff.

Perhaps the odds on humans ingesting it are low, but where there is so much of it there is a clear threat.

Extensive Impact of Thallium

The other point is that thallium is cumulative. It, as Chairman Train mentioned, moves up through the food chain, so that if you get a fairly widespread amount of thallium, and this is picked up by smaller organisms, and these in turn are eaten by larger ones, it can pass up through the food chain, being, in effect, concentrated and then killing the animals near the top.

Therefore, its impact may extend far beyond the target animals or even the secondary nontarget creatures.

Senator McGee. That in itself may well point to the importance of the far more stringent controls over substances like thallium with no relation to eagles and no relation to predator controls because of its implications in other ways and this is only incidental to some of the points we have here, and I hope that all of the right eyes are open to what those implications really are.

Now, I have no other questions this morning. I do want to thank you very much. It was extremely helpful, and I want to say again, from this one Senator, that we are again quoting one other distinguished American, "We sleep better nights because you are down here." We think it is great, and it is likewise, I think, great for my State. We have been trying to get some attention from AMTRAK, and this way we have a "Train" in Wyoming now.

Subcommittee Recess

The subcommittee will stand in recess until 2:30 p.m. I thank you very much.

(Whereupon, at 10:25 a.m., June 3, 1971, the subcommittee was recessed to reconvene at 2:30 p.m. the same day.)

(AFTERNOON SESSION, 2:30 O'CLOCK, THURSDAY, JUNE 3, 1971)

NONDEPARTMENTAL WITNESSES

DEATHS OF EAGLES IN WYOMING

STATEMENTS OF:

KEITH BECKER, EXECUTIVE DIRECTOR, WYOMING OUTDOOR COORDINATING COUNCIL

ALEXANDER SPRUNT, RESEARCH DIRECTOR, NATIONAL AUDUBON SOCIETY

5-YEAR TABULATION OF EAGLES KILLED BY OTHER POISONS

Senator MCGEE. The subcommittee will come to order.

Mr. BECKER. Mr. Chairman, if we may, we will go back to the statement which was being delivered at the close of the hearing.

Senator MCGEE. Proceed.

Mr. SPRUNT. I am Alexander Sprunt, research director of the National Audubon Society. I put most of my remarks in the record yesterday afternoon. I very much appreciate the opportunity of concluding at little more length. I will be brief, however.

The first thing I would like to do is give you for the record a tabulation of the eagles that I mentioned yesterday that have been killed by other poisons over a 5-year period in the West. These, I want to emphasize, represent only those records that we happen to have in our files. They are not complete. At least, we have strong reason to believe that they are not a complete record of the losses from these causes.

Senator MCGEE. You submit them because they are indicative?

Mr. SPRUNT. Precisely. As a matter of fact, we know, or have reason to believe, that the Bureau of Sport Fisheries and Wildlife has other records of the same nature.

Senator MCGEE. Would they be more detailed or more extensive?

Mr. SPRUNT. I think they are more extensive. This one is reasonably detailed, but I believe they have more extensive records.

(The tabulation follows:)

DENVER WILDLIFE RESEARCH CENTER—DENVER, COLO.—1080 AND STRYCHNINE IN RAPTORS

Invoice No.	Location	Sample description	Chemical found	Date received
6725	California	California condor, stomach lining, crop contents, heart tissue.	1080—0.75 mg	July 1, 1965
		California condor, stomach contents.	No strychnine	
6756	South Dakota	Golden eagle, heart, liver and stomach contents.	1080—0.13 mg., no strychnine	Apr. 12, 1966
6757	do	Golden eagle, heart, liver and stomach contents.	1080—0.20 mg., no strychnine	Do.
6758	do	Bald eagle, stomach contents	1080—0.24 mg., no strychnine	Do.
7508	do	Golden eagle, viscera (liver and gastrointestinal tract).	1080—0.55 mg	Nov. 10, 1966
7509	do	Golden eagle, viscera (liver and gastrointestinal tract).	1080—0.21 mg	Do.
7510	do	do	1080—0.29 mg	Do.
7511	Colorado	Golden eagle, heart, liver and gastrointestinal tract.	1080—0.31 mg	Dec. 15, 1966
8540	South Dakota	Golden eagle stomach contents	1080—not found	Jan. 16, 1968
10129	Nebraska	do	1080—0.33 mg	June 3, 1968
10130	do	do	1080—0.02 mg	Do.
10131	do	do	1080—0.05 mg	Do.
10228	do	Golden eagle, viscera	1080—not found	Aug. 20, 1968
10227	do	do	do	Do.
10421	do	Golden eagle, head	NaCN—present	Dec. 18, 1968
10464	South Dakota	Golden eagle, viscera	Strychnine—positive, 1080—not found.	Nov. 19, 1968
10465	do	do	Strychnine—not found, 1080—not found.	Nov. 28, 1968
10467	do	Golden eagle, BKHLM	Strychnine—not found, 1080—0.86 mg.	Do.
10483	Colorado	Golden eagle, viscera	Strychnine—not found, 1080—0.1 mg.	Mar. 5, 1969

Note: The above analyses were run on birds all of which were suspected in advance of having been killed by 1080 or strychnine.

EAGLES KILLED AT BASE STATIONS OF DIVISION OF WILDLIFE SERVICES

Mr. SPRUNT. I mentioned yesterday that I was afraid that this incident was only the tip of an iceberg showing above the surface. I am afraid this is true. We do not expect, of course, the Division of Wildlife Services to report on eagles killed at their own base stations. This is hardly within the bounds of reasonable expectation.

Senator MCGEE. Do you have every reason to believe there were some killed at their base stations?

Mr. SPRUNT. Yes, sir, we have excellent reasons to believe that there were some killed and that these birds have been deliberately suppressed in a number of instances.

Senator MCGEE. Those may be the ones that Mr. Suffolk brought up here yesterday.

OTHER WILDLIFE SPECIES KILLED THROUGH ANIMAL CONTROL MEASURES: 1920–30 RODENT CONTROL WITH THALLIUM

Mr. SPRUNT. It could be. The question of species other than eagles that have been killed during the animal control measures was also brought up at a time or two in the hearings.

I thought you might be interested in one rather extensive record of this kind of thing, also with thallium, that occurred in the late 1920's and early 1930's in California, where they went into a rather extensive rodent control program with thallium, and there were 60 species of wildlife that were killed in that operation.

Senator MCGEE. You mean birds, animals, reptiles, all things?

Mr. SPRUNT. Mostly birds in this case. The man who made this tabulation was primarily interested in birds. He had 60 species, among which were golden eagles. He did have a number of mammal species, too—cats, dogs, mules, sheep, deer, and so forth.

Of course, the agent here was thallium on poisoned grain.

Senator MCGEE. That was a little different situation.

Mr. SPRUNT. It is a little different situation, but it is the same agent.

Incidentally, these eagles that are mentioned in this tabulation are from base stations of the Bureau.

We have recently attempted to get some up-to-date figures on nontarget wildlife that has been killed during the Bureau's animal control operations, and have been unable to do so. The last tabulation of this that we are able to come across is that of the Leopold Committee that gathered information on this subject in 1965.

We attempted to get some information on this from the Division of Wildlife Services recently, and were told that tabulations, at least on a national level, are not taken on nontarget wildlife any longer.

PROMISE REVIEW BY BUREAU AND COUNCIL ON ENVIRONMENTAL QUALITY

We certainly welcome this review of the program and the policies of damage control of the Bureau which has been promised by the Department of the Interior and CEQ. We think that this should go a long way toward pointing up some of the corrective measures that very badly need to be taken. We think it will be quite helpful in bringing the whole thing into balance.

We certainly want to commend both of those groups for undertaking this review.

1971 APPROPRIATION FOR ACCELERATED RESEARCH ON PREDATOR CONTROL

We would also like to commend you, Mr. Chairman, for having the $100,000 appropriated for nonlethal control of predators. We certainly think this is a step in the right direction.

STUDY BY DENVER WILDLIFE RESEARCH CENTER OF BUREAU OF SPORT FISHERIES AND WILDLIFE

I am sure that you are familiar with the excellent beginnings that have been made on this type of thing at the Denver Wildlife Research Center of the Bureau of Sport Fisheries and Wildlife. They have been working for a number of years on the development of chemosterilists and reproduction inhabitants.

They would be in a position to move forward vigorously along these lines if funding were available to them.

We applaud your efforts in spotlighting this unfortunate occurrence. I want to assure you that the National Audubon Society will support you in your efforts in promoting nonlethal control of predators.

Senator MCGEE. Thank you for your summary.

Keith?

65-903 O—71——9

Statement of Mr. Becker

PRESENTATION FORMAT

Mr. Becker. Thank you, Mr. Chairman.

As I mentioned yesterday, I will make every effort to keep my remarks brief. I would like to summarize some of the more important points that I feel were presented in my written statement in hopes that that will give us a basis for some discussion of what I think are critical areas here.

I have some additional remarks that I think are pertinent to this submerged iceberg which exists supposedly below the surface of what we have seen in dealing with thallium sulfate in eagles.

Senator McGee. Those are the frozen funds downtown.

Mr. Becker. That may be a portion of the iceberg, sir.

AGENCY PERSONNEL ADMINISTERING PREDATOR CONTROL PROGRAM

There were a number of points raised throughout the course of these hearings as to the dedication and the efficiency and the nature of the personnel within the various agencies who administer this predator control program within the bureau, within the Wildlife Services Branch and within the various State and county control programs that exist.

I think that I would like to direct a portion of my remarks to this area.

Evidence of Additional Bird Deaths

There is substantial evidence that the number of birds that were found is only a small portion of those which may have succumbed to one sort or another——

Senator McGee. Why do you say that?

Mr. Becker. There have been some indications which apparently cannot be verified at this time and which we have purposely excluded from testimony because we need more background. It is not quite on the level of rumor, but yet we don't have the authoritative evidence to make them part of the hearing record.

Senator McGee. As you accumulate those, however, and can verify them, we would appreciate your sending them along.

(The information was not received in time for printing.)

Mr. Becker. We certainly appreciate that invitation. We will forward this information as it becomes available to us. We believe that there are probably 80 birds which can be verified as dead.

Causes of Deaths

Senator McGee. Not necessarily from thallium?

Mr. Becker. By no means necessarily of thallium. In fact, there is considerable question in my mind as to whether this thallium is the more important item in the sort of losses that we have experienced.

Senator McGee. What is your educated guess as to what might be the real cause?

Mr. Becker. I will get into that in a moment. If I may, I will proceed here with the course that I am on and I will try to break that down a little bit, although I think it is a little difficult to come up

with figures. Possibly I can give you some reasonable percentages as to how these things may break down.

Other Losses of Similar Magnitude

Not only do we believe that this total loss surely exceeds that which we listed by a substantial margin, but this sort of situation is not unique to this incident. Losses of similar magnitude have been transpiring for a very, very long period of time.

Mortality Study By John Turner

Much of this is borne out by a mortality study conducted by Wyoming State Representative and ecologist John Turner, who has records that indicate losses over a multi-State area.

Senator McGee. I visited John and he had some material and data that were quite interesting. We will make this information a part of the record at this point.

(The information follows:)

State of Wyoming

FORTY-FIRST STATE LEGISLATURE
HOUSE OF REPRESENTATIVES

JOHN F. TURNER
TETON COUNTY

COMMITTEES:
TRAVEL, RECREATION & WILDLIFE
LABOR & FEDERAL RELATIONS

May 29, 1971

Senator Gale McGee
Old Senate Building
Washington, D. C.

Dear Senator Gale Mcgee;

I congratulate you on your concern for the recent eagle deaths. The hearings should be of considerable benefit. I am sure you would agree that the recent slaughter of both Golden and Bald Eagles is a tragic and useless loss to the people of the state - and the nation. It is my strong belief that occurrences such as these poisonings and shootings must not be allowed to continue.

As perhaps you are aware, for several years, I have been conducting studies of eagles - especially of the Bald Eagle, in eight of the Rocky Mountian States. This research has involved contacts with 600 individuals in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. I am convinced that these needless killings of eagles have been widespread throughout our region for several years.

Our national bird, the Bald Eagle has declined dramatically in recent years and one of its last strongholds has been in the Intermountain West. Our resident population is small but significant; the species reproduces slowly and if mortalities like those suffered recently continue, we will lose the bird as a member of our wildlife complex in the next instant of geological time.

The evidence that carelessly used thallium was the cause of the poison mortalities emphasizes the danger of highly toxic agents being used by individuals lacking sifficient knowledge and concern. Frankly, we can no longer afford to have these indiscriminate poisons in the hands of the nonprofessional whose practices are often irresponsible and clouded with tunnel vision and distorted objectives.

In view of the irreplaceable losses already suffered, and the need to take positive action to save our national emblem I am hoping you will consider preparing and introducing a bill ofthe following nature into the Congress of the United States.

On behalf of the American people, we need a bill to forbid the use of certain toxic agents by private converns in predator and rodent control activities. Under such legislation, it shall be unlawful for poisons such as thallium, cyanide, strychnine, parathion and 1080 to be used in predator and rodent control by anyone but authorized agents of governmental departments. The designation of which toxic agents are to be removed from private use will be determined by the Director of the Environmental Protection Agency

(EPA). Upon application by recognized groups, the Director of the Environmental Protection Agency, shall be allowed to grant exceptions for non-governmental use in certain hardship situations. For the purpose of this act, "predator control" should mean regulation of mamals or birds which cause depradations by killing or maiming of domestic livestock.

Some reasons for offering such a proposal to resolve this deplorable situation are as follows:

* Thallium has been removed from federal use since 1967. Use was also discontinued by the Wyoming Game & Fish Department because of the difficulty in handling and potency as a lethal agent against non-target species. Such latter characteristics are representative of other lethal poisons still being distributed and applied by private concerns - most of which are removed from workable controls and regulations.

* Many of these indiscriminate poisons are now in widespread use by nonprofessionals. It is strongly believed that eagles have been target and non-target victims of these practices for some time. During certain times of the year, exposure of poison baits is incompatible with the survival of eagles in particular areas. Resolvement of this situation can't be accomplished under the permissive situation we have at present.

* At certain times of the year, the American Bald Eagle is residing in vast areas of the Rocky Mountain West. At different times of the year - especially in Fall, Winter, and Early Spring, observations have been reported in every county of the state of Wyoming. Wyoming is now one of ten states left in the nation which still have any significant number of resident Bald Eagles - perhaps a dozen or so adult pairs remain. Whether or not any of the recent killings were Wyoming residents cannot be determined, but the loss is definitely irreplaceable.

* During the last 10 years, I have observed a disturbing decline in active Bald Eagle nests in northwestern Wyoming. Remaining pairs in the Jackson Hole-Yellowstone region have been producing young birds but the decline continues. Perhaps the young birds are leaving the confines of the parks during the non-summer periods and are falling victims to poisons, shootings, and power lines in other regions. Whatever the reason for the losses, unless the young birds survive to establish new nests and replace older age classes, the birds have little chance of surviving in these areas.

* The population of Bald Eagles in the United States proper is at a crisis stage. Only 400 to 500 adult pairs remain, and of these, probably only about 200 pairs are capable of producing young birds. Reproductive rates have dropped off significantly since the applications of hard pesticides were begun after World war II. Effects of pesticides, plus other poisonings, shootings, electricutions, and loss of habitat push the Bald Eagle closer and closer to regional extinction in the lower 48 states. Our national emblem could well disappear from the landscape as a resident bird south of Canada before the end of the century.

* Except for a few suspected pairs, the Bald Eagle has disappeared as a resident from states such as Colorado and Utah. It would indeed be desireable to reverse the trend of declines and re-establish nesting birds in areas where habitat is suitable. Accomplishing this will be impossible as long as poisons are used in careless and widespread manners.

* The Golden Eagle has been severely persecuted in areas of the Rocky Mountains and significant declines are suspected in many areas. This species, in addition to the Bald Eagle, has been accused of losses in the wool growing industry which border in fantasy. 8200 lamb deaths were attirbuted to eagles in Wyoming in 1969. These ezaggerated and distorted figures are inexcusable - especially considering that competent and prestigious studies show that eagles only rarely take a lamb. The data on reported losses are collected in a non-statistical manner by the woolgrowers and any proofs that actual reported killings occurred are nonexistent. Such unwarranted claims provide the basis for the depressing philosophy that eagles must be killed. Certain members of the industry seem to forget that by slaugthering eagles they are removing important controls upon rabbit and rodent populations which compete with stock for range grass.

* The needed but depressing publicity that has been focused on the recent eagle killings can do no good for the image of Wyoming around the country. Perhaps lasting damage has already occurred. Perhaps the "Cowboy State" of open spaces and unmatched scenery will now be remembered as the state "which kills eagles." Although hard to determine, the negative effect this could have on potential visitors might be sustantial. Mrs. Edward Long from California writes me, "Last year we spent a good deal of time and money in your state; marveling at the sceniv beauty and the abundant wildlife ... Publicity should point out that this type of story (the killing of eagles) does not encourage people to visit Wyoming, and the tourists' good will and money are valuable to any state's economy."

As a citizen of Wyoming, I ask you to weigh the above and consider favorably to introduce and help gain passage of legislation of the nature mentioned earlier. We must take such action if we are to preserve our remaining eagles - and other valuable threatened species from disappearing from our lands. These creatures are in trust - for present Americans - and for generations to come. To deny ourselves the opportunity to take positive measures for protection of these magnificent animals will be a betrayal to the present - and the future.

Similar comments are being sent to Senator Clifford Hansen and Congressman Teno Roncalio. Copies will be distributed to interested parties. Thank you for your consideration and I anxiously await your reply concerning this matter.

Sincerely,

John F. Turner

John F. Turner

State Representative - Teton County

SERIOUS QUESTION OF EAGLE SURVIVAL

Mr. BECKER. Excellent.

The question is seriously raised as to the survival of the eagle as a species beyond the turn of the century. We don't know when we may go past the point of the critical population in this species.

The losses, as were indicated by Mrs. Dobas, are of such a magnitude in the very small remaining areas of the habitat—this bird is certainly partial to habitat which is uninhibited, which has been relatively unmolested by man—we feel rather certain that if we are not able to maintain the species in that habitat, it is not going to be maintained at all.

SHOOTING AND ELECTROCUTION

The losses that Mr. Turner had by their various designations include not only the poisoning but also losses largely due to shooting and to electrocution. The electrocution thing, I think, deserves more of our attention because we have powerlines throughout the State of Wyoming, throughout the West, many of them by the small cooperatives, which are not designed in such a manner that they are safe for these large birds.

Senator MCGEE. Do you know what kind of lines they were, where the 15 were lost?

Mr. BECKER. I don't know the specific structure.

Senator MCGEE. Were they co-op lines?

Mr. BECKER. I believe they were co-ops. Once again, I don't have that definite knowledge.

Senator MCGEE. Were you here yesterday when we had some testimony that suggested that they were redoing the lines and that there was cooperation in that regard, they would space them out so that there would be enough space to avoid the eagles' wings getting in contact with the wire?

Mr. BECKER. We feel, Senator, that this is an absolute imperative item in our effort to preserve the species. It is going to have to be done on a crash basis. We think that the Eagle Preservation Act of 1940 was created for a different era when the threat was not nearly so immediate.

If we are in fact going to deal with this situation, we are going to have to take some rather immediate steps to remedy things such as the powerlines which go on killing eagles throughout every day of the year, throughout every season when there are either resident or migratory eagles in the area.

The losses cannot be computed because these lines run through remote areas.

Senator MCGEE. I wonder with the many high wires we have why there has not been more of that. I suppose it would have come to somebody's attention if there had been. It must have been the peculiar construction in this case, perhaps.

Mr. SPRUNT. I have had some experience with that. We have had some instances of this throughout many of the Western States. It has been corrected in many cases by the power companies.

Mr. BECKER. This situation exists at other places in Wyoming than at Worland. Some of the lines that were constructed down through Lincoln, Sublette Counties, and possibly in other portions of

the State are also of this configuration and have not been corrected to my knowledge.

So I think this is a very serious problem, Mr. Chairman. In an act which would properly protect the species, we are going to have to consider these other sources of loss, as well as the abuse and misuse of poisonous chemicals.

QUOTES FROM JOHN TURNER, AUTHORITY ON EAGLES

I would like to quote if I may, for the record, some words from John Turner, a recognized authority on eagles. His statement is:

> The population of bald eagles in the U.S. proper is at a critical stage. The Rocky Mountain West remains as one of its last strongholds. A few but significant number of resident pairs remain, but their numbers continue to decline. If we are to preserve these future survivors and retain hopes of reestablishing them in areas where suitable habitat still exists in the intermountain West, we must take positive steps to halt the needless, irreplaceable mortalities from indiscriminate shootings, irresponsible poisonings, and electrocution from power lines.

LEGISLATION REQUISITE

To effect this sort of remedy we would like a new act, a strengthened version of the 1940 act. We feel that methods aimed at better control of poisons, though helpful, will not be adequate for the survival of the eagle species and for protection of other nontarget species of wildlife.

That act should provide for a fine, probably of not less than $500, and possibly not to exceed $5,000, and 1 year in jail.

CONVERSION OF TRANSMISSION LINES TO NONHAZARDOUS CONFIGURATION

A complete conversion of all these transmission lines on a rather crash basis to a nonhazardous configuration within possibly the next 18 months with low-interest Federal loans, if necessary, to help in these conversions, should be included.

TRANSFER OF PREDATOR CONTROL TO STATE WILDLIFE OR GAME AND FISH DEPARTMENT

We would also like to eventually see this whole predator control program, if possible, turned over to the State wildlife or game and fish departments as part of a comprehensive wildlife management program on a sound ecological basis. You can't manage one species completely separate from another. We feel all wildlife should be managed under one comprehensive and rational program.

FEDERAL FUNDING ASSISTANCE

Senator McGEE. You recommend it go to the State Game and Fish Department of Wyoming?

Mr. BECKER. Yes. This will probably take Federal assistance in terms of funds to establish the management program which will be necessary to handle the areas of predator management and control within the State.

The legitimate goal in this whole program is to recognize that the resident wildlife belongs to the State, that we either have or can de-

velop the competency in these States to have an integrated management program. I throw that out for the record as an eventual goal.

FEDERAL LEGISLATION AND MIGRATORY NATURE OF BIRDS

Senator McGEE. You would still get into a little complication with Federal legislation that really implemented the protection of the eagles. Wyoming apparently, according to the testimony this morning, did not follow through with the State laws banning killing of golden eagles, and therefore you still will have those gaps. The same way with ducks. Even though the State game and fish department is responsible for the conditions there, the Federal regulation is uptight because of the overlapping flyways.

I am sure that would apply to eagles because of their migratory habits. I don't know. I am just thinking out loud. We want to make sure we don't get caught as we are now with gaps that everybody thinks everybody else is responsible for.

Mr. BECKER. I agree wholeheartedly. We are talking here about a species which is not necessarily resident to the State and for that reason would not fall under the jurisdiction of the State alone and would certainly have implications as to Federal management of endangered species.

I am referring much more to the predator control program of resident wildlife within the State. I think this is something that I would like to have entered into the record as an item for consideration by this committee and by this body as a desirable direction and a possible future policy.

At this point I would like to go into the area of the program, the nature of the program, the type of statistics that have been involved. This is now outside my written testimony, but I think it is a valuable area to explore. I would like to deal with it briefly at your pleasure.

The predator control program in many of our areas might more appropriately be entitled "Predator Eradication." The wolf, the grizzly, the cougar are cases in point.

As a sportsman and outdoorsman, the Senator is cognizant of the difficulty in finding even a single downed pheasant in a restricted limited area; a brightly colored bird falling is sometimes difficult to find.

Senator McGEE. Even when you kill them dead, they still crawl.

Mr. BECKER. I think it puts in perspective the difficulty of finding a species such as the eagle which blends very well with this environment, dead, in an area which is rugged, is uninhabited, and covers thousands of square miles. This illustrates my point a little bit that we have only begun to find these dead eagles in our area.

This has held true for the whole predator control program. The public in general is not cognizant of most of these losses to wildlife which are not endangered species.

ABSENCE OF CONTROL PROGRAM IN TETON COUNTY

In Teton County, we have no formal control program within the valley. There is control done outside the valley through agreements with the Bureau of Sport Fisheries and Wildlife in those areas that

are subject to sheep utilization. Some of those areas are on the Hoeback and over on the west slope of the Tetons, which are utilized for sheep.

As we get down into the Hoback Rim area and the Sublette County area, where there is utilization for sheep, in those areas several illicit baits have been found, placed there by persons who have no authority to place them, and on public lands.

Illegal Poison Campaigns

Dr. McCloud, who is a highly respected physician in Jackson Hole, has found carcasses in those areas which have lain out all season and have not been touched by scavengers or predators of any type. Now these were not baited carcasses. They were in areas where this sort of illegal control occurred.

Some of these poison campaigns, these illegal poison campaigns, have been so devastating and so thorough that there is no carnivorous wildlife in those regions. You can walk for hours and sometimes days in some of these areas which have been subjected to intensive control, both by legitimate and illegitimate means, and find no carnivorous wildlife.

I think this has reference when we think of some of the statements that were delivered with reference to the Casper area where all that were found were dead eagles. Now, the eagles are migratory animals which can move into the area. If the rest of the predators have been eliminated by intensive programs, then they may still be residents of that area until such time as a new batch of these toxic things are put out.

Effective Control of Target Species

It is our belief that a realistic wildlife management program can adequately protect the livestock people against unrealistic and excessive losses. According to statistics which we have from the Bureau of Sport Fisheries and Wildlife, poisons are not a particularly effective means of controlling a target species.

They feel that hunting, direct shooting, aerial shooting, which has recently been before this body, are all more effective in the control of target species than poisoning. In fact, they rarely know what their effectiveness is with these poisons, because animals vary so greatly and even though they refer to 1080 as selective, it is selective depending on how much of the carcass the animal may eat, how many times they return to the bait, and what is secondary feeding habits may be.

So I would suggest, and I suggest in agreement with the vast body of sentiment and expertise in this area, that poisons are not a necessary factor in predator control and predatory animal management processes in our Western States, and that we could quite adequately manage these animals without the use of any poisons whatsoever.

WILDLIFE SERVICE BRANCH EXCESSIVE PERSONNEL AND FUNDING AND INEFFECTIVE METHOD OF VERIFYING LOSSES

There is good reason to believe that right now the Wildlife Services Branch is oversized and has a budget which far exceeds its require-

ments to mitigate the actual and verifiable losses. The Branch has depended for a number of years on a statistical method which is outrageous, absolutely incomprehensible if looked at in depth.

They send out questionnaires, which are returned in very limited number by those people who have either in fact had excessive losses or have managed excessive losses. The questionnaires are rarely returned by those operators who either don't use public lands or have negligible losses.

And then this very small body of information which is compiled is extrapolated to give the losses over the entire range. So we don't know what the factor of error is. But it may be in the realm of several hundred percent.

This is the statistical basis on which we base our appropriations and our manpower for predator control branches.

AGENCY STUDIES OF PREDATOR CONTROL

We were quite frankly delighted to hear of the intent of the Council on Environmental Quality and the Environmental Protection Agency and the Department of Interior in their efforts to explore this whole issue of predatory animal control. We were delighted that you, sir, have had the foresight to bring this matter before the attention of this body.

We feel that for the first time wildlife may have an even break and be viewed in an objective and realistic manner as to their values as well as to their debits in the whole use and management area.

I think throughout this hearing we are in general agreement as to the tragedy of the events that we have witnessed over the last month, and I think we are in general agreement as to the necessity of some sort of solution.

I would plead with you that that solution go beyond the immediate effect and beyond the immediate losses and the causation of those losses, to the total picture as related to losses throughout the Nation by all means and objecively weighed against the benefits and the values that these species have as an integrated part of the whole wildlife community and as a public resource.

It seems to us that one cannot but question the ability of a Nation not able to preserve a livable environment for the eagle or for other wildlife species, to in fact preserve a livable environment for man.

We of the Outdoor Council in Wyoming, with the vast proportion of Wyoming residents, believe that with prompt appropriate action we can preserve them both.

Thank you, Mr. Chairman.

Senator McGee. Thank you very much. It will be exceedingly helpful to us.

You are the last witnesses we have now, pending further developments.

HOLDING RECORD OPEN FOR RECEIPT OF ADDITIONAL INFORMATION

We will hold the record open for perhaps 10 days. In the meantime, if you accumulate additional information, we will be glad to receive it for the record in that interval, or if any others have information of that sort, it will be helpful.

Mr. BECKER. Thank you, Mr. Chairman. We will be very happy to serve in any capacity as far as accumulating any additional resource material that might be of service to you.

STATEMENT OF LEWIS REGENSTEIN, WASHINGTON COORDINATOR, COMMITTEE FOR HUMANE LEGISLATION

Senator McGEE. I have received testimony from Mr. Lewis Regenstein of the Committee for Humane Legislation.

Without objection, this testimony will be placed in the record at this point.

(The statement follows:)

The Committee for Humane Legislation appreciates the opportunity to state for the record its views on the recent and tragic eagle deaths in Wyoming.

We do not believe that this latest (and highly publicized) poisoning incident should be viewed as an isolated occurrence. Rather, it should be evaluated in the context of the United States Department of Interior's massive effort to wipe out all wildlife which it considers undesirable.

The Committee for Humane Legislation therefore requests that the Agriculture Subcommittee take whatever action is in its power to protect the American Eagles from the Department of Interior. The Interior Department—both purposefully and through negligent indifference—has been killing off our eagle population for many years. This latest instance of eagle poisonings is part of the western sheep and cattle ranchers' continuing program—aided and abetted by the Interior Department—to kill off all predators which may be potentially "injurious to agriculture."

The campaign against the American Eagles by vested interest group goes back many years. In Alaska, from 1915 until 1951, over 100,000 eagles were killed and bounties paid on them because they were considered damaging to the salmon industry.

More recently, western ranchers—particularly sheep and cattle farmers—have joined this attempt to wipe out the eagle. Many of these ranchers persist in the mistaken belief that eagles prey on their livestock, probably because eagles have been observed feeding on the carcasses of animals which had already been killed. In actuality, eagles, by preying on snakes and rodents, perform functions which are beneficial to farmers.

Incredibly, the Interior Department has joined forces with these groups that wish to destroy any wildlife which might compete with agricultural interests. For example, in March of 1967, Secretary of Interior Stewart Udall authorized the killing of golden eagles "for the protection of livestock" in 52 of 56 Montana counties. The law still authorizes the Secretary of Interior to permit the "taking" of golden eagles "for the purpose of seasonally protecting livestock" and the "taking" of bald eagles "under special circumstances." Up to March 1970, blanket permits for killing golden eagles were freely issued. Moreover, in testimony before this committee on 2 June 1971, Assistant Secretary of Interior Nathaniel Reed stated that eagles would still be killed if it could be shown that they were harming livestock.

If we are to preserve this magnificent bird for future generations to enjoy and marvel at, it is clear that we must remove from the Interior Department the authority to permit such killing. Alternatives—such as financial compensation for livestock losses—must be found.

The number of eagles killed by permit, however, is far less than that killed by our Interior Department's mass and indiscriminate poisoning program. Known as the predator control program, this huge campaign includes the distribution throughout the western United States of tons of grain and meat baited with the deadly poisons strychnine, cyanide, and sodium monofluoracetate, or 1080. The purpose of this program is to wipe out predators such as foxes, coyotes, and mountain lions. However, there is no way to prevent non-target species, such as eagles, from feeding on this bait or on the carcass of a poisoned animal. For years, eagles have been dying from 1080; and Assistant Secretary Reed has admitted that it was present in the area in Wyoming where the dead eagles were

found and has not yet been ruled out as a cause of some of their deaths. In earlier testimony before this committee, Mr. Alexander Sprunt of the National Audubon Society provided documentary evidence that at least 14 eagles have died as a result of ingesting 1080. As he pointed out, this is but "the tip of the iceberg"—many, many more have undoubtedly perished and not yet been found and autopsied.

The Interior Department is aware of this situation and admits that its program is "accidentally" killing eagles. Yet, each year it increases both the scope and cost of this poisoning program. We have carefully noted Assistant Secretary Reed's testimony to the effect that the predator control program will be studied and improved. We have heard such promises many times before. The important thing is that Interior plans to continue this extermination project. We find this shocking and unacceptable, and we urge an immediate end to the poisoning of what little remains of the wildlife on our public lands.

The Interior Department has already succeeded in driving the wolf, the mountain lion, the black-footed ferret, the grizzly bear, and several other species of wildlife to the very brink of extinction. According to the new Secretary of Interior, Rogers Morton, there are now only about 800 nesting pairs of bald and golden eagles left in the United States. Unless the Interior Department brings about an immediate and drastic change in its wildlife policies, our national symbol will surely vanish from this continent.

LETTER FROM M. J. RYAN, FOOD AND DRUG ADMINISTRATION

Senator McGee. I have received a letter from Mr. M. J. Ryan of the Food and Drug Administration concerning their activities with thallium.

The letter will appear in the record at this point.

(The letter follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
PUBLIC HEALTH SERVICE,
FOOD AND DRUG ADMINISTRATION,
Rockville, Md., May 28, 1971.

Hon. GALE W. MCGEE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MCGEE: This is in reply to a telephone request from Mr. Dudley Miles of your office for information relating to Food and Drug Administration activities concerning thallium and its salts.

As you know, thallium salts are presently used as rodenticides and are subject to regulations administered formerly by the United States Department of Agriculture and presently by the Environmental Protection Agency.

The Food and Drug Administration has traditionally been concerned over the possible misuse of this compound in food processing establishments. As far back as 1954, letters were issued to FDA District Directors advising them that careless use of such rodenticides would be considered a violation of the Federal Food, Drug, and Cosmetic Act and subject to regulatory action. Inspectors were instructed to inquire into the use of these compounds whenever they made food plant inspections. This continues to be our policy in an effort to prevent possible food contamination problems.

In 1965, USDA cancelled the registration of thallium compounds for use in and around the home except by qualified personnel from Federal, State, and local governments because of its potential health hazard. Besides requiring a statement limiting directions for household use of thallium to Government agencies, the new ruling also required labels of these products to bear a clear and prominent warning against sale to the general public.

Thank you for your interest. Please let us know if we can be of further assistance.

Sincerely yours,

M. J. RYAN,
Director, Office of Legislative Services.

STATEMENT OF DAVID W. K. SUMNER, JOURNALIST AND WRITER, MORRISON, COLO., REGARDING THE EAGLE DEATHS

Senator McGee. Subsequent to the hearings on the eagle deaths in Wyoming, I received testimony from Mr. David W. K. Sumner with a request that it be placed in the hearing record.

Without objection, his testimony will be placed in the record at this point.

(The testimony follows:)

Mr. Chairman and Members of the Subcommittee, during the past four months, I have been actively involved in studying, examining and exploring the various predator control programs now extant in the Rocky Mountain States (Colorado, Wyomnig, Utah, New Mexico, Montana). The discovery of the Jackson's Canyon eagles occurred in the midst of my research—and I spent considerable time on this local issue—or occurrence—as well as attempting to get an overview of things.

As I write this statement, the Wyoming eagle deaths have, it seems, already accomplished some positive changes, which I will list:

1) People have learned about thallium sulfate, and what it does—and the substance has, for all practical purposes, been made unavailable.

2) The endangered condition of our native eagles is now known by more, though the inadequacy of the two eagle protective acts hasn't got much press.

3) There is some, but not much awareness that the eagle deaths are not an isolated instance, and that poison is a way of life in the West and an integral part of an old and established federal program.

4) The sheepmen with whom I have talked are at least envisioning the possibility of having to deal with predators in some fashion that isn't such dreadful public relations.

5) The inadequacy of poison control laws—both state and federal—has been underscored, though not widely.

6) The inadequacy of scientific work on: a) the poison programs and its effects on the environment, and b) predator ecology, and c) predation on sheep and other domestic stock—all this has, to some extent, been raised.

All this is encouraging, but it is but a beginning in a long list of tasks ahead. At least I hope that it is such a beginning, for I do have fears that the Wyoming eagle deaths will not have the repercussions I feel they should. Part of those fears stem from a personal skepticism about the charges now being filed in Casper—and the effects of such a trial, no matter how it turns out. For solving this case ("getting a few arrests and making a few convictions," as Interior Secretary Morton has suggested) or not solving it (i.e. acquittal) isn't going to get at the hear of the problem that killed the Wyoming eagles—and is killing countless species of other wildlife this very minute, in an on-going very business-like fashion. Solving a case is seldom *dealing* with the problem as things seem to work in the U.S.

The basic problem here is a long standing program that exists to benefit various sectors of the agricultural community. For many years, killing predators by whatever means available—as well as other innocent animals who happened to drop by—was a generally accepted practice. However, I think there are now two basic ways of arguing against its continued acceptability:

1) the predator poisoning, etc. program has grown to a point that makes it a self-perpetuating, self-expanding bureaucracy. While sheep numbers in the U.S. have dwindled from 56 million in the early 1940's to about 20 million today, the budget for first Predator and Rodent Control and now the Division of Wildlife Services has risen from an annual figure of $2.7 (1940) to approximately $7 million now. Put simply, that means more than twice as much control to protect less than half as many sheep. DWS personnel have told me that they also are engaged in "pesticide appraisal and monitoring" and in "wildlife enhancement"—however, in Colorado and Wyoming in 1970, this amounted to about 4% of the budget. The other 96% was for "animal damage control."

2) like clean air, clean water, ample forests, the people of this country are coming to see wildlife as a precious, but dwindling resource. More and more these days, there is talk of the non-consumptive use of wildlife—the simple acts of looking, marveling and/or maybe snapping a picture. More and more people

simply want to see a coyote, a bobcat, or an eagle—or in some cases, to have the assurance that these species continue to exist and will keep on doing so.

From a scientific point-of-view, this same concern voices itself in a plea for attention to predator ecology—and also to simple wildlife ecology. Something is known about predator-prey relationships—though not early enough. There is, however, ample evidence that eliminating certain predators from certain areas can produce disasterous backlashes—e.g., the case of the Kaibab deer herd after predators there were killed off, and many cases reported to me of rodent overpopulation following upon intensive coyote and bobcat killing programs.

With this general evidence in mind, I would like to suggest the following be undertaken. Some of these are definitive steps, but more are aimed at pinpointing information which can be the basis of sound concrete moves—laws, decisions, whatever.

1) The predator control program would hardly exist today if certain portions of the agricultural community did not need, and expect it. However, the case of the Wyoming eagles indicates that there is considerable disparity of views about the damage certain predators actually do. It is pretty easy to conclude that no one really knows how many sheep are killed by coyotes, how much grass is devoured by prairie dogs with what effects, etc.

To my knowledge, the *first* scientific study is now under way to determine just how many sheep are taken by coyotes in an area of northern Colorado. This is being done by a University of Michigan group on a National Science Foundation grant.

While there are too many variables to come up with any absolute criteria or figures for predator damage, some solid benchmarks must be scientifically established. How many sheep do eagles kill in Wyoming? And so forth.

It seems that it would be to everyone's advantage if these areas of ignorance were cleared up. Many people suspect that predators are being blamed for more damage than they do, and that they are therefore being excessively controlled. It strikes me as unsound to blame a multiplicity of ills on predators; far better we find out what the ills really are and get at them directly.

2) Concurrently, much more research must be done on the area of non-toxic, non-lethal means of predator control. I believe that the Division of Wildlife Services lab in Denver is a highly misguided operation, and I would like to see it undergo some major changes—a vast reduction in poison research (basically the place strikes me as a poison research and testing firm), and a reemphasis on other means of predator control. By this, I mean not only work on repellants and birth control pills for coyotes, but also some careful study of agricultural management which will minimize predator losses. In the case of sheep, for example, are there better ways of overseeing lambing than those now practiced—or better means of herding? I have collected some evidence of the sheep losses due to poor herding, and sloppy lambing care—as these losses are attributed to predators.

3) This last observation points toward the condition of the agricultural crop with which I am most familiar—sheep. Since this industry has the largest stake in predator control in this region, it is logical to look and see what is going on.

My basic impression—and it is not hard to come by—is that the sheep industry is in deep trouble. However, I also sense that the sheepman is crying out against predators excessively because they are a major problem that's close to home, and that he can act against physically and immediately.

I'd like to see a broad and impartial assessment of the sheep industry—its history, its present condition and its future. One writer recently suggested that the industry as it is presently constituted will have to change—or die. I don't know enough about the sheep industry to make any definitive statements—though I am uneasy about any industry that must be propped up by such a large and varied number of supports and subsidies. And I'm particularly uneasy when these sheepmen repeat, over and over again today, with all the aid they are presently getting, "We need more help . . ."

4) As soon as possible, convene a new "Predatory Mammals" hearing—as was most recently done in February and March of 1966 by the Subcommittee on Fisheries and Wildlife Conservation of the Committee on Merchant Marine and Fisheries—House of Representatives.

The foregoing, I hope will provide enough input to build a program of Predatory animal management that is suitable to the needs of the last quarter of the 20th century—as well as the years beyond. To do this, furthermore, we need not only scientific data, but also a basic commitment underlying that

data—and thus shaping the conclusions that issue from it. That commitment is: all animals, be they so-called predators or otherwise, are of value to all Americans—as parts of a diverse web of creation which gives life a sustaining variety and network of relationships.

Interim steps between now and the enactment of a truly 20th century program of predator management should be careful to err on the side of caution, not excess. Such steps should include:

1) Stricter control of all poisons that might be used to kill animals—especially any poisons which are either: a) persistent, or b) non-specific among animal species.

2) Stronger justification for and surveillance of all "control" programs—and an accurate and complete accounting of all activities. Need for control must be demonstrated in terms of verified losses; means of control must be selected to eliminate target individual animals (not species); reports of control activities must include: cost, time, means (clearly quantified), and results (animals killed and resulting decrease of predation, if any).

3) Elimination of all control not directly serving essential agricultural production. In particular, elimination of control ordered by various state Fish and Game Departments to protect species from their own natural predators, because those species are huntable by humans. There is no excuse for poisoning coyotes and bobcats to "save" grouse, pheasants and turkeys for human predators. Programs such as this, in effect, re-define a predator as "any animal that beats you to something you want for yourself." Such a definition has little to do with sound ecology.

4) Centralization of all control operations by making it illegal for private individuals as well as county and state agencies to engage in same. This seems the surest way to eliminate "freelance" programs of the kind that appear to have killed some of the Wyoming eagles. My field interviews indicated that today's federal personnel leave much to be desired; however, with an agency like Division of Wildlife Services, at least the structure for conscious management exists. The present system (sic) is such a hodge podge that there is simply no way of knowing what is taking place, no way to avoid duplicating effort, etc.

5) Immediate cessation of any control program that in any way threatens any species on the U.S. Department of Interior's rare and endangered species list.

This completes my statement. Thank you very much for your consideration.

LETTER FROM EDWARD O. LOGAN, JR., UTAH STATE UNIVERSITY, LOGAN, UTAH

Senator McGee. I am including in the record a letter I received from Edward O. Logan, Jr., Logan, Utah.

(The letter follows:)

UTAH STATE UNIVERSITY,
Logan, Utah, August 4, 1971.

Senator GALE MCGEE,
Chairman, Subcommittee on Environmental Appropriations, Committee on Appropriations, U.S. Senate, Washington, D.C.

DEAR SENATOR MCGEE: I am writing to you concerning the hearings you are currently holding on the circumstances surrounding the Bald and Golden Eagles deaths in your state of Wyoming. At the conclusion of these respective hearings (as well as those held prior to these), I would appreciate it very much if you would kindly please send me copy of each of them. Would you please acknowledge receipt of this letter concerning my request for these hearings?

Additionally, I would like to express my views and feelings on these circumstances surrounding the killings of the eagles. It is my view that the Permit System granted by the Department of the Interior to kill eagles is outmoded and ancient in methods and processes of managing predatorial birds; not consistent and lacking articulation in balancing and measuring the concepts and principles of an ecosystem; and an absolutely ignorant, biased procedure to follow in issuing the permits considering whom (i.e., sheepman and cattleranchers) determines the variables to shoot the eagles. Why isn't the Public and other interest groups consulted on these relevant matters? Why aren't public hearings held to discuss the issues in the relationships of eagles versus the killing of lambs? As an American Citizen, I always thought and educated that all wildlife

belonged to the Public, and not subject to individual ownership. Will this incident set a precedent on whom rightfully owns wildlife?

I personally favor a comprehensive and a thorough investigation and study on the interrelationships of predatorial birds (eagles) in livestock; and this definitely should include a study into the processes and procedures through which this Permit System is administered. I would recommend and prefer an independent organization to conduct this investigation and study. Perhaps, the National Academy of Sciences, or Ralph Nader's Study Group should be asked to this.

I can only visualize the events concerning the eagles deaths as a disgrace to the Nation, and as a shocking incident to the policies and concepts to the wildlife management programs of today. I am beginning to wonder if there will be more incidents similar in nature to this one, and I can only hope, with sincere apprehension and mistrust, that the day will not come where Man will see the Bald and Gold Eagles as birds of extinction.

Sincerely yours,

EDWARD O. LOGAN, JR.,
Environmentalist.

SUBCOMMITTEE RECESS

Senator MCGEE. Very fine. Thank you very much.

The subcommittee will stand in recess subject to recall.

(Whereupon, at 3:10 p.m., Thursday, June 3, the subcommittee was recessed, to reconvene at the call of the Chair.)

65-903 O—71——10

PREDATOR CONTROL AND RELATED PROBLEMS

MONDAY, AUGUST 2, 1971

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., in room 1318, New Senate Office Building, Hon. Gale McGee (chairman) presiding.

Present: Senators McGee, Hruska, and Young.

STUDY OF PREDATOR CONTROL

NONDEPARTMENTAL WITNESSES

STATEMENT OF JAMES O. VOGAN, PINEGROVE RANCH, RAWLINS, WYO.

DEATH OF EAGLES IN WYOMING

Senator McGEE. The resumption of the hearings on the problem of predator control will come to order.

On June 2 of this year this subcommittee conducted or was conducting hearings on Department of Agriculture appropriations. In the course of those appropriations requests it was developed that the moneys appropriated by the Congress a year ago for accentuating and speeding up the study of predator control had been frozen by the Bureau of the Budget and, therefore, the dimension of new requests had to be measured and in that context the problem of predator control, by coincidence, timingwise, likewise exploded with the occasion of the discovery of 50 eagles in Wyoming, many of which eagles had died from doses of thallium poisoning.

In the light of this discovery, we probed further then into the predator problem, particularly into the use of very powerful chemicals, in seeking to control the predators. Subsequent to that and through the efforts of the Department of the Interior investigators there were other violations discovered in the State of Wyoming and some prosecutions and some fines and other settlements have already been arrived at in that regard.

But persisting throughout those early hearings were word-of-mouth stories to the effect that there were many other forms of eagle kills in the interest, it was said, of controlling predators and thus members of my staff and the members of the Interior Department investigating staff came upon other interesting attributes of the problem.

The upshot of it all was that there may have been several hundred eagles killed in Wyoming through allegedly unlawful means, whether

it be with the use of aircraft, helicopters, or other devices, and to set the stage for this, our first witness for a short time this morning is Mr. James Vogan.

Mr. Vogan, would you come forward to the table in front and proceed with any statement that you may wish to make.

WITNESS ASSERTION OF CONSTITUTIONAL PRIVILEGE AGAINST SELF-INCRIMINATION

Mr. VOGAN. Mr. Chairman, I respectfully decline to make any statement or answer any questions of the subcommittee or its members on the grounds and for the reason that such statements or responses to questions might tend to incriminate me.

I, therefore, invoke my constitutional privilege against self-incrimination.

INTRODUCTION OF DOCUMENTS FOR RECORD

Senator MCGEE. I must say this is the first instance where I think the Agricultural Subcommittee has had a witness who invoked the Fifth amendment, but I do appreciate your point, Mr. Vogan, and at this point I would include in the record several documents for this hearing record.

APPLICATION TO U.S. DISTRICT COURT FOR THE DISTRICT OF WYOMING FOR ORDER CONFERRING IMMUNITY ON AND COMPELLING A WITNESS TO TESTIFY

The first is a copy of an application for an order to confer immunity on and to compel testimony of the witness, which was signed by Dudley Miles, professional staff member of the U.S. Senate Appropriations Committee and the Clerk to this subcommittee. This application was filed in the Federal District Court for the District of Wyoming under authority of title XVIII, United States Code, section 6002 and 6005.

(The application follows:)

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING

. . . . . .

In the Matter of the Application of :
:
UNITED STATES SENATE COMMITTEE ON APPROPRIATIONS :
SUBCOMMITTEE ON AGRICULTURE, ENVIRONMENTAL AND CONSUMER PROTECTION:
:
For an Order to Confer Immunity on :
and to Compel Testimony of Witness :

. . . . . .

APPLICATION

The Subcommittee on Agriculture, Environmental and Consumer Protection of the United States Senate Appropriations Committee moves this Honorable Court for an order instructing James Vogan to testify and produce evidence pursuant to the provisions of Title 18, United States Code, Sections 6002(3), 6005.

1. The Subcommittee on Agriculture, Environmental and Consumer Protection, a Subcommittee of the Appropriations Committee of the United States Senate, is inquiring into the alleged illegal killing of golden and bald eagles in Wyoming and elsewhere.

2. James Vogan may be subpoenaed to appear before this Subcommittee during the hearings on or about July 31, 1971.

3. It is anticipated that the said James Vogan will invoke the Constitutional privilege against self-incrimination and refuse to answer any questions realting to his activities falling within the scope of the above authority.

4. This application for immunity is made in good faith, with the affirmative vote of two-thirds of the full Committee and upon due notice to the Attorney General, in the belief that the witness can give important testimony which will be pertinent to the Subcommittee inquiry.

WHEREFORE, the Subcommittee on Agriculture, Environmental and Consumer Protection, a Subcommittee of the Appropriations Committee of the United States Senate, [illegible] James Vogan to [illegible] [illegible] to [illegible] relating to all matters [illegible] to called upon particular to the inquiry of said Subcommittee, pursuant to Title 18, United States Code, Sections 6002(3), 6005.

Clerk,
Subcommittee on Agriculture, Environmental
and Consumer Protection

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING

In the Matter of the Application of

UNITED STATES SENATE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON AGRICULTURE, ENVIRONMENTAL AND CONSUMER PROTECTION

For an Order to Confer Immunity on
and to Compel Testimony of Witness

SIR:

PLEASE TAKE NOTICE that upon the annexed application and approval, the undersigned will move this Court on the 30th day of July, 1971, at 10:00 a.m. or as soon thereafter as counsel can be heard for an order compelling James Vogan, Pine Grove Ranch, Rawlins, Wyoming, to testify and produce evidence in an inquiry conducted by the Subcommittee on Agriculture, Environmental and Consumer Protection of the United States Senate Appropriations Committee, pursuant to the provisions of Title 18, United States Code, Sections 6002(3), 6005.

Respectfully,

Dudley Miles, Clerk,
~~Chief Counsel~~, Subcommittee on
Agriculture, Environmental and
Consumer Protection

Date: July 20, 1971

To:

The Honoreble
The Attorney General
U. S. Department of Justice
Washington, D. C.

NOTICE TO ATTORNEY GENERAL OF FILING OF APPLICATION

Senator McGEE. Secondly, a copy of a notice signed by Dudley Miles advising the Attorney General of the United States of the filing of the foregoing application.

(The notice follows:)

AFFIDAVIT OF SERVICE

Senator McGEE. The third document is a copy of an affidavit of service signed by Dudley Miles, certifying that the notice described in the foregoing paragraph was served on the Office of the Attorney General on July 20, 1971.

(The affidavit follows:)

City of Washington)
:
District of Columbia)

AFFIDAVIT OF SERVICE

DUDLEY MILES, of lawful age and being first duly sworn on oath according to law deposes and says:

1. That he is a duly appointed Professional Staff Assistant for the Committee on Appropriations of the United States Senate and is the Clerk to the Subcommittee on Agriculture, Environmental and Consumer Protection of said Committee.

2. That on July 20, 1971, in the City of Washington, District of Columbia, he personally served a copy of the annexed Notice and Application, full, true and correct copies of which are attached hereto and made a part of this Affidavit as though reiterated at length herein, on the Office of the Attorney General of the United States by delivering the original of said Notice, together with a full, true and correct copy of said Application to Mr. E. Ross Buckley, Chief, Immunity Section of the U. S. Department of Justice.

Further affaint sayeth not.

Dudley Miles

Dudley Miles, Staff Assistant
Committee on Appropriations and Clerk
to Subcommittee on Agriculture,
Environmental and Consumer Protection

Subscribed and sworn to before me
this 27th day of July, 1971.

Wm R. Lewis

Notary Public

My Commission expires: 12-15-73

CERTIFICATION OF APPLICATION APPROVAL BY MEMBERSHIP OF SENATE APPROPRIATIONS COMMITTEE

Senator McGEE. Fourth is a copy of a certification by Dudley Miles that the filing of the application described above was approved by all of the membership of the Appropriations Committee of the United States Senate—two-thirds of them are required, but it was unanimous polling of the committee.

(The certificate follows:)

United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, D.C. 20510

July 27, 1971

I, Dudley Miles, Professional Staff Member of the Committee on Appropriations of the United States Senate and Clerk to the Subcommittee on Agriculture, Environmental and Consumer Protection, do certify that an application for an order instructing James Vogan to testify and produce evidence pursuant to the provisions of Title 18, United States Code, Section 6002(3), 6005, was approved by the Committee on Appropriations of the United States Senate with more than 2/3 of the members of said Committee expressing approval of such application.

Dudley Miles

Dudley Miles, Clerk
Subcommittee on Agriculture,
Environmental and Consumer
Protection

Sworn to before me on this
27th day of July, 1971.

W. R. Lewis
Notary Public

My Commission expires:
12-14-73

LETTER OF DEPUTY ATTORNEY GENERAL WILSON ADVISING OF NO OBJECTION BY DEPARTMENT OF JUSTICE TO GRANTING OF IMMUNITY TO WITNESS

Senator McGEE. Fifth is a letter, dated July 27, 1971, addressed to the chairman of this subcommittee and signed by Will Wilson, Deputy Attorney General, advising that the Department of Justice has no objection to the grant of immunity requested in the foregoing application.

(The letter follows:)

ASSISTANT ATTORNEY GENERAL
CRIMINAL DIVISION

Department of Justice
Washington 20530

July 27, 1971

Honorable Gale W. McGee
Chairman, Committee on Appropriations
Subcommittee on Agriculture, Environmental
and Consumer Protection
United States Senate
Washington, D. C. 20510

Dear Senator:

This will acknowledge receipt on July 20, 1971, of your letter dated July 20, 1971, addressed to the Attorney General, in which you indicate the intention of the United States Senate Committee on Appropriations, Subcommittee on Agriculture, Environmental and Consumer Protection, to apply to the United States District Court for the District of Wyoming for an order to compel the testimony of James Vogan pursuant to 18 U.S.C. 6002 and 6005 in connection with an inquiry into the illegal killing of golden eagles and bald eagles.

We have reviewed our files with respect to the person named above, and have no objection to the proposed grant of immunity.

Sincerely,

Will Wilson

WILL WILSON
Assistant Attorney General

CERTIFIED COPY OF ORDER OF U.S. DISTRICT COURT FOR THE DISTRICT OF WYOMING

Senator McGEE. Finally, a certified copy of an order issued by Hon. Ewing T. Kerr, the judge of the Federal District Court for the District of Wyoming granting the request made in the foregoing application.

(The order follows:)

FILED
JUL 30 1971
A. MARVIN HELART
CLERK

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

In the Matter of the Application of

UNITED STATES SENATE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON AGRICULTURE, ENVIRONMENTAL AND CONSUMER PROTECTION:

For an Order to Confer Immunity on
and to Compel Testimony of Witness

No. 119 MISC.

ORDER

The United States Senate Appropriations Subcommittee on Agriculture, Environmental and Consumer Protection on this date having made written application for an order requiring James Vogan to testify and produce evidence before it, pursuant to Title 18, United States Code, Sections 6002(3), 6005; and it appearing that he may decline to answer questions or produce evidence on the ground that his answers may incriminate him, the aforesaid Subcommittee inquiring into the alleged illegal killing of golden and bald eagles in Wyoming and elsewhere; and it further appearing that the application was made upon the approval of an affirmative vote of two-thirds of the full Committee and timely notice having been given to the Attorney General of the United States; it is

ORDERED that the said James Vogan appear before said Subcommittee and he is hereby ordered and compelled to testify and produce evidence with respect to the matters under inquiry by the said Subcommittee.

Date: July 30, 1971

EWING T. KERR
United States District Judge

ADMINISTRATION OF OATH TO WITNESS

Senator McGee. With this information a part of the record, and these documents now laid publicly on the record of this committee, this subcommittee is ready, Mr. Vogan, to hear any statement you may wish to make. Before proceeding with your statement, will you raise your right hand and be sworn in?

Would you stand please?

Do you solemnly swear that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. Vogan. I do.

Senator McGee. You may be seated and you may proceed with whatever statement you have prepared for the occasion.

WITNESS' NAME, AGE, LEGAL RESIDENCE, PRESENT AND FORMER EMPLOYMENT AND HEADQUARTERS

Mr. Vogan. My name is James Vogan. I am 48 years old. My legal residence is 5863 Utahna Drive, Murray, Utah. At this time I am currently employed by Herman Werner Ranches or Herman Werner, 400 East 15th, Casper, Wyo., and am presently headquartered at the Herman Werner Pinegrove Ranch 27 miles south of Rawlins.

My employment with Herman Werner began in the middle of February 1971, and prior to that I worked for Buffalo Flying Service at Buffalo, Wyo., and that was from around September 1, 1970, until my current job with Werner. I am a licensed airline transport pilot and have an initial tag rating for firefighting purposes in the following aircraft: TBM, Grumman TBM, Douglas B–26, PBY land, Boeing B–17, North American B–25, and Douglas V–18.

I am also rated to fly helicopters and am a licensed instructor in any type of the above aircraft. I have over 12,500 hours logged in fixed-wing aircraft and over 4,000 hours in helicopters.

SHOOTING OF 500 EAGLES ON WYOMING RANCH

Mr. Chairman, I am here because I have been asked to report to you and to the committee my personal knowledge of the shooting of over 500 eagles on one ranch in Wyoming. These eagles were shot from aircraft and include both golden and bald eagles. I have further knowledge of other eagles shot in Wyoming, in Colorado, as well as other wild game of various kinds.

At no time during the above period have I personally shot any wildlife, eagles or otherwise. This does not say that I haven't taken a shot at an eagle from the ground, because I have. That I missed.

If you have any other questions——

WITNESS OBSERVATION OF SHOOTING AS HELICOPTER PILOT

Senator McGee. I understand from your opening statement that you were—you personally observed the shooting of eagles, however, as a pilot of a helicopter.

Mr. Vogan. Yes; that is so.

Senator McGee. And that your records will show that there were several hundreds of eagles shot from this craft?

Mr. Vogan. That is correct.

Senator McGee. Now, you indicated at the beginning of this period, which got underway perhaps in early September 1970, almost a year ago, where you were employed as pilot by the Buffalo Flying Service of Buffalo Wyo.?

Mr. Vogan. That is correct.

Now, I don't remember exactly whether it was in September or October that actually we started in——

Senator McGee. We will leave that. The record will show the actual beginning was sometime in the early autumn of 1970.

Mr. Vogan. That is correct.

BUFFALO FLYING SERVICE OPERATION

Senator McGee. What type of business organization is or was the Buffalo Flying Service? Was it a corporation, a partnership, or what? Do you have any knowledge of that?

Mr. Vogan. It is a corporation, if I understand it. I guess there are several partners, but it is incorporated, I know.

Senator McGee. Who is the principal owner or stockholder, the person in charge of the operations of the Buffalo Flying Service?

Mr. Vogan. The man that is in charge and runs the operation almost completely, as far as I know, is Doyle Vaughan.

Senator McGee. Doyle Vaughan?

Mr. Vogan. Yes.

Senator McGee. V-a-u-g-h-n?

Mr. Vogan. A-n.

Senator McGee. A-n?

Mr. Vogan. Yes.

COMPANY AIRCRAFT AND PILOTS

Senator McGee. How many aircraft did they own or operate?

Mr. Vogan. I think it was about three fixed, three or four fixed-wing aircraft plus the two helicopters.

Senator McGee. In addition to yourself, how many pilots did they employ?

Mr. Vogan. There was Doyle Vaughan, myself, and a fellow by the name of Ed Eisler from Alamagordo, N. Mex.

Senator McGee. Eisler?

Mr. Vogan. E-i-s-l-e-r, from Alamagordo, N. Mex., plus pilots that worked for him prior to this by the name of Baker and Lynch.

Senator McGee. Is Mr. Vaughan a qualified pilot and can fly for the firm?

Mr. Vogan. Yes; he is.

PRINCIPAL SERVICES PERFORMED BY COMPANY

Senator McGee. What are the principal activities or services usually performed by the Buffalo Flying Service?

Mr. Vogan. Well, there is a lot of spraying and predator control, also the part 135, which I think is the air taxi.

WITNESS PARTICIPATION IN PREDATOR CONTROL ACTIVITIES

Senator McGEE. As I understand from your prepared statement, as a part of your duties for the Buffalo Flying Service you participated very heavily in the predator control phase of that company's operation?

Mr. VOGAN. Yes; that is correct.

COMPANY CONTRACTS WITH INDIVIDUAL RANCHERS

Senator McGEE. Do I understand correctly that those services were performed as a result of contracts or agreements between the Buffalo Flying Service and various individual ranchers?

Mr. VOGAN. That is correct.

Now, I think most of the contracts were verbal contracts. I never at any time saw any written contracts.

Senator McGEE. But at least there was an agreement?

Mr. VOGAN. Yes.

Senator McGEE. To the best of your knowledge?

Mr. VOGAN. Yes; that is correct.

Senator McGEE. Were you aware of the terms of these contracts or agreements and how the payment was to be made to the Buffalo Flying Service, on what basis?

Mr. VOGAN. I had overheard conversation that most of it, most of the terms of the contract was related to me through Doyle Vaughan, that managed——

Senator McGEE. That is, he himself, the operator of the Buffalo Flying Service, conveyed to you the terms of the contracts?

Mr. VOGAN. That is correct.

Senator McGEE. And what were those terms? Did they have a general pattern? Did they vary?

CONTRACT WITH HERMAN WERNER

Mr. VOGAN. Well, it seemed to vary from the one rancher to the other, like, now Herman Werner, he told me had made, he had made a deal where he, Werner, was to pay him $25 per eagle and $50 per coyote or $50 for a bobcat, fox or whatever predator——

Senator McGEE. $50 for any four-legged predator and $25 for an eagle, is that correct?

Mr. VOGAN. That is correct. And then—pardon me——

Senator McGEE. OK.

CONTRACT WITH DEAN VISINTINER

Mr. VOGAN. And on the Dean Visintiner's ranch, I think he made a verbal deal of $10 per eagle and $50 per coyote, which there was a conflict there——

Senator McGEE. $50 per coyote?

Mr. VOGAN. Yes, per coyote or bobcat or any predator.

Senator McGEE. The fee was still the same for the animals?

Mr. VOGAN. Yes.

Senator McGEE. But cut-rate for the eagles?

Mr. VOGAN. Yes, he had cut it down to $10, which caused a conflict at one time.

OTHER AGREEMENTS

And there were several of the ranchers that paid $80 per hour, a straight $80 per hour for helicopter service.

Senator MCGEE. That was the equivalent of one eagle and one coyote every hour, is that right?

Mr. VOGAN. Yes, that is correct, but whether we killed any or not, it was still $80 an hour.

Senator MCGEE. I suppose from Mr. Vaughan's point of view that the hourly rate was preferable to the carcass guarantee?

Mr. VOGAN. Not in most cases, this was not so. There was much more revenue from the individual coyote and individual eagle, that sometimes——

Senator MCGEE. In other words, you didn't have very many dull days?

Mr. VOGAN. There were none, especially on the Herman Werner Ranch and also on the Visintiner Ranch; in fact, most of them you were continually shooting them.

PROSECUTION FOR CARCASSES CONTAINING THALLIUM FOUND ON ANOTHER HERMAN WERNER RANCH

Senator MCGEE. This question you don't need to answer. I want to check with counsel though. It ought to be part of the record. Is this the same Herman Werner Ranch on which thallium was discovered on the carcasses under which there was prosecution?

Mr. MILES. This is a different ranch.

Senator MCGEE. Same owner but different ranch?

Mr. MILES. Yes, at least some common family ties.

Senator MCGEE. I want to make sure it was not the same ranch, but the same owner, the same Herman Werner was involved, at whose place the thallium poisonings occurred and there was prosecution earlier, but Mr. Werner, I understand, was not personally involved.

Mr. VOGAN. No, I understand he was not.

WITNESS RECORD OF PREDATOR CONTROL FLIGHTS

Senator MCGEE. Yes. I wonder if you could advise us then on what ranches you worked in the predator control effort. Who acquainted you with these flights, who accompanied you on these flights and, to the best of your knowledge, what birds or animals were killed on the flights?

I don't know. Do you—you have, as I understand it, some records that you yourself kept?

Mr. VOGAN. Yes, I do have records——

Senator MCGEE. Perhaps you might read those into the record.

Mr. VOGAN. OK.

Senator MCGEE. Or however you prefer to proceed on it. I think it might be relevant for you to read your own personal records into the hearing record.

Mr. VOGAN. OK.

Senator MCGEE. These things are all supposed to be in little black books, but yours is a blue book.

Mr. VOGAN. Yes, this is the record I kept for paper purposes, for the Buffalo Flying Service.

Senator MCGEE. You proceed in whatever way you wish, Mr. Vogan.

BOB GIBBS RANCH

Mr. VOGAN. OK. I am sure that this was in September or early October I was sent to the Bob Gibbs Ranch.

Senator MCGEE. And Bob Gibbs Ranch is located where roughly?

Mr. VOGAN. It is up by Clearmont.

Senator MCGEE. Clearmont is in Sheridan County?

Mr. VOGAN. Yes. At that time we killed several eagles—I am not really sure of the count—and two coyotes and one fox. Now Bob Gibbs flew as the gunner on that, on this flight.

Now this is from—actually from memory, which I kept no record, because of the——

Senator MCGEE. This was the first time out, is that it?

Mr. VOGAN. Yes; this was the first time out and I think we were working by the hour, if I remember correctly, which was $80 an hour or I am really not positive of the deal that Mr. Vaughan made with Bob Gibbs.

Senator MCGEE. The first run is two eagles, two coyotes, and one fox?

Mr. VOGAN. Yes.

Senator YOUNG. I wonder if I could——

Senator MCGEE. Yes.

Mr. VOGAN. I am not sure there is a possibility that there could have been more eagles involved. To my memory I don't remember, but I remember two shot out of the tree.

LEGAL KILLING OF FOXES, COYOTES, AND BOBCATS

Senator YOUNG. Let me ask this question. Are foxes and coyotes and bobcats considered predators?

Mr. VOGAN. Yes; that is correct.

Senator YOUNG. Is there a bounty on them or is it illegal to hunt them?

Mr. VOGAN. As far as I know, it is not illegal to hunt them.

Senator YOUNG. Is there a bounty on them?

Mr. VOGAN. No. There is on coyotes in certain areas.

FEDERAL PROHIBITION AGAINST KILLING OF EAGLES: PREDATORS OF BABY LAMBS

Senator YOUNG. It is illegal to kill the eagle?

Mr. VOGAN. It evidently is.

Senator MCGEE. Yes; both golden and bald eagles are Federal offenses, the bald eagle for a longer period of time, and the golden eagle.

Mr. VOGAN. A lot of the ranchers now feel that the eagle is a predator and I personally have observed eagles carrying off lambs that were just born and I have never seen them carry off any lamb after they have survived several days and where they are getting

strength enough. But if the ewe will stand over them, they can protect them. But otherwise the eagle has got them.

Senator YOUNG. Which is the worst predator?

Mr. VOGAN. I would say the coyote possibly is the worst, although the golden eagle—not the bald eagle, I never have observed a bald eagle. I have seen him eating on a carcass on the ground, but I—or, in fact, there was one shot or two that were shot that were eating a carcass on the ground.

Now, whether they killed him, I don't know.

Senator YOUNG. Thank you, Mr. Chairman.

BOB GIBB RANCH

Senator MCGEE. Proceed with your notes that you have kept on the missions that you flew.

Mr. VOGAN. Yes; now, this again I don't know whether it was September or early October—wait a minute, no, this would be—I went back to the Gibbs ranch later on and there was some coyotes and eagles. I might not have the right dates, but I think after I lost the engine on the helicopter and they had repaired it, rather than send it back to the south, they kept it close to the base of operations in case we had any trouble and of course I was sent out to Bob Gibbs' place.

DAN HEALY LU SHEEP RANCH KILLING OF COYOTES ONLY

But immediately after I had gone out to Bob Gibbs' place I was sent over to the Dan Healy Ranch over at Worland, on the LU Sheep Ranch, and of course I flew the Bell helicopter over there and with the shooters, a kid by the name of Mike Fernandez and Norm DeVilbiss. There was not any eagles killed on that ranch at all that I knew of and there were 10 or 12 coyotes killed.

BOB GIBBS RANCH: ATTACK ON RANCHER'S SON EAGLE BY SHOT FROM AIRCRAFT

I don't remember the exact number. For the information here, on the Gibbs Ranch, Bob Gibbs had told me that one of these eagles they had shot from the fixed-wing had atacked his son. When they landed and tried to grab or to get the eagle, it attacked his son and put him in—well, they had to take him to the hospital. I don't know, that is just what he told me, which probably will come out in time.

Senator MCGEE. I have been torn up by rooster feathers which did the same thing, but an eagle is a mammoth bird with 7-foot wingspread and all.

HERMAN WERNERS RANCH

Mr. VOGAN. Yes; they are extremely vicious, especially if you shoot one down and break its wings and then go try to kill it, which we had to; when we first went to the Herman Werner Ranch we were supposed to bring the eagles in, which the fish and game for the State of Wyoming observed and also the personnel from the Union Pacific Railroad, they was out there running surveys and the Government traps was considerable there.

We took approximately 65 into that ranch before they finally had us stop bringing them in, just to shoot them down and leave them lay from then on.

DAN HEALY LU SHEEP RANCH

The Dan Healy place, there wasn't—or the LU Sheep Ranch there was no eagles shot to my knowledge. In fact, I never did see one. I never knew that they was a predator until after I had gone to some of the other ranches.

CAMERON TAYLOR RANCH

Now, at the Cameron Taylor Ranch in Ten Sleep, I really——

Senator McGEE. Ten Sleep is generally in the Worland area?

Mr. VOGAN. Yes; in the Worland area, and in that area there was approximately 100 eagles killed on that ranch plus one coyote and there was six elk that were killed from the helicopter there.

Senator McGEE. That is against the law, too?

Mr. VOGAN. That is definitely against the law. I knew that at the time I was flying the helicopter, too. Cameron Taylor was one of the shooters. DeVilbiss was a shooter and also Taylor's brother-in-law. I don't know his name.

Senator McGEE. That is, you had three gunners on that trip or on those trips——

Mr. VOGAN. Yes; to the best of my knowledge. To look back and remember it, I would say that all three of them were shooters.

Senator McGEE. Do you have a date or dates on the Cameron Taylor——

Mr. VOGAN. That would be in October, to the best of my knowledge.

Senator McGEE. But precisely this is before you started to keep records, is that correct?

Mr. VOGAN. Yes; and as far as I know, Cameron Taylor, I think, wound up paying $25 per eagle and $25 for the coyote.

Senator McGEE. That is, he paid Mr. Vaughan of the Buffalo Flying Service, is that it?

Mr. VOGAN. Yes; I give him a record. I may be wrong on this number of eagles that was shot over there. I actually didn't keep a full count and, of course, I think I might have hedged on this with Buffalo Flying Service due to the fact that he had, or Cameron had given me one of these elk, which was—the party tagged it for me and gave it to me. Of course, Norm DeVilbiss got one of the elks, too, that he had it tagged for.

Senator McGEE. But all six of the elk were shot from the helicopter?

Mr. VOGAN. Yes; that is correct.

Senator McGEE. From that point onward, as I understand it, your recordkeeping then began?

Mr. VOGAN. Yes; that is correct.

Senator McGEE. You proceed with your records then.

BOLTON RANCH OWNED BY HERMAN WERNER

Mr. VOGAN. OK. On November the 18th of 1970 I arrived at the Bolton Ranch, which is owned by Herman Werner, for the purpose of predator control. Del Jenkins was the shooter at that time for me. In fact, Del Jenkins was taking instruction in the helicopter, which he flew the helicopter down there with myself as instructor, and when we landed there in the afternoon we run onto a coyote, which we changed

places and I flew the helicopter and of course Del Jenkins starting shooting the coyotes, and on that date there was one eagle and six coyotes killed that afternoon.

On November 21, 1970, there was five eagles and four coyotes killed.

Senator McGee. The same team?

Mr. Vogan. That is right.

Senator McGee. You were the pilot and Jenkins was the gunner?

Mr. Vogan. Now, I did not write the shooters down in the book except once in a while I would put one of the names down, but I do remember that he had done most of the shooting, him and DeVilbiss.

Senator McGee. Let me interrupt you there, Mr. Vogan, and the Assistant Secretary of the Interior is here and this is a courtesy because he has other things he has to be doing, and I was just wondering—if Mr. Reed would like to testify now or wait until later?

Mr. Reed. It's O.K.

Senator McGee. All right, you can proceed, Mr. Vogan.

Mr. Vogan. O.K., on the second flight of November 21 there was six eagles killed and four coyotes with Jenkins. This was extremely cold flying, I mean, and also their arms got sore from shooting, so they would change off on these different flights, so I can't definitely say it was Jenkins or DeVilbiss actually flying as gunner for me on any particular flight, but both of them were there shooting for several days, which I will go into here.

On the third flight there was six eagles and no coyotes killed.

On the fourth flight there was one bobcat.

Senator McGee. That would have been the day you would go on the hourly basis, wouldn't it?

Mr. Vogan. OK. On the 22d, on the first flight, there was two eagles and one coyote and that was DeVilbiss on that flight, for that flight; as far as to the best of my knowledge that was DeVilbiss.

On the second flight there was eight eagles, one coyote.

On the third flight there was 10 eagles, two coyotes.

On the forth flight there was nine eagles, one coyote.

On the fifth flight there was two eagles and two coyotes.

On November 23d there was seven eagles and three coyotes.

On the second flight there was 14 eagles and no coyotes.

On November 24, one eagle, five coyotes. On the second flight, one eagle, eight coyotes. On the third flight there was three eagles, three coyotes. On the fourth flight there was two eagles, one coyote.

On the 25th, one eagle—this was on the first flight there was one eagle and two coyotes.

Then we jump up to the 29th, and I think this was over Christmas and I had gone right home.

Senator McGee. Over Thankgsiving week?

Mr. Vogan. Yes, over Thanksgiving, that is right, OK, and on the 29th of November I came back and we shot on the first flight two eagles and eight coyotes; and on the second flight, eight eagles, four coyotes.

FLIGHT TIME

Senator McGee. Let me interrupt you there. When you speak of a flight, how long would you be out on a single flight? Does it vary?

Mr. Vogan. It would vary with the amount of gas that we carried or

whether we got a load. You see, at this time we were bringing the animals and also the eagles in, which——

Senator McGee. You were bringing them in with your flight?

Mr. Vogan. That is correct.

Senator McGee. It varies. What would be a typical flight out, an hour or 2 hours?

Mr. Vogan. An hour to 2 hours would be a typical flight or I have seen a time when it got so cold it was impossible to continue, we would have to go back to get warm.

Now, on the third flight—now these gunners from now on would be either DeVilbiss, Jenkins, or Haizlip——

Senator McGee. Who is Haizlip?

Mr. Vogan. Gary Haizlip. At this time I think he was 17. I know he became 18 later on when he went to work for Buffalo Flying Service as a gunner and truck driver.

On flight No. 3 there was two eagles and no coyotes at all.

On the fourth flight, four eagles, one coyote.

Then we jump to December 1. OK, on the first flight, five eagles, five coyotes. On the second flight, three eagles, no coyotes.

On the second of December, seven eagles and two coyotes. On the second flight, eight eagles, five coyotes. On the third flight, 16 eagles and one coyote.

On December 6, on the first flight we got seven eagles, one coyote, On the second flight we got four eagles, five coyotes. On the first flight we got six eagles, one coyote. On the fourth flight, nine eagles, five coyotes. On the fifth flight we got seven eagles, two coyotes.

On December 7 we got eight eagles, four coyotes. One the second flight, 10 eagles, one coyote. On the third flight, five eagles, five coyotes. On the fourth flight, 11 eagles, two coyotes.

On December 8 we got one eagle, five coyotes.

Now I am sure that this is the date on the 8th that Ed Eisler was there and came with the Bell helicopter and I think he got five eagles and no coyotes, but I am really not sure on this. I would have to go over my record the way this is written up.

Now, I didn't keep it—I think this will show in the record, the log record when Mr. Eisler did come down, but I have it written down. This is written down——

Senator McGee. We can amend that, if necessary, later after you check that log.

Mr. Vogan. O.K. On the 12th of December, five eagles, three coyotes. On the second flight we got seven eagles, four coyotes. On the third flight we got 21 eagles and one coyote.

Senator McGee. That was a record?

Mr. Vogan. No; I don't think so. I think there was more.

Senator McGee. Up to now?

Mr. Vogan. Yes; up to now.

Senator McGee. I have been following you until now and that was a new high, 21. Any particular thing, weather-wise or anything that accounted for this? Was this a migration season?

Mr. Vogan. I think probably it was a windy day where the eagles were really out.

On the 18th, December 18—we skip from the 12th to the 18th here and I don't know why, but evidently I had gone home.

Senator McGee. Christmas shopping?

Mr. Vogan. Yes. There was five eagles and four coyotes killed. On the second flight, four eagles, six coyotes. On the third flight, seven eagles, eight coyotes. On the fourth flight, one eagle, three coyotes.

On the 19th, the first flight was three eagles, no coyotes. This was Jack Howard was the gunner.

On the second flight, five eagles, no coyotes. On the third flight, there were 26 eagles, four coyotes.

On the 21st, the first flight, six eagles, no coyotes. Jack Howard was the gunner.

On the 22d, two eagles, three coyotes. On the second flight, six eagles, no coyotes. On the third flight, one eagle, no coyotes.

On the 23d of December there was five eagles, two coyotes on the first flight. Then we jump clear to December 31.

There was three eagles, three coyotes and one bobcat, and evidently this was flown from the Bell helicopter, as far as I know with Eisler and Vaughan.

Senator McGee. You were not on that flght?

Mr. Vogan. No, as far as I know this shows a Bell helicopter, so, I must have something in here that made me think it was a Bell.

OK on the 31st also I was flying with Muzalski as gunner.

Senator McGee. You spell it.

Mr. Vogan. M-u-z-a-l-s-k-i, Henry Muzalski, from Salt Lake City, and on the first flight we got two eagles, three coyotes and on the second flight, 12 eagles and no coyotes.

Now on the 31st, this was another flight with myself where I got nine eagles and two coyotes. Then on January 1 I am not sure now on this McCarty that flew as a gunner. Actually we went in to get gas in a Bell, gasoline, into Rawlins and he never—he never shot any eagles on any of this flight. There was—we run into five coyotes and he shot two coyotes out of the bunch. His wife was along. There was the three of us in the helicopter.

On the first, the second flight shows two coyotes, and the third flight was two coyotes.

OK, on the second there was no eagles killed and I don't have the number of coyotes. Evidently I don't on the second unless—there is three eagles that shows here, but I am not really sure, who was the gunner I don't know. I don't remember. OK this was around the second, it was around on the first of February from memory. Now this Wes Karsten boy, the Fish and Game will have his name in their records, was with me flying between Doyle Vaughan and myself. I was flying, Doyle Vaughan was shooting and Steven Karsten—that is a 14- or 15-year-old boy, the Wes Karsten boy—Fish and Game will have all of this information.

Shooting of Bald Eagle and Golden Eagle on Ground

But he, Doyle on the flight shot a bald eagle and a golden eagle that was on the ground. Now, previous to this there was one bald eagle that was shot on the ground that was eating on a carcass that was shot by Norm DeVilbiss, but I don't remember the date on that. That is when we first got down there. This is my first real encounter to really see a bald eagle.

I never really had, because we picked it up and took it in.

On February 21 there was 29 eagles and 10 coyotes and I am not really sure of the gunner. I think it was either a fellow by the name of Max Lee or Wes Karsten. I don't know which one.

Senator McGee. You are certain that it would be one of the two, is that correct?

Mr. Vogan. Yes; well, I really don't know. Maybe I am wrong on this date, but I am just estimating because they were doing the shooting at that time.

SHOOTING OF COYOTES SLAUGHTERING LAMBS

And sometime in February, which I don't have a record of, Mitch Bacholsiki, he is the Mitch Bachloski, the airport manager at Rawlins, his boy flew with me and that is the time we caught the five coyotes up on the cliff that had about 100 head of sheep up there and were just slaughtering their lambs, absolutely just killing them.

Senator McGee. Five coyotes?

Mr. Vogan. Yes.

Senator McGee. Cornered the sheep?

Mr. Vogan. They had them cornered, just like sheepdogs around them, just had them cornered there and killing their lambs, just killing them and leaving them.

Senator McGee. How could they corner them? Was there a fence that held them in?

Mr. Vogan. No; a sheer dropoff of maybe 300 feet straight down. Of course, Mitch, he is a 15-year-old boy, had done a terrific job and shot all five of the coyotes, got them, all five, which is the first time that this had been done. We caught four in a pack before and shot all four of them, but this is the first time—well, the only other time I have seen any more than the five was the time that Morris McCarty, the general, or the foreman of the ranch, and Pauline McCarty were with me in the helicopter. We went in to get gas and coming back we ran into six coyotes there, of which Morris got two of them.

He wasn't too good a shot, but he tried to give it the old college try.

Senator McGee. The weapon that was most effective, what is it?

Mr. Vogan. The weapon which I thought was most effective was the 12-gauge 300 magnum, or the 100 Remington that we had. Of course, in extremely cold weather we didn't know really what was causing it, but there was—at times we had a jam which started it, losing its GL–96 or something like that. It was a cleaner we used, I don't know who it is made by, but we couldn't work on it in this extremely cold weather.

Senator McGee. My fingers jam still when it is cold.

Mr. Vogan. Yes; I have, seen this happen, this Henry Muzalski couldn't even shoot his fingers were so cold. This is a problem we had on this, is changing of the shooters so often is because of the continuous shooting to the point of where their arms, their shoulder became black and blue from shooting, and they just had to change off and also due to the cold weather Doyle Vaughan had to go buy Jack Howard a pair of snow boots to continue to fly, it was extremely cold.

Of course, he bought me a pair also.

By the way, Doyle Vaughan——

Senator McGee. We don't publicly want to testify about that temperature in Wyoming.

ASSERTION BY DOYLE VAUGHN THAT HE HAD PERMIT TO SHOOT EAGLES

Mr. VOGAN. It was cold. Doyle Vaughan had told each one of these shooters that he had a permit to shoot the eagles, if they had a permit to shoot the eagles, and in fact I thought they had a permit.

Senator McGee. Say that again.

Mr. VOGAN. Doyle Vaughan told the shooters that I had brought down there that he had a permit to shoot the eagles on this predator control.

Senator McGee. Did that apply to all of the gunners? Did he tell all of them that he had a permit to shoot eagles?

Mr. VOGAN. Yes; all of them that I know of will testify to this, that he did tell them this at one time or another when he was there. Of course, I understood this. I——

PAYMENT BY DOYLE VAUGHAN TO ONE SHOOTER

Senator McGee. Did he pay the gunners?

Mr. VOGAN. The only ones that he paid—well, he was supposed to have paid Gary Haizlip, which brought this all about. This is why this is——

Senator McGee. Why would the others go out and freeze their fingers and feet?

Mr. VOGAN. For the enjoyment of——

Senator McGee. In other words, for them it was a sporting operation?

Mr. VOGAN. It was a sporting operation.

ALLEGED PERMIT TO KILL EAGLES

Senator McGee. And they thought they were covered by permits?

Mr. VOGAN. Yes; they thought—this is correct, either I had told them and also Doyle Vaughan told them that they had a permit, which I understood there was permits issued, so I never doubted his word on it whatsoever.

Senator McGee. You never saw any permit, did you?

Mr. VOGAN. I never saw any permit. In fact, I never butted into his business, into his financial affairs or anything. But when I got affidavits the other day from Jack Howard and from Max Lee to turn into the Labor Board for pay—he has never paid—Doyle Vaughan has never paid the Haizlip boy and, of course, they had to go to the Labor Commission and at this time when I got these affidavits from Henry Muzalski and Max Lee and Jack Howard, they did state that Doyle Vaughan, there was some conversation about this and, of course, they had heard about the trouble that was being caused by these eagles being killed and they, both of them, told him—"Well, what the hell, Doyle Vaughan told us he had a permit to shoot them."

I told them they would probably be called as a witness on this thing, so they are expecting it.

Senator McGee. Senator Hruska.

WITNESS KNOWLEDGE OF ALLEGATION OF PERMIT POSSESSION

Senator HRUSKA. Mr. Vogan, did you personally hear Mr. Vaughan tell these gunners that he had a permit?

Mr. VOGAN. Yes; I did. I personally heard him tell Jack Howard and also Muzalski, I personally heard—in fact, Muzalski and I stayed at Doyle Vaughan's house in Wyoming one night and there was a conversation there. I don't remember his house or whether it was at the Wagon Wheel Inn where he took them—Henry will remember—but he knows, he doesn't remember me telling him that he did have a permit and also any ones that I ever did ask to come up there and shoot, I told them that they had a permit because I thought they did have some kind of permit.

KNOWLEDGE OF WYOMING FISH AND GAME PEOPLE OF EAGLE KILLING ON BOLTON RANCH

I realized that they were a predator and, in fact, in the first place I never thought it was against the law to shoot these eagles. The Wyoming fish and game came out and saw these eagles piled up, we had a regular haystack of them out there when we first started bringing them in and, of course, there wasn't nothing ever done about it.

Senator MCGEE. Did you say Wyoming game and fish was out there and saw a pile of eagles?

Mr. VOGAN. That is correct and so did the Union Pacific survey crews. I am sure that they saw them and also——

Senator MCGEE. Did you see the game and fish people out there?

Mr. VOGAN. No; I had seen their trucks. At this time, I was gone, but Morris McCarty told me to stop bringing them in, not to bring any more eagles in, that Wyoming fish and game was there. Of course, I never knew——

Senator MCGEE. When would that be roughly? Can you——

Mr. VOGAN. I would say it was probably in November, maybe the latter part of October. I am really not sure.

Senator MCGEE. Last fall?

Mr. VOGAN. No, it was the beginning of November—yes, last fall.

Senator MCGEE. The eagles were piled up where, on whose ranches?

Mr. VOGAN. They were piled to the west of the Bolton ranchhouse and out by the drive there, where the road goes through there and, of course, we left them lay out there and there were people traveling through there all the time. There are probably many, many witnesses that saw these, the way Morris McCarty talked to me, that there had been many, many people that had seen them, which of course I was out flying. I didn't see the people——

Senator MCGEE. Can you tell us again where the Bolton Ranch is located in the State?

Mr. VOGAN. The Bolton Ranch is located—you go out on the Sage Creek Road, I think it is about 9 miles out there and then——

Senator MCGEE. Is it to the south?

Mr. VOGAN. South of Rawlins, and then you turn on an unimproved road. I think it is about 15 miles back into the ranch.

Senator MCGEE. Let me get this clear here, because it is a very significant point. As I understand it, the Game and Fish Commission,

somebody from the Game and Fish Commission may have seen these eagles, but as I understand it you said you did not see the Game and Fish personnel there?

Mr. VOGAN. No; I did not see them. I was told by——

Senator MCGEE. You were gone at the time?

Mr. VOGAN. Yes; I was gone and I was told by several people that they were there and I was also told that when they moved them up into the shearing sheds, which is approximately a half a mile to the south of the ranch. They moved the eagles up there, that they had come by there, and taken pictures of it.

Senator MCGEE. There were those that had taken pictures of them?

Mr. VOGAN. I understand there was. I don't know. I don't have personal knowledge, this is hearsay, is all I can tell you on that.

Senator MCGEE. Did they indicate to you how many eagles there may have been stacked up there at that time?

Mr. VOGAN. To the best of my knowledge I think we stacked 60, probably 65 or so up in that pile.

Senator MCGEE. At that season of the year they would pose no other problem lying out there because of the temperature, that is, they wouldn't add to the aroma or anything?

Mr. VOGAN. No; they just wanted to move them. Evidently, the Fish and Game kind of had given them the idea that maybe they were in trouble.

Senator MCGEE. That who was in trouble, Game and Fish?

Mr. VOGAN. Well, the people that were shooting them.

Senator MCGEE. I see.

Mr. VOGAN. This is my impression of what has happened. Anyway, they moved them out of there and put them in the shearing shed up there and they were there until just recently during the shearing when they moved them up and buried them.

INSTRUCTIONS TO GUNNERS THAT THEY WERE COVERED BY PERMIT

Senator MCGEE. Let's see. I wanted to ask you one other question before you go on with your table, Mr. Vogan, and that is, you were referring here to the instructions that were given to the gunners, namely, that they were covered by permit?

Mr. VOGAN. Yes; this was their idea. This is what they understood.

Senator MCGEE. They understood they were covered by, that Vaughan had a permit for the shooting of eagles?

Mr. VOGAN. That is correct. In fact, Jack Howard and all of them went back to Salt Lake City and bragging around about it and, of course, how many they had shot, and then after I found out it was against the law, I went and told them—I said, I told them that they had better keep their mouth shut because it was against the law.

Senator MCGEE. You might get the Federals on you?

Mr. VOGAN. Yes.

Senator MCGEE. Did Vaughan ever personally tell you that he had a permit to kill eagles?

Mr. VOGAN. He personally told me that he had either obtained a permit or was going to obtain one, that they could be had, that a permit——

Senator McGee. In other words, it was one that required a permit and either he had a permit or was obtaining a permit?

Mr. Vogan. Yes; or he was going to obtain a permit, so I never was really concerned about it myself.

SHOOTING OF ELK

Senator McGee. Were there any other discussions or instructions that you had from Vaughan in regard to this factor? What about the elk that were shot, for example? Did he have a permit for the killing of elk?

Mr. Vogan. No; the only thing that was ever said about this, I hauled the elk across from Ten Sleep, my own elk, to Buffalo Airport.

Senator McGee. And suggested you move them out?

Mr. Vogan. Yes; which at that time I had told Doyle Vaughan I had hauled across the elk and that was about the only thing ever said about this.

KILLING OF OTHER WILD LIFE

Senator McGee. You referred to bobcats and you list here one bear and coyotes and Bald and Golden Eagles, mostly Golden Eagles, and are there any other birds or game animals that may have been shot?

Mr. Vogan. Yes; there was several antelope and several deer.

Senator McGee. Antelope and deer?

Mr. Vogan. Yes; and I am not sure on that count on the elk. There possibly might have been, I know they had them, they had picked them up and I don't, I just don't remember whether it was—there might have been possibly eight, I don't know.

Senator McGee. I wonder if I can interrupt this now. It is getting to the hour of 11:30 and if we can interrupt it for just a little bit, we would like to put the Secretary on for a moment.

Mr. Vogan. OK.

Senator McGee. And if you will resume your seat in the audience and we will then come back to give the remainder of the table you have, Mr. Vogan.

Mr. Vogan. Very good.

(At this point the witness was temporarily excused.)

DEPARTMENT OF THE INTERIOR

PRESERVATION AND PROTECTION OF EAGLES

STATEMENT OF NATHANIEL P. REED, ASSISTANT SECRETARY OF THE INTERIOR FOR FISH AND WILDLIFE AND PARKS, DEPARTMENT OF THE INTERIOR

ACCOMPANIED BY:

SPENCER SMITH, ACTING DIRECTOR, BUREAU OF SPORT FISHERIES AND WILDLIFE, DEPARTMENT OF THE INTERIOR

CHARLES H. LAWRENCE, CHIEF, DIVISION OF MANAGEMENT AND ENFORCEMENT, BUREAU OF SPORT FISHERIES & WILDLIFE, DEPARTMENT OF THE INTERIOR

COOPERATION OF WITNESS AND HIS OFFICE

Senator McGee. Mr. Secretary, I want to say that we are delighted to have you with us here this morning and I would make mention that

from the very outset of the surfacing of the eagle killings, and it came out during the predator hearings before this subcommittee, that your office and you in particular have been exceedingly cooperative and resourceful in pursuing all of the ramifications of the problem. In recent days we have worked closely with your personnel in seeking to verify and validate all of the evidence that was possible to verify. We appreciated in the earlier instances the difficulty of establishing intent over the thallium case and that was very frustrating, even though there were means to relief otherwise. But your men in the field were exceedingly able and true to their word; and I just wanted you to know that all of the contacts we have had with your Department have been superb.

INTRODUCTION OF ASSOCIATE

Mr. REED. Thank you, Mr. Chairman, and I want to say the feeling is reiterated by the Secretary and myself to you and the members of the committee staff who have worked with us.

I am accompanied by Spencer Smith, Acting Director of the Bureau of Sport Fisheries and Wildlife.

I think, for the purposes of this morning's meeting, my statement is here and is in content and there are enough copies of them available so that if anybody wants to see my prepared remarks, they can see them.

Senator MCGEE. We will make them a part of the record and you proceed as you wish.

(The statement follows:)

It is a distinct pleasure, Mr. Chairman, for me to appear again before this Committee to participate in further discussion of the problems facing us in the preservation and protection of eagles.

At the outset I want to emphasize how gratified I am at the close and productive working relationship that has developed between this Committee and those of us at the Department of the Interior who have been involved in the events triggered by the deaths by thallium sulphate poisoning of 23 bald and golden eagles earlier this year in Wyoming. In my opinion, this is a splendid and continuing example of Legislative-Executive cooperation. And I can assure you that Secretary Morton shares this view.

Mr. Chairman, my remarks at this point this morning will be brief but I would like to take this opportunity to bring you up to date on some of the actions taken by the Department of the Interior since we last testified at your hearing two months ago.

During the course of our investigation of the unfortunate Jackson Canyon incident, our people heard rumors and unconfirmed reports of a far more serious situation, a situation involving the deliberate and unlawful killing of eagles from aircraft. Naturally, this prompted us to continue and intensify our investigation.
Subsequent information that was obtained strongly indicated that certain ranchers in Wyoming and Colorado were employing pilots and gunners in both fixed-wing aircraft and helicopters in patrols to seek out and kill eagles and coyotes. Ostensibly this was done to protect livestock.

Our further information paints an appalling picture. For example, it was reported to us that initially the gunners were required to collect and exhibit the eagles they had killed before they could collect a bounty payment for them. The bounty, we were told, amounted to $25 for each eagle slaughtered. Estimates of the total number of eagles wantonly destroyed far exceeds the number involved in the thallium incident. If these figures turn out to be even approximately accurate, they are absolutely sickening statistics.

It is our understanding that recently some of the ranchers have abandoned the payment system I have just described and are paying gunners for their reported kills--no actual physical proof required. Burial appears to be the method of disposing of the dead birds.

Every evidence we have collected indicates that this sordid story that I am telling you today is a cold, callous, deliberate defiance of Federal and State law. We absolutely cannot permit this to continue. If something is not done, and quickly, this valuable resource will, indeed, be in serious jeopardy.

Having sketched this situation for you, Mr. Chairman, let me pledge again that we in the Department of the Interior will bend every effort, working very closely with this Committee at all times, to find a solution to this problem. I applaud your holding this hearing. Hopefully, it will result in disclosures which will enable my Department and the Department of Justice to act in consort to bring those responsible for the senseless and unlawful slaughter of large numbers of our dwindling population of eagles before the bar of Justice.

I look forward with keen interest to the witness who will follow me. With your permission I would like to postpone answering any questions you may have until he has completed his testimony.

Before closing let me make brief mention of one additional fact that is of interest to all of us. When I testified before this Committee on June 2, I told you we were forming a blue ribbon task force to study the Department's predator control program thoughout the country. I further said that the task force would be sponsored jointly by Interior and the Council on Environmental Quality and that it would be composed entirely of wildlife management experts from various universities.

I am pleased to report that the task force has been appointed and is now addressing itself to the predator control program evaluation. I am sure that many of you read our press release on this matter but to refresh your memories let me give you the names of the members of this distinguished panel. They are: Dr. Stanley Cain, Chairman, University of Michigan; Dr. Fred Wagner of Utah State University; Dr. John Kadlec, University of Michigan; Dr. Richard Cooley of the University of California, Santa Cruz; Dr. Maurice Hornecker, Cooperative Wildlife Unit Leader, University of Idaho; Dr. Durwood Allen of Purdue University, and Dr. A. Starker Leopold of the University of California, Berkeley.

Thank you.

OTHER ASSOCIATES

Mr. REED. I think, if I may, I would like to ask members of my senior staff to accompany me at the table. I will ask, in addition to Mr. Smith, Victor Schmidt, Assistant Director of Operations, Charles Loveless, Assistant Director of Wildlife Research, Charles Lawrence, Chief of Enforcement, Jack Berryman. Chief of Wildlife Services and Dale Horn, U.S. Management Enforcement Agent, Denver, to accompany me here so we can more properly develop our case.

DESCRIPTION BY MR. LAWRENCE OF INVESTIGATION

Following my brief remarks, Mr. Chairman, I will ask Mr. Lawrence to describe how the case is being investigated. It is being intensely investigated at this very moment. Agents armed with proper search warrants are in the field to fully bring this case to culmination.

I will request one proviso, Mr. Chairman, if we get into an area which my officers feel could prejudice the case or any of our witnesses, we will respectfully request permission not to answer that specific question.

Senator MCGEE. And do not hesitate to make that request, because, as your men will testify, we have tried to protect their records in every respect so as not to prejudice the chance of the constructive prosecution of the case.

Mr. REED. All right, I will ask Mr. Charles Lawrence, Chief of Enforcement, now to take my seat and give you a rundown on where we stand right now, sir.

Senator MCGEE. Not everybody gets the warm Secretary's seat.

WITNESS OFFICIAL OFFICE

Mr. LAWRENCE. Well, I can tell, sir, at the moment it is the "hot seat." There is no doubt about it.

My name is Charles H. Lawrence, Chief, Division of Management and Enforcement, Bureau of Sport Fisheries and Wildlife, Department of the Interior.

MEETING WITH MEMBERS OF CASPER AUDUBON SOCIETY

Mr. Chairman, when I was first instructed to go to Casper, Wyo., to aid in determining the cause of the death of eagles found in Jackson Canyon, I arrived there on May 4, I believe, and the following morning I met with with three or four members of the local Audubon Society, men who had been instrumental in discovering the eagles in Jackson Canyon.

During the course of our conversation——

Senator MCGEE. Jackson Canyon, for the purposes of this hearing, is generally what, southwest of Casper?

Mr. LAWRENCE. Yes, sir; about 12 miles.

Senator MCGEE. Yes.

PERSISTENT RUMOR RESPECTING STACK OF EAGES ON BOLTON RANCH

Mr. LAWRENCE. During the course of our discussion as to the circumstances surrounding the finding of these eagles, one of the men I was talking with made mention of the fact that he continued to hear a persistent rumor about 25 eagles having been observed stacked up on the Bolton Ranch in the vicinity of Rawlins, Wyo. He felt that there was every evidence that these eagles had been shot from aircraft.

Senator MCGEE. I might add there, that it was mentioned as an aside during the testimony in June here before this committee, and to protect whatever allegations might have been there. I dismissed it as the kind of thought that floats around bars on Saturday nights.

Mr. LAWRENCE. Well, at the moment I realized that that information was much more significant than might initially have appeared.

Senator MCGEE. Many of us suspected at the time.

INABILITY OF AGENT STATIONED IN WYOMING TO CONFIRM RUMOR

Mr. LAWRENCE. I was certain that we should make every effort to determine the facts in the case. We have one agent stationed in the State of Wyoming and later on I inquired of him if he had heard the report of these 25 eagles, and he informed me he had, that he had met with a number of people and attempted to confirm the information he had received and had been unable to do so.

Frankly I was unsatisfied with that report and decided we would pursue this thing right out to the end.

ASSIGNMENT OF AGENTS TO INVESTIGATE

You may remember on several occasions reporters from various newspapers reported my comments concerning the developments in the eagle poisoning case and also the report of eagles being shot from aircraft. In every instance I said that we were going to continue with this investigation and with that in mind, I requested our regional office in Albuquerque to assign U.S. Game Management Agent Dale Horne here on my left and Agent Ritter from Salt Lake City, Utah, to go back into Wyoming and start digging.

For the past 2 months that is exactly what they have been doing and their investigation paralleled some of the work of your committee, sir. So, I would like to go on record as indicating, and we can confirm it, that our Department, our Bureau, had been actively engaged in pursuing this thing and getting as much information as we possibly could and the committee's action in having this gentleman appear will be of tremendous benefit to the wildlife, to the eagles, to the people of the United States, and I personally wish to commend you, sir, for having taken this action.

OFFICE INVESTIGATION OF POISONINGS OF EAGLES WITH THALLIUM

Senator MCGEE. I think the record ought to show, Mr. Lawrence, that as you were digging out there during the thallium episode, that your jurisdiction was very limited, that is, if you couldn't establish

the violation of a Federal law, that you were out of business; is that not correct?

Mr. LAWRENCE. That is correct.

Senator MCGEE. And that the whole element of uncertainty about establishing intent, even thallium or anything else, had to be resolved, if indeed you had a case at all?

POTENTIAL FOR PROOF OF CRIMINAL INTENT IN SHOOTING OF EAGLES

Mr. LAWRENCE. That is correct. Well, I recognized that if we obtained information and names and identities of individuals who were actually shooting eagles from aircraft, we would have an open and shut case, because there is absolutely no excuse for it and because of the magnitude, the apparent magnitude of this offense, we were making every effort to run it to ground.

ALLEGED PERMIT TO KILL EAGLES: BALD EAGLE ACT AMENDMENT EXTENSION OF PROTECTION TO GOLDEN EAGLE

The witness made mention of a permit and I would like——

Senator MCGEE. Yes, I wanted to ask that question next, is there ever an extenuating circumstance where a permit to kill eagles would be in order?

Mr. LAWRENCE. Well, may I explain it this way, sir?

On October 24, 1962, the Bald Eagle Act was amended and it was approved. Now, the amendment extended Federal protection to the Golden Eagle as well as the Bald Eagle.

SECTION 2

Now, in section 2 of the amendment, it states:

> Provided, that on the request of the Governor of any state, the Secretary of the Interior shall authorize the taking of golden eagles for the purpose of seasonally protecting domesticated flocks and herds in such state in accordance with regulations established under the provisions of this section and in such part or parts of such state and for such periods as the Secretary determines to be necessary to protect such interests.

PUBLICATION OF IMPLEMENTING REGULATIONS

As I said, the act was officially amended October 24, 1962. A few months elapsed until such time as the implementing regulations could be developed and published. They were published in the Federal Register, volume 28, No. 23, on February 1, 1963.

SECTION 11(4): PERMITS FOR KILLING BALD EAGLES

With respect to the means by which eagles could be taken under permit, section 11(4), of the implementing regulation states: "Bald Eagles may be taken under permit by firearms, traps or other suitable means except by poison or from aircraft."

Senator MCGEE. Poison and aircraft are exempted from that exemption?

Mr. LAWRENCE. Yes, they are prohibited. They are prohibited means.

Senator McGee. Without an exception?

Mr. Lawrence. Without an exception.

Permits for Killing Golden Eagles

"Golden Eagles may be taken under permit by firearms, traps or other suitable means except by poison or from aircraft.

Had a permit been issued by the Secretary of the Interior effective in the State of Wyoming during this period, the Secretary or no one else had any authority to authorize the taking of these birds from aircraft.

Denial of Request of Governor of Wyoming for Blanket Permit

I believe, sir, that the Governor of Wyoming requested of the Secretary a blanket permit as he had in previous years and in view of a policy established by Secretary Hickel, the permit was denied.

Senator McGee. The permit was and the Governor of Wyoming then did request a permit for the shooting of eagles as predators?

Mr. Lawrence. Yes, sir.

Senator McGee. And do you have the dates of those requests?

Mr. Lawrence. I do not have that. We can provide it, sir.

But as of March 5, 1970, the Secretary, then-Secretary of Interior Hickel, concluded that the eagles were deserving of greater protection than they had been given and that in the event a permit was issued, each request had to be investigated by a field man, and the justification confirmed. Following his denial of the blanket permit, no further requests were received from the State of Wyoming.

Denial of Blanket Permits Requested by Other Governors

Mr. Reed. I would like to point out other Governors also requested blanket authority to kill eagles during seasonal periods for livestock protection. The Secretary made that point to more than one Governor in denying blanket permitting and insisted upon individual permits for an identified predator and no requests had been received from these States for an individual predator.

Latest Issuance of Blanket Requests

Senator McGee. Will the records reveal when was the last year that such permits might have been granted?

Mr. Reed. Yes, sir, the last eagle permit was issued by the Department of the Interior on January 1, 1969, to the States of Montana, Wyoming, and New Mexico.

Senator McGee. And those were blanket permits?

Mr. Reed. Yes, but they had a qualification which prohibited shooting eagles from airplanes.

Senator McGee. From aircraft. Then there has been a request since from several Governors including the Governor in Wyoming for similar permits in subsequent years, that is, 1970, but such a permit was not granted?

65-903 O—71——12

ABSENCE OF STATUTORY AUTHORITY FOR ISSUANCE OF PERMIT TO KILL BALD OR GOLDEN EAGLES FROM AIRCRAFT

Mr. LAWRENCE. Now, Mr. Chairman, there is no Federal permit, of any kind, that could have been issued by anyone that would authorize Mr. Vaughan to kill bald and golden eagles from aircraft.

SECTIONS 668 AND 668a. TITLE 16 UNITED STATES CODE AND IMPLEMENTING REGULATIONS

Senator MCGEE. We will insert in the record at this time sections 668 and 668a of title 16 of the United States Code, which part of it you read, and then if you will insert a copy of the regulations from which you have been reading.

That section of your testimony at this time will complete it.

(The documents follow:)

PROTECTION OF BALD AND GOLDEN EAGLES

§ 668. Bald and golden eagles; act prohibited; penalties.

Whoever, within the United States of any place subject to the jurisdiction thereof, without being permitted to do so as provided in sections 668–668d of this title, shall take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or any golden eagle, alive or dead, or any part, nest, or egg thereof of the foregoing eagles, shall be fined not more than $500 or imprisoned not more than six months or both: *Provided*, That nothing in said sections shall be construed to prohibit possession or transportation of any bald eagle, alive or dead, or any part, nest, or egg thereof, lawfully taken prior to June 8, 1940, and that nothing in said sections shall be construed to prohibit possession or transportation of any golden eagle, alive or dead, or any part, nest, or egg thereof, lawfully taken prior to the addition of said sections of the provisions relating to preservation of the golden eagle. (June 8, 1940; ch. 278 § 1, 54 Stat. 250; June 25, 1959, Pub. L. 86–70, § 14, 73 Stat. 143; Oct. 24, 1962, Pub. L. 87–884, 76 Stat. 1246.)

REFERENCES IN TEXT

Prior to the addition to said sections of the provisions relating to preservation of the golden eagle, referred to in the text, means prior to Oct. 24, 1962, the date such provisions were enacted by Pub. L. 87–884 as an amendment of this section and section 668a of this title.

AMENDMENTS

1962—Pub. L. 87–884 extended the prohibitions against the enumerated acts to the golden eagle and changed the proviso by substituting "bald eagle", "June 8, 1940" and "and nothing in said sections shall be construed to prohibit possession or transportation of any golden eagle, alive or dead, or any part, nest, or egg thereof, lawfully taken prior to the addition of said sections of the provisions relating to preservation of the golden eagle" for "such eagle." "the effective date of said sections" and "but the proof of such taking shall be upon the accused in any prosecution under said sections", respectively.

1959—Pub. L. 86–70 eliminated words "except the Territory of Alaska." which followed "subject to the jurisdiction thereof,".

LEGISLATIVE INTENT

Enacting clause of act June 8, 1940, provided:

"Whereas the Continental Congress in 1782 adopted the bald eagle as the national symbol; and

"Whereas the bald eagle thus became the symbolic representation of a new nation under a new government in a new world; and

"Whereas by that act of Congress and by tradition and custom during the life of this Nation, the bald eagle is no longer a mere bird of biological interest but a symbol of the American ideals of freedom; and

"Whereas the bald eagle is now threatened with extinction: Therefore

"Be it enacted * * *", etc.

§ 668a. Same; taking and using for scientific, exhibition and religious purposes.

Whenever, after investigation, the Secretary of the Interior shall determine that it is compatible with the preservation of the bald eagle or the golden eagle to permit the taking, possession, and transportation of specimens thereof for the scientific or exhibition purposes of public museums, scientific societies, and zoological parks, or for the religious purposes of Indian tribes, or that it is necessary to permit the taking of such eagles for the protection of wildlife or of agricultural or other interests in any particular locality, he may authorize the taking of such eagles pursuant to regulations which he is hereby authorized to prescribe: *Provided*, That on request of the Governor of any State, the Secretary of the Interior shall authorize the taking of golden eagles for the purpose of seasonally protecting domesticated flocks and herds in such State, in accordance with regulations established under the provisions of this section, in such part or parts of such State and for such periods as the Secretary determines to be necessary to protect such interests: *Provided further*, That bald eagles may not be taken for any purpose unless, prior to such taking, a permit to do so is procured from the Secretary of the Interior. (June 8, 1940, ch. 278, § 2, 54 Stat. 251; Oct. 24, 1962, Pub. L. 87–884, 76 Stat. 1246.)

1962—Pub. L. 87–884 extended the provisions of the section to the golden eagle, permitted the taking of specimens for the religious purposes of Indian tribes and authorized the taking of golden eagles for purpose of seasonally protecting domesticated flocks and herds.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WASHINGTON, D.C. 20240

AUG 3 1971

Hon. Gale W. McGee
United States Senate
Washington, D.C. 20510

Dear Senator McGee:

In response to your request, we submit a copy of the Federal Register, Volume 28, Number 23, dated Friday, February 1, 1963, which prescribes regulations affording Federal protection to the golden as well as the bald eagle.

Section 11.3 authorizes the Secretary of the Interior to issue permits to take bald and golden eagles when he determines they have become seriously injurious to wildlife or to agriculture or other interests--and the injury complained of is substantial and can be abated only by taking some of the offending birds. However, your attention is respectfully directed to the provisions of the succeeding section, Section 11.4, governing the means of taking under permit. You will note this section authorizes the taking of depredating bald and golden eagles by means of firearms, traps, or other suitable means except by poison or from aircraft (emphasis supplied).

Sincerely yours,

Assistant to the
Director

Enclosure

Title 50—WILDLIFE AND FISHERIES

Chapter I—Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, Department of the Interior

SUBCHAPTER B—HUNTING AND POSSESSION OF WILDLIFE

PART 11—PROTECTION OF BALD EAGLES AND GOLDEN EAGLES

By notice of proposed rule making published in the FEDERAL REGISTER of December 7, 1962, notification was given that the Secretary of the Interior proposed to revise Part 11, Title 50, Code of Federal Regulations, for the purpose of prescribing regulations which would extend Federal protection to the golden eagle as well as the bald eagle and which would govern the taking of such eagles for scientific and exhibition purposes, for depredation control purposes, and for religious purposes of Indians, when it is determined that such taking is compatible with the preservation of the species.

Interested persons were invited to submit written comments, objections, or suggestions regarding the proposal to the Director, Bureau of Sport Fisheries and Wildlife, Washington 25, D.C., within thirty days following the date of publication. A number of comments, objections, and suggestions were received with respect to several provisions of the proposal.

Objections were received protesting that provision of the proposal which would, under certain conditions, permit the taking of golden eagles from aircraft for the protection of domestic livestock. The proposal has been reconsidered and the taking of golden eagles from aircraft will not be permitted under any conditions.

Suggestions were received regarding the wording of those provisions of the proposal dealing with the taking of bald and golden eagles for religious purposes of Indians and the information required in applications for permits to do so. The proposal has been reconsidered and the wording of these provisions revised in accordance with these suggestions.

All other comments, objections, and suggestions were fully considered preliminary to determination that no other changes would be made on the basis of these communications. The revision of Part 11, Title 50, Code of Federal Regulations, is hereby adopted as set forth below and shall become effective on April 1, 1963.

Part 11, Title 50, Code of Federal Regulations, is revised to read as follows:

AUTHORITY: §§ 11.1 to 11.9 issued under sec. 2, 54 Stat. 251, as amended; 16 U.S.C. 668a.

§ 11.1 Eagles protected.

The taking, possession, or transportation of the bald eagle (Haliaeetus leucocephalus), commonly known as the American eagle, or the golden eagle (Aquila chrysaetos), or their parts, nests, or eggs is prohibited, except as permitted in this part. No bald eagle or golden eagle, or their parts, nests, or eggs may be purchased, sold, traded, or bartered, or offered for sale, trade, or barter in the United States or in any place subject to its jurisdiction.

§ 11.2 Permits to take for scientific or exhibition purposes.

Whenever the Secretary determines that it is compatible with the preservation of the bald eagle or the golden eagle to take, possess, or transport such birds or their parts, nests, or eggs for the scientific or exhibition purposes of public museums, scientific societies, or zoological parks, a permit may be issued for such purposes.

§ 11.3 Relief from depredating eagles.

(a) The Secretary may issue permits to take bald eagles or golden eagles when he determines they have become seriously injurious to wildlife or to agricultural or other interests in any particular area in the United States or in any place subject to its jurisdiction, and the injury

complained of is substantial and can be abated only by taking some or all of the offending birds.

(b) Whenever the Governor of any State requests permission to take golden eagles to seasonally protect livestock, the Secretary will authorize such taking without a permit in whatever part or parts of the State and for such periods as he determines necessary to protect those interests.

(c) No bald eagle may be taken for any purpose unless, prior to such taking, a permit to do so has been issued by the Secretary.

§ 11.4 Means for taking; persons authorized to take.

(a) Bald eagles may be taken under permit by firearms, traps, or other suitable means except by poison or from aircraft.

(b) Golden eagles may be taken under permit by firearms, traps, or other suitable means except by poison or from aircraft.

(c) Whenever the taking of golden eagles without a permit is authorized for the seasonal protection of livestock, such birds may be taken by firearms, traps, or other suitable means except by poison or from aircraft.

(d) The taking of eagles under permit may be done only by the permittee or his agents named in the permit. Whenever the taking of golden eagles without a permit is authorized to seasonally protect livestock, such birds may be taken only by the owner of such livestock or by his agents.

(e) Any person exercising any of the privileges granted by this part must permit at all reasonable times, including during actual operations, any Federal or State game agent or deputy game agent, warden, protector, or other game law enforcement officer free and unrestricted access over the permises on which such operations have been or are being conducted; and shall furnish promptly to such officer whatever information he may require concerning such operations.

§ 11.5 Possession and use for religious purposes.

Whenever the Secretary determines that the taking and possession of bald or golden eagles for the religious purposes of Indian tribes is compatible with the preservation of such birds, he may issue permits for such taking and possession to those individual Indians who are authentic, bona fide practitioners of such religion. Any birds or their parts taken or possessed under permits issued pursuant to this section are not transferable, except such birds or their parts may be handed down from generation to generation or from one Indian to another in accordance with tribal or religious customs.

§ 11.6 Applications for permits.

(a) Applications for permits must be addressed to the Regional Director at the Regional Office of the Bureau of Sport Fisheries and Wildlife having administrative supervision over Bureau functions in the State in which permit activities are proposed. (See § 11.9 of this part for addresses.)

(b) Applications for permits (except as provided under paragraphs (c), (d), and (e) of this section) must state the name and address of the applicant, his age, the species of eagles and the number of such birds, nests, or eggs proposed to be taken, and the State and locality in which such taking is to be done. In the case of permits for taking such birds for scientific or exhibition purposes, the application must include the name and address of the public museum, scientific society, or zoological park for which they are intended. The applicant will furnish such other information as may be requested by the Regional Director.

(c) Requests from the Governor of a State to take golden eagles to seasonally protect livestock must be submitted in writing to the Secretary listing the periods of time during which the taking of such birds is recommended, and including a map of the State indicating the boundaries of the proposed area of taking. The Governor will be advised in writing concerning the request and a notice will be published in the FEDERAL REGISTER.

(d) Applications for permits to take and possess bald eagles or golden eagles for the religious purposes of Indian tribes must be submitted by individual Indians. Such applications must state the name and address of the applicant, his age, the name of his tribe, the species and number of eagles proposed to be taken, and the State and area where taking is to be done. Further, the applicant must name the religious ceremony for which such eagles or their parts will be used and must enclose a statement from a duly authorized official of the religious group in question verifying that

the applicant is authorized to participate in such ceremonies.

§ 11.7 Permit requirements.

(a) Any permit issued pursuant to this part will specify the date of issue and expiration, the number of bald eagles or golden eagles or their nests or eggs that may be taken, the person or persons who may take such eagles or their nests or eggs, the places where, the time when, the means or methods by which they may be taken, and the disposition or utilization to be made of such birds, nests, or eggs.

(b) Permits issued under this part are not transferable. In addition to other penalties prescribed for violation of regulations in this part, permits may be revoked at any time by the Regional Director for violation of any requirements of the permit or the provisions of this part. If revoked, they must be surrendered on demand. Within thirty (30) days after the expiration date, the holder must complete and mail to the Regional Director a report of his activities on a form provided for this purpose.

(c) Nothing in this part or in any permit issued thereunder authorizes the taking, possession, or transportation of bald eagles or golden eagles, or their parts, nests, or eggs in any State contrary to the laws and regulations of that State: *Provided,* Such laws and regulations are for the purpose of giving further protection to such eagles and are not inconsistent with the provisions of any Federal law for the protection of such birds. Further, no permit issued under this part authorizes the taking, possession, or transportation of bald eagles or golden eagles or their parts, nests, or eggs unless the holder also possesses whatever permit may be required for such activities by the State concerned.

§ 11.8 Possession, transportation, and disposition.

(a) Any bald eagles or golden eagles or their parts, nests, or eggs, seized for any violation under this part or otherwise acquired, may be disposed of by Regional Directors by loan to public museums, scientific societies, or zoological parks or by gift to Indians authorized under permit to possess such birds or their parts.

(b) Bald eagles, alive or dead, or their parts, nests, or eggs lawfully acquired prior to June 8, 1940, and golden eagles, alive or dead, or their parts, nests, or eggs lawfully acquired prior to October 24, 1962, may be possessed, or transported without a Federal permit, but may not be purchased, sold, traded, bartered, or offered for sale, trade, or barter in the United States or in any place subject to its jurisdiction. All shipments containing such birds, parts, nests, or eggs must be marked as provided in paragraph (c) of this section.

(c) Every package or container in which bald eagles or golden eagles or their parts, nests, or eggs are shipped or transported by any means whatever, must be plainly and clearly marked, labeled, or tagged on the outside thereof showing the names and address of the consignor and consignee, the contents of the package or container, and the number of the permit, where required, under authority of which it is possessed and transported, and the purpose of the shipment.

§ 11.9 Jurisdiction and address of regional offices.

The geographic jurisdictions and addresses of the Bureau of Sport Fisheries and Wildlife regional offices are as follows:

(a) Pacific Region (Region 1—comprising the States of California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington) P.O. Box 3737, Portland 8, Oreg.

(b) Southwest Region (Region 2—comprising the States of Arizona, Colorado, Kansas, New Mexico, Oklahoma, Texas, Utah, and Wyoming) P.O. Box 1306, Albuquerque, N. Mex.

(c) North Central Region (Region 3—comprising the States of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) 1006 West Lake Street, Minneapolis 8, Minn.

(d) Southeast Region (Region 4—comprising the States of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia) Peachtree-Seventh Building, Atlanta 23, Ga.

(e) Northeast Region (Region 5—comprising the States of Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia) 59 Temple Place, Boston 11, Mass.

(f) Alaska Region (Region 6—comprising the State of Alaska) P.O. Box 2021, Juneau, Alaska.

STEWART L. UDALL,
Secretary of the Interior.

JANUARY 25, 1963.

[F.R. Doc. 63-1086; filed, Jan. 31, 1963; 8:46 a.m.]

Senator McGee. Will you also furnish for the record sections 705–707 of title 16 of the code which also pertains to the illegal taking or transportation of birds and other wildlife.

(The material follows:)

§ 705. Transportation or importation of migratory birds; when unlawful.

It shall be unlawful to ship, transport, or carry, by any means whatever, from one State, Territory, or district to or through another State, Territory, or district, or to or through a foreign country, any bird, or any part, nest, or egg thereof, captured, killed, taken, shipped, transported, or carried at any time contrary to the laws of the State, Territory, or district in which it was captured, killed, or taken, or from which it was shipped, transported, or carried. It shall be unlawful to import any bird, or any part, nest, or egg thereof, captured, killed, taken, shipped, transported, or carried contrary to the laws of any Province of the Dominion of Canada in which the same was captured, killed, or taken, or from which it was shipped, transported, or carried.

It shall be unlawful to import into the United States from Mexico, or to export from the United States to Mexico, any game mammal, dead or alive, or parts or products thereof, except under permit or authorization of the Secretary of the Interior in accordance with such regulations as he shall prescribe having due regard to the laws of the United Mexican States relating to the exportation and importation of such mammals or parts or products thereof and the laws of the State, District, or Territory of the United States from or into which such mammals, parts, or products thereof, are proposed to be exported or imported, and the laws of the United States forbidding importation of certain live mammals injurious to the interests of agriculture and horticulture, which regulations shall become effective as provided in section 704 of this title. (July 3, 1918, ch. 128, § 4, 40 Stat. 755; June 20, 1936, ch. 634, § 4, 49 Stat. 1556; 1939 Reorg. Plan No. II, § 4(f), eff. July 1, 1939, 4 F.R. 2731, 53 Stat. 1433.)

AMENDMENTS

1936—Act June 20, 1936, added last sentence.

EFFECTIVE DATE OF 1936 AMENDMENT

See note set out under section 703 of this title.

TRANSFER OF FUNCTIONS

See note under section 701 of this title.

§ 706. Arrests; search warrants.

Any employee of the Department of the Interior authorized by the Secretary of the Interior to enforce the provisions of sections 703–711 of this title shall have power, without warrant, to arrest any person committing a violation of said sections in his presence or view and to take such person immediately for examination or trial before an officer or court of competent jurisdiction; shall have power to execute any warrant or other process issued by an officer or court of competent jurisdiction for the enforcement of the provisions of said sections; and shall have authority, with a search warrant, to search any place. The several judges of the courts established under the laws of the United States, and United States commissioners may, within their respective jurisdictions, upon proper oath or affirmation showing probable cause, issue warrants in all such cases. All birds, or parts, nests, or eggs thereof, captured, killed, taken, shipped, transported, carried or possessed contrary to the provisions of said sections or of any regulations made pursuant thereto shall when found, be seized by any such employee, or by any marshal or deputy marshal, and, upon conviction of the offender or upon judgment of a court of the United States that the same were captured, killed, taken, shipped, transported, carried, or possessed contrary to the provisions of said sections or of any regulation made pursuant thereto, shall be forfeited to the United States and disposed of as directed by the court having jurisdiction. (July 3, 1918, ch. 128, § 5, 40 Stat. 756; 1939 Reorg. Plan No. II, § 9(f), eff. July 1, 1939, 4 F.R. 2731, 53 Stat. 1433.)

REFERENCES IN TEXT

Section 709, included within the reference to sections 703—711 of this title, was omitted from this Code.

TRANSFER OF FUNCTIONS

See note under section 701 of this title.

§ 707. Violations and penalties; forfeitures.

(a) Except as otherwise provided in this section, any person, association, partnership or corporation who shall violate any provisions of said conventions or a sections 703–711 of this title, or who shall violate or fail to comply with any regulation made pursuant to said sections shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not more than $500 or be imprisoned not more than six months, or both.

(b) Whoever, in violation of sections 703–711 of this title, shall—

(1) take by any manner whatsoever any migratory bird with intent to sell, offer to sell, barter or offer to barter such bird, or

(2) sell, offer for sale, barter or offer to barter, any migratory bird shall be guilty of a felony and shall be fined not more than $2,000 or imprisoned not more than two years, or both.

(c) All guns, traps, nets and other equipment, vessels, vehicles, and other means of transportation used by any person when engaged in pursuing hunting, taking, trapping, ensnaring, capturing, killing, or attempting to take, capture, or kill any migratory bird in violation of section 703–711 of this title with the intent to offer for sale or sell, or offer for barter, or barter such bird in violation of said sections shall be forfeited to the United States and may be seized and held pending the prosecution of any person arrested for violating said sections and upon conviction for such violation, such forfeiture shall be adjudicated as a penalty in addition to any other provided for violation of said sections. Such forfeited property shall be disposed of and accounted for by, and under the authority of, the Secretary of the Interior. (July 3, 1918, ch. 128, § 6, 40 Stat. 756; June 20, 1936, ch. 634 § 2, 49 Stat. 1556; Sept. 8, 1960, Pub. L. 86–732, 74 Stat. 866.)

ASSIGNMENT OF EIGHT AGENTS TO WYOMING: SERVICE OF SEARCH WARRANTS

Mr. LAWRENCE. I have just one more comment, sir, to indicate the progress. On Friday some of our personnel met with the U.S. attorney in the company of Mr. Vogan and this morning, as a result of information that had been collected in the field and collected as a result of the interview, eight of our agents are in Wyoming. They are serving search warrants to obtain records and physical evidence and they are in the field right at this moment.

ABSENCE OF PUBLICITY DURING CASE DEVELOPMENT

Senator MCGEE. The reason for the careful, shall we say, "secrecy" or lack of publicity of what was developing here was explained by what circumstances? That is, in our conversations with your people we were reminded, of course, of the importance of not surfacing this sort of thing prematurely.

Your people likewise were very careful not to go to the New York Times, and I am just wondering if you can explain, for the record, why that is.

Mr. LAWRENCE. Well, premature publicity probably would have resulted in the destruction of evidence and would have materially jeopardized the case and the development of the case. So we most assuredly had no intention of giving any publicity whatsoever to it.

Senator McGee. Do you have any other thing to add?

Mr. Reed. I would just like to finish, if I may, Mr. Chairman, by saying that I do think this case has been wisely handled by the legislative and executive branches of Government. This hearing culminates a great deal of work which you have been aware of from the start.

Legislative-Executive Cooperation

It has been a path which we walked, which involves great secrecy and involved developing a case which we are making at this time and in no way could this hearing do anything except assist us, and I express my gratitude and the Secretary's gratitude for the way it has been handled.

Senator McGee. That is an appropriate point for me to observe that I am a member of another committeet that is having problems and this does illustrate that the executive and legislative branches can cooperate with responsibility in the pursuit of problems in the national interest.

And in our own small way we may ultimately set an example for others hopefully to follow.

Mr. Reed. Thank you, sir.

Senator McGee. Thank you very much.

Mr. Reed. Thank you, Mr. Chairman.

SUBCOMMITTEE RECESS

Senator McGee. The hearing will recess until 11 a.m. tomorrow, when we will document the additional items of the records that have been kept by Mr. James Vogan and pursue a line of questioning in regard to the evidence that has now been submitted.

We will resume at 11 a.m. tomorrow in this room.

(Whereupon, at 11:50 a.m., Monday, August 2, the subcommittee was recessed, to reconvene at 11 a.m., August 3.)

PREDATOR CONTROL AND RELATED PROBLEMS

TUESDAY, AUGUST 3, 1971

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 11 a.m., in room 1318, New Senate Office Building, Hon. Gale McGee (chairman) presiding.

Present: Senator McGee.

STUDY OF PREDATOR CONTROL

NONDEPARTMENTAL WITNESSES

STATEMENT OF JAMES O. VOGAN, PINEGROVE RANCH, RAWLINS, WYO.

SUMMARY: PRACTICE OF PREDATOR CONTROL BY HELICOPTER

Senator McGEE. The subcommittee will come to order.

Mr. Vogan, will you come up to the witness table.

Before we proceed with today's testimony, I want to repeat for the record that the oath administered yesterday still obtains today. I am advised by legal counsel. You have no reason today to wish to recant on the oath.

Mr. VOGAN. None.

Senator McGEE. The summary we heard yesterday, to put it as briefly as possible, related to the practice of predator control by helicopter. James Vogan testified to the alleged shooting from aircraft over Wyoming ranches of more than 500 bald and golden eagles, primarily golden eagles, a few bald eagles.

Mr. Vogan alleged that eagle kills were documented from September 1970 until early March of 1971, a period of approximately 6½ to 7 months while he was employed as a helicopter pilot for the Buffalo Flying Service.

Mr. Vogan also testified that Buffalo Flying Service entered into agreements with several ranchers in Wyoming to shoot predatory animals and eagles. We heard how the operator of the Buffalo Flying Service, a Mr. Doyle Vaughan, entered into an agreement with the ranchers to shoot coyotes and other predators which so far in-

cluded a few bobcats and a bear, for a fee of $50 per head, and we also heard how the fee for eagles was generally $25 per bird, although in at least one instance it was lowered to as low as $10.

There was an interval apparently when the going fee was $80.00 per hour for predator and eagle kills.

We also heard Mr. Vogan testify that some 65 eagles were piled up like a haystack on the Bolton Ranch owned by a Mr. Herman Werner, a ranch located south of Rawlins, Wyo.

Mr. Vogan described to us how these eagles were moved to a sheep-shearing shed before finally being buried in a mass grave.

FEDERAL SPORTS FISHERIES AND WILDLIFE INVESTIGATION

This subcommittee also heard testimony yesterday from the Department of the Interior. We were told how Federal Sports Fisheries and Wildlife officials have been investigating the incidents in Wyoming for many weeks. The thrust of the testimony centered around the fact that Federal officials were well aware that a shocking number of eagles had been shot and were well aware of the people involved.

I might add that the whole incident is an excellent example of the cooperation between the executive and legislative branches of Government. Federal officials verified much of what Mr. Vogan had earlier revealed to the committee.

Mr. Vogan was in the process of listing yesterday the ranches that he worked on and the predators and eagles killed, along with the identification of the flights on which the kills occurred, the number of kills, and the gunners in many instances aboard the aircraft at the time.

Until the point where we had to break off yesterday, Mr. Vogan had listed the Bob Gibbs Ranch at Clearmont, Wyo., the Healy Ranch near Worland and the Cameron Taylor Ranch where predators or eagle kills were made and he described a long list of eagle kills made on the Herman Werner Ranch in Carbon County of Wyoming.

EXCEPTION TO FEDERAL LAW

Likewise, it was developed that Mr. Vogan believed that many of the gunners aboard the helicopters were told by Mr. Doyle Vaughan that he had a permit to kill eagles. The Federal Wildlife Service testified that no such permit had been issued, that golden eagles and bald eagles were protected under the law, that there was only one possible escape clause and that was a clause that would provide in any given locale, in any given season a Governor could request an exemption to the law if he could show that eagles were a predatory problem in that area.

The record further shows that the last granting of such permit was in the year 1969, 2 years ago, but that the Governor of Wyoming did request this past year an exemption to the law, but was denied the request and that other Governors from other States that have an eagle presence had made similar requests that were turned down.

Now, may I ask you, first of all, Mr. Vogan, whether this is a fair brief summary of the substance of the testimony yesterday?

Mr. VOGAN. Yes, sir.

Senator McGee. In that case, we will begin where you left off. As I recall, on the notes that you had kept, you were down to February of this year, 1971. You had just referred to a Mr. Bachloski who had shot coyotes but no eagles, and I believe you were into the spring, right after the Bachloski citation there.

I see you frowning as though I was mistaken. Where did you think you left off?

Mr. Vogan. As far as I know, I did leave off on Bachloski that had shot coyotes, but no eagles. He had shot five coyotes that day.

VISINTINER RANCH

Senator McGee. Resume then and you go down now into the next date.

Mr. Vogan. Did I mention the Visintiner Ranch?

Senator McGee. Just a minute. In my recollection you had not mentioned it yet.

Mr. Vogan. Well, let me take it out of my record.

Senator McGee. This is the little blue book again?

Mr. Vogan. Yes; this is the blue book which the Fish and Game has a copy of.

Senator McGee. Yes.

Mr. Vogan. On January 4—wait a minute, sir, January 3, I was sent to the Visintiner Ranch, or down to Baggs, and I had been working down there on several ranches, which I can give you the names of here, and on January 3 there was two helicopters, the Bell which was being flown by Ed Eisler from Alamogordo, N. Mex., with Gary Haizlip as the gunner and an Indian boy that worked for Mr. Visintiner as the observer.

At that time, I don't have a complete record here of which helicopter had killed what, but I can give you approximately here.

On January 3 I show two bobcats, two coyotes, and——

Senator McGee. This is on the Visintiner?

Mr. Vogan. Yes; it is on the Dean Visintiner, and it is in the State of Colorado. There was, I think, and I am almost positive, that this was the Bell helicopter at this time. It does not show any eagles shot on that particular flight and I think that myself I got the one coyote. This is in the Hughes 300 helicopter I was flying.

Sentor McGee. So at one stage you did have two helicopters at work at the same time roughly?

Mr. Vogan. Yes; even so, on the Bolton Ranch, at one time there was two helicopters.

On January 4, and I think this was Eisler that was flying and I am not sure whether Gary Haizlip or Del Jenkins was shooting for him at the time——

Senator McGee. The last name was Del Jenkins?

Mr. Vogan. Yes; he is from the Buffalo Flying Service. There was one coyote and 22 eagles killed on that particular flight.

On my own flight with either Joe Evans or Dean Visintiner, I am not sure, I don't have that listed, there was one bobcat and five eagles on that particular flight and on the next flight——

Senator McGee. These were, the flights were on the same day?

Mr. Vogan. Yes; this was on the fourth.

Senator McGee. Yes.

Mr. Vogan. Now I am sure that this was—they were running a check on the helicopter, I think you will find they had a 100-hour check that will be listed in the logbook that has been subpenaed. You will find that they were down at this time on a check, 100-hour check, maintenance check.

I went out in the Hughes and I think that Norm DeVilbiss was flying, but I have no record. I think he was the gunner if I remember.

Senator McGee. On your flight?

Mr. Vogan. Yes; and there was 11 eagles killed on that flight.

INTERCEPTION BY FISH AND GAME

Then at this time, on this date, Del Jenkins had gone into Craig, Colo., for gas and had spilled the beans in there that we were out there hunting with aircraft, which the Fish and Game perked up their ears and came out and were flying over us. In fact, we saw them several times in the aircraft and at that time Dean Visintiner gave the order "no more eagles to be shot."

On January——

Senator McGee. Mr. Visintiner himself gave the order to you?

Mr. Vogan. Yes; that no more eagles were to be shot because he informed me it was against the law in the State of Colorado to shoot predators from the aircraft.

Then, on January 5 we got, I think it was, between the two helicopters—we got six coyotes in——

Senator McGee. You were still on the Visintiner Ranch there?

Mr. Vogan. Yes; still on the Visintiner Ranch. This time we loaded the coyotes onto a pickup or onto two pickups, I don't remember, but I know that Colorado Fish and Game stopped—Del Jenkins and Gary Haizlip were stopped by the Fish and Game, and the Fish and Game took pictures of the coyotes in the pickups.

Senator McGee. I gather there were no eagles in the pickup?

Mr. Vogan. No; there was no eagles. In fact, we never did pick up any of the eagles.

Senator McGee. You left them laying where they were shot?

Mr. Vogan. Yes; now if—well, the Fish and Game has a record of Del Jenkins making a statement that he and Gary Haizlip were both employed by Buffalo Flying Service, although as far as I know there was nothing ever done about this. You know, even if it was against the law, they didn't try to prosecute them.

The Fish and Game for Colorado has a complete record on this, if this comes out.

Senator McGee. We may make note of that and there may be a significant record that they may have.

Mr. Vogan. That is correct.

Now, we also shot during this time on the Wynne—I think it was named Chuck Wynne place—and it was next to Visintiner's, bordering Visintiner's property, as far as I know, and also on the Spicer Ranch. But as I can recall I don't think there was any eagles shot on Chuck Wynne's place or Spicer's property and that is it. Well, let's see here—now, Spicer, also a rancher by the name of Boyer that we spent 1 hour hunting for down there and we killed three coyotes.

Senator McGee. Any eagles?

Mr. Vogan. No; no eagles on the Boyer place that I can remember.

Senator McGee. Yes.

Mr. Vogan. And Mr. Greaves, we spent 2 hours flying for him. They were paying him by the hour, that Greaves——

Senator McGee. That was the $80 per hour that was provided?

Mr. Vogan. I am sure that was being paid.

Senator McGee. Not for carcasses?

Mr. Vogan. No; not by the predators themselves.

Senator McGee. And what was the result on the Greaves Ranch?

Mr. Vogan. I don't have any record of what coyotes was killed, but if I remember correctly, I think it was three or four coyotes.

Senator McGee. Any eagles on the Greaves Ranch?

Mr. Vogan. No, sir.

Now, on the Arambel and Perlouis property we killed——

Senator McGee. This is also in Colorado?

Mr. Vogan. Yes; it is also in Colorado. That is what I have been told. There is no line up there in the air that you can see it——

Senator McGee. No; the line is not up there, the State boundary line?

Mr. Vogan. No. On the Arambel and Perlouis property, as he was paying by the hour and I show a record of——

Senator McGee. Who is "he"?

Mr. Vogan. Mr. Arambel was paying, and as far as I know, and can truthfully say I don't remember him hiring us to kill eagles, although Joe Evans was on the flight as a gunner and he mentioned it that he had a eagle problem. I don't know if he was paying by the hour and my record shows 24 eagles, seven coyotes.

Senator McGee. And the gunner at that time was Joe Evans?

Mr. Vogan. Joe Evans.

Senator McGee. This would have been on the Arambel Ranch?

Mr. Vogan. Yes. Well, it says "Arambel and Perlouis."

Senator McGee. Or Perlouis Ranch. This would be two different ranches, is that right, perhaps adjoining?

Mr. Vogan. I don't have any idea whether they were in business together or whether there were two separate ranches.

Senator McGee. But you have no record, no recollection of Mr. Arambel paying for the killing of eagles?

Mr. Vogan. No, sir; he never said anything to me about it.

Senator McGee. Or directing, did he have any word directing you to kill eagles?

Mr. Vogan. No, sir; he told me on one ranch, on another place—he mentioned the fact that there was a vast amount of eagles that was going to damage his land crop. Now I don't know whether Doyle Vaughan—Doyle Vaughan was down there afterwards whether he cleaned those eagles out for him or not. I don't know. I suppose when this grand jury is called and they are called as witness this will come out.

Senator McGee. Yes.

Mr. Vogan. On this Spicer Ranch, I am really not sure whether this is the Spicer Ranch here. Anyway it doesn't—I don't have any record of any eagles killed whatsoever.

Senator McGee. Just coyotes?

Mr. Vogan. Just the coyotes, that is it.

Senator McGee. Is that the end of the blue book?

Mr. Vogan. Yes, this was the end of the record on the Visintiner when I was flying out of Baggs.

Senator McGee. Correct, right.

Mr. Vogan. With Joe Evans shooting.

Senator McGee. Now you had an additional record there after the Visintiner episodes?

Mr. Vogan. Well, let's see, let's see—on 4 I do have a record. Now this was—I had orders from Mr. Werner.

Senator McGee. This is Herman Werner that you referred to yesterday?

Mr. Vogan. Yes, on 4—after April or March—that he told me not to shoot any more eagles, but due to the fact that I felt in my own mind that they were a predator and I had seen what they had done, I, when I was out shooting—I did shoot eight eagles on April 3 of 1971.

Senator McGee. Did you do the shooting?

Mr. Vogan. No.

Senator McGee. You had a gunner with you?

Mr. Vogan. I had a gunner with me, but it don't show the record here of who the gunner was and I don't remember.

Senator McGee. That was on which of the Herman Werner ranches?

Mr. Vogan. I think that it was on the Bolton, as far as I can remember.

Senator McGee. The Bolton Ranch?

Mr. Vogan. Yes, on April 19, 1971, there was 15 eagles shot and three coyotes.

On April 5 there was 10 eagles and two coyotes.

On April 6 there was six eagles and no coyotes.

Senator McGee. Now, you mentioned that in a direct conversation to you from Mr. Herman Werner that he said, if I heard you correctly, "Don't shoot any more eagles."

Mr. Vogan. That is it.

Senator McGee. Was he aware you had shot eagles?

Mr. Vogan. Yes, Mr. Werner was aware. He was there, I think, at the time the Fish and Game came out and discovered these.

Senator McGee. Found the piles?

Mr. Vogan. Discovered these eagles. Anyway, we were taking eagles in, he was present on several—at several times when we were bringing the eagles in.

Senator McGee. Was he one of those that would have made payments to the Buffalo Flying Service for this predator——

Mr. Vogan. That is correct.

Senator McGee (continuing). Activity?

Mr. Vogan. Of course, I never had any business dealings with him. It was between Doyle Vaughan and Mr. Werner.

Senator McGee. This is the period when you were working for Doyle Vaughan?

Mr. Vogan. Yes; and I received my orders from Doyle Vaughan.

Senator McGee. Yes.

Mr. Vogan. Not from Mr. Werner.

Senator McGee. Yes.

Mr. Vogan. In fact, at the time when Morris McCarty, his foreman on the ranch, came and told me that this—that Mr. Werner was going to stop us from shooting eagles, I made the statement to Mr. McCarty that I—that Mr. Werner would have to come and tell me personally to stop and then, of course, I would take my orders from Mr. Vaughan.

Senator McGee. When did your services terminate again, for this point in the record today, with the Buffalo Flying Service?

Mr. Vogan. It was the middle of February. I am not sure of the date. They will have it in the record on the subpenaed files.

Senator McGee. Yes, in February. Now I thought we were talking about some eagle shooting in April here?

Mr. Vogan. Yes.

Senator McGee. Who were you responsible to in April then?

Mr. Vogan. That was to Mr. Werner.

Senator McGee. You were now employed by Herman Werner?

Mr. Vogan. By Herman Werner. Of course, like I say, he had ordered me not to shoot any more eagles with his helicopter, but I went ahead and done this on my own, which I probably will get fired for.

Senator McGee. And you ticked off several of those bags of eagles then that you just read into the record?

Mr. Vogan. Yes.

Senator McGee. That these were eagles that were shot from your helicopter even after Herman Werner had said, "Don't shoot any more eagles"?

Mr. Vogan. Yes.

PAYMENTS TO BUFFALO FLYING SERVICE

Senator McGee. Were you present on any occasion when there was a payment by Mr. Werner to the Buffalo Flying Service for services which you had rendered?

Mr. Vogan. My daughter was, my 16-year-old daughter was in the house with the two of them when this payment was made. The first payment of $10,000 was, that he wrote out a check to Doyle Vaughan. I saw the check personally myself and so did several other witnesses.

Senator McGee. This is a $10,000 check from Herman Werner to Doyle Vaughan of the Buffalo Flying Service?

Mr. Vogan. Yes; that is correct.

Senator McGee. And it is your understanding that this was for services that you, at least in part, had rendered as a pilot of the helicopter owned by the Buffalo Flying Service?

Mr. Vogan. That is correct.

Senator McGee. Was this amount calculated on the basis of the $80 an hour or was this on a per carcass——

Mr. Vogan. At this time it was—it was understood by myself that this was per carcass.

Senator McGee. Per carcass?

Mr. Vogan. Yes.

Senator McGee. In other words, you had to submit a bill that would allow for what? What was it, $25 per eagle and $50 per coyote?

Mr. VOGAN. Yes; at this time there was, it was my understanding and I was told by Doyle Vaughan that this was settled and my daughter was there, too, as a witness, that this was $25 per eagle, $50 per coyote.

Senator MCGEE. Coyote or other predatory animal?

Mr. VOGAN. Yes.

Senator MCGEE. Because there were still some bobcats in there.

Would your records show what fraction of that $10,000 represented the eagle kills?

Mr. VOGAN. I do have a figure here that I have submitted to Doyle Vaughan. I don't know whether he——

158 COYOTES—337 EAGLES

Senator MCGEE. In other words, these were the figures submitted for billing purposes; is that it?

Mr. VOGAN. Yes; well I have figured up on the costs until they had reverted back to the hourly basis and I will have to find that here. It was on January 2 that I showed 158 coyotes at $50 per head, which comes to $7,900. On the eagles there had been at that date 377 eagles killed, at $25 per head, which comes to $8,425.

Senator MCGEE. Let me be sure I have those two figures correct now for the record. The coyote kills according to your record were how many coyotes?

Mr. VOGAN. Was 158.

Senator MCGEE. 158 coyotes at $50 per head?

Mr. VOGAN. Per head. This is as of January 2.

Senator MCGEE. January 2 this year, 1971?

Mr. VOGAN. Yes.

Senator MCGEE. And the eagle count was——

Mr. VOGAN. 337.

Senator MCGEE. 337 eagles at $25?

Mr. VOGAN. $25 per head, which comes to $8,425.

Senator MCGEE. That is six times the number of eagles that we had the ruckus over in June about the thallium deaths, more than six times that.

Mr. VOGAN. I realize that.

Senator MCGEE. All right. Now are there any other occasions that you can recall on which money or checks were delivered by Mr. Werner to the Buffalo Flying Service?

Mr. VOGAN. Mr. Doyle Vaughan had told me that he was, that he had asked me to kill eagles at the Bob Gibbs place and he was going to bill them for them. I don't know whether he did or not.

Senator MCGEE. That is, he was going to bill——

Mr. VOGAN. Bob Gibbs.

Senator McGee. Bob Gibbs for them?

Mr. Vogan. Yes.

ADDITIONAL PAYMENTS FOR DAMAGE TO HELICOPTER

Senator McGee. Let me rephrase my question again.

First, I wanted to know whether there were any other occasions on which you were aware that Mr. Herman Werner made a payment to the Buffalo Flying Service in addition to the one you already described?

Mr. Vogan. Yes; there was a $5,000 payment later on after I lost the engine on the Hughes helicopter. Gary Haizlip and I were flying coming into Rawlins and the engine just blew up and it tore it all to pieces and he had to buy a complete new engine.

Senator McGee. Obviously you got down all right.

Mr. Vogan. We got the helicopter down, but the engine was completely destroyed.

Senator McGee. So this $5,000 was to pay for the damage to the helicopter?

Mr. Vogan. No; he went to Mr. Werner and told Mr. Werner that he owed him another $5,000 on the eagles and the coyotes and Mr. Werner, without questioning his——

Senator McGee. Statement.

Mr. Vogan. Statement, wrote him out another check for $5,000.

Senator McGee. Was there a bill submitted, that is, documented bill submitted with this second payment of $5,000?

Mr. Vogan. I do not know at this time. I know that I heard that Mr. Werner raised hell when he found out that Visintiner was getting his eagles killed for $10.

Senator McGee. Was there any reason to believe that this $5,000 additional charge that Mr. Werner paid to Doyle Vaughan of the Buffalo Flying Service was a padded account to help defray the costs of the damage to the helicopter?

Mr. Vogan. I do not know. All I know is that I gave Doyle Vaughan these figures that I had on the eagle kill and the coyote kill at this time.

NUMBER OF KILL TAKEN AS AN ARTICLE OF FAITH

Senator McGee. Did anybody in behalf of Herman Werner ever attempt to verify any of the losses, that is, the coyote or eagle kills, to verify those kills for the payment or was this taken as an article of faith?

Mr. Vogan. It was taken as an article of faith because Mr. Werner, I think, had checked on myself, he had seen me, set and watched me shooting down the eagles up by where he has the wheat ranch and I think that he knew that I was bringing in a correct count.

Senator McGee. He had himself observed the killing of some of the eagles?

Mr. Vogan. Yes; he had observed this.

Senator McGee. When—that was up on the wheat ranch?

Mr. Vogan. Yes.

Senator McGee. Where would it be? Is that near the Bolton place?

Mr. Vogan. It is straight east of the Bolton Ranch and it is up on a plateau where they had the wheat ranch. He was there watching myself and I think that Jack Howard was up there at the time flying as a gunner with me and, in fact, at one time I came down, they were trying to drive some sheep down and I came down to help them put the sheep or started to drive them over to help them out.

Senator McGee. Roughly when would that have been, do you recall?

Mr. Vogan. It would have been at the time Jack Howard was shooting for me, which Jack will have a record of, will be giving a record, because I talked to Jack Howard last night and he told me that the Federal Fish——

Senator McGee. You mean since your testimony yesterday you have talked to Jack Howard?

Mr. Vogan. Yes; I talked to Jack Howard and he told me that the Federal had talked to him and that they had asked, said that they had a record of him shooting 62 eagles and he made the statement that he shot 65. They were wrong.

Senator McGee. Sixty-five eagles instead of 62. I think accuracy is important here.

Did you—you have told us that Herman Werner had great faith in your integrity, this sort of thing, one of the reasons being he had seen you there in the wheat farm shooting the eagles, that is, you were flying the copter while eagles were being shot. Did you see Mr. Werner there?

Mr. Vogan. Yes, I did. He was in his station wagon.

Senator McGee. Did you have any words with him when you——

Mr. Vogan. I spoke up and talked to him and asked him if I could help him out to herd the sheep and he said, "No." Anyway I went around at one time and drove some sheep in to them.

Senator McGee. I see. Did you have any conversation with him at that time about the number of eagles you might have gotten up there?

Mr. Vogan. No; there wasn't any question ever. He never did question my shooting, you know, what I turned in to him. That is what——

Senator McGee. That was good enough for Herman Werner?

Mr. Vogan. That was good enough for him.

Senator McGee. Do you have any additional items there you want to include in the record?

I have a list now given to me that was a composite of the list that you kept and unless there is something to be added there, I would prepare to make this listing a part of the record.

Mr. VOGAN. That would be fine.

NIXON AND CURT ROCHELLE RANCHES

Now, on this list of ranchers I haven't heard the Nixon Ranch mentioned.

Senator MCGEE. I don't believe you mentioned the Nixon Ranch. Let the record show this is a local family.

Mr. VOGAN. And Curt Rochelle Ranch, which there were no eagles killed on the Curt Rochelle Ranch and the Nixon Ranch I don't remember of any eagles being killed on his ranches. Although there were——

Senator MCGEE. When you were on those ranches, you were at that time under the employ of whom?

Mr. VOGAN. Herman Werner.

Senator MCGEE. Herman Werner.

Mr. VOGAN. Yes. I had orders at that time not to shoot any eagles though.

Senator MCGEE. Yes. Did—well actually this is irrelevant at this time and I won't raise that question.

When you were working for Herman Werner now, he was your employer instead of Buffalo Flying Service. What did you do for a helicopter?

PAYMENT FOR USED HELICOPTER

Mr. VOGAN. He wrote me out a check and sent me up to Minnesota to pick a helicopter up and bring it back.

Senator MCGEE. That is, Mr. Werner, at this time acquired his own helicopter?

Mr. VOGAN. Yes, that is correct.

Senator MCGEE. Was this a Hughes?

Mr. VOGAN. Yes, a 300 Hughes like I had flown before.

Senator MCGEE. How much do those come to ordinarily?

Mr. VOGAN. Well, this check was in the amount, if I remember correctly, of $17,000.

Senator MCGEE. $17,000?

Mr. VOGAN. $17,000, yes.

Senator MCGEE. Would that be a new craft?

Mr. VOGAN. No; it was a used one. It was bought from a fellow by the name of Hillery Berry, which is a friend of Senator Humphrey's.

Senator McGee. It might have been flying politicians around before it flew gunners?

Mr. Vogan. I think it was used for that at one time or another.

PERMISSION TO PRINT BLUE BOOK

Senator McGee. Would you be willing to make your blue book available just for photostatic purposes so that we may make the blue book pages available for the record?

Mr. Vogan. Yes, sir. It has been photostated. It was photostated. A copy was taken out at Salt Lake and this was several months ago, a couple of months ago, and also just—the U.S. attorney in Cheyenne even has a copy of it, but there is no secret to this [indicating].

Senator McGee. Right, any longer?

Mr. Vogan. Any longer, no.

Senator McGee. All right, we will borrow it long enough to photostat it and get it right back to you.

(The document follows:)

BLUE NOTEBOOK OF MR. JAMES VOGAN

1st flight
23rd 3 cy 7 eag
2nd 14 eag
24th 5 cy 1 eag
flight 2nd 8 cy 1 eag
3rd 3 3 eag
4th 1 2 eag
25 1st flight 2 cy 1 eag
29 1st flight 8 cy 2 eag
2nd 4 cy 8 eag
3rd 2 eag
4th 1 cy 4 eag

144
86 ½

Firearms Control
524 5854

Salt Lake Hardware
105 W 3rd west

1st Dec
first flight 5 cye 5 eag
2nd 3 eage

2nd Dec 2 cy 7 eag
2nd flight 5 cy 8 eag
3rd 1 cy 16 eag

6th Dec
first 1 cy 7 eag
2nd 5 cy 4 eag
3rd 1 cy 6 eag
4th 5 cy 9 eag
5th 2 cy 7 eag

Dec 7th
1st flight 4 cy 8 eag
2nd 1 cy 10 eag
3rd 5 cy 5 eag
lost 1 cy (the other cage that had the 7 in it)
4th 1 cy 11 eag

Dec 8
1st 5 cy 1 eag
5 dry

101 cy 205 eggs

Dec 12
1st flight 3 cy 5 eag
2nd 4 cy 7 eag
3rd 1 cy 21 eag

Dec 13 2 cy 12 eag
2nd flight 1 cy 6 eg

Dec 18 2 cy 5 eag
6 cy 4 eg
8 cy 7 eg
3 cy 1 eag
3 eg
5 eggs
4 cy 26 eggs

36 cys 102 eggs

Dec 21 6 eag

Dec 22 3 cy 2 eag
6 eg
1 eag

Dec 23 2 cy 5 eag
4 eagles
6 eag

Dec 31 3 cy
1 bobcat
3. eags

12 cys 30 eag

42. 137

137
25
685
274
3425
2100
5525

Dec 31 3 cy 2 eag
" 12 eags
" 2 cy 9 eags

5 cy 23 eag

Warner total as of Jan 2

158
50
$7,900 cys

eagles 337
25
1685
674
$8,425

Warners

Jan 1 3 cys
2 cys

Jan 2 4 cys

~~Jan 3~~

101 205
36 102
12 30
9 337 eags
158 cys

Werner

Jan 6
Hughes
first flight 2 cys
2 nd 1 cy

Bell

1 cy
1 lb beat

Jan 11, 1971

12. cys.

Jan 12

4 cys

16 eags

Jan 13 6 cy
Feb 20 1 cy
21
29 eag 10 cys

April 2 2 cys
March 3 8 eag 3 cys
" 4 15 eag 3 cys
5 10 eags 2 cys
6 6 eags.

Henry Mugalski
4788 Bob Elder
Murray

Contact Rod
Crawly through
Denis Guilford
6347819
Cheyenne
McGEE OFFICE
7782220

Drifters Inn
383 2015

Joe Evans
383 6295

Larry Haylip
457 W. 5320 So

Mary Lee 262 1986
4740 Rifle St
Murray

Steven Houston
4566134
3323 Bryan Ave SLC

~~Buffalo Zero~~

Chuck
Destree
Nite Cellars
684 7476

Bowling Alley.
684 2613

Harold Maddox
776 1210

Wesley Houston
~~[illegible]~~
4739 Rifle
Murray Ut.
262 - 5977

Frank Daughter
M.D.
Olympus Clinic
Workers doctor

Hughes parts
area 213
648 8708
09
10

Southland Helicopter
3205 Lakewood
Blvd Long Beach
90808
213 6362179

Hughes Nevada
6005 Las Vegas
Blvd So
702 6481746

Columbia Hel
503 285 7155
Seattle
206 767 3055
6H191

Morris McCarty
El Tarson
Box 204
Mattoatse
82433

Frank & Johnnie
266 0835

Jack Howard
2661976

Henry
222 1566

Doug Royal
915-445 5457
445 4871

Dean Vicentine
303 824 6061

Ables Barton
Portland
1-503-252 7785
Daughter Diane
786 6157
Ex Wife Shirley

Dick Thomas
7782220
Cyc.

Don Hall
7777461
Cyc fish & Game

Fred Hardley
301 5927249

R.J. Crawlie
New Senate
Bldg r.m 6206

Bronco for sale
235-3196

237-7716

Jack Williams
234-1531
356-9331

Hughes 2698
915-4472865
Spray gear
Joe W Moore

Victoria Texas
512 5732222
VTE 512 573 9011

Mr Walley
Maddox

437 6247 137 H

Jim McCourt
Tom Cooley
Groveview Security
Bank

Tuffy Maddox
Childress Texas

Roy Simmon
24th & Bell
1416

Buck Rothes
3265569
Saratoga

22 12

Broodmore
63-42
Selby

Hil Barry

507 8793141
Lake Wilson
Home 8793479
Minneapolis
Concord Motel
612 332 1481

Wayne Kinzie
405 3271612
3271926
Office 327 1565
405 area
Bill Moore
area 602
933 0929

1263

Bob Gage
CH 47000
48371
48272
47198
Home Seattle
9276135

30032 5 Ave
SW Federal
way
washington
Morris McCarty
To Ed Lorenzen
8682414 Nitterson

John Swaiko
FAA Denver

Wes Karsten
1313 NE 131 place
apt 108
252 7785
252 6001
work American
Bindry Co
923 SE Hawthorne
236 2831

200.00
250.00
200.00
276.00
190.40
200.60

Don Pykstra
234 4505
pipeline Patrol
Casper Wyo

Izack Brooks
30 mi S.
Rock Springs

Carmel Patton
Union Pacific
Rock Springs

Herman Werner
235 5928
Morris McCarty

Visintiner
Jan 4
1 cy 22 avg
~~Pilot on Eagle~~ Eagle
1 Bobcat 5 avg
~~Pilot on Eagle~~ Wagon 11 avg
~~on Bell~~
Jan 5 3 cyp.
3 Eyp

Jan 3
Visintiner
2 cats 2 cyp.
1 Cy
Wagon
2 cyp
Joe Evans
Spicer
1 cy
:30 min

/17

Joe Evans
Spicer 3:25
13 cyc total
Spicer & Greaves

Joe Evans
Boyer 1 hr 3 cy

Greaves 2 hr

Chuck Wynn 3 hr

Jumper Joe Evans
Cranbell
& perlous } 2 hr
24 cyc 7 cyc

Dec 27 3 cy

Dec 28 9 cyc
3 cyc.
1 cy

Dec 29 3 cy
2 cy
4 cy
8 cy

Dec 30 12 cy

Spicer
Dec 27 1:10
1:40

Dec 28 2.30
2:20
1:35

1:40
1:30
:50
2:10

5:00
Hughes
9460F

Rhoads

5.50 groc
11.98 shells
3.00 gas
2.95 car wash 3000 miles
2.50 car gas
3.00 " "
2.00 battery charge
2.00 gas
2.90 sandwiches

3.70 dinner for Del & Myself at LaMont
10.40 tools
5.12 to charge tires
4.18 to fix helicopter engaging cable
3.92 service on pickup
2.50 gas pickup
16.87 shells
3.10 lunch in Palings

Sportabs
Vitamins
Wyo
65328
Max Lo
262986

1815
Meadow
17 R

SHOOTING OF WILD GEESE

Senator McGEE. Do you have any other statement you want to make in regard to those flying missions before I get into my other questions?

Mr. VOGAN. I was advised by the U.S. attorney, due to my immunity here, to bring out everything that was shot—wild game, antelope, elk, and also the deer that was shot from the helicopter and also the wild geese.

Senator McGEE. Wild geese?

Mr. VOGAN. Wild geese.

Senator McGEE. Canadian geese?

Mr. VOGAN. Yes. I don't know a Canadian goose from another one, but I know——

Senator McGEE. I must say I have wished secretly sometimes I could sit around all day and shoot geese. They are the fastest bird there is. I hasten to add, for the record, I never got into a helicopter to shoot geese.

Mr. VOGAN. But Norm DeVilbiss that is with the Buffalo Flying Service, and I am not sure whether Del Jenkins shot one of them down—I don't know.

Senator McGEE. But Canadian geese were pursued by helicopter?

FEDERAL LAWS IN REGARDS TO AIRCRAFT LOGS

Mr. VOGAN. Yes; there were five or six of them shot down. I don't remember the correct number.

Senator McGEE. As I understand it, the Federal laws and regulations require that aircraft logs be maintained on each aircraft, is that correct?

Mr. VOGAN. Yes; that is correct.

Senator McGEE. Was such a log maintained on the helicopter in question, and I am speaking now of the Buffalo Flying Service?

Mr. VOGAN. Well, I am a poor recordkeeper. I was busy and I didn't keep a very good record, although the times were logged but not each individual flight, like the Bell helicopter was, especially when Ed Eisler was flying it; as far as I know, he did log each flight or the flights in the daytime and I think he put the number of kills in there, but I am not sure.

Senator McGEE. You haven't seen that record?

Mr. VOGAN. I think I did see, but I am not really sure whether I did see——

Senator McGEE. In other words, Mr. Eisler's log might hold some additional information that would be relevant here to the killing of either animals or birds?

Mr. VOGAN. Yes, except that the logbook would be kept with the aircraft, which——

Senator McGEE. In other words, it wouldn't be posted with the Buffalo Flying Service?

Mr. VOGAN. Yes; it would be with Doyle Vaughan, although if he had heard anything like this investigation, he would certainly have destroyed the records if I know Doyle Vaughan.

ALL ENTRIES IN BLUE BOOK MADE PERSONALLY

Senator McGEE. I would like to ask a couple of questions in reference to your own blue book. Did you make the entries in your blue book yourself or were they made by some other person?

Mr. VOGAN. No; I made every entry into this book myself.

Senator McGEE. And there would be no entries in it that anyone else would have made?

Mr. VOGAN. No, sir.

Senator McGEE. When were the notations made in reference to the occurrence of the matters that you cited in your blue book? Were they made several weeks later or were they made at the end of a day or——

Mr. VOGAN. After——

Senator McGEE. After each month?

Mr. VOGAN. After each date and a lot of the times it was made after each flight, like the first flight I would write it down and the second flight I would write it down because we were shooting so many down it would be almost impossible to keep track of them from memory.

Senator McGEE. As I understand it, you are in a position personally to vouch for the accuracy and authenticity of entries made in the book where you so indicated? There were some areas where you said you weren't quite sure and you said so, but the areas where you affirm them you vouch for the accuracy of those?

Mr. VOGAN. I will definitely vouch for it and, of course, I made this statement before to the U.S. attorney's office when they had showed me the copies that they had, the photostatic copies.

PURPOSE OF KEEPING DETAILED RECORDS

Senator McGEE. Will you explain to us again, just one more time, why you went to the trouble to keep and maintain the details daily on those flights?

Mr. VOGAN. For the pay purposes.

Senator McGEE. Once you left the $80-per-hour category and had to go to the carcass collection route, this was for the purposes of billing the contracting rancher?

Mr. VOGAN. It was for the purpose of giving a record, a true record to Buffalo Flying Service, so they could bill on the record.

Senator McGEE. In other words, you never did bill one of the ranchers?

Mr. VOGAN. No, sir; I never did bill anybody. That was not my job.

Senator McGEE. Your present employment with Herman Werner, is it on a per carcas basis or were you paid by the hour or by the month?

Mr. VOGAN. I am paid by the month. It is the same way that it was with Buffalo Flying Service.

VOLUNTEERING OF GUNNERS

Senator McGEE. With reference to the men aboard the helicopters that you flew, how did you select a gunner?

Mr. VOGAN. From a—a lot of it would come from word of mouth. Somebody that had been up and shot for me, someone would come and ask me if they could come up and shoot for the sport of it, why it was

OK with me, because, I will tell you, it took more than one shooter on this thing.

Senator McGee. And the gunners that you carried, some of them volunteered as gunners, is that correct?

Mr. Vogan. That is correct, and Doyle Vaughan had agreed to pay their expenses, if not brought in my vehicle, if they brought their own vehicle he was to reimburse them for the gas, which it was usually paid out of an expense account of cash I had.

Senator McGee. These were actual expenses? He didn't give them a bounty payment for killing of an eagle or coyote?

Mr. Vogan. No, sir; the only one that was paid out of this bunch was Del Jenkins, which was a mechanic; Norm DeVilbiss, which was a mechanic; and Gary Haizlip, which was——

Senator McGee. Haizlip is the young man from Salt Lake City?

Controversy on Employment

Mr. Vogan. Yes; he was hired by Buffalo Flying Service to drive the truck, to go get gas, and also to shoot. And his brother relieved him; there is a controversy on this. Doyle Vaughan signed an affidavit with the labor commission that Gary Haizlip never worked for Buffalo Flying Service, but we have many affidavits signed by people that are familiar with this, that he did work for Buffalo Flying Service, where Doyle Vaughan did admit that "they" were working for him. In fact, Del Jenkins signed an affidavit that he had never worked for Buffalo Flying Service, but when this—when the fish and game for the State of Colorado caught them with those coyotes, Del Jenkins made a statement to the fish and game that they "were both employed by Buffalo Flying Service."

And, of course, Larry Haizlip, a twin brother of his, came up and relieved Gary for 1 week.

Senator McGee. Who did this?

Mr. Vogan. Larry Haizlip; that is a twin brother of Gary's and they are identical twins. You can't tell the difference between them.

Senator McGee. As far as you know, the other one was up there for 1 week?

Mr. Vogan. That is correct. And, of course, my boy, 11 years old, this does not sound reasonable, but he shot that 12 gauge 3-inch magnum and shot this bear and, in fact, him and I captured the yearling cub and brought it home in the helicopter, believe it or not.

Senator McGee. An 11-year-old boy shot a bear?

Mr. Vogan. An 11-year-old boy.

Sheep-Killing Bears

Senator McGee. I aspired to do it for years and the only bear I had ever seen was when I had a fly rod in my hand in the summertime and it is not a good weapon.

Mr. Vogan. Well, the bear had been killing sheep up there. It was on the Curt Rochelle Ranch it was killed. I didn't know it was the Curt Rochelle Ranch at the time. I thought it was the Werner Ranch, but I found out later it was the Curt Rochelle Ranch.

Senator McGee. Were there any other circumstances you know of that would have brought a gunner aboard these helicopters? You indicated it may have been for sheer sport as far as they were concerned so long as their expenses were covered?

Mr. Vogan. No; there wouldn't be any other circumstances, just to go along. The only time was when Morris McCarty rode into Rawlins with me, him and his wife, to get gas in the Bell helicopter and Morris shot two coyotes. That is the only time, and he just rode in with me. I don't think there was any particular reason.

Senator McGee. To the best of your knowledge, the gunners heard about this, shall I say, sporting proposition by word of mouth by others who had done it?

Mr. Vogan. That is correct.

Senator McGee. You had no knowledge that Mr. Vaughan might have recruited hunters on the premise they could have a good time out of it?

Mr. Vogan. No, sir; he did not. The only ones that he sent, which he sent down there to shoot with me, was the mechanics, which would be Del Jenkins and Norm De Vilbiss.

Senator McGee. Was it your responsibility to get a gunner or was it Doyle Vaughan's?

Mr. Vogan. Well, there was times when I wouldn't have had a gunner if I had not gotten him myself.

Method of Hunting Eagles by Helicopter

Senator McGee. Would you describe for us a little bit about being a pilot of a helicopter, the process of, let us say, hunting eagles?

Mr. Vogan. Well, the process of hunting eagles is just you see them flying out there, it is usually a windy day, and the Golden Eagle is, I would say, is not really a hard bird to zero in on and get your gunner in position to shoot, but a Bald Eagle, if you shoot a Bald Eagle down, I can guarantee you, you earn your money.

Senator McGee. What is the difference, why do you say the Bald one is a tough one to shoot down from a helicopter and the Golden Eagle is not?

Mr. Vogan. The Bald Eagle is a very good maneuvering bird, you would think they have been to fighter school or something, because they will actually when you come up on them even at maybe 3 or 4 feet away, they will start flapping ends like that so you don't know which way they are going and all of a sudden they will turn like that and then turn back and do an Immelman or split S when you get into a position to shoot, so they are almost impossible to shoot down.

So even a young Bald Eagle, you can tell a young Bald Eagle from the way they maneuver, which a young Bald Eagle—sometimes when you just set on the ground and it would be impossible to tell the difference between a Bald Eagle and a Golden Eagle, you would get on them with a helicopter. Then, of course, there is the maneuverability that they have which would tell you whether it is a young Bald Eagle or a Golden Eagle or——

Senator McGee. What altitude would you go? How far off the ground would you have to have the craft ordinarily?

65-903 O - 71 - 15

Mr. VOGAN. Well, I have seen a time when we had to climb, with a Bald Eagle or Golden Eagle, both, to maybe 500 or 1,000 feet. I was so busy about that time, I really didn't pay too much attention to what I was doing——

Senator MCGEE. Did it involve any speed calculations, aside from the altitude?

Mr. VOGAN. Well, I have seen a time when you had to slow down and you might come up on one of them and they will turn fast. You have to just almost switch the helicopter around immediately to get back on them.

Senator MCGEE. You have to be on top of them, I assume?

Mr. VOGAN. Yes; and, well, not necessarily on top of them. You can't shoot up.

Senator MCGEE. You can, but it wouldn't be wise?

Mr. VOGAN. No; it wouldn't be very wise. Also I have seen the eagles, that they are a very tough bird and they are hard to knock down. I have seen them where they have been hit, they have just tumbled through the air and gone clear to the ground and fly away, so you have to go after them.

Senator MCGEE. What would be a good range before you would start shooting? How far away?

Mr. VOGAN. I have had some of the new shooters start shooting maybe as far as 200 feet, 300 feet away, but——

Senator MCGEE. As near as 100 yards and these are shotguns you are using?

Mr. VOGAN. Yes, 3-inch magnum, 1100 Remington, and also we used the Browning 3-inch magnum at times on this——

Senator MCGEE. I wish you had mentioned the Winchester, that is what I had, but not a 3-inch magnum.

Mr. VOGAN. No.

They are a very difficult bird and, of course, when we started bringing them in, it was, every time it was a fight.

Senator MCGEE. Who owned the guns that you used?

Mr. VOGAN. Doyle Vaughan owned the guns that I was shooting with at Buffalo Flying Service.

Senator MCGEE. The people that volunteered as gunners generally used his guns or did they bring their own?

Mr. VOGAN. Well, they always used his guns, except for Joe Evans, and Joe Evans had his own gun down there, which I don't know. I think that the shells was furnished by Arambel and by Vaughan.

Senator MCGEE. Who furnished the ammunition on most of the flights?

Mr. VOGAN. Doyle Vaughan furnished it. In fact, I had bought ammunition. Doyle Vaughan had wired money to Salt Lake or sent it or wired money to Rawlins for me to pick up for expenses to buy shells to bring back.

Now, Norm DeVilbiss bought some shells in Rawlins also from the Bi-Right Drugstore there to use, and I also bought a few boxes when we would run out. There were so many shells used on this——

Senator MCGEE. Many, many shells per bird; is that it?

Mr. VOGAN. That is correct. I have seen as high as a box of shells shot up on one eagle.

Senator McGee. It sounds like McGee duck hunting from a blind.

Now, when you collected your birds, when you accumulated them, would you land after each kill and collect the carcasses or did you have a ground crew?

Mr. Vogan. No, we would land right on the spot, and the gunner, which at this time was mostly Norm DeVilbiss, would get out, and it would be the biggest job you ever saw trying to kill him, to get him in there, because——

Senator McGee. Very often perhaps it had fractured a wing or something?

Mr. Vogan. Well, even if they looked dead, you had better get out and kick them and make sure, because they can look dead and come to life, and you had better have a gun or something to protect yourself.

DISPOSAL OF DEAD EAGLES

Senator McGee. To the best of your recollection, who actually participated in the disposal of the dead birds?

Mr. Vogan. I am not really sure. I know Morris McCarty, I understand Morris McCarty, that the general foreman moved them from the ranchhouse, down by the ranchhouse up to the shearing shed, and left them there, which they were observed evidently by the Fish and Game in the shearing shed.

That is what I was told anyway. I don't—I never did see them there, but then as far as taking them up and burying the eagles, I don't know. I think that it was the foreman that is there now and whether it was Gabe, one of the cowhands, or someone else, I am not sure.

I never saw them bury the eagles. I made the statement to Tex, the foreman there, that the Fish and Game knew where they were buried.

Senator McGee. That is the Colorado Fish and Game now?

Mr. Vogan. No, the Fish and Game——

Senator McGee. The Wyoming Fish and Game?

Mr. Vogan. Yes; the Wyoming Fish and Game knew where they had buried the eagles, and I understood, through conversations, that they had observed this spot that the eagles were buried from the air.

Now I don't know that this actually happened, but I got it from a pretty good source that this did happen.

Senator McGee. What you are saying is, you believe the Fish and Game at least was aware that something was going on like this?

Mr. Vogan. That is correct. It is my understanding they knew where these eagles were buried. In fact, I told Tex—this is the foreman out there—at one time that they knew where they had buried these eagles, and that if they wanted to rebury them, they had better get it done, because I give them a fair warning that this was happening, because I knew that this whole investigation—of course, there was never nothing done by the Wyoming Fish and Game at the time when they saw these——

Senator McGee. My understanding is there might be some difficulty.

Mr. Vogan. What is that?

Senator McGee. In the light of these hearings, it might be difficult to find the carcasses?

Perhaps they have been moved again, we don't know that.

Mr. Vogan. Well, I don't know. Time will tell.

Senator McGee. Right. I think the record ought to show now, to kind of pull these strings together, roughly how many eagles we are talking about in very round numbers.

We are talking about over 500, would you say?

Mr. Vogan. Well, I had kept a record up to a certain point, and then I kept a record in my own mind of the eagles that were killed, and I estimated or had a count in my own mind of 570 alone on the Bolton Ranch and around close to 200 on the other ranches.

Senator McGee. Yes. And of those, more than 500 to 570, let us say—maybe increased by three now after your conversation with Mr. Howard, "That it might have been 65 instead of 62 that he shot," and how many of them would you estimate would have been bald eagles?

Mr. Vogan. I, in my own mind, don't think there was over five bald eagles in the whole bunch. In other words, when I came in and saw the bald eagle, once I learned their manner of maneuvering, and knew that it was a bald eagle, I pulled away from him; and also Norm DeVilbiss, after he shot that one, one bald eagle, he would not shoot any more.

Senator McGee. Do you have, let's see, did you specify as you went along here who the gunners were of the—let us say, the five bald eagles you referred to? You mentioned Norm DeVilbiss now as having shot one on the ground.

Mr. Vogan. Yes, Norm DeVilbiss did shoot one bald eagle, and Doyle Vaughan shot a bald eagle, and, of course, there are witnesses on that. And also there is a witness, I myself, I and Norm DeVilbiss were alone at that time. Of course, this bald eagle was taken into Salt Lake to be mounted.

Senator McGee. There is a—who would have the mounted specimen?

Mr. Vogan. I don't know. I took it into the bar at Frankie & Johnny's to give to Jack Howard, which had some friend that he thought that would mount it. The bartender there——

Senator McGee. Is this the bartender where?

Mr. Vogan. Frankie & Johnny's in Salt Lake, I asked him I could leave it in there, and I set it down behind the counter, and I think Jack Howard picked it up and I don't know what he had done with it. Maybe he destroyed it. I never seen it. I know that he said something to me about some fellow refused to have any part of it, so I don't know.

Senator McGee. Now, Mr. Vogan, you had presented some exceedingly startling and sometimes shocking testimony to this subcommittee, and there is one question that remained undeveloped in the course of the hearing that might usefully be clarified. That is up to you.

Reasons for Revealing Evidence

Do you feel you could explain why you have come before us with this testimony at this time?

Mr. Vogan. Well, I had a choice of either coming forward or somebody else coming forward, and I would be the one that would be

prosecuted on this thing, and I knew in my own mind at this time that if this had happened, Doyle Vaughan would have got word of it, and between him and Werner or the other ranchers, they would have thrown the whole blame on me. So I had my choice.

It would have been turned in by the Haizlip boys' father or the Haizlip boys' uncle, I think it was their uncle, because Doyle Vaughan had never paid them, and they were mad about it, and they were looking at any way to get back at this guy.

In fact, he has never, all of his pilots seemed like they have trouble or any personnel that has worked for him outside of his—maybe his secretary, which is very, very loyal to him, or just Del Jenkins, which is very, very loyal to Doyle Vaughan, although Doyle had told me several times he was going to fire him. But it would have been a case of where I would have either had to come forward, that Fish and Game had all of the information anyway, so, and I was told this at the time and Mary Alice Tobin, which is Richard Tobin's wife, down at Salt Lake, told me they had all of the information. I guess they had been by and talked to her, and that she also give me a good scare that Dick Thomas is very, very thorough and that I could be assured that if he went after this, to pursue this, that somebody was going to get hung in the tree.

So I figured, well, if somebody is going to get hung, I don't want no part of it.

Senator McGee. It might as well not be you?

Mr. Vogan. That is correct.

Search for Fall Guy

Senator McGee. As you reflect backward on these very startling bits of testimony, one can understand how a lot of people would be scrambling for a fall guy and find somebody to hang it on.

Mr. Vogan. Right. That is my feelings on it and, of course, I am not too happy about Del Jenkins making an affidavit, a sworn affidavit, that this Gary Haizlip didn't work, that he did not work for Buffalo Flying Service. And when he did, I know that he worked for him because he was with me for quite a few weeks down there, and Gary Haizlip's mother had contacted Doyle Vaughan to pay the boys and he had agreed that he would send them a check, and this is after they quit, and he never did send them a check.

I have had to—I had to go through the labor commission to get my money. Ed Eisler had to go through the Labor Commission to get his money, and I think you can go back over the year's record and find several years and find out that a guy by the name of Lynch that flew for Buffalo Flying Service and also Baker flew for the Buffalo Flying Service, and I think they all had to go through the labor commission to get their money.

It is—the boys are only 18 years old, they worked hard for their money, and then to have this guy not pay them, and I know Mitch Bachloski, he and his father are representatives for the Rawlins area and are stuck for money, and he has tried to get it and is all crippled up now and he needs his money, and there is nothing but a mass of lies that this Doyle Vaughan tells, so this is why this was brought about.

I don't like to be involved in it, but I am here and this is the reason why.

Senator McGee. Do you have any other statements you want to make?

Mr. Vogan. No, sir. I think it has been covered very thoroughly.

CONCLUSION OF HEARINGS

Senator McGee. Then we will wind up this stage of the hearings, Mr. Vogan, and I want to state for the record that this testimony has been assembled under oath and will be turned over to the appropriate authorities for whatever action is deemed appropriate, and with that observation we will terminate the hearings this morning.

(Whereupon, at 12:35 p.m., Tuesday, August 3, the hearings were concluded and the subcommittee was recessed, to reconvene at the call of the Chair.)

CHRONOLOGICAL LIST OF HEARINGS

LIST OF WITNESSES

SUBJECT INDEX

L

N

O

P

R

S

T

V

W