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# ESTABLISHING A NATIONAL WILDLIFE REFUGE FOR THE TULE ELK

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## HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY, NATURAL  
RESOURCES, AND THE ENVIRONMENT

OF THE

### COMMITTEE ON COMMERCE

### UNITED STATES SENATE

NINETY-FIRST CONGRESS

SECOND SESSION

ON

## S. 3028

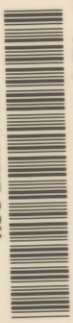
TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO STUDY  
THE DESIRABILITY OF ESTABLISHING A NATIONAL  
WILDLIFE REFUGE FOR THE TULE ELK

MARCH 17, 1970

Serial No. 91-56

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## ESTABLISHING A NATIONAL WILDLIFE REFUGE FOR THE TULE ELK

TUESDAY, MARCH 17, 1970

U.S. SENATE,  
COMMITTEE ON COMMERCE,  
SUBCOMMITTEE ON ENERGY,  
NATURAL RESOURCES AND THE ENVIRONMENT,  
*Washington, D.C.*

The subcommittee met at 2 p.m. in room 5110, New Senate Office Building, Hon. Philip A. Hart (chairman of the subcommittee) presiding.

Present: Senator Hart.

### OPENING STATEMENT BY THE CHAIRMAN

Senator HART. The committee will be in order.

Our hearing today is to consider S. 3028, introduced by the distinguished Senator from California, who will be our very first witness.

In addition we are going to hear other persons knowledgeable in this field. Most certainly I would include the assistant secretary, Dr. Glasgow.

The bill would authorize the Secretary of Interior to study the desirability of establishing a national wildlife refuge in California, or in an appropriate western State, for the preservation of the California tule elk.

Whether the committee or the Congress ultimately decides to authorize such a study, it is good to see so many people expressing in a constructive way a deep concern. It suggests the increasingly broad surge of awareness with respect to the whole of our environment. The recognition that if we do not act in time, deprivations will occur that will be beyond correction.

The energy displayed by so many in California with respect to today's hearings is further evidence that man is not tolerant of avoidable deprivation.

Now, having said that, I think it would be best to go directly to the testimony of the witnesses, many of whom have traveled thousands of miles to participate today.

(The bill and agency comments follow:)

(1)

Staff member assigned to this hearing: Leonard Bickwit, Jr.

91ST CONGRESS  
1ST SESSION

# S. 3028

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## IN THE SENATE OF THE UNITED STATES

OCTOBER 14, 1969

Mr. CRANSTON introduced the following bill; which was read twice and referred to the Committee on Commerce

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## A BILL

To authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent western States for the preservation of the California tule elk.

1        *Be it enacted by the Senate and House of Representa-*  
2        *tives of the United States of America in Congress assembled,*  
3        That the Secretary of the Interior is authorized and directed  
4        to study and formulate recommendations on the need for, and  
5        desirability and feasibility of, establishing a national wildlife  
6        refuge for the conservation and preservation of the California  
7        tule elk in the Southwestern United States and particularly  
8        on the eastern slope of the Sierra Nevada Mountains in the  
9        States of California and Nevada. Included in this study will

1 be a report on areas, if any, in the Southwestern United  
2 States where the propagation of a California tule elk herd  
3 could fill an ecological niche.

4 SEC. 2. The Secretary shall submit to the President and  
5 the Congress, within one year after the date of this Act, a  
6 report of his findings together with such legislative recom-  
7 mendations as he deems appropriate.

8 SEC. 3. There are authorized to be appropriated such  
9 sums as may be necessary to carry out the study authorized  
10 by this Act.

U.S. DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
Washington, D.C., March 16, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Committee on Commerce,  
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Your Committee has requested the comments of this Department on S. 3028, a bill "To authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent Western States for the preservation of the California tule elk."

We share with the proponents of this legislation their concern for the proper management and preservation of the tule or dwarf elk, but see no need for the enactment of S. 3028.

As introduced, S. 3028 would direct the Secretary to study the desirability of establishing, in the southwestern United States a national wildlife refuge for the conservation and preservation of the California tule elk. The study, a report of which would be made to the President and the Congress no later than a year from the date of enactment, would also concern those areas, if any, in the southwestern United States where the propagation of a California tule elk herd "could fill an ecological niche". Section 3 authorizes the appropriation of such funds as would be necessary to carry out the authorized study.

It is our belief that this legislation would give to the Secretary no authority not now provided by law. Feasibility studies of the kind proposed are essential to management and development of the National Wildlife Refuge System. It is a charge of the so-called Endangered Species Act of 1966 (16 U.S.C. 668aa) that the Secretary "carry out a program in the United States of conserving, protecting, restoring, and propagating selected species of native fish and wildlife that are threatened with extinction". While the tule or dwarf elk can be considered rare, it is the opinion of mammalogists and conservationists generally that this resident species is not in danger of extinction. In keeping with a more general responsibility for the effective management of our Nation's wildlife resources, the Department has taken an active role in the management and preservation of the California tule elk herd.

The real need is not for establishment of a refuge, but for full-scale management of the present habitat. To this end, the Department, through its Bureau of Land Management, is cooperating with others responsible for administration of the Owens Valley Range. The Bureau which administers 43,000 acres (or 22 percent) of the Owens Valley elk habitat is working with the City of Los Angeles, the United States Forest Service and the California Department of Fish and Game to conduct vegetative studies that will identify the composition and utilization of vegetative types within the habitat range of five elk herds. The Bureau plans to make use of these studies in its development of a habitat management plan. We believe that cooperative planning and habitat development will result in improvement of the tule elk herd. Effective management to date by the California Department of Fish and Game and others has resulted in a sound herd, consisting of approximately 300 animals, that is suited to its habitat. Though the number of animals and extent of their range have been restricted by the advent of settlement in the West, we concur in the general opinion that this interesting animal is now threatened with extinction, either by reason of diminished numbers or inadequate habitat.

Our interest in preservation of the tule elk is such that the Department will take positive action to assure the survival of this species if ever it becomes threatened with extinction.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

LESLIE L. GLASGOW,  
*Assistant Secretary of the Interior.*

Senator HART. It seems very unfair to call as the first witness a man who has traveled only a couple of floors, but we do want to hear from the sponsor of the bill, our colleague which we are grateful to the people of California for having sent, the sponsor of S. 3028, Senator Cranston.

#### STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

Senator CRANSTON. Thank you very much, Mr. Chairman.

First, I want to thank you for calling this hearing on rather short notice at a time very convenient for those who have traveled so far. It was very thoughtful of you to do that.

Senator HART. You used some muscle, I should add.

Senator CRANSTON. I might add that I also traveled across the continent just a couple of days ago partly to be here for this hearing.

The State of California has been blessed by many unique gifts of nature. Among these are a number of species of animals which exist nowhere else in the United States or in the world. The California dwarf elk, which is called the tule elk, is one of these—a smaller species than the common American elk and found only in California. A century ago the thousands of herds of tule elk which previously had browsed on the hills and plains of central California were in the final stages of a deliberate slaughter for meat, for their hides, and for the land where their free roaming impeded the newly developing agriculture of central California. Their last natural refuge was the tule swamps of the southwestern San Joaquin Valley from which they got their name.

It is incredible that they survived there at all.

Legend has it that in the 1870's the tule elk were reduced to a single pair—but even the more probable estimate that the herd contained less than 30 elk makes their survival today a biological miracle. Even today there are less than 400 tule elk, most of which still browse free

on open and unfenced land. The largest and most important herd is found in the Owens Valley in Inyo County on land owned by the city of Los Angeles and on Federal land. Here there are 250 to 300 animals—the best hope for the survival of the species. Yet surprisingly this herd was transplanted from the San Joaquin Valley and so far as we know, the tule elk is not indigenous to lands east of the Sierra Nevada. The fact that three-quarters of today's tule elks are surviving in a habitat where they do not naturally occur is evidence both of the challenge to survival they've faced and of their amazing survival ability. The only other free roaming herd is found on the eastern slopes of California's north coastal mountains in the area east of Clear Lake. According to the Bureau of Sport Fisheries and Wildlife this herd contains fewer than 100 animals. There is some question about whether this herd is actually tule elk. A third group of about 35 elk is kept fenced in a semidomestic state on the Tule Elk Reserve in Kern County.

Despite the fact that so few of the tule elk survive, the limitation on their range has led the California Department of Fish and Game to authorize tule elk hunts which reduce the herd to what the Department considers a manageable number. For example, last year the department authorized the killing of 80 tule elk in order to reduce the Owens Valley herd to 250 elk. Neither of these wild herds can avoid contact with civilization, usually in the form of cattle and cattle ranchers. Many ranchers view the elk as competition with their grazing cattle and as a pest. Their demands that the elks' activities be restrained add to the economic arguments for limiting herd size.

Thus it appears that so long as the tule elk is restricted to these two areas, the species will be limited to a number small enough to threaten its survival. For example, the two herds could be wiped out by disease or could be poisoned by an accidental misapplication of pesticides. It is simply not good wildlife management to allow the only remaining members of a rare species to be as concentrated as the tule elk are today in California. Many conservationists argue that the Owens Valley herd should be expanded, that a wildlife refuge should be created on city of Los Angeles and Federal lands where the herd could expand and where cattle would not be given first priority.

While I support the idea of a tule elk refuge in the Owens Valley area, it is not necessarily the purpose of my bill to create a refuge there. The bill I authored, S. 3028, is directed to the need to establish new herds in new areas. If the California Fish and Game Department is correct that the Owens Valley area can support only 250 elk, then I say that instead of the senseless slaughter of these animals which the Federal Government classifies as rare, that we capture and remove the surplus animals to establish new herds in areas where the ecosystems are capable of accommodating a hoofed browse species. Because of the enormous population pressures in California, I doubt that we can plan to limit new alternative sites for the tule elk in California. Therefore, I believe a Federal study to seek out these ecological niches in all of the Southwestern United States is absolutely essential if we are to plan for the future dispersal and conservation of the species.

One such niche might exist in the former habitat of the Merriam or Arizona elk, which became extinct around 1900. In the areas of Arizona and New Mexico where this elk once lived, the ecology may be capable of supporting the tule elk. I believe we need to know the

answers. If our countryside can support the tule elk in places they do not now inhabit, then I believe this knowledge is essential for responsible planning to conserve the tule elk.

A rare animal is defined by the Department of the Interior as an animal which may be endangered if its environment worsens. Clearly the way to protect a rare animal is to give it more viable environmental alternatives—in other words, additional refuges.

Several possible California locations for new tule elk herds have been suggested. The head ranger of Point Reyes National Seashore—and the bill for Point Reyes passed the Senate this morning incidentally, so it will now be completed—has told my staff that he will attempt to establish a tule elk herd at Point Reyes. There have been several suggestions for new tule elk sites along the Pacific flyway on the west side of the San Joaquin Valley. Mono Lake has been proposed to me.

But in most of these locations, we are operating in the dark on the question of whether the ecology is able to absorb and support the tule elk on an annual basis. Certainly the purposes of wildlife conservation are not served when the elk must be hand fed and fenced, as is the case in Kern County. Therefore, Mr. Chairman, I urge that you direct the Secretary of the Interior to study new tule elk refuge sites by acting favorably on S. 3028.

Thank you very much.

Senator HART. I have to confess that until I heard your testimony I was unsure what the definition of a rare animal was. But you give us the definition here.

Maybe I am seeking professional counsel, but how did you become interested in the tule elk?

Senator CRANSTON. Well, I have been interested in animals all of my life personally. I have become deeply interested in rare species and in endangered species, of which incidentally I think man may be one, and the tule elk obviously is a threatened species in California, classified now as rare.

Shortly after I returned to the Senate, I received many letters and phone calls and wires from citizens who were deeply disturbed by the slaughter of these animals, particularly since they are on the rare list. Thus my constituents led me to become very well acquainted with the tule elk and the problem it faces, which is the problem we face.

Senator HART. I would suggest that at least on some occasions the system is responsible.

Senator CRANSTON. Yes.

Senator HART. In your testimony you mention the tule elk as filling an ecological niche elsewhere in the southwest of our country.

What does one mean by an "ecological niche"?

Senator CRANSTON. Well, the concept of an ecological niche is a place where a species can live without excessive competition from some other species. An unfilled niche is a place where there is food and an environment that is adaptable for use by some species but where there is an excess of food. And there are large unfilled niches in various parts of the United States we are discussing.

Senator HART. The ecologists always caution us against introducing a species into an area where it is not indigenous.

Is your position that you are proposing a study that would identify areas that would be subject to that kind of criticism?

Senator CRANSTON. Well, I suggest we find areas that would be hospitable by this study. I think the criticism that you refer to occurs only when a species is introduced into a place where it is not indigenous, without adequate study in advance to make sure that the habitat is appropriate. That is exactly what my bill would call for, a study to find places, if they exist, where the environment and the browse available would be suitable for the tule elk.

So that criticism would then not apply.

Senator HART. I think we have already been told why you propose a study rather than the establishment outright of an area. It is because there remains unanswered some of these questions, the answers to which we have to have before we know what wisely we should do?

Senator CRANSTON. Yes, I think to proceed to fix a habitat as a refuge without knowing whether it is appropriate might waste funds, serve no purpose, and the elk might not survive in that place.

Senator HART. This one sounds very unfriendly, but I am sure we need an answer for the committee and the Congress if we are going to move on the bill—

Senator CRANSTON. I can't imagine an unfriendly question from you, Mr. Chairman.

Senator HART. There are some endangered species for whom we have yet to establish areas of refuge. Why should we take some of our limited resources and provide one for a species that is rare, but not yet endangered?

Senator CRANSTON. Perhaps we should be proceeding to establish refuges for those that are endangered, while studying where to establish refuges for those that are on the rare list.

Senator HART. That is a good answer.

The staff tells me that the practice traditionally with a species such as this is that it is managed and controlled by the State. I take it you are suggesting the possibility of a departure from that practice and have generally indicated you feel it is wise. Would you care to develop that?

Senator CRANSTON. I think the problem has become nationwide. I think the Federal Government should attempt to resolve the problem, particularly when it crosses State boundaries, as this well might.

If we are limited to State action, if we find we cannot save the Tule Elk in California, as I suggest might be the case, depending on State working with State would take longer, I think, than have the Federal Government seek to work nationally and with the States.

Senator HART. Mr. Bickwit, do you have some questions?

Mr. BICKWIT. No, Mr. Chairman.

Senator HART. Let me conclude then, as I opened, by thanking you for bringing this matter to the attention of the country. This is typical of what we would expect from Senator Cranston, it is another evidence of a concern that serves not just the people of California, but the people of the Great Lakes Basin too. With you, I think that all life is important to all life. I may never see a tule elk, but I hope they remain there.

Thank you.

Senator CRANSTON. Thank you very much. I want again to thank you for arranging these hearings on such short notice, and I want to express my delight that the committee is chaired by a man with your viewpoint.

Thank you very much.

Senator HART. Our next witness is Mr. Glasgow, the Assistant Secretary of the Interior for Fish and Wildlife, Parks and Marine Resources.

**STATEMENT OF LESLIE L. GLASGOW, ASSISTANT SECRETARY OF INTERIOR FOR FISH AND WILDLIFE, PARKS AND MARINE RESOURCES, ACCOMPANIED BY ROBERT J. SMITH, CHIEF, DIVISION OF WILDLIFE, BUREAU OF LAND MANAGEMENT, AND JOHN GOTTSCHALK, DIRECTOR, BUREAU OF SPORT FISHERIES AND WILDLIFE**

Mr. GLASGOW. Mr. Chairman, before I sit down, we have a map we would like to post up here and it will just take a second.

Senator HART. I was going to say we have all afternoon, but that is a dangerous thing to say. But we are not pressed for time.

Mr. GLASGOW. I am pleased to appear here today to discuss with you bills which would authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent Western States for preservation of the California tule elk. The Department of the Interior, the Department of Agriculture, the State of California, and the city of Los Angeles are all concerned with the management of the present habitat of this animal. But may I point out that the Secretary of the Interior presently has authority to make such studies as are recommended by these bills.

Let me highlight the status of this magnificent animal. We find the tule elk currently not in danger of extinction, although the population is small. This animal, as an indigenous species of California, is basically a responsibility of the State. The Department of the Interior's Bureau of Sport Fisheries and Wildlife has the responsibility of monitoring the status of the population of tule elk because of its being a "rare" species. "Rare" by definition denotes a species " \* \* \* although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens."

The five existing tule elk herds, consisting of approximately 365 animals, use public lands administered by the Department's Bureau of Land Management including lands withdrawn from the city of Los Angeles watershed, lands owned by the city of Los Angeles, lands which are a part of Inyo National Forest, and some private lands in Owens Valley.

The Bureau of Land Management and other agencies are presently studying the tule elk habitat in order to develop a comprehensive multiagency tule elk habitat management program for Owens Valley, Calif. By cooperative planning and habitat development, the tule elk habitat can be enhanced and the herd improved as it has in the past under principles of multiple use management.

There appears to be some local dissatisfaction over the fact that existing limited habitat requires harvesting of some tule elk. This is done under State permits. Hunts have been conducted in recent years in 1941, 1947, 1953, 1956, 1964 and 1969 while the population grew from 189 to 365 animals.

Information available to us indicates that the quality, or the carrying capacity of the habitat, is the limiting factor on tule elk populations. We agree with the State of California that the herd must be kept in balance to protect its habitat. This is now being accomplished.

Consequently, we feel that the real need is not for establishment of a refuge but for full-scale management of the present habitat.

Senator HART. Would you like to give us some clear idea of the things on the map?

Mr. GLASGOW. May I ask Mr. Bob Smith of the Bureau of Land Management, who is chief of their division of wildlife to explain the map for us? And possibly review, also, some of the history of the tule elk.

Senator HART. It would be very helpful to the committee.

Mr. SMITH. Mr. Chairman, I have a short statement I would like to read. It will repeat a little bit of what Senator Cranston spoke of a few minutes ago, but I think it will explain the map too.

The large herds of tule or dwarf elk inhabited the San Joaquin and Sacramento Valleys of California in the time of the gold rush in 1849.

In the summer dry periods they utilized the valley floors where water and food was available, and in wet winter periods, they moved into the low foothills. These herds declined rapidly as the wild lands were converted to farms and ranches and other commercial uses.

Tule elk weigh about half as much as the other three elk species in the North American continent, the Roosevelt, Rocky Mountain and Manitoba elk, of which the bulls weigh about 1,200 pounds. In other words, the bulls average about 600 pounds in the tule elk.

They are handsome, light colored miniatures of their larger relatives. Bulls grow large sets of antlers and are excellent jumpers.

However, by 1873, in recognition of their sad plight, the State of California passed a law to prevent their killing. The last remnants of the herd were squeezed into the Tule Marshes north of Buena Vista Lake in Kern County where the population gradually built up to about 400 animals by 1905.

However, by then they were doing extensive damage to alfalfa fields, so some of the elk were distributed to city parks and to private animal collections.

After transplants into Yosemite National Park in 1921 and 1922 proved to be too successful, in that they outgrew their habitat area again, the herd numbering 26 animals and an additional 29 from Buttonwillow were moved into Owens Valley in 1933 and 1934.

This herd grew to an estimated population of 100 in 1937, 189 in 1943, and between 365 and 400 animals prior to last year's count.

In addition to the Owens Valley herd, about 125 animals known as the Cashe Creek herd are found in Colusa and Sonoma Counties southeast of Clear Lake. This herd was begun on private lands in 1922 from a transplant from Del Monte Park near Monterey. It ranges on public domain or private lands.

The only other herd consists of 32 animals on the Tupman State Reserve southwest of Bakersfield. The total area of this reserve is 953 acres. But the area is bisected by a canal which the elk do not cross, so they are essentially confined to an area of about 350 acres.

An interagency action program to protect and increase the tule elk herds and increase public enjoyment of them in the Owens Valley is underway.

The agencies involved are the California Fish and Game Department, Forest Service, Bureau of Land Management, the city of Los Angeles, and Inyo and Mono Counties.

Three meetings have been held, the most recent on Wednesday of last week. Initial studies are under way and due for completion in January 1971.

One of the stated objectives of the committee is worth quoting:

While pressing its study to determine the optimum number of tule elk Owens Valley and adjacent ranges can support, the new Interagency Committee is backing the Department of Fish and Game search for other suitable areas in California and in the West into which the valley oriented animals could be transplanted.

Thank you, Mr. Chairman.

Senator HART. Mr. Smith, what is the spread in terms of miles between these several locations?

Dr. GOTTSCHALK. Approximately 80 miles, the total valley. This is the map of Owens Valley presented here. The dim lines, if I may, Mr. Chairman—I say “dim” because I’m sure the audience can’t see them, and it may be difficult for you—indicate the approximate ranges of the five discrete herds which are identified at the present time in the Owens Valley.

The so-called Bishop herd, Timemaha herd, Goddale herd, Independence herd, and the Lone Pine herd occupy the southern extremity of the valley. The different colors as shown on the map indicate Forest Service land, land that is under the management of the Bureau of Land Management, and lands owned or controlled by the city of Los Angeles.

Using the other map, a map of the whole State of California, we are looking at Owens Valley on the east side of the Sierra Nevada, in this section, where the five herds are located. The small Tuppan ranch, or Elk Reserve, is located down here, and the Cashe Creek, southeast of Clear Lake, is shown here.

I might point out—Senator Cranston mentioned Point Reyes—this would be located in this area (indicating). The elk originally extended throughout the Central Valley of California from the upper limits of the Sacramento drainage, all of the way south to the vicinity of Bakersfield. It subsisted primarily on the grass and tules or other forage available in the bottomland at that time, which in primeval days supported a fantastic quantity and variety of all kinds of wildlife. It was the principal big game animal of this area at that time.

In addition there were deer, but it was a primary source of food and fiber for Indians prior to the white man’s coming; and after that, of course, was preyed upon heavily by the early settlers of California.

Senator HART. Do you agree it would be desirable to increase the number of the tule elk?

Mr. GLASGOW. We would be interested in increasing the number of nearly every wildlife species except those which are pests.

Senator HART. Except those that are what?

Mr. GLASGOW. Except those that are pests—blackbirds, starlings—this type of thing.

Senator HART. I thought you were getting an argument these days that they served a purpose too?

Mr. GLASGOW. Well, they do. They have a place in this world. But we have changed the world so much that they may need to be controlled.

The tule elk should be increased if we are able to find areas in which it is compatible with the other interests involved.

Senator HART. So it would be fair to say that you and Senator Cranston are in general agreement on the desirability to increase them; the problem is how?

Mr. GLASGOW. Yes, and there is one thing Senator Cranston pointed out that I think is extremely important. We could increase the number of elk in this area here, and I think we should; but we should also look for other areas, because we would seem to have most of our eggs in one basket.

One of the ways in which to save an endangered or rare species is to have them distributed in different areas. If you have a catastrophe in one area, you still maintain some stock in other locations.

Senator HART. That is precisely the reason we identify things as rare species, I have learned today.

Well, do you think that that distribution, which both you and the Senator think is desirable, is better handled by the State rather than the Federal Government?

Mr. GLASGOW. Well, the handling of resident game species is a function of the State governments. We would certainly assist them in every way we could.

In the case of tule elk there is a problem in that they are not generally compatible with agricultural regions. For this reason, we run into an extremely difficult problem in finding areas in which to move them. I know that our own people have looked not only in California, but other States as well, and they cannot distribute tule elk to many areas that would otherwise be suitable, because the animals would conflict too seriously with agriculture.

Senator HART. Even though that study hasn't produced as yet other areas that you can identify that could receive the elk, doesn't that argue that even given the best will on the part of the authorities in California, they can't go east of their State line? You can, and even you haven't been able to find anything yet.

Mr. GLASGOW. This is true. Of course, the State of California could give elk to other neighboring States for stocking purposes. And they have investigated this possibility with some of their neighboring States.

I think the most likely thing that can be done here is to increase the number of elk on this area, and then find a few areas that would maintain a limited number of them. I don't think we are going to find any site where you can expect to maintain a high population of elk.

Senator HART. Do you have any range in terms of numbers which you think is a desirable minimum?

Mr. GLASGOW. The number per acre, or number of acres per elk? It would be figured on the number of acres per elk. The number of

acres required to support an elk would vary, just as it does for cattle or other animals. So it would be quite a variable figure.

I am going to ask Mr. Smith, from the Bureau of Land Management, who does have some information on this, to answer your question.

MR. SMITH. I note here that, regarding the size of the herds in Owens Valley, the Bishop herd is 54—this was after the hunt, I believe, last year—Timemaha, 51; Goddale, 62; Independence, 32; Lone Pine, 55. So it appears that maybe something in that range appears to be a viable herd. Each of those appears to be a viable herd.

MR. GLASGOW. Just looking at these figures, it would appear around 50 to 55 acres would be required per animal. I believe livestock is grazing in the area also, and if livestock and cattle were removed, I am sure the capacity for elk would increase a certain amount.

Senator HART. While you say you have the authority under existing law to undertake such a study, such a study in the detail proposed by Senator Cranston has not as yet been made. Is that correct?

MR. GLASGOW. Not as a separate or special study. We have made investigations in attempting to determine where elk could be transplanted.

The State of California has done the same thing. I think it should be called an investigation, rather than a formal study.

Senator HART. Without attempting to get you to change the Department's position, if the bill became law, what would your guess be as to the cost of such a study—as distinguished from an investigation?

MR. GLASGOW. I will ask Dr. Gottschalk of the Bureau of Sport Fisheries and Wildlife to respond.

DR. GOTTSCHALK. I believe the question of carrying capacity of areas that were identified by the respective States, including the State of California, could be examined on the ground and estimates made of their carrying capacity and the overall feasibility within a period of about a year. And it might take roughly 2 man-years to accomplish the job of this magnitude, which would be on the order of \$50,000, I would guess.

Senator HART. Has the Department ever established a refuge for a rare species?

MR. GLASGOW. May I ask Dr. Gottschalk to respond to that again, please?

Senator HART. Sure.

DR. GOTTSCHALK. We are in the process at the moment of acquiring land at Mason's Neck, Va., for the eastern form of the bald eagle, which is declared to be endangered. This is the first area we have begun to acquire specifically for the purpose of providing habitat for an endangered species of animal.

That is not to say, however, that we don't have many other areas which do provide habitat for endangered species. It is frequently thought the Aransas National Wildlife area in Texas was acquired specifically for the whooping crane. It is the wintering home of the whooping crane—and this is a very important feature—but the area was acquired with migratory hunting stamp funds and provides winter habitat for many other water birds. It serves in this case a combination purpose.

There are still other areas that have been set aside within the public domain specifically by the Bureau of Land Management, under the authority of the Secretary, to protect endangered species.

Several of the States have set aside areas that have been identified as being important to endangered species. The Forest Service of the Department of Agriculture has also set aside or identified areas for the purpose of protecting habitat needed by endangered species.

So there are many areas that are set aside for this purpose.

Senator HART. Doctor, you are describing areas set aside for an endangered species?

Dr. GOTTSCHALK. Yes.

Senator HART. I take it there has been no such area designated for a rare species?

Dr. GOTTSCHALK. I presume that there has been. I'm not as capable of responding fully to that question as the other, because in the context of the whole history of conservation activity in the United States, it is quite possible that areas have been set aside for animals that were in a rare status at that time.

The authorizations under which we carry out the National Endangered Species program limits actions by the Secretary of the Interior with respect to animals other than those covered by international treaties to those species which he formally declares to be endangered.

As of this point, as I recall, the endangered species, also promulgated by the Secretary, contains 76 different species of wildlife in the United States. Under Federal law, his having declared these animals endangered automatically then gives him the authority to cooperate with the States and to take the actions he feels necessary to effect a program of conservation of those species. But he has no similar authority with respect to rare species.

Senator HART. Let me see if I can get this straight. If the Tule elk is rare, but not endangered, and we authorized this study, since this doesn't authorize or direct the establishment of a reserve or refuge, we would not be inconsistent with existing basic law, would we?

Dr. GOTTSCHALK. You are correct, sir. You would not be inconsistent.

Senator HART. Then if at the end of your study you were to recommend, as the Cranston bill would require, appropriate legislation, would you have to treat the species as endangered; or could you deal with it, including establishing refuges, even though you continued to hold to the view it was merely rare?

Dr. GOTTSCHALK. If we conducted a study as suggested, and identified areas that might be capable of supporting Tule elk, and the Congress then passed a law that directed us to do so, the Congress in effect would have mandated that a species which we consider to be rare was indeed endangered, and it would be exercising the legislative prerogative to come to that conclusion.

If, on the other hand, the Congress failed to take such action, there would be no authorization in existence now, no general authorization for the Secretary of the Interior to undertake a specific land acquisition program for the tule elk. It would not preclude the possibility that the Secretary could, with the authority he has, particularly with respect to the activities of the Bureau of Land Management, and the administration of the public lands, and the authority he has to call upon other Secretaries for assistance, especially the Secretary of Agriculture, with respect to forest lands, and even the authorities that he has to enter into cooperative agreements with other political bodies

such as the city of Los Angeles—all of these things would give him some authority to proceed with establishment of a refuge without land acquisition being involved, merely by getting the management program approved and entered into by all of these cooperative groups.

Senator HART. Mr. Bickwit?

Mr. BICKWIT. You say that you have conducted studies to some extent and that you have looked around for areas which the elk might use?

Mr. GLASGOW. Yes. And this has been over a period of some years, too.

Mr. BICKWIT. Why, then, do you appear to be objecting to going further and to spending the \$50,000 that would be required for a more extensive study?

Mr. GLASGOW. No; we don't object to it.

Mr. BICKWIT. You are in sympathy with this bill?

Mr. GLASGOW. We just feel we have the authority to proceed now, if we had the money. And we are doing it with personnel on an unofficial basis at the present time.

Mr. BICKWIT. Do you intend to spend something in the nature of \$50,000 to accomplish this purpose if this bill is not passed?

Mr. GLASGOW. I'm sure we have spent that much already.

Mr. BICKWIT. Thank you.

Senator HART. You have been so gracious, I don't want to sound harsh with you, but we have a laboratory of the Bureau of Commercial Fisheries at Ann Arbor, and after news accounts that it was going to be closed, we—I'm sure many of the Michigan delegation got on the phone to certain of your associates, and we have been told that it is not the intention of the Department to close it, but rather to transfer it from the Bureau of Commercial Fisheries to Sport Fisheries.

Are you able to state on the record that that is the plan?

Mr. GLASGOW. Yes. I will elaborate on that if you like.

Senator HART. Yes.

Mr. GLASGOW. We did have in our long-range plans the intention of phasing—or at least lowering the commercial fisheries emphasis and increasing the sport fisheries emphasis in the lakes, because the sport fisheries values are much higher than the commercial fisheries.

We were going from one to the other in an orderly fashion and we were then faced with a budget cut, which meant that in making this change we had to cut the budget slightly. But instead of maintaining the same level of program, we will take a slight dip. But it is our intention to bring that back up, and we have always had in mind going much further in the environmental aspects of fisheries research work with the new plan after it is converted toward sport fisheries.

So that we never intended to cut out the laboratory at all. It was just unfortunate that this budget cut came at the time when we were making this change from one use to the other. I'm sorry that misinformation was spread, and spread rapidly, concerning purported plans to eliminate the lab. This is not true.

I think, when we get our funds restored, that that lab will be in a much stronger position in the environmental area that it has ever been in the past.

Senator HART. Thank you for that assurance. I'm sure in the future we will include it in our letters to alarmed, outraged citizenry.

Gentlemen, did any of you have anything further?

Mr. GLASGOW. I would like to just add another comment here. I want it on the record, because we are dealing with a problem here, and there are natural laws involved. And no matter how many laws we pass that are man-made, we are dealing with natural laws. Nowhere can these elk be moved where control will not be necessary. They will reproduce and overpopulate a given area, and it will be necessary to effect some control.

So we are escaping from hunts, or some method of control, by distributing further to new areas. We will always be faced with the control of these animals a few years after they are moved.

I just wanted that on the record, because some of the people feel that there should be no hunting, there should be no reduction. But this is one thing I can guarantee you can't get away from. Wherever you move them, you are going to have to come back and control them.

Of course, we think that hunting is the proper means of control. It does give the sportsmen some recreation, it keeps the animals within their habitat, it gives you an incentive to perpetuate them forever—and that is what would be done under a hunting system—they would be perpetuated forever.

So I just wanted that on the record.

Senator HART. How do they control the number taken?

Mr. GLASGOW. They make a census and they determine the number that should be taken in order to bring the herd down to the carrying capacity of the land.

Senator HART. And issue a license—

Mr. GLASGOW. It is on a permit—I would assume on the lottery basis, although I do not know all of the details. But it is normally on a lottery basis, wherever one can draw for a permit. If he's lucky, then he can go hunting. But only a certain number of permits are issued.

Senator HART. And it would be the number above the figure thought to be appropriate for the maintenance of a healthy herd?

Mr. GLASGOW. That is correct, sir.

Senator HART. Thank you very much, gentlemen.

The secretary for the preservation of the tule elk, Mrs. Tasker Edmiston.

**STATEMENT OF MRS. TASKER EDMISTON, SECRETARY, COMMITTEE  
FOR THE PRESERVATION OF THE TULE ELK, LOS ANGELES,  
CALIF.**

Mrs. EDMISTON. Thank you, Mr. Hart. I wish to second the motion of Senator Cranston of deepest appreciation for this courtesy of hearing us while we are here. It saves us time and money to devote to the tule elk instead of transportation. We appreciate it very, very much.

Senator HART. You are welcome.

Mrs. EDMISTON. I have a prepared statement that I would like to enter for the record. I believe I could better use my time to speak rather impromptu, and the things I leave out or do not make clear, I would appreciate the opportunity of clarifying them.

Senator HART. Very well. We will order the prepared statement printed in the record, and you make such comments as you desire.

Mrs. EDMISTON. Thank you so much. There has been some discussion about whether the tule elk is rare or whether it is endangered. How many are there, the number is so pitiful that it seems disgusting to quibble about whether it is rare or endangered, because of the terribly scarce number.

But I wish to call attention—and I have only the one copy. I would like to share it, and either have a copy of it or the original back.

Senator HART. We will be able to make a copy.

Mrs. EDMISTON. Right. When the Department of the Interior made its list of rare and endangered species in 1964, the tule elk headed it, the top of the page of the list of endangered mammals.

I am submitting that for copying at this moment. It was my understanding that the department of fish and game in California said that. We want it rare, we are keeping—manipulating the numbers small and therefore we want it moved into the rare instead of the endangered column.

Therefore, as a bookkeeping device, only as a changing of the piece of paper, the status of the tule elk is moved to rare instead of endangered list. Its hope of salvation is no better. In fact it is worsening with all of the pressures of population and use and misuse and cooperative agreements which seem to be agreed to be used for death, to manage death, to despoil, to take away our natural environment. The tule elk is mismanaged under a very arbitrary statement of policy of the Fish and Game Commission of California, adopted in January of 1961, which by arbitrary compromise with the stockmen, and the less discriminate of the gunning fraternity to keep the number between 250 and 300.

The fish and game department, the year before this policy was adopted had proposed a hunt to wipe out half of the entire population. Of the 300 which they had counted and said were there, they stood in open testimony and testified to wipe out 150. That is when the Committee for the Preservation of the Tule Elk was born. We said this can't happen. And they then came up with this compromise policy which upped the thing a little bit, a very little bit. We have no way of knowing exactly how many. I heard today the figure of 365. I never heard that in my life before.

The last kill was authorized on the 1968 census—of the Fish and Game Department of California. In March they said they could find 176. And they kept this harassment of counting by plane going all of the time. Later they came up with 178. That still wasn't enough to be able to hold a hunt to satisfy the ranchers and the less discriminate gunners, and by the way, I can describe the hunt. I have observed it with a modest little armband which said I was there as an official observer. I asked some disquieting questions that were reluctantly answered and they don't add up to anything except a ravage of our natural resources. At any rate, the pressure for a hunt was on. So the fish and game department brought in the local cattlemen to help with the count. And by some magic the 176 counted in March went up to 335 in August with the help of the cattlemen.

Then all by themselves, the fish and game department made another count in December, again when the foliage was off, and you would expect it to be a more accurate count, of 148. But on the basis of 335

they authorized a hunt to wipe out 85 of these animals. It had to be substantiated with another count made by the fish and game department without the cowboys in 1969 and that time they came up with 330.

Now, we don't know, only the fish and game department was in the plane, we asked to send an observer, it was denied. There is some manipulation of numbers. But according to the fish and game department's numbers, the only numbers we have, after wiping out 78 in the hunt, according to their figures there should be 252 in the wild herd surviving. That is not 365. I don't know where that number could possibly have come from.

But at any rate it is such a piddling number it is ridiculous to have to say that it is a rare or endangered species. It is terribly endangered. We heard yesterday in testimony in the House from the same gentleman who testified here today, that there are 100 in Cashe Creek. They only bring that group into service whenever they need to up the numbers. Today it has grown to 125. This is not the season for calf dropping. So, I don't understand how 25 elk were born on paper overnight. It is a tragedy with a wildlife resource so fragile, so endangered, so rare, that we handle numbers on paper a little carelessly. I am not criticizing the gentleman personally. I have nothing but reason for personal respect. I am just saying that numbers that may get translated on to paper are a very serious thing to deal loosely with when it is a species of wildlife at stake. The number game can be very tricky.

Again, on this Cashe Creek herd, as was mentioned, there were a number of transfers made in an effort to reestablish the herd—22, in fact. And all but the one that wound up in the Owens Valley perished, we believe, That one prospered. We contend the Owens Valley should be the real, primary, and major wildlife refuge, Federal wildlife refuge. There has been a transfer up to Cashe Creek or Clear Lake, but since 20 of the others were known to have completely failed, and since they also introduced Rocky Mountain elk there, it is in my order of logic to say since Rocky Mountain elk are readily adaptable and the tule elk are not readily adaptable, that it is probable the Rocky Mountain elk, not tule elk, were saved, or a mixture thereof. Elk species do mix in the wild.

Serious biologists put a question mark over the origin or bloodline of the Cashe Creek herd. To me they are critters, and any wildlife is the greatest asset to the natural scene, a contribution to the entire biota and they are certainly valuable.

But for the preservation of the species, let us simply wipe that off the docket for preservation purposes. It may or may not be tule elk. The hope of the species lies in the group in the Owens Valley. Yesterday Sigurd Olson, who could not stay over—and I am so sorry he couldn't stay and testify stated the scientific fact that the gene pool of a severely limited number of animals that have survived in captivity, in a pen, eating pellets from a trough does not have the survival characteristics that make for long-term survival. The hope of survival of the species lies in the gene pool in the Owens Valley herd, an enlarged herd.

We heard today about the five herds there. There are five groups. They do intermingle. I keep in touch with the State fish and game department. They say we lost the Independence herd today. We can't find the Goodale herd and something happened to the Lone Pine herd

next week or last week. The fact is they move about. Although this dwarf elk does not follow the giant migratory pattern of the other species, they do move about. There are five general locations. Owens Valley, depending on your reference points—I heard 70 miles or 80 miles mentioned—between Lone Pine and Bishop, which is considered by many the Owens Valley area, is 60 miles long. The tule elk habitat, depending on the terrain, ranges from 4 miles at the narrow point of the Timemaha Reservoir to 10 miles wide. Something over half is on city land, and the rest on BLM or forest service land. Tule elk do move about. The pressures for extermination, managing them to death, are terrific.

In 1967 by unanimous agreement, the city council of Los Angeles authorized a wildlife refuge specifically for the preservation of the tule elk, but also for a complete refuge for all animals between the Timemaha Reservoir and the Owens Lake south of Lone Pine. The Los Angeles Department of Water and Power, with jurisdiction over the land, has refused to cooperate. They say they have this cooperative agreement with these other agencies which is an agreement to mismanage that which belongs to all of the people to the point where it cannot be esthetically enjoyed and it is endangered.

There was much talk about whatever the number might be, it would have to be managed by man. We take great exception to that. We feel the master ecologist got his degree in some institution greater than any which I have attended, and I have attended some of the great, or my son has attended and he is now attending one of the great.

There is a master ecologist which has taken pretty good care of the species through the eons of time, and it would behoove us to find our very humble place in that ecosystem.

In this Owens Valley, which we propose as the primary refuge, and we do hope there are others, there are a few mountain lions left. In the last hunt a hunter said to me—I don't think it would be appropriate for me to repeat it verbatim. I saw a mountain lion right out in the Goodale area and was so and so too surprised to pull the trigger. By the way, he brought in a magnificent creature, a young tule elk not quite in the prime. The mountain lion would not have wiped out that one. He would have taken the old cripple, the deformed, the weak, the lame, the one that is easier to get. This one was very easy to get by the hunter, because the fish and game department had aircraft overhead in actual torment, almost diving on to the tail of the elk, riding them, running them, harassing them, walkie-talkie radios, keeping in constant contact, and a telemeter on one elk's neck with a constant beep beep, so they would have a way to know where they were in the inner recesses and direct the hunting parties there, hunting parties taken out by guides, in fish and game department jeeps and trucks, cutting them off and mowing them down as the elk came across the given points.

We have documented that in a small movie. We would be so happy to make it available to this group. It shows the fish and game plane in this utter harassment. I said to one of the men how come you switched a weigh-in station on us, when we were told it would be here. They said hold your horses, don't get excited, you will have plenty of time to get to Bishop, because they can't do anything until the plane gets overhead and gets the elk flushed out.

Those are the circumstances of what they call the cooperative agreement management. It is a disgrace to game management. It is a dark cloud over this rare and endangered natural resource. The Committee for the Preservation of the Tule Elk has thousands of members outside of California who say this is our heritage, it is not a local problem. The question was asked, do you have refuges for other animals? Yes.

The National Elk Refuge for the Rocky Mountain elk has saved and restored that species, so it is in a good situation now. It was not so-called endangered by some when it was established. That refuge helped save the trumpeter swan which was once much endangered and now is safe through this system. The key deer is another one that is being quite comfortably restored through a refuge.

There are other problems of roads and such, but a refuge has saved the key deer. The heath hen was too late in bringing forth a Federal refuge.

As a kid in school I contributed money to transfer the few heath hens onto Martha's Vineyard. I stood in Martha's Vineyard 3 years ago with the excellent habitat and said, "How come there are no more?"

They transferred them too late. The will to live, the survival factors in the gene pool were such that when one fire, which did not burn up the heath hen, but was one more pressure upon them, they could not endure and they are gone. Also, my lunch money for quite a spell was gone. That was no matter, but my heritage is gone and that is a matter.

Right now we have some Federal protection for the California condor. Its numbers are hopefully around 50, and it is believed, well, I would hate to say which way the balance is.

We do not have to wait until the tule elk is down to 50. Now is the time to act. There is all kinds of precedent for refuges for the rare as well as the endangered. Sigurd Olson pointed out yesterday this would be a refuge for the rare and endangered tule elk and for people as well, who must have places of quiet where they can go and reconstitute themselves from the pressures of the urban squeeze.

Geography has been wonderful with the scenic splendor there. Without getting into the inner recesses of the habitat to disturb the wildlife, there are great scenic spots, overviews, where you can observe wildlife, where you can observe the beautiful scenery without invading the privacy of the inner habitat.

I would like to say about the competition—oh, I mentioned the city council resolution. Last summer they called the department of fish and game and the department of water and power to the city council to stand up and testify why they drag their feet on establishing the authorized refuge. And the department of fish and game gave the same testimony that was given right here, carrying capacity of the land.

A city councilman said, will you explain this to me? The carrying capacity of the land is 250 to 300 tule elk.

Yes.

Then how come that same land can carry a great deal of cattle. Would you please give us the number of cattle on dirt-cheap leases from the city of Los Angeles' Department of Water and Power; the Federal land has some dirt-cheap leases, too, but I will not go into that.

How many cattle are there? I knew how many were registered in Inyo County on the day the tax assessor makes a count—15,000 plus. And by the way, a calf elk is counted the day it is dropped and a cow calf is only counted the day it is marketed. And the cattlemen have the cattle en route on the day the tax assessor is around. They are not around usually.

How many cattle are in the Owens Valley at various times of the year? The department of water and power testified up to 40,000 cattle. Now, that is not on a yearlong basis. They truck them in as calves to eat up the wild flowers in the spring, to tramp up the watershed, and then they are trucked out when the goodies are gone.

It is a terrible disruption of the natural habitat, the natural watershed, the natural beauty. Wildlife has been compatible with the land for eons of time. The things that make, the qualities that make for good domesticated livestock are such that they tend to stay in one spot, and eat up one spot, tramp up one spot and pollute one spot. For every reason this area, let us hope, would be a crest to crest national wildlife refuge, depending upon the ecological balances to hold the species in line.

Ecology has done it long before we coined the word and talked it. I would say let us practice it as well as talk it, and if the time should come, and I wish to go on public record, that with ecological balances relied upon, if the tule elk should exceed the real, not fake, not imagined and not contrived carrying capacity of the land, this committee would say send a biologist in to remove the less able, the unfit, not this so-called hunt, and I can tell you of the lottery system, the numbers, all of that if you are interested, on paper it says in each instance they will take the poorer animal, and I witnessed the hunts, I stood at the weighing station and I asked questions that were not welcome, but they were factual.

Is this a cull? On what basis could this possibly be called a cull?

No, it is not a cull; it is a selective thing. We are taking the old.

Then how old is this animal?

About 18 months.

How old does a tule elk live if he lives a normal lifespan?

Seventeen years.

The hunter is not looking for a cull.

One of them said to me, blankety-blank, do you think I paid \$50 to take a cull? I paid my \$50 to take a trophy.

We believe that the natural predator has a place in the ecosystem, biologically, esthetically. For many reasons we know and many reasons we are not sophisticated enough to know, and he certainly knows how to cull animals.

The hunters, and we have a good many hunters on this committee, are members saying we believe that to hunt a rare and endangered animal and to slaughter—they do not deny this kind of killoff of the hunt to be slaughtered and under those circumstances unethical, unsportsmanly, and un-American.

This thing must stop. The local interagency agreements are agreements to despoil, agreements to manage and manipulate and not to save in this age of the environment.

I have in my file thousands of letters, international as well as national. S. 3028 is a real constructive measure toward the age of the environment.

Perhaps the environmental issue is not all talk. I do not believe it is just talk. I believe that the things that this Congress is doing, that this administration has pledged to do, are vital, are vigorous.

We support and we commend and we will be with you all of the way. But we cannot condone, we cannot allow this despoilment, this ravage to go on any further. It must end.

I would like to answer any questions you may have. There are many things I would like to go into, but I do not want to usurp the time.

Senator HART. Mrs. Edmiston, you have made a very persuasive case. I certainly had some questions, but I think you have covered them.

You have given us your impression of the hunt. Let me ask this: Earlier witnesses have reminded us that there are now eight or 10 times the number of tule elk than in the late 1800's, whatever the figure was. What about the argument it will survive and indeed has increased from that low figure? Why worry about it now that there are 10 times as many?

Mrs. EDMISTON. I am not a gambler, but it is possible to be lucky once. But you are not always lucky. There has been testimony that the tule elk ate tules. You would think so. Its name is the dwarf elk, *Cervus nannodes*, and it hid in the tules in the age of its earlier debauchery, and therefore the rancher on Miller and Lux Ranch called it the tule elk.

It has used the tules as was done in biblical times to hide for survival. We were lucky. They survived. For a very short time they survived this management policy of keeping them down to a tremendously low figure. But biologically the gene pool is robbed, the gene pool is so limited, every year that this gene pool is held at this dangerously low level survival factors, the things that make for long term survival are diminished and the factors for long term survival are lost.

Lloyd Ingles, author of "Mammals of the Pacific States," one of the great mammalogists of our times, wrote in a personal letter, on learning of Senator Cranston's bill, I have quoted it verbatim at the conclusion of my written testimony, that the tule elk has been dangerously reduced in number.

He is an eminent biologist that does not speak loosely. He concludes that it took eons of nature's time to produce the species, and by the actions we take or the inactions we take, which lead toward the probability of extinction, are just like ripping up the foundation planks of the universe. It is not only like it, it is doing it, because the whole potential of life lies in the gene pool.

Every species that goes to extinction or that is weakened is minimizing the whole potential of life on this earth, at this point we know of no other place to live.

It is a very important thing to establish a refuge to save this species. We have just been lucky for a short span. Luck does not last forever.

Senator HART. I have no further questions.

Mrs. EDMISTON. May I, Mr. Chairman, add a number of things for the record? This shows a little insert map which is very up-to-date of the Owens Valley. It indicates the city-owned land and other adjacent lands. I would like to insert "Sanctuaries for the Protection of Rare Species" by Gerhard Bakker, "History of the California Tule Elk" by the same author. And to show that we do have a great deal of interest in the so-called sporting fraternity, in a recent Los Angeles Times Sunday Supplement, the spokesman for the sporting fraternity

had quite an article "Who Will Save the Tule Elk," and he concludes with note of this legislation you are considering today and his final statement is, "This is the beginning or the end of a species."

I would like to add those things to the record.

Senator HART. They will be received and I hope that if in fact the action of this committee and this Congress marks either the beginning or the end that we will insure against it being the end.

Mrs. EDMISTON. We are grateful. Thank you so much.

Senator HART. Mr. Bickwit?

Mr. BICKWIT. I just have one question.

In your written statement you refer to a socioeconomic study of the California tule elk.

Mrs. EDMISTON. Yes.

Mr. BICKWIT. And you say that you agree with its conclusions as to the locations where the tule elk ought to be placed.

Mrs. EDMISTON. We would hope—I was glad to see Senator Cranston mention several locations. You know this study brought out the fact which we have long contended, that Owens Valley area is the one place that has proved biologically excellent for the tule elk and it is one of the great scenic resources of the earth. We believe that should be the primary one. It is where the elk are, it is in every way most compatible, it is land already basically in public ownership, it wouldn't require a great deal of money for funding.

We were happy to see Dr. Phillips and Cieracy-Wantrup say the second basic location should be the Point Reyes National Seashore.

I had the pleasure of sitting in the gallery while the funds were voted for that this morning. I am so grateful.

Senator HART. I will make a trade with you. You make sure this Congress adds to that system, of which Point Reyes is one, an area in Michigan known as the Sleeping Bear Dunes.

Mrs. EDMISTON. Oh, I am already on that committee.

Senator HART. All right. Stay with it, because we are going to get it.

Mrs. EDMISTON. I am going to stay with it. That is one of my special projects.

At any rate, Drs. Phillips and Cieracy-Wantrup say a second tule elk habitat should be the Point Reyes National Seashore for esthetic and biological and all reasons and the tule elk were endemic there. It is a part of the original habitat.

I have hiked the area on a number of occasions and I would thoroughly concur that is a very fine place for a nucleus of tule elk.

The committee also would like to have adequate funds made available for a study within the year's time. We haven't too much time to drag our feet. We feel a year is time to do a good study, and an expeditious study. But we would like to see it adequately funded, so it would be done well.

We would like to see a third, and the Cieracy-Wantrup study concurs, I only have the abstract, the study is not published as yet, that there should be a third tule elk habitat. The study suggests one possibility that was mentioned yesterday in the waterfowl management area called San Luis Island. There are a number of reasons pro and con. **Among the con it is very small, it is in a highly concentrated use area, it would have to be a fenced reservation and we would like unfenced reservation.**

If there is room for an elk to move around and browse or graze, he would be moving around on the waterfowl's nest, and if this is a waterfowl nesting area, we believe the elk should not step on their eggs.

But there are a number of sites suggested within the State. We would like to see this California elk for historic, esthetic and biological reasons relocated in several locations within the State. I don't say if a good location were found outside the State we would fight it, but we would like to see the California elk stay in the State. We do not feel we are provincial, we are Americans first, we want a national reserve. But there are many reasons for keeping animals within their natural areas.

Mr. BICKWIT. Has your committee gone to the State of California?

Mrs. EDMISTON. Many times.

Mr. BICKWIT. What has been the reaction?

Mrs. EDMISTON. Words, words, and gunning them down.

We hear such things as were said today, the carrying capacity of the land, I was so grateful to hear Mr. Glasgow say if they relieve the pressure of livestock, there could be more tule elk. We get absolutely nothing but words, words, and another gunning down of the elk under the guise of optimum number. When we corner the gentlemen and say really now do you mean that is an optimum number, they say no, it is a compromise. The natural resource is compromised. My heritage is compromised. Life's potential is compromised. I am a very loyal Californian, and I work on the side of the Fish and Game Department in some of its programs. But I have to call a spade a spade and this one is an ugly spade.

Senator HART. I know there are others that we want to hear from and shall, but this team that you talk about in your prepared testimony, the socioeconomic study—

Mrs. EDMISTON. I would lend you this abstract if you like.

Senator HART. No. You referred to an ecologist and archeologist. Why the archeologist?

Mrs. EDMISTON. That is an esthetic goody of my own. The Eastern Sierra is a very rich archeological area. The National Geographic Society has sponsored some research there. I would like more research there. It is a very rich area. While setting aside a great Federal reserve, knowing the Federal Government's total interest in the preservation of our heritage, you might want an archeologist on the team. We would like to see ecologists in the field. If you wanted an archeologist as well, we certainly wouldn't fight it.

Senator HART. You are adopting a pattern some of us in past years have used when there is some particular research project that we would like to see funded. We stick it into the Pentagon budget because it is always easy to get. It is impossible any other way almost.

You are now going out on an archeological expedition under the guise of Fish and Game. That is just as bad as we are.

Mrs. EDMISTON. Could be. And I would say we would be in very good company. But I would like to say that Dr. L. S. B. Leakey, the great archeologist, is vitally interested in this Owens Valley area.

By the way he is a member of the Committee for the Preservation of the Tule Elk.

Senator HART. He is?

Mrs. EDMISTON. Yes. He, in his own personal meanderings in the Owens Valley for archeological reasons, felt it was such a tragedy that the living heritage is not there to be enjoyed, it is kept down to this ghost herd situation. He is personally incensed and he is a member of our team.

By the way, he did not ask me to tuck in that archeological bit.

I also have appreciation of history; my own son is a history major, I think it behooves us as a part of the ecosystem to know where we were, where we are, and the point toward which we are going. I think it would be a great national asset to have this reserve save a great many things.

My primary interest is the living things. But I also have an interest in that which is part of the key to the past.

Senator HART. Well, I will report to my wife tonight that you also hold Dr. Leakey in highest regard. She was in his class last year.

Mrs. EDMISTON. Oh, wonderful. Another rapport.

Senator HART. Thank you very much.

Mrs. EDMISTON. Thank you for letting us come.

(The statement and attachment follow.)

STATEMENT OF BEULA EDMISTON, SECRETARY, COMMITTEE FOR THE PRESERVATION OF THE TULE ELK

Mr. Chairman and members of the subcommittee, I am Beula Edmiston, Secretary, Committee for the Preservation of the Tule Elk, representing the Committee. We support and commend S. 3028 by Alan Cranston and urge its approval by this body and prompt enactment into law.

Ten years ago, fifteen concerned citizens, determined that the California Tule Elk should have a fair chance for survival, formed the Committee for the Preservation of the Tule Elk. Now thousands of people in every state of the Union and on every continent of the earth join with us in declaring that all rare and endangered creatures are everybody's business, and call for a great National Wildlife Refuge for the preservation of the Tule Elk.

We are deeply grateful to this deliberative body for early consideration of this important environmental issue.

Indeed, this bill, and this Hearing contribute to the forward thrust of the 70's—the Decade of the Environment!

We will not presume to argue the case for refuges before this distinguished body. Suffice it is to say that refuges have played a vital role in every successful wildlife restoration program in our history. Refuges, large enough to be ecologically significant, contribute to the entire eco-system far beyond our means of calculation.

With the growing population pressure and dwindling open spaces, a substantial National Wildlife Refuge (or refuges) for the preservation of the Tule Elk would make a monumental contribution toward the preservation of a tolerable, and beautiful, environment for man.

Its importance cannot be overestimated.

While men were walking on the moon, a science observer declared that 100 years from now, the refuges and natural reserves established at this time might be considered the greatest contribution of the 20th century.

S. 3028 would open the way for saving outstanding open space for the preservation of the Tule Elk and all life—including our own.

We are glad that S. 3028 calls for studying the desirability of one or more National Wildlife Refuges. We believe the Secretary of the Interior would find the long, narrow, superably scenic Owens Valley, present home of the free-roaming Tule Elk (the one relocation provided right for the unique California species) to be the right place for a National Wildlife Refuge of heroic magnitude—perhaps a crest to crest reserve. This fabulous land is practically all in public ownership: City of Los Angeles, Bureau of Land Management, and U.S. Forest Service. Seldom do we have the chance to save so much with so little outlay.

By virtue of geography and landscape values, viewing sites and overviews could be established where unmolested Tule Elk and other wildlife could be observed without the necessity of invading the inner habitat.

Here, as the beloved naturalist, Sigurd F. Olson observed, a National Wildlife Refuge would save and restore the rare Tule Elk and be a refuge for people as well, who, more and more as the cities expand need quiet places to commune with nature to find spiritual sustenance that only places of natural beauty can provide.

We hope the Secretary of the Interior would also consider relocating a nucleus of Tule Elk on the Point Reyes National Seashore, historically within its natural range. We would hope that a third suitable refuge might be provided, if possible, within its native state.

In his *The Tule Elk, its History, Behavior, and Ecology*, Dale McCullough recognizes the esthetic importance of the Tule Elk in the Owens Valley and notes that its esthetic value will continue to increase. He recommends an additional location to help assure the species' survival.

A very recent *Socio-Economic Study of the Tule Elk* by S. V. Ciriacy-Wantrup and Wm. E. Phillips points up the tremendous esthetic importance of the Tule Elk, recommends three habitats be provided in California, that the Owens Valley be the major one, a transfer to the Point Reyes National Seashore be made, and still one more relocation.

We believe the time table provided for in S. 3028 is well considered. One year recognizes both the urgency of action and the time necessary to evaluate appropriate areas.

We urge sufficient funds be made available to put a team of ecologists in the field. In view of the important archaeological values in the lands east of the Sierra, we would suggest that an archaeologist might well be included on the staff.

We close with the words of Dr. Lloyd Ingles, eminent mammalogist, and author of *Mammals of the Pacific States* on learning that S. 3028 had been introduced in the Senate:

"I urge the active support of the effort to establish a National Wildlife Refuge for the Tule Elk which have been dangerously reduced in numbers. Let it never be said of our generation that we hastened the extinction of that species.

"It took ages of nature's time to produce a species. To be guilty of contributing toward the extinction of a species is like tearing up the foundation planks of the universe."

Gentlemen, we believe that S. 3028, the Tule Elk, and the foundation planks of the universe are in good hands.

#### QUOTATIONS FROM A NATURALIST'S BOOKSHELF

(Compiled by Committee for the Preservation of the Tule Elk)

*Cervus nannodes*. The so-called valley elk, or tule elk, of California . . . chose the arid plains and was probably more truly a plains animal than any other American elk . . . The valley elk may be considered the most specialized of all elk in habitat choice and the one, apparently, with the greatest tolerance for desert conditions . . . It may be safe to say that for purposes of range stocking, three elk, herd run, are equivalent to one adult cow."—*The Elk of North America* by Olaus J. Murie.

California's management tule elk has now become an established part of the fauna of the desert area of the lower part of the Owens Valley. The animals were introduced there in 1933. This is the smallest North American elk. The herd here of about 300 animals are all that remains of a vanishing species once abundant in the San Joaquin Valley. The Society for the Preservation of the Tule Elk is making a noble and determined effort to have a large and permanent reserve established in lower Inyo County where the animals can be kept inviolate from the interference of cattlemen and game hunters.—*The California Deserts* by Edmund C. Jaegers.

On 9th March, 1967, Los Angeles City Council authorized some 240 square miles lying between Timemaha and Owens lake in the southern part of Owens Valley to be set aside as a wildlife refuge. Its prime purpose is to serve as a secure sanctuary for the principal free-ranging herd of Tule Elk, *Cervus nan-*

nodes . . . For the Tule Elk—one of the rare and endangered species listed in the *IUCN Red Data Book*—the adoption of this proposal is therefore a most important and welcome measure for maximum protection. [Authorized refuge is not yet established.]—*International Union for the Conservation of Nature Bulletin*, April/June 1967.

It is to be hoped that by the creation of this reserve the tule elk will not, like the grizzly bear, become extinct.—*Mammals of the Pacific States* by Lloyd G. Ingles.

The Owens Valley [tule elk] herd roams freely in a superbly scenic area . . . hemmed in by the Sierra Nevada on the west and the Inyo Mountains on the east. But the Owens Valley herd seems to be in an increasingly precarious position. Although the Tupman herd may serve as a curiosity, it is the Owens Valley herd that presents the aspects of wildness and beauty so gratifying to the lover of nature. Owens Valley is owned by the City of Los Angeles, and in recent years the city has leased the lands to cattlemen. Today these men complain about having to share their range with the elk . . . The tule elk deserves the greatest possible protection we can give it. The need is for the establishment of a permanent, inviolate sanctuary in Owens Valley to the exclusion of all conflicting interests and activities. The Committee for the Preservation of the Tule Elk, 5502 Markland Drive, Los Angeles, California 90022, is working valiantly toward this objective.—*Exploring Our National Wildlife Refuges* by Devereux Butcher.

The Tule Elk (dwarf) is in grave danger of extinction . . . The ultimate fate of the Owens Valley herd may be determined within the next few years. Since the animal is now competing with the cattlemen in the area, it may be that the Tule Elk will disappear within our lifetime unless positive steps are taken to protect it . . . Without the untiring efforts of a few, many of today's "vanishing species" would probably have disappeared years ago. The killers, hunting for sport or profit, have always been far more aggressive and vocal than those who condemn them. To fight against such odds takes courage, strength, and determination. Behind each small victory to preserve the wildlife of the world, there is a man—or group of men—dedicated to the belief that nature's creatures belong to no one and to everyone.—*Vanishing Wildlife* by Roy Pinney.

The tule elk . . . has already had one close brush with extinction.—*The Life of Prairie and Plains* by Durwood L. Allen. [Especially for young people.]

When the white man arrived, there were at least six forms of wapiti [elk] in North America, but the eastern one was killed off so promptly that only a single museum skin and a few skulls survive to mark the fact that it ever lived at all. The Merriam elk of the mountains of Arizona and New Mexico is also extinct, and the Tule or "dwarf" elk of California nearly so . . . The only race that survives in respectable numbers is the Rocky Mountain elk . . .

Action has come late, but now it represents a determined effort to share the land with wildlife. One of our present tasks has been stated clearly by The Nature Conservancy: "We are obligated, as was Noah, to round up representatives of all living things, and see them safely through the flood—the onrushing flood of civilization.

If these things are done, generations to follow will not lament that they were born too late to have known primeval America, . . . to have seen the eagle course effortlessly through the sky, to have heard the mournful call of the coyote and the bellow of the moose (or bugle of an elk), nor even to have watched a warbler construct a nest in the luxuriance of an unlogged forest.—*The Land and Wildlife of North America* by Peter Farb and Editors of *Life*.

Tule Elk or Dwarf Elk. *Status*: rare. Restricted in range, reduced in numbers. *Protective measures already taken*: Herds are carefully managed and protected from indiscriminate hunting by State law; establishment of Tule Elk State Park; organization of the Committee for the Preservation of the Tule Elk, dedicated to the protection of this species.—*Rare and Endangered Fish and Wildlife of the United States* by the Bureau of Sport Fisheries and Wildlife (resource publication 34).

The tule elk (*Cervus nannodes*) native only to the central and coastal valleys of California is a rare and unique big game species. High esthetic appeal is attached to this animal by nature lovers and outdoorsmen. Naturalists and conservationists place great significance on this animal because of its uniqueness . . . The challenge to manage the herd and its habitat so as to maintain the animal for the future is great.—*Tule Elk Habitat Management Plan* by the Inyo National Forest.

The dwindling herd of this shy but exceedingly handsome elk has retreated before the onslaughts of man to its last refuge, the Owens Valley, and even here it is being cut to pieces by hunters . . . The Committee's [late] chairman, Walter Dow hopes that "some day the people of Los Angeles will realize that they own the most unique natural park in the world and will set it aside as such." But whether this occurs before the heads of all these hapless creatures adorn the knotty-pine-and-chrome game rooms of a lot of second-class sportsmen, only the next few years can tell.—*Moment in the Sun* by Robert and Leona Train Rienow.

Whenever the tule elk increase their number to over 300, a legal hunt is held in the fall to reduce them to 250 individuals, a number arbitrarily set by the California Fish and Game Commission as a compromise between the cattlemen and ranchers on the one hand and the conservationists on the other. These periodic hunts keep the elk at a very low species level and constantly fearful of their lives.—*Sanctuaries for the Protection of Rare Species* by Gerhard Bakker.

The tule elk were still without a wild home until 1933 when private individuals, in cooperation with local agencies, managed to arrange for 27 elk to be released in California's Owens Valley . . . The elk thrived and increased and, under pressure from cattlemen and sportsmen, the State Fish and Game Department in 1943 authorized a hunt that claimed 43 bulls. Further hunts were allowed. On October 1964, 50 of the 329 tule elk in Owens Valley were shot. Although such shooting was meant to cull out the poorer specimens, calves—and healthy adult elk—were sometimes killed.

People concerned with the fate of the animals formed the Committee for the Preservation of the Tule Elk, the main objectives being the end of such hunts and the creation of a permanent, wild sanctuary for the tule elk.—*Animals at Bay* by Adrien Stoutenburg. [Especially for young people.]

The crusade apparently succeeded when the Los Angeles City Council, by unanimous vote, authorized "that portion of Owens Valley lying between Tine-maha and Owens Lake, be set aside as a wildlife refuge." But actual protection of the elk in the area seems to be slow in coming.

However, the people of California take pride in the fact that this rare animal, along with the California condor, is found only in their state and nowhere else in the world. So the public will surely demand that this sanctuary be maintained to preserve the tule elk and other wildlife in the area.—*Animals in Danger* by Frances and Dorothy Wood. [Especially for young people.]

Senator HART. Next, representing the Sierra Club, Evelyn Gayman.

#### STATEMENT OF EVELYN GAYMAN, REPRESENTATIVE OF THE SIERRA CLUB

Mrs. GAYMAN. My name is Evelyn Gayman. My home address is 1260 Cliff Drive, Laguna Beach, Calif. 92651. I am also a member of the Tule Elk Committee, but as you can see, Mrs. Edmiston has left very little for me to say.

I am, however, appearing here today on behalf of the Sierra Club, an organization of more than 90,000 members throughout the United States. The purpose of the Sierra Club is to explore, enjoy, and protect parks, wilderness, waters, forests, and wildlife. It is in the interest of wildlife, specifically the tule elk, that I am testifying.

The Sierra Club is deeply concerned about the preservation of wildlife and regards the establishment of the refuge under consideration as essential not only for the survival of the tule elk, but it is important to the health of our citizens.

Early colonists on the continent found there were three species of elk here. Two were extinct by 1900.

The tule elk, found nowhere else in the world, once roamed the Central Valley in California in such numbers that they were said to "darken the plains for miles." By 1870 market hunting in the days of the gold rush, and changing land use reduced this species, too, to near extinction.

Because of the protection afforded on the Miller-Lux Ranch, they made a comeback. As their numbers increased they became a source of irritation to the ranchers whose fields they invaded. Transplants were unsuccessfully tried. Then California created a small reserve at Tupman. This was in the tule elk's natural habitat, but it did not permit the elk to exist in anything like a natural condition. The attempt to solve the problem by moving some to fenced pastures in Yosemite and Sequoia National Parks proved to be a mistake in that the climate was not conducive to the elk's welfare and confining animals was contrary to national park policy. This was not the answer.

In 1933 permission was obtained from Los Angeles to liberate tule elk on the bottom lands of the Owens Valley, owned by the city for watershed and leased to cattlemen for grazing. Here the herd, living in a free wild state, flourished. But they were soon in trouble again. Cattlemen were angered by their competition though the elk do not, except in periods of extreme scarcity, eat the same food as the cattle. Ruthless hunts were initiated by the ranchers.

At that point the California Department of Fish and Game stepped in at the insistence of aroused conservationists and established a policy of authorizing a hunt cutting the herd to 250 whenever the elk numbers surpassed 300.

Since any species having less than 2,000 specimens is regarded as an endangered species, certainly the mere existence of 250, or even 300 elk, is not a safe survival number. A count, dangerously low, of 176 has been registered.

It is the Sierra Club contention that "species of native wildlife are important natural resources as objects of esthetic, recreational, and scientific interest. Efforts to manage and conserve wildlife should strive to protect and enhance these values." The club "recognizes that preservation of suitable habitat is the keystone of wildlife conservation."

The establishment of the long-sought reserve is the answer to the preservation of the tule elk.

The Los Angeles City Council 3 years ago approved its establishment on much of the city land. However, the rancher-oriented Inyo County supervisors are opposed, as is the Los Angeles Department of Water and Power, which profitably leases grazing rights, and the State Fish and Game Department. A refuge here, together with bordering Bureau of Land Management land and national forest land could be created at no acquisition cost to the public.

The setting aside of reserves for protection of rare or endangered species is not a unique request. Many exist throughout the world and

function effectively. Open land in adjoining States might also be favorably considered for such a reserve.

We believe an elk refuge in the Owens Valley between California's highest, often snow-capped mountain ranges would add substantially to the already outstanding recreational and tourist attractions found there. A growing interest in wildlife might be satisfied here when elk were no longer being hunted. Under the present program they are so fearful of their deadly enemy, man, that many visitors have sought in vain to get a glimpse of an elk.

People, subjected to the tensions of crowded urban life, find relief in the open spaces where flora and fauna can be viewed in their natural habitat.

This reserve could be a sanctuary for many other species of wildlife living here as well as the abundant flora that make this a colorful landscape that varies with the seasons. People everywhere have become aware of their diminishing heritage, and are insisting that the values of this earth be preserved.

We support the study as authorized in Senate bill S. 3028, yes, but we urge that this study be the motivation for action soon. Not only the elk, but the reserve may be lost, so rapidly does progress sweep away what we have taken for granted as eternal.

I thank you for this opportunity of speaking here and also may I express my appreciation for your having scheduled this meeting so that we from California could attend this one, too.

Senator HART. I am glad you could. In connection with the land that the city of Los Angeles has in the valley, could you describe what has happened—our notes show that the city did approve the establishment of a reserve.

Mrs. GAYMAN. Yes.

Senator HART. But it has not as yet come into being. Is that correct?

Mrs. GAYMAN. That is right.

Senator HART. What, if anything, have you done with the city to persuade it to go forward with that proposal?

Mrs. GAYMAN. There have been meetings with subcommittees of our city council, who in turn sought to bring pressure on the bureau of water and power. But it is a very powerful bureaucracy within the city and so far there have been no results.

Senator HART. Assuming that you do have success, and the city does establish the reserve, I take it it is the position of the Sierra Club that that is not sufficient?

Mrs. GAYMAN. Well, it would be such a big step, I think we would be quite happy for the time being, but we would be very happy to see them go further. And the Point Reyes suggestion is the most practical, most feasible.

Senator HART. Although you continue to persuade the city to act, and to establish the reserve, it is not your position that one area would be sufficient to insure against the loss of the elk?

Mrs. GAYMAN. It is advisable, as someone stated before, to have your eggs in more than one basket. We feel that way too.

Senator HART. Thank you very much.

We shall next hear from the president of the group Help the Tule Elk, Mr. Walter S. Boardman.

**STATEMENT OF WALTER S. BOARDMAN, PRESIDENT, HELP THE  
TULE ELK**

Mr. BOARDMAN. Senator Hart, I am Walter S. Boardman, residing at 3001 Veazey Terrace, N.W., Washington, D.C. and representing Help the Tule Elk, an association of persons concerned about the protection of the dwarf elk of California. The organization does not claim tax-exempt status. Its membership includes citizens in many parts of the country.

We commend Senator Cranston for the introduction of this legislation to authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or Western States for the preservation of the California tule elk.

S. 3028 represents a fair, practical approach to the very specific problem of an adequate refuge for the tule elk. This hearing also provides an opportunity to call to the attention of the Senate the sorry picture of mismanagement that has characterized the fate of the tule elk on the lands of the city of Los Angeles. The fiction about 300 head being all the range will carry—and I go back to the figure that it will carry 15,000 cattle, it will carry three times that many elk, according to studies of food consumption of the animals—and the related manipulations of stockmen and responsible agencies of State and local administration is a story unworthy of our culture. It clearly demonstrates that California is not prepared to serve as steward of its wildlife and that the Federal Government must step in.

At the hearing yesterday before the Subcommittee on Fish, Wildlife, and Conservation of the House Merchant Marine and Fisheries Committee much was said about leaving the matter to the States. It was the old "States rights" pitch used to uphold slavery prior to 1860 and used by local-interest groups to impede progress in humanitarian affairs even to the present. Where judgment is blinded by greed, as in this case, some more objective body must be called upon to intervene.

And we believe that to be Federal.

Prior to yesterday, I believed that the contemplated authorization would be sufficient to set the wheels of progress in motion to resolve the conflict of opinions on an elk refuge. Having heard the departmental statement and especially the comments yesterday, and they were somewhat different it seemed today—I realize that if it were simply an authorization, nothing constructive would happen. It is urged that the bill be amended to prescribe two or more hearings in California and one in Washington, D.C., to bring out the facts about land management in the Owens Valley watershed—and I refer to the rather unsatisfactory grazing situation there—the public interest in wildlife management, the actual versus the right policy on grazing permits and other matters of land administration. Such hearings should be under congressional supervision to assure a fair and full presentation. It would be an interesting case study and a revelation as to why many of our troubles of today exist.

Thank you for the opportunity to appear here today.

Senator HART. Would you expand just a little on why until yesterday you thought that the Cranston approach as drafted would be adequate and now suggest that it is not?

Mr. BOARDMAN. I had the belief that the Bureau of Sport Fisheries and Wildlife would be rather eager to make a study and to present the varied recommendations. But I had the feeling that there was some shadow behind them, whereby they were now most hesitant to get into this, and there were comments to the effect, "Well, we are already doing it, it has already been done, or we already have the facts," that indicated a lack of enthusiasm necessary to succeed.

Senator HART. I don't deny that that is a possibility. I suggest also thought that—and I base this largely on what I heard Dr. Glasgow say at the end of our visit with him here—that it may be a problem of the budget with them as much as anything else.

I think he wound up telling us that he didn't object to the proposal in the bill—the record will speak for itself—but I think as I listened to him I thought, well, now that will enable us to go to the committee and say the Department not only doesn't oppose the bill, but if it could find the money would be glad to do the thing.

So it might be simply a hang-up over money.

Mr. BOARDMAN. I could be in error, but I am under the impression yesterday that he said money was not a factor. I could be in error. I think, however, and I will say that it is the shadow of the International Association of Game, Fish, and Conservation Commissioners—and the tremendous drive they are making for placing all wildlife in their hands to manipulate what is really behind this hesitancy and why it would not succeed.

Senator HART. Do you have any questions?

Mr. BICKWIT. No, sir.

Senator HART. Thank you very much.

Next we shall hear from the director of field services for the Humane Society of the United States, Mr. Frank J. McMahon.

#### STATEMENT OF FRANK J. McMAHON, DIRECTOR OF FIELD SERVICES, THE HUMANE SOCIETY OF THE UNITED STATES

Mr. McMAHON. Senator Hart, thank you very much for allowing me to be heard today.

I am Frank J. McMahon, director of field services for the Humane Society of the United States.

For the purpose of this hearing, I represent not only our national office, but our California branch.

Mr. Chairman, because of the fact that you have heard from persons who are expert in their knowledge of the tule elk, Mrs. Edmiston, to be exact, I would like to request your permission to place my prepared statement in the record and make a few verbal remarks.

Senator HART. We will receive the statement for the record; and you may make such remarks as you like.

Mr. McMAHON. As director of field services for the Humane Society of the United States, I have worked closely with the Department of the Interior on several wildlife matters, the most important of which is probably the seal hunt held on the Pribilof Islands in the Bering Sea.

For the last 2 years I have been a member of a task force and have traveled to the Pribilof Islands working with the Department of Interior to develop a more humane method for the slaughter of the northern fur seal.

My close association with Department of Interior has led me to shudder at some of the terms they use in their control of wildlife. For example, Mr. Chairman, if we study the words as they use them, "harvest," it means nothing except kill. "Management" means very little except that the ultimate result is to kill.

As a matter of fact, even the word, "conservation" has come to mean conserve so that the hunter can kill.

And I am not opposing hunting. What I am saying is this is becoming overbearing with some of our departments.

Unfortunately the Department of Interior is very well aware of the power and the strength of the National Rifle Association, and the hunting lobby. It is only very recently that they are realizing that persons interested in genuine conservation, ecology, and protection of our environment are also beginning to develop a powerful lobby.

We have in the past had extreme difficulty with the Department of Interior because of the power of the hunting interests, and the position taken by the Department of the Interior concerning our natural resources and wildlife.

I intend to make a suggestion concerning Senate bill 3028, but first I would like to give this committee a brief example of the attitude taken by the Department of Interior concerning wildlife in an earlier case.

Although my remarks concern mustangs, they will be brief and they have a direct relation to S. 3028.

Early in 1968, the HSUS was notified that the Department of Interior intended to "harvest" approximately 200 mustangs on the Pryor mountain range of Montana and Wyoming. All of our efforts to obtain information concerning this proposed harvest led to uninformative, unknowledgeable, and unintelligent reports from the Department of Interior.

The claim was made by USDI that the mustangs were starving to death. ABC television produced a film showed these animals with their long and flowing manes and tails galloping across the range. There was not one emaciated animal among them.

We presented these pictures and still photographs to the Department of Interior. Their answer was, "The range is being depleted, and they will starve to death some day."

When we questioned them about plans to trap the animals, we were told no plans had been made to do so. We showed them photographs of three traps which were built in the area by BLM at a cost to the taxpayers of \$30,000. They stated that they had no intention of trapping the animals.

And yet we received word from our agents in the area that the harvest was actually about to begin. At this particular point, through a slip of the tongue of a USDI official, we were informed that the Department of Interior intended to stock the Pryor Mountain range with bighorn sheep, and open the area to hunters.

It is common knowledge among persons familiar with mustangs that these animals will not allow bighorn sheep near the water holes, and the decision had to be made as to whether it would be bighorn sheep or mustangs.

The Department of Interior decision was very plain—the mustangs would have to go.

This, in itself, is an example of the Department of Interior's close association with hunting interests. The Department of Interior left us no alternative but to take drastic action to protect these mustangs whose herds are reduced to less than 17,000.

The Humane Society of the United States, in the United States District Court for the District of Columbia, filed a civil suit for a restraining order against the then Secretary of Interior, Stewart Udall, to stop the roundup or harvest of any mustangs under its jurisdiction in the Pryor Mountain range.

It was only after a court appearance and the guarantee to the judge by the USDI that the roundup would not take place that any action was taken. The judge dismissed our suit, but only for being premature. Without a doubt, however, it was this action that saved the Pryor Mountain herd.

The climaxing insult to our intelligence came when the Bureau of Land Management proudly announced in a press release that it had added 10,000 acres to the Pryor Mountain range, so the mustangs would not starve to death.

Gentlemen, we are talking about a range where there are no fences for hundreds of miles. The mustangs must have been absolutely delighted to learn that they could now legally graze on lands that they had been grazing on all along.

As I have stated before, the Humane Society of the United States, the California branch, and the membership, strongly support this legislation designed to protect the rare tule elk. We do urge this committee, however, to provide the strongest possible safeguards to assure that this refuge will be actually a refuge, and that the words "management" and "harvest" are not overused, and overemployed by the Department of Interior, should this refuge be established.

We also request that the Secretary be instructed to include on the study committee persons closely associated with ecology and with expert knowledge of the tule elk herd, such as Mrs. Edmiston, for example.

Thank you very much, Mr. Hart, for allowing me to appear before you today.

Senator HART. Thank you very much, Mr. McMahan, for your expression of concern and particularly the interesting story about the mustangs.

Mr. McMAHON. I have with me a copy of the suit, Senator, but it does belong to our attorneys, so I am not at liberty to leave it.

Senator HART. I'm sure your summary description of it is accurate. I only wish we could file that kind of suit to restrain what we now learn is the premature announcement, but undoubtedly the intention to deploy MIRV's in June. That is also one that leaked out through a slip of the tongue, as you put it in your description of the Interior's procedure on the mustangs.

Do you have any questions, Mr. Bickwit?

Mr. BICKWIT. I am just curious, you are saying that you do support the bill as it stands, despite your worries?

Mr. McMAHON. Yes. We support the bill as it stands. We do feel that if not a part of the bill that the very strong recommendation should be made concerning the refuge, and there actually being a refuge, and that appropriate people be on the committee—not people

that are simply concerned with how many tule elk we are going to raise, or how many we can kill. People that are genuinely concerned with the ecology, the conservation problem.

Senator HART. Thank you very much.

(The statement follows:)

STATEMENT OF FRANK J. McMAHON, DIRECTOR OF FIELD SERVICES, THE HUMANE SOCIETY OF THE UNITED STATES

Mr. Chairman and gentlemen of the Committee on Commerce, I am Frank J. McMahon, Director of Field Services for The Humane Society of the United States. I want to thank you for allowing me to appear before you today. I had the pleasure of appearing yesterday before the House Sub-Committee on Merchant Marine and Fisheries to testify in support of H.R. 14603, introduced by Mr. Brown of California, which is similar to Mr. Cranston's bill, S. 3028.

The Humane Society of the United States is the largest national humane organization in the country with Branches in five states and affiliated societies in eighteen states and Puerto Rico.

My remarks to this Committee will be brief as you will hear from Mrs. Beulah Edmiston of the Committee for the Preservation of the Tule Elk and also from a representative of the Sierra Club. I know the time of this Committee is valuable and for me to testify about the actual hunt or conditions on the Tule Elk ranges would be repetitious.

I represent not only our national headquarters here in Washington, but our California State Branch which is headquartered in Sacramento. The HSUS California Branch has been concerned for many years about the continued hunting of the Tule Elk for "so-called" control of the herd. In spite of all assurances that the Tule Elk is not in the class of an endangered species, but that it is classed only as a rare animal, the fact exists that the present herds of the Tule Elk are well below the level of 300 animals. This is a dangerously low population and certainly, even excluding hunting, any natural disease or epidemic could render the Tule Elk an extinct species almost overnight.

I would like to state, however, that The Humane Society of the United States California Branch had a representative at the last hunt allowed for the Tule Elk. This hunt was authorized by the California Department of Fish and Game. From the reports that we have received from our Branch, it is obvious that this could hardly be classified as a hunt and should more rightly have been called an unsportsman like massacre. The animals were stampeded by plane. The hunters were driven to the location by jeep and other ground transportation and regardless of any claims, there was no selective killing of any animals. It seems perfectly obvious that when shooting from 550 yards one cannot determine the physical condition or the age of an animal. This cannot be in any way construed as controlling a herd; it can only be construed as indiscriminate killing.

In closing my testimony on S. 3028, I would like to state that The Humane Society of the United States and its California Branch fully support this bill introduced by Mr. Cranston of California and similar legislation which has been introduced by other members of Congress. We are also in full accord with the testimony, which we have studied, of the Committee for the Preservation of the Tule Elk and that testimony to be presented by the Sierra Club.

One further remark concerns the bill that you are studying today. The Humane Society of the United States has for many years been concerned about our wildlife, the endangered species, and the great waste of our resources. The bill you are studying today is directly concerned with wildlife and shows a growing awareness of the Congress and of the public to the fact that we are facing a major problem.

Mr. Roger Caras, the noted author and lecturer, made the following remark at our National Leadership Conference which was held last year in Hershey, Pennsylvania. The remark was made basically concerning wildlife, but it applies to all living creatures including man. Mr. Caras' statement was:

"Something is triggering a change in the human race. I sense it wherever I go. I sense it in the mail. I sense it in the halls of Congress. I sense it in everyone I speak to. There is a restlessness. Man is beginning to see that there is a new consideration that must permeate every single thing he thinks and does on this earth. It is called conservation. It is no longer a dirty word. It is no longer a luxury. It is an absolute necessity or we perish."

Thank you very much, gentlemen, for allowing me to comment on this proposed legislation.

Senator HART. Now speaking for the Wilderness Society, we will hear from Mr. A. T. Wright.

**STATEMENT OF A. T. WRIGHT, CONSULTANT, WILDERNESS SOCIETY**

Mr. WRIGHT. Thank you very much, Mr. Chairman.

I am A. T. Wright, consultant for the Wilderness Society, a national conservation organization of some 60,000 members with its headquarters here in Washington, D.C., at 729 15th Street N.W.

Mr. Chairman, the views expressed here are really those of Dr. Walter Penn Taylor on behalf of the Wilderness Society. Dr. Taylor is past president of both the American Society of Mammalogists and the Ecological Society of America and now resides in Claremont, Calif. He is a long-time member and leader of the Wilderness Society and a person who has served with great distinction as a wildlife ecologist and educator.

I would like permission to have the statement inserted into the record, and proceed with a brief remark or two.

Senator HART. The statement will be inserted at the end of your comments.

Mr. WRIGHT. Thank you very much, Mr. Chairman.

The remarks that I would like to make are that I find myself somewhat in disagreement with the Bureau when they say there is no real need for the establishment of a refuge, but for "full scale management of the present habitat."

My feeling about that is, sir, that tule elk, under a full scale management situation, will always be low man on the totem pole. Perhaps I should say low animal on the totem pole.

His interests will always be subordinate to that of cattle or any other economic consideration. I don't see that under a full scale management plan, the tule elk will have a decent chance for survival. I believe a refuge is the answer. I do not, of course, presume to predict the outcome of the study called for by this bill. But it certainly seems clear to me that ecologists and wildlife biologists, if they are the ones to make this decision, would very likely recommend a refuge.

Somehow or other I find a parallel here to the Wilderness Act of 1964. I am sure the Senator may agree that wilderness protection is the finest protection that you can give to a stretch of land in a national park or a national forest, or a wildlife refuge. With respect to wildlife, I am sure it is clear that a wildlife refuge is the finest kind of protection you can give to rare or endangered species of animal, or indeed any species at all.

Thank you very much.

Senator HART. I am sure the analogy is correct.

Mr. Bickwit?

Mr. BICKWIT. My understanding of what the Department of Interior said was that, not that it was against a wildlife refuge, my understanding was it was willing to go beyond its current plans for preservation and improvement of the habitat of the area now being used in the Owens Valley.

Was that not your understanding?

Mr. WRIGHT. Well, sir, I merely address myself to the last paragraph, which says:

Consequently, we feel the real need is not for establishment of a refuge, but for full-scale management of the present habitat.

Mr. BICKWIT. That is true.

Mr. WRIGHT. This will be a multi-agency management arrangement between Federal and State agencies and I just don't see the tule elk coming out very well in that deal, especially with the pressures in this situation.

I think the pressures of the cattlemen, hunters, and other interests, who would like to see the herd controlled will be knocking on the doors of the agencies involved and the administrators involved and doing their best to pressure them into a form of management that Mrs. Edmiston has described so well, and even if that were an improved situation, it seems clear to me that there is nothing that is going to do as well by the tule elk as a wildlife refuge. I don't mean to be promoting it as some kind of utopia for wildlife. Wildlife refuges have their problems, their intrusions, and they are imperfect sometimes in their arrangements and in their management. But I see nothing better on the horizon for the tule elk.

Mr. BICKWIT. It is your view the Department would not undertake this study were it not for this bill?

Mr. WRIGHT. I really don't know the answer to that, sir. I think it is quite likely, but I don't know that.

Mr. BICKWIT. That is all. Thank you.

(The statement follows:)

STATEMENT OF A. T. WRIGHT, CONSULTANT FOR THE WILDERNESS SOCIETY

Mr. Chairman, I am A. T. Wright, consultant for the Wilderness Society, a national conservation organization of some 60,000 members with its headquarters here in Washington, D.C. at 729 15th Street, N.W.

I am here today to present the testimony for the Wilderness Society which has been prepared for this hearing by Dr. Walter Penn Taylor, a long-time member and leader of The Wilderness Society and a person who has served with great distinction as a wildlife ecologist and educator. As past president of both the American Society of Mammalogists and the Ecological Society of America, Dr. Taylor now resides at 660 Bonita Avenue, Claremont, California 91711, is highly qualified to offer the benefit of his rich knowledge and fine background to the Subcommittee today. It is a pleasure for me to present this to the Subcommittee.

S. 3028, authorizing a study by the Secretary of the Interior to determine the desirability of establishing a National Wildlife Refuge in California and/or adjacent western states for preservation of the California Tule Elk should be enacted promptly and funds should be provided by the Congress for completion of the investigations. Time is of the essence and Congress should act without delay.

As one of the world's outstanding species of big game animals threatened with extinction, the Tule Elk deserves immediate consideration.

California has a very special interest in this splendid animal, formerly found from the southern end of San Joaquin Valley northward well into the Sacramento Valley, the Tule Elk has been reduced to a pitiful remnant. It has been saved from extinction only by continuing interests of knowledgeable and far-sighted conservationists, private ranchmen, concerned sportsmen and the sagacious administration of the California Fish and Game Commission. It has now become clear that the Tule Elk cannot cope with domestic cattle, high-powered firearms, limitless mobility and steadily increasing pressures brought by modern use and development of its natural habitats.

Only a few hundred of these Elk are left alive in the whole world. Most of these are located in a limited area east of the Sierra Nevadas in California.

Progressive sportsmen and conservationists with others who believe in a quality environment in which some of the original animal and plant species are still present should have little difficulty in uniting on a reasonable program for saving this species.

It is an unfortunate thing that a combination of factors threatens ultimate extermination of all the world's most valuable species of wildlife. We cannot permit additional examples of the world's original stock of native wild animals to become extinct. As our civilization becomes more complex, we need more than ever the original stocks of wildlife, forests, and earth's natural treasures to preserve our quality environment.

An important first step is for Congress to enact this legislation that would authorize the Secretary of Interior to study the desirability of establishing a National Wildlife Refuge for preservation of the Tule Elk.

Mr. Chairman, it is a privilege for me to be here today to present these views of Dr. Taylor in behalf of the Wilderness Society.

Thank you.

Senator HART. Are there any others who have come a great distance who planned to testify but who have not been called on?

(No response.)

Senator HART. I hear none. Without objection, let us have printed in the record a statement by Mary Hazell Harris, executive director, Defenders of Wildlife.

Mr. PERRY. Senator, may I make a few comments?

Senator HART. Surely. I didn't realize you were here as spokesman for Miss Harris.

Mr. PERRY. Yes, sir. I am Harold Perry, field representative, Defenders of Wildlife.

#### STATEMENT OF HAROLD L. PERRY, FIELD REPRESENTATIVE, DEFENDERS OF WILDLIFE, WASHINGTON, D.C.

Mr. PERRY. I am presenting this statement for Miss Harris for the record today. I would like to make a comment of my own, if I may, Mr. Chairman.

Senator HART. Proceed.

Mr. PERRY. It is indeed an honor and a privilege to be here to help with the tule elk. I note in the statements today a reference to the Merriam elk now extinct in my own State of Arizona, and the comment that it may be one place for the tule elk.

I would like to point out that if this study is made, we should look closely at the Fish and Wildlife Services' compound "1080" program in Arizona, because some concerned citizens of Arizona believe today that the thousands and thousands of pounds of compound "1080" treated meat may be contaminating the grasslands of Arizona.

I read several years ago in the San Bernardino Audubon report that compound "1080" treated grain in California killed many deer.

The Arizona predator control program spreads thousands and thousands of pounds of compound "1080" poisoned grain from aircraft, in their present programs in Arizona. I would hate to see this endangered or rare tule elk placed in this position if the Merriam elk habitat is chosen for the transplant. That is all I have to say.

Senator HART. Where is this? In Arizona?

Mr. PERRY. Yes, sir.

Senator HART. Was that one of the areas suggested as a possibility by Senator Cranston?

Mr. PERRY. Yes, sir. Somewhere in one of the presentations today I read that the Merriam elk habitat may be compatible to the tule elk. I would just say a word of caution about this because of the amount of compound "1080" poison that is spread over Arizona today, and the concern of the citizens of Arizona for this pollution by Wildlife Services.

Senator HART. I hope it is not a monopoly of the citizens of Arizona. I hope we are all far more sensitive than we were a few years ago about these things.

Mr. PERRY. Yes, sir. I believe Arizona being a winter playground state probably is spearheading the opposition to this pollution program.

Senator HART. Thank you, and thank Miss Harris.  
(The statement follows:)

STATEMENT OF MARY HAZELL HARRIS, EXECUTIVE DIRECTOR, DEFENDERS OF WILDLIFE

Mr. Chairman, I am Mary Hazel Harris, Executive Director of Defenders of Wildlife, a citizens' organization of 20,000 members, with offices at 2000 N Street, N.W., Washington, D.C. 20036.

Members of Defenders of Wildlife have long been deeply interested in the small remnant of the once great herds of elk that roamed over much of California. Their slaughter for sport until only a few animals remained and those escaping only by hiding in deep marshes is a well known story. That the species survived is to the credit of one man, Henry Miller, though other individuals and public officials have since given their support.

However, from the time of Henry Miller to the present day, the future of the species has been uncertain, and neither the stockmen nor the conservationists have been happy over the arrangement whereby hunting has been permitted whenever, according to some count, the number of animals reached three hundred. The story of the various counts and subsequent kill in 1969 is not one that should ever be repeated.

Studies have been made of the Tule Elk and conclusions drawn according to the viewpoint of those reading the reports. It is of passing note that while the principal range in the Owens Valley of the Tule Elk is on lands owned by the City of Los Angeles, and that the City Council has voted to make the land a wildlife refuge, this just has not happened. It is reported to be because of the stockmen who hold grazing privileges on the city lands. This however, is not the issue here.

It does not appear that a comprehensive examination has been made of land use. Is there another area where there is suitable habitat without ranchland competition? It would be ideal if an area could be found where an ecological balance could be maintained. Is there possibly an area which could be to the elk what Isle Royale is to the moose-wolf balance of nature?

Even if an ideal situation cannot be found, there must be some place where a larger number of animals can exist, and where refuge conditions can prevail. It is unfortunate for the present confrontation between the stockmen and the conservationists to continue if another range can be found. The sooner land use planning begins in this and similar situations, the better the chances are of averting some of the environmental disasters that appear to be ahead.

The Defenders of Wildlife wish to commend Congressmen Brown, Waldie, Burton, Gubser and Sisk for this move to "Authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent Western States for the preservation of the California tule elk." We deeply appreciate this opportunity to present a statement before the Sub-Committee on Fisheries and Wildlife. Thank you.

Senator HART. I am advised that the testimony prepared to be presented by George Alderson, acting Washington representative, Friends of the Earth, is to be printed in the record at this point, and that Mr. Alderson is not here.

Their testimony supports the bill, S. 3028, and suggests two amendments, one to direct the Department to study all alternatives, whether or not they are covered by existing legislative authorities, and second, to create an advisory committee.

(The statement follows:)

STATEMENT OF GEORGE ALDERSON, ACTING WASHINGTON REPRESENTATIVE, FRIENDS OF THE EARTH

I am George Alderson, Acting Washington Representative of Friends of the Earth, probably the newest and smallest of the national conservation organizations, devoted to the preservation, restoration, and rational use of the ecosphere. Our national headquarters are at 30 East 42nd Street in New York City, and the Washington office is at 917 15th Street, NW. For the committee's consideration, I am submitting copies of the Environmental Handbook, which we recently published in collaboration with Ballantine Books. Another program Friends of the Earth has initiated is the League of Conservation Voters, which will be raising funds for the election campaigns of officeholders who are committed to defense of the environment.

National conservation policy for a long time has had among its objectives the protection of endangered wildlife. This goes back at least as far as the Migratory Bird Treaty Act of 1916. Yet specific attention often has been necessary to instigate effective programs to implement this objective, chiefly because agency people hesitate to grapple with the real or illusory conflicts with other programs. This laissez-faire tendency is well exhibited in the case of the tule elk.

S. 3028, to provide for a study by the Interior Department of the potential for a tule elk national wildlife refuge, is the product of a long historical background. The tule elk, originally inhabitants of the marshy Central Valley of California, were pushed out of their habitat by drainage and farming. The small herd that exists today in Owens Valley is almost an accident, because they could have been lost so easily as the pressures on California lands intensified. As others here today can testify, the present situation is not one that can reassure us about the future survival of the tule elk. The remnant population in Owens Valley is subject to pressure from cattlemen, through the Los Angeles Department of Water and Resources and to hastily-considered management activities by the California fish and game agency. As Secretary Glasgow commented in House hearings, the small size of the population and its geographical concentration make the tule elk vulnerable to disease. The population is also vulnerable to the influence of genetic drift because of these conditions. Although Californians have tried for many years to make these agencies respond intelligently to the tule elk problem, the response has consistently been unsatisfactory and largely insensitive to the problems of maintaining the elk population.

This situation should not surprise us, because city and state natural resources agencies can hardly be expected to command expertise on the problems of endangered wildlife; their central functions are quite different. The Interior Department, on the other hand, has been active in this field—thanks to legislation that came from this subcommittee—and can provide effective assistance in dealing with the tule elk. However, Interior thus far has taken an unreasonably timid approach to the problem, failing to consider some of the alternatives that could mean survival for the elk. As hearings before the House Subcommittee on Fisheries and Wildlife showed, Interior's staff had not considered the possibility of developing a tule elk population on its refuges in the Central Valley—within the tule elk's native range.

Several factors seem to be at work: (1) Interior's tendency to avoid even illusory interference with established programs, such as its own waterfowl refuges, (2) possible influence by the Los Angeles Department of Water and Power, an agency of considerable political muscle in California which administers the Owens Valley land and the cattle grazing on those lands, and (3) the hunting orientation of the State Department of Fish and Game.

To overcome these interlocking influences that year after year have continued to block innovations to protect the tule elk, refuge study should be authorized, with specific instructions that Interior go beyond the narrow viewpoint that has characterized its efforts thus far. One way to insure this broader scope would be to provide for a citizens' advisory committee, to be appointed by the Secretary of the Interior, including people such as Mrs. Edmiston and Fred Evenden, who is executive secretary of the Wildlife Society. The board should have authority to release its majority and minority reports publicly. The Interior study reporting on alternative measures for protection of the tule elk should be due back on the Hill after a year, so the Congress can proceed to the next step, if new legislation is necessary.

In summary, Friends of the Earth urge approval of S. 3028, and suggest strengthening amendments (1) to direct Interior to study all the alternatives, whether or not they are covered by existing legislative authorities, and (2) to create an advisory committee.

Mrs. BLUE. Excuse me, Senator. I have a letter on behalf of the American Horse Protection Association, and also would like to leave for the record the statement of Christine Stevens on behalf of the Society for Animal Protective Legislation.

Senator HART. They will be received and printed in full as though given. Thank you.

(The statement and letter follow :)

STATEMENT OF CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

My name is Christine Stevens. I am Secretary of the Society for Animal Protective Legislation. We support S. 3028 because of its clear intent to protect the small number of remaining Tule Elk.

We would support with greater enthusiasm a bill to create a suitable refuge for these small elk that have been persecuted and killed so persistently that their numbers have dwindled from countless thousands down to a much contested number ranging between less than two hundred to more than three hundred. Regardless of the exact count, this species assuredly needs protection. No study is needed to determine so obvious a fact.

The jurisdiction of many agencies, federal, state, and city, over the Owens Valley which is, for all practical purposes, the last retreat of the Tule Elk, undoubtedly creates difficulties and confusion. However, a decision by the Congress of the United States that the Tule Elk should be removed at last from destructive controversy and allowed to live in peace in a refuge provided by the Federal Government on federally owned land, would be warmly welcomed by humanitarians and conservationists and by the ever growing number of people who have a dual interest in preventing cruelty to animals and in preventing the extinction of species.

The Society for Animal Protective Legislation respectfully requests that action be taken by the Subcommittee on Energy, Natural Resources, and the Environment to end this unseemly controversy by creating in this Congressional session the established refuge which these animals deserve and which they must have in order to survive as a species.

AMERICAN HORSE PROTECTION ASSOCIATION, INC.,

March 5, 1970.

HON. WARREN G. MAGNUSON,  
*Chairman, Committee on Commerce, U.S. Senate,  
Washington, D.C.*

DEAR SENATOR MAGNUSON: The American Horse Protection Association, a national non-profit organization dedicated to the welfare of horses, both wild and domestic, wishes to express its strong support of Senator Alan Cranston's bill, S. 3028, to authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent Western States for the preservation of the California tule elk.

If these rare and valuable animals are to escape total extinction, swift action by a Federal agency is an obvious necessity. Considering the fact that they are now on the brink of extermination, immediate effective steps must be taken to give them a safe and suitable refuge. This country can no longer afford, and must not allow, the mindless waste of yet another breed of animals which are among our finest natural resources. We hope that you will do all that you can to pass this necessary legislation.

We would appreciate your including this message in the record of the hearings.

Sincerely,

JOAN R. BLUE,  
(Mrs. William L. Blue),  
*Vice President.*

Senator HART. That I take it concludes the testimony that we are to receive today. And, incidentally, it completes the hearing on the bill.

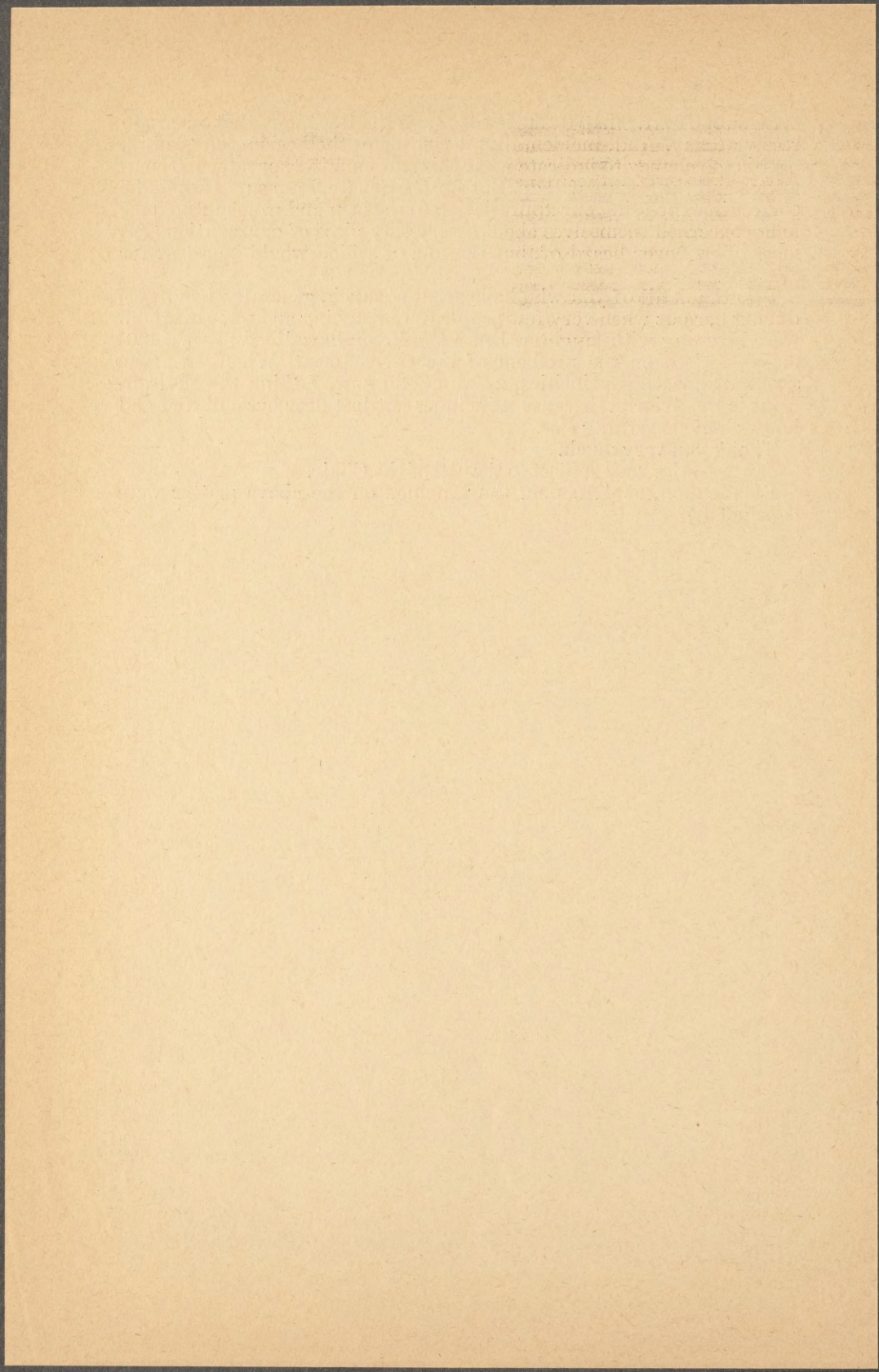
It is too chancy to indicate what this subcommittee or later the committee and the Senate will do. But for the Senate, I am sure I would be correct in expressing our appreciation to the men and women who have long concerned themselves about a very tiny piece of our creation that most of us never heard of, but the loss of which would be a loss for all of us.

I do thank all of you who have spent so much, generally I suppose, during periods when very few people were listening and some of whom were listening with laughter. But I think you have lived to see a 180-degree switch on the problem of the environment. When we argue about reallocating priorities, as we all do now, I think the environment is the priority, because it includes not just deer but children and houses and everything else.

Thank you very much.

We are adjourned subject to the call of the Chair.

(Thereupon, at 4:10 p.m. the hearings on the above matter were concluded.)



## ADDITIONAL INFORMATION

WHO WILL SAVE THE BIG ELK?—

LARGE GRAZING ANIMALS ARE THE FIRST TO GO WHEN OPEN LAND IS FARMED—  
PRESERVING A SIGNIFICANT-SIZED HERD CAN CAUSE PROBLEMS AS EVIDENCED IN  
OWENS VALLEY

(By Lupi Saldana)

On the evening of Oct. 10, 1933, the last of three trucks loaded with 27 elk started an historic trip from Yosemite National Park to the Owens Valley. This was no ordinary cargo and no ordinary trip. The animals were the last of a vanishing species—the tule elk.

This move to the sprawling Owens Valley at the foot of the towering High Sierra was the last stand for this unique species of big game, which is native to and found only in California. From a population that once numbered in the tens of thousands, there were only 400 survivors scattered throughout the state.

The transplant from the fenced corral at Yosemite to the 600 square miles of open space in the valley was a success as all but one animal survived. That elk had been injured before the start of the trip. The other 26 multiplied and thrived on the abundance of feed, water and room. In fact, conditions were so good that the following year 29 more elk were imported from the Buttonwillow area in Kern County.

For a few years it appeared that the saga of the tule elk was going to end in classic style with the audience cheering as the animals, eventually multiplying into five separate herds, faded away in the Sierra sunset. But this happy ending was only a mirage. Controversy soon began to swirl around the valley's new residents as ranchers complained that the 400 to 600-pound animals were destroying crops, fences and other property. So today, 37 years after the transplant that apparently had saved the species from disaster, the state's tule elk population remains at only about 400. Why?

The answer can be wrapped up in one word—controversy. On one side of the fence are the ranchers, who demand that the elk herd be thinned periodically to keep damage to crops and property at a minimum. They point out that the annual damage bill runs into thousands of dollars and they are not compensated for losses.

At the opposite end of the pole are the preservationists led by the militant Committee for the Preservation of the Tule Elk. It flatly demands that no more elk be killed because the tule elk assertedly is an endangered species. Although the committee includes a distinguished advisory board, it has been opposed by groups who brand it as being anti-hunting.

Sportsmen and hunters strongly favor keeping the elk herds large and healthy, but they feel the committee is basically interested in stopping hunting. Sportsmen feel they should be permitted to harvest any animals declared surplus by state authorities, because their license money provides funds for managing the herds.

Caught in the crossfire are harassed state wildlife authorities, such as the State Department of Fish and Game. They do not consider the tule elk an endangered species. Yet they have taken extra precautions to protect and maintain the elk herd, while partially heeding the demands of the ranchers.

The department's experts strongly deny that the tule elk is an endangered species. It points to an independent two-year study of the elk herds made by the Resources For The Future, an affiliate of the Ford Foundation, under the direction of the University of California. The group concluded that "under present herd distribution and management, the probability of the tule elk ever becoming extinct is infinitesimal—about 1 in 768,000."

Department biologists add that the herds must be kept within certain population limits to avoid an outbreak of an epizootic disease, such as anthrax, which could wipe out the valley's entire elk population. Overcrowding generally triggers such outbreaks. Another point was that the elk also compete with deer and cattle for feed.

A decade of smouldering controversy between these antagonists finally exploded in late 1969. The conservation blast echoed from the Owens Valley to Los Angeles City Hall to Sacramento and finally to Washington. Now the politicians have entered the picture.

The buildup for the 1969 eruption began to form in 1943 when the State Fish and Game Commission, which sets policy for the DFG, finally heeded the ranchers' demands for a hunt to thin the elk herds. That year 43 bull elk were taken by licensed hunters.

Additional fuel was added when selective hunts to "cull" the herds were held in 1949 and 1955. A total of 251 elk were taken in those two hunts. The department recommended another hunt in 1959, but opposition from preservationists was so strong the commission decided to give the matter more study before considering another shoot. Then in 1960 the elk committee was formed to lead the opposition to the hunts.

Following a series of public meetings at which extensive testimony was given by biologists, conservationists, ranchers, sportsmen, etc., the commission in 1961 adopted a compromise policy. The policy reflected the commission's determined intent to protect the elk, while at the same time recognizing the plight of the ranchers and the competition for feed between the elk and other wildlife.

The heart of the commission's new policy was that the valley's elk population would be kept at between 250 and 300, and when the population increased beyond 300 a rigidly controlled selective hunt would be held to "cull" the herds and reduce the population. Under this policy, hunters may shoot only animals selected for "culling" by trained department employees.

All factions, including the committee's determined secretary, Mrs. Beula Edmiston, appeared happy with the compromise policy. At a meeting in 1961, Mrs. Edmiston urged the commission to set the minimum and maximum size of the herds at the "modest figure" of 300, adding: "We commend the program of scientific culling when necessary."

This happiness was quickly dissipated by special hunts held in 1961, 1962, 1964 and 1969 when a total of 227 elk were taken. It was the 1969 hunt that finally triggered the nationwide explosion. The elk committee tried desperately to block the hunt held last October, but it failed. In 1969, the Los Angeles City Council voted to close the Owens Valley (most of which is owned by the city) to all hunting.

The City Board of Water and Power Commissioners, which controls the land, refused to close it. The board noted that its leases with ranchers automatically permit hunting on city land. The commissioners were also under heavy pressure from the Inyo County Board of Supervisors and other groups in the valley.

The hunt was held as scheduled in October and 76 elk were "culled." This brought new, sharp protests from Mrs. Edmiston and other members of the committee, who confronted wildlife officials and hunters right on the hunting grounds. The hunt, despite all precautions taken by the department, was described as "barbaric," "slaughter" and a "Roman holiday." Mrs. Edmiston declared that "tule elk hunting must end!"

Tired of sparring with state wildlife officials, the elk committee took its case to the lawmakers. Its requests included: 1—The end to all tule elk hunts. 2—That the Owens Valley be designated an elk refuge. 3—That any surplus animals be transplanted to other areas.

The plight of the tule elk isn't new. It's a carbon copy of what has happened to many other natural resources under the guise of civilization. When the white man first came to California, he found thousands of elk roaming the bottomland and the foothills of the San Joaquin Valley and the Sacramento Valley. The huge elk herds were scattered from Butte County, 80 miles north of Sacramento, to the Buena Vista Lake region near Bakersfield. Individual herds with more than 2,000 animals were in the San Joaquin Valley in 1846.

The herds dwindled rapidly in the next three decades as the elk were caught in the deadly crossfire of the guns of the market hunters and ranchers whose crops were being damaged.

The size of the elk made them ideal for the market. Bulls average about 600 pounds, but a few weigh 700 to 750 pounds. The cows average 400 pounds with an occasional lady elk weighing 500 pounds. The animals were easy targets as they did not migrate into the high, rugged country. The elk spent most of their time on the valley floor eating various kinds of grasses as well as twigs and leaves. In the wet winter months they would move into the low foothills on either side of the lush valleys.

Tule elk are also known as dwarf elk, because they are smaller than the three other species of elk found in the North American continent. The Roosevelt, or Olympic, elk is found in northwestern California, western Oregon, Washington and Vancouver Island; Rocky Mountain elk are comparatively abundant in some Rocky Mountain states; and the Manitoba elk are found in Manitoba and Saskatchewan provinces in Canada. Bulls of these species weigh as much as 1,200 pounds.

Since prehistoric times, the larger elk has been found over most of the United States and southern Canada. However, the crush of civilization also reduced their range and two species disappeared. Lost were the Eastern elk, found from the St. Lawrence River to North Carolina and westward to Iowa; and the Merriam elk of Arizona and New Mexico.

Although the tule elk is the miniature of the elk family, they are magnificent animals. In general size and shape, they look like their larger cousins. The bull grows a large set of handsome antlers, while the cows grow only small horns. The antlers are shed during February and March. They are the lightest in color of all the elk. They have a light golden brown colored body, darker brown on the neck and legs and a tawny rump patch. They are very powerful animals, easily jumping five and six-foot fences, and crumpling chain-link fences.

The sad condition of the tule elk was officially recognized in 1873 when the state passed a law making the killing of an elk punishable by imprisonment for a term not to exceed two years.

A major slice of credit for saving the species belongs to Henry Miller, an early-day conservationist-landowner. As the last remnants of the elk herds were squeezed into the tule marshes north of Buena Vista Lake in Kern County, Miller ordered his ranch hands to protect the animals from hunters. The dense tules which gave the animals protection also gave them their name.

Under the watchful eyes of men like Miller, the elk made a comeback and by 1905 there were more than 400 animals living in the wild on the Miller and Lux spread. By then the elk were doing an estimated \$7,000 worth of damage annually to alfalfa fields as well as damaging fences. So it was decided to distribute some of the elk to city parks and private animal collections.

In 1921 and 1922, four adult cows and two yearling bulls were taken to Yosemite National Park and placed in a 28-acre enclosure built by the California Academy of Sciences. By 1932, the park's herd had increased to 27 and superintendent Col. C. G. Thomson wanted to have them moved to an area where they could roam in the wild.

The late G. Walter Dow of Lone Pine learned of the availability of the elk. The businessman-philanthropist-conservationist conceived the idea of transplanting the animals to the Owens Valley in Inyo County. He even prepared, ramrodded and financed the plan.

A resident of the valley since moving from Colorado in 1918, Dow knew the valley and its people well. He envisioned it as a giant natural corral fenced by the Sierra and Inyo mountains and the desert to the south. There was an abundance of feed and water and he felt competition with agriculture would be minimal as farming and ranching had been substantially reduced when Los Angeles bought up most of the water rights in the valley.

Valley residents, including ranchers, greeted Dow's idea with an outpouring of support. They felt a herd of tule elk would be an outstanding scientific and tourist attraction for the area, whose chief industry is recreation. State and federal wildlife authorities added their blessings and agreed to help transport the animals. So the Owens Valley Tule Elk Express started rolling in 1933 with Dow in the driver's seat of one of the trucks.

Dow's dream was realized. The transplanting of the elk was an outstanding conservation feat because, without benefit of today's tranquilizers, the 26 animals from Yosemite and the 29 from Buttonwillow were moved without injury.

Dow, who served as chairman of the elk committee for five years, died in 1967, before his final wish for the tule elk became a reality—the designation of the valley as an elk refuge.

The refuge idea, however, didn't die with Dow. It is the main thrust of the committee's legislative drive, which has received favorable reception from lawmakers.

Senator Alan Cranston responded with a bill "to authorize the Secretary of the Interior to study the desirability of establishing a national wildlife refuge in California and/or adjacent western states for the preservation of the California tule elk." A companion measure was introduced in the House by Congressman George E. Brown Jr.

Efforts of state wildlife authorities to reconcile their differences with the committee have not been successful.

Significantly, advisory board chairman Horace M. Albright of Los Angeles agreed that some elk must be killed in order to keep the herds under control. He said:

"I think we don't want to become an organization opposed to any killing at all. We know the elk must be kept under control." Dr. Kenneth E. Stager, senior curator of birds and mammals of Los Angeles County Museum of National History, complained that the committee was making little use of the advisory board saying:

"I have allowed my name to be used by the group with the thought that I might be able to help. We should either be allowed to advise or get off the committee."

One of the major differences between the department and the committee has been the census counts made by the department. Writing in the *Nation Parks Magazine*, Mrs. Edmiston said:

"The committee has questioned the accuracy of the counts and has been critical of the hunts. The committee contends that healthy animals, rather than the sick, old or injured, are often the actual casualties."

The department answers that its aerial counts are always conservative, because elk not positively identified are not included in the count.

The committee's secretary denies that the group is opposed to all hunting. "We have hunters on the committee and there is nothing in our by-laws which state that we are against hunting." However, Mrs. Edmiston admitted some committee members are opposed to hunting.

The big explosion came in October when hunters "culled" 76 elk. The department's account of the hunt was headlined this way: "Tule Elk Hunt Is Successful in Owens Valley." The story had this to say in part: "A tightly controlled special hunt to keep the Owens Valley's five herds of tule elk in balance was completed on October 18 after a three-weekend hunt . . . the herd reduction brings the number of tule elk in the Owens Valley to a minimum of 252."

Mrs. Edmiston and several committee members lambasted the proceedings. Said the committee official:

"Who killed my tule elk—and yours? The man with blood on his hands, of course. But who were his accomplices? The arbitrary policy of the Fish and Game Commission that limits the number of the wild, free roaming herd to 250-300 is to blame. So are the cattlemen and the hunters who brought about that miserable number."

Warden inspector Ned Dollahit, who was in charge of the hunt, explains it this way: "The culling process is followed by many government agencies across the country with many species. Some think that any killing should be done only by official personnel. We believe in giving hunters, whose license fees are the department's bread and butter, an unusual opportunity. The people on this committee just don't believe that any elk should be killed."

Director Arnett adds that "nobody, including the ranchers in the valley, want to see the elk eliminated. We believe the present commission policy has been successful in maintaining the elk herds in a healthy condition. If the existing land uses in the Owens Valley were changed, we would be more than willing to re-examine the present limits."

Arnett said he is looking beyond the Owens Valley to help solve the elk problem. "We are actively working with the National Park Service, the State Department of Parks and Recreation and private landowners on the possibility of introducing tule elk into the Point Reyes area of Marin County."

After all the charges and counter charges are sifted, one undeniable fact stands out as large as a Rocky Mountain elk—that today there are only about 400 tule elk left. Is this the beginning or the end of a species?

