Mary L. Bishop
1555 Gus's Grind
Fairbanks, AK 99709
907-455-6151

March 31, 1994

Rep. Bill Williams, Chairman
House Resources
Alaska State Legislature
State Capitol MS 3100
Juneau, AK 99801-1182

Dear Rep. Williams:

Everyone should have the right to fail or succeed in business enterprise. But NO ONE should have the right to do it at the expense of our state's healthy moose population.

I urge you to oppose moose farming in Alaska.

My adamant opposition to moose farming is based SOLELY on the risk it puts upon one of the most valuable assets we have in Alaska--our healthy moose herd. Scientific literature is replete with examples of wildlife disease related to confined wild ungulates. I have enclosed only one example. Wildlife disease experts can provide you with others.

There is no question that fenced animals will escape. In this day and age--when animal rights advocates are freeing research animals all over the U.S.--it will be a simple matter to cut a moose fence in Alaska.

Will escaped animals be diseased? Will disease spread to the healthy wild population--one of Alaska's greatests assets? The risk is too great; the potential benefit too small.

Contagious diseases like TB and brucellosis develop in confined ungulates. Additionally, there are severe nutritional problems: The "Northern Exposure" moose died; the best efforts of wildlife scientists have not been able to keep a confined moose alive more than 8 years--usually less.

Because of unfortunate experience, other states and provinces are moving away from ungulate farming--not toward it.

This issue is like fish farming and ranching. It should receive the same careful consideration of disease and genetic implications to the free roaming, wild population.

Increased moose for eating, viewing and hunting should be provided by measures like SB 77--intensive management of free roaming wildlife populations. In my opinion, it is irresponsible to put this invaluable wildlife population at risk by passing SB 46--moose farming.

Sincerely,

Mary Bishop

Mary Bishop

Alaska State Legislature

Please enter into the record my testimony to the House Resources Committee
committee name

committee on Moose Farming, dated 3/8/94
bill/subject

I might add the Mat-Su-Borough Agriculture and Forestry Board representing all areas of the Mat-Su and alot of farmers, foresters, supports this bill

Signed: [signature]
Testifier

Robert Shumacher
Representing (Optional)

PO Box 3712 PALMER 99645
Address

(907) 746-4453
Phone No.

Alaska State Legislature

Please enter into the record my testimony to the HOUSE RESOURCES committee name

committee on SB 46 bill/subject, dated 3-9-94.

I WOULD LIKE TO GO ON RECORD, AGAIN, AS SUPPORTING THIS BILL. I STRONGLY BELIEVE THAT MOOSE FARMING WOULD HELP IN INCREASING WILD HERD POPULATIONS. THIS WAY THERE COULD BE CLOSED HUNTING SEASON IN AREAS WHERE THERE IS A LARGE HUMAN POPULATIONS WITHOUT AFFECTING THE NEED FOR FOOD FOR THOSE WHO HUNT FOR FOOD.

I STILL OPPOSE RESTRICTING IMPORTING MOOSE FOR MOOSE FARMING. THERE SHOULD BE A LIMIT. I KNOW ONE MAIN CONCERN IS DISEASE, BUT CONTROL WILL HELP. WE ALSO HAVE TO BE CONCERNED FOR LOCAL DAIRY & BEEF FARMERS THAT DISEASES ARE NOT TRANSMITTED TO THEIR ANIMALS. I DON'T BELIEVE THAT JUST ANYONE SHOULD BE ALLOWED TO HAVE A MOOSE FARM, ESP. IF RAISING MOOSE FOR PUBLIC CONSUMPTION. PEOPLE INVOLVED WITH MOOSE FARMING SHOULD BE AWARE OF SPECIAL FOOD NEEDS FOR MOOSE, VACCINATIONS AGAINST DISEASES, & BRANDING OR EAR TAGGING TO PROTECT ANY ANIMALS THAT MAY ESCAPE.

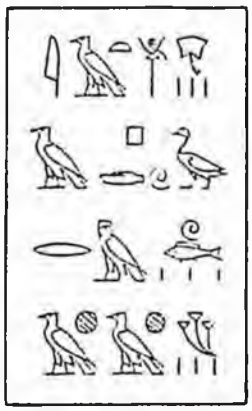
Signed: Cheyenne Walker CHEYENNE WALKER
Testifier

SECF
Representing (Optional)

HC 62 BOX 5360 DELTA JCT. AK 99737
Address

895-1024
Phone No.

THE WILDLIFE SOCIETY
ALASKA CHAPTER



March 18, 1994

Hon. Bill Williams, Chairman
Resources Committee
House of Representatives
Alaska State Legislature
Capitol Building, Rm 128
Juneau, AK 99801-1182

RE: CSSB 46

Dear Rep. Williams:

The Alaska Chapter of The Wildlife Society wishes to register its opposition to SB 46, the "moose farming" bill. The Wildlife Society is a national organization of wildlife research, management, law enforcement, and administrative professionals with over 8,000 members nationwide and 340 members in the Alaska Chapter. The Chapter recently adopted a position statement on importing, transplanting, and ranching game in Alaska, which I have enclosed. This position statement reflects the experience and judgement of knowledgeable professionals in Alaska, as well as experience of colleagues with whom we've discussed this issue from other states, Canada, and Scandinavia.

Although there are some areas of the world where game ranching is appropriate, Alaska is not one of them. Alaska still has an abundance of free-ranging native wildlife species and relatively intact ecosystems that are available to the public for both consumptive and non-consumptive uses. As our position paper presents in greater detail, game ranching could jeopardize these wildlife resources by competing for wildlife habitat, introducing diseases to native wildlife populations, increasing opportunities for poaching, and generating pressure to reduce natural predators. An additional consideration is the philosophical implications of reducing species currently held in public trust to the status of privately-owned livestock. The United States has a long tradition of holding native wildlife for the common good of all, rather than the economic benefit of a few.

Again, the Chapter urges you to vote against CSSB 46, or any similar legislation.

Sincerely,

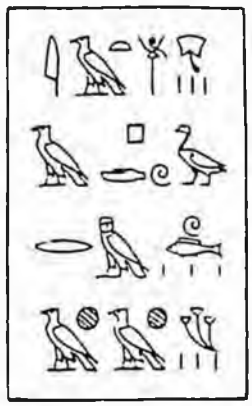
Richard Shideler

Richard Shideler, President
1833 No Way Lane
Fairbanks, AK 99709

Encl

cc: Rep. Bill Hudson
Rep. Con Bunde
Rep. Joe Green
Rep. Eldon Mulder
Rep. David Finkelstein
Rep. John Davies
Rep. Pat Carney
Sen. Mike Miller

THE WILDLIFE SOCIETY
ALASKA CHAPTER



POSITION STATEMENT

OF

THE ALASKA CHAPTER OF THE WILDLIFE SOCIETY

ON

IMPORTING, TRANSPLANTING, AND RANCHING GAME IN ALASKA

The Alaska Chapter of The Wildlife Society is dedicated to wise management of wildlife resources and their habitats. Alaska is unique in supporting native wildlife populations at historic levels over much of the state. These populations have great economic and cultural value to the state and its people as sources of food, fur, and revenue. Much of this value derives from wildlife being in its original, free-ranging condition where both consumptive and nonconsumptive users have access to this public resource.

English common law gave ownership of wildlife species to the ruler to be held in trust for the people. In reality, the only group that benefitted from this arrangement was the privileged class. In North America, free-ranging wildlife species traditionally have been held in common by the public. Private ownership of wildlife thus can only occur as authorized by government acting in the best interest of the people.

The Alaska Legislature has authorized private ownership of bison, muskoxen, and elk. Plains bison and elk are exotic (i.e., non-native) species that have been imported to Alaska and established as wild populations in several locations. Muskoxen were extirpated in Alaska in the 19th century and re-established in the wild with imported stock. Alaska also has an existing reindeer herding industry. Ownership of reindeer herds in Alaska is restricted to Alaska Natives by federal law, although non-Natives have challenged the law by importing reindeer from Canada. Recently, persons promoting game ranching as business ventures have proposed legislation authorizing private ownership of additional wildlife species, including moose. Other proposed legislation would require resource-management agencies to transplant exotic species such as elk to areas where they do not currently occur.

Game ranching may have a place in some countries or regions of the world based on their unique conditions and institutions. In such situations, game ranching can provide an alternative to domestic livestock and may to some extent preserve the diversity and abundance of native ungulates. Alaska, however, has the opportunity to maintain its historic abundance of free-ranging wildlife species for the benefit of all its citizens without resorting to game ranching.

Game ranching or other private ownership of wildlife species threatens to diminish the abundance and quality of Alaska's wildlife resources. Wildlife species occupy the landscape regardless of land ownership, yet remain public property. It is common knowledge that commercial development of land often alters or eliminates wildlife habitat thereby reducing wildlife populations. The public may not realize that ranching

generate pressure to eliminate large predators from areas in which game ranching occurred.

In addition to considering the risks to Alaska's wildlife species posed by game herding or ranching, or by resource-management agencies importing or transplanting exotic wildlife, the public should contemplate the philosophical implications of reducing species currently held in common to the status of privately-owned domestic livestock. Traditionally, consumptive users of wildlife have had a strong vested interest in maintaining healthy, abundant, free-ranging wildlife populations. More recently, nonconsumptive users also have supported legislation and policies that maintain wildlife habitats. Although captive wildlife may serve an educational role by providing highly managed viewing opportunities to the public, ranched game is unlikely to generate the incentive for maintaining large, relatively unmodified ecosystems currently engendered by free-ranging, native wildlife species.

Alaska's wildlife has local, statewide, national, and international importance. In recognition of this, and in the interest of maintaining these valuable resources for the enjoyment and use of future generations, the Alaska Chapter of The Wildlife Society finds that:

1. Skillful, professional management is required to assure the future of wildlife resources in North America;

2. Wildlife species in North America have traditionally been considered common property of the people, and public ownership of wildlife has benefitted both the public and the wildlife resources;

3. Reindeer herding by Alaska Natives is an economic benefit to those communities where herding has traditionally and continually been practiced since inception of the industry;

4. Private ownership of wildlife has led to unfair chase harvesting, inhumane treatment of captive wildlife, illegal commercial trade in wildlife and wildlife body parts, and escape of captive wildlife and potentially will reduce habitat for wild ungulates, impair public access to wildlife, decrease numbers of ungulates in a wild setting, disrupt the genetic integrity of native wildlife populations, and cause extirpation of large predators;

5. Exotic wildlife species, and to some extent native wildlife from non-Alaska stocks, imported to Alaska and subsequently transplanted within Alaska by resource-management agencies, pose many of the risks identified for ranched game;

6. Commerce in wildlife without a uniform system of disease inspection has facilitated introduction and transmission of non-native diseases and parasites, including bovine tuberculosis and bovine and rangiferine brucellosis; and

7. The presence of free-ranging, native wildlife species has strongly contributed to the maintenance and protection of large, relatively undisturbed natural ecosystems.

TO!

Representative Williams

fax # 465-3793

April 19, 1994

LETTER FROM A MOOSE

Why do you Legislators want to treat me as a cow?

Why do you want to fence me from my freedom that I have enjoyed for thousands of years?

Why do you want to let entrepreneurs experiment with my species?

Why do you want for me to be tied to a gas pump for tourists to taunt and torment?

Why do you want to spend more millions of state dollars to prove Moose farming, like all previous ventures were disasters i.e. dairy farming, pig and chicken and musk ox, fox and barley farming!

Why do you want to degrade, humiliate and domesticate me when I am one of your states greatest wild assets?

Lastly, does Sen. Miller own stock in chain-link fencing?

Scientifically, morally, and financially, this SB 46 is a disaster and deserves to be killed.

Paddy Tatum
HC 66
Nenana, Ak. 99760
Ph. 582-2535
fax 582-2860

Paddy Tatum

Alaska State Legislature

Please enter into the record my testimony to the HRES committee name

committee on SB 46 bill/subject . dated 4-20-94 .

April 20, 1994

Written Testimony of Dave Bear, P.O. Box 39283, Ninilchik, AK
Re.: SB 46, Moose Farming
House Resources Committee

I oppose SB 46 in its present form because it will facilitate individuals locking up huge areas of state land. This bill, if passed, will seriously restrict public use and access of public lands. The above notwithstanding, this bill is irresponsible and frivolous management of public resources. If legislation is necessary, I favor the original bill by DEC, F&G and DNR.

Thanks

D Bear

TANANA CHIEFS CONFERENCE, INC.
122 FIRST AVENUE
FAIRBANKS, ALASKA 99701-4897
PHONE (907) 452-8251 FAX (907) 451-8938

April 16, 1993

House Resource Commiittee Members
Alaska State Legislature
Alaska State Capitol
Juneau, Alaska 99801-1182

Dear House Resource Commiittee Members:

I understand that SB 46, "An act relating to moose farming and relating to game farming" is being heard by your committee on Monday, April 19, 1993. You should be aware that the 43 member villages of Tanana Chiefs Conference, Inc. are opposed to moose farming of any kind, at any level. Further, during the February meeting of the Executive Board of Tanana Chiefs Conference, the bill was reviewed and discussed and unanimously opposed. On behalf of Tanana Chiefs Conference, I respectfully request your rejection of this bill and I urge you not to pass it out of committee. Thank you.

Sincerely,

TANANA CHIEFS CONFERENCE, INC.

for Will Mayo
President

Rural Alaska
Community Action Program, Inc.

April 5, 1993

Representative William K. Williams
Chair, House Resources Committee
State Capital Building
Juneau, AK 99801-1182

Dear Representative Williams:

RurAL CAP is concerned that the legalization of moose farming and the sale of moose meat could have adverse effects to thousands of rural Alaskans who depend on the subsistence lifestyle.

We feel there are a host of serious questions that cannot yet be adequately addressed, such as the threat of disease to both domestic and wild animal populations, problems of domesticated animals attracting bears and wolves, incentives to illegally harvest animals for income, and finally the enormous cost to the State.

While we believe strongly in increased economic opportunities, especially in rural Alaska, we cannot afford to do so while putting at great risk the subsistence economy which provides sustenance to rural Alaskans.

Thank you for considering our views as you debate the merits of legalization of moose farming.

Sincerely,

Jeanine Kennedy

Jeanine Kennedy
Executive Director

CC: Representative Hudson
Representative Bunde
Representative Green
Representative James
Representative Mulder
Representative Finkelstein
Representative Carney
Representative Davies

Administration • P.O. Box 200908, Anchorage, Alaska 99520 • (907) 279-2511, FAX (907) 279-6343

Page 1/1

April 3, 1993

To Rep. Bill Williams, Chairman House Resources,

As a Biologist/Naturalist and a 26 year resident of Alaska I find SB 46 (Moose Farming bill) the most abhorrent idea yet to come out of our Legislature.

It's not often that I agree with the Alaska Fish & Game - but they and many other scientists and wildlife professionals present well founded biological data on why this is a bad idea.

I find it ludicrous to envision our wild moose, be it calf or adult, held in pens, corrals, and cages, tethered and taunted, their dignity destroyed by "Another Roadside Attraction" mentality, by the exploitations of a few who might financially profit from this degredation.

This is not what Alaska is all about.

I don't believe we can "Own" that which is meant to be a free-living being, and a very important part of Nature as wild.

Rather, we Alaskans are the custodians, not entrepreneurs, of our wild animals.

If anyone is interested, I have collected volumes of cases over the last two years of disasterous attempts to capture and raise wild ungulates in western states, in Canada and in Europe. Three problems that will surface are:

1. Infectious diseases such as bovine TB, and Brucellosis are likely in penned-up conditions
2. Moose are not a herding animal, but territorial, how is this going to be handled?
3. Opens a plethora of problems regarding poaching.

We all know what a disaster all attempts aragriculture and animal farming have been in the last ten years, not to mention the hundreds of millions of dollars spent on such failures.

Let's face it, the few people that would financially profit from this are those that need a "Gimmick Display" to lure tourists, or those that would receive huge state agricultural loans (does this smack of the multimillion dollar defunct Delta Farm Project, or the Point MacKenzie Dairy debauchery?)

May I please hear from you on this matter? Please vote against SB 46

Sincerely,

Paddy Tatum

Paddy Tatum
HC 66 box 27620
Nenana, Ak. 99760 Fax. 582-2860 Ph. 582-2535

Carol A. Jensen
8451 Greenhill Way
Anchorage, Alaska 99502
(907) 344-7078

April 17, 1993

TO: House Resources Committee

FROM: Carol Jensen

RE: SB 46, Moose Ranching

I strongly oppose passage of this bill for the following reasons:

1. For the same reasons the Fish & Game Dept. opposes it. The threat of disease to wild stocks; the encouragement of even more poaching than we already have.

2. I have worked in the tourist business since 1988, and have talked to thousands of tourists. I also talk to many different people when I travel on my own vacations Outside. These people DO NOT want to see wild Alaskan animals caged, penned, or chained. Even a safari type set up where people are driven through a fenced game "preserve" is not acceptable to most, because THIS IS ALASKA...the last wild, spacious outpost for truly free roaming animals. In the Lower 48, that has been all but lost, and the only way to see "wild" animals is in this type of setting. BUT WE FORTUNATELY ARE NOT AT THAT POINT YET. They don't come to Alaska to see zoos. Many that do go to the Alaska Zoo are saddened by what they see. They would much rather see the animal in the wild.

3. I do not want to see entire industries developed to warehouse and slaughter our wild game animals. The next step will be the cruel "factory farms" that we presently have in the Lower 48 that warehouse pigs and cattle.

4. Game farms and tourists traps with wild animals may also take away some of the anticipation and mystique from Denali and our other parks. Many people go to these parks to see wild animals...if they can pay a few bucks and see a moose, caribou or even wolf (yes, this bill could just be the start of more wild animal "farms"), they may decide to skip the trip to the parks, particularly if the weather is a deterant (we get a lot of inclement weather May-August).

5. Animal abuse is very common within private businesses that exploit animals for profit (ie: many zoos, circuses, rodeos, the entertainment business and animal "parks"). The Animal Welfare Act is terribly inadequate and under-enforced. We don't need this here.

Thank you for this opportunity to comment.

Carol Jensen

Carol Jensen
(daytime phone: 800-478-2234)

please include in testimony on SB46 in House Resources

TO: House Resources Committee

From: Gary V. Oskolkoff & Marla Kvasnikoff

RE: Moose Farming SB-4

DATE: April 16, 1993

Dear Committee Members:

We ask that you reject the proposed moose farming bill.

At this time a lack of data as regards the issue of moose farming will lead the State of Alaska into many problem areas:

ex: **funding** (although a zero budget is being proposed we believe this to be unrealistic)
grazing leases and regulations (also relating to the funding issue)
environmental and resource damage, waste and exploitation.

Thank you for your consideration.

Sincerely,

Mrs. Marla Kvasnikoff

Marla Kvasnikoff/and for
Gary Oskolkoff

Box 39070
Ninilchik Ak
99639

Bill Arvey
P.O. Box 81195
Fairbanks, AK 99708
April 2, 1993

State Representative Williams
House of Representatives
State Capitol, Juneau, AK

Dear Representative Williams;

I strongly urge you to reject the "Moose Farming Bill", SB 46.

Alaska'a wild game animals should not be the objects of commercial ranching or farming for several reasons.

1. "Moose ranchers" will be afforded preferential use of a public resource, at public expense. Once recognized as commercial game ranches, these operations will become eligible for state assistance in the way of revolving agricultural loans, predator control, and whatever else can be dreamed up to gain access to the state till. This is not an unusual pattern, as past legislatures have funded plenty of turkey schemes that have diminished the state treasury while providing no known benefits. Some of us still hope that the experience of these losers would have led to a collective learning experience.

2. There are really no "surplus" animals available to provide startup herds for the proposed operations. The potential for abusive poaching of young and injured animals in the name of "ranching" is great. Even animals that die naturally from disease and starvation are fully utilized by predators and scavangers, many of which form the basis of the trapping industry.

3. Moose are wild, intractable animals that require large quantities of native vegetation in order to thrive. Implicit in the proponent's arguments are the requirements to provide large amounts of native willow and birch to feed out the captive animals. Therefore, what you may think will be a red meat ranching concept will quickly become a project to raise and cut vast amounts of feed, which is highly unlikley to even be possibile.

4. As with most other public-funded Ag projects that fail, when this baby folds up, as it surely will, the "rancher-farmers" will be back begging you (that is, us) for supplemental help, loan forgiveness, etc. I don't think the public will be happy to realize that they must subsidize or rescue yet another poorly conceived program.

5. Proponents argue that predators can be excluded and moose be kept in by fences at the perimeters. Fences will not prove effective at either in my opinion. Just as in other commercial ranching ventures of this type, predators will prove to be a problem, and demands for special predator contol measures to protect investments will surely follow. Witness the current situation on the Seward Peninsula where commercial reindeer herders demand that natural predators (wolves and bears) be destroyed to protect herds that are utilizing public lands.

Thank you for considering my views.

Sincerely;

Bill Arvey

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 2

To Please include	From testimony on
Co. SB46 to House Resources	Co.
Dept. Thanks	Phone #
Fax #	Fax Vesta

April 15, 1993

To: House Resources Committee

From: Dave Bear
P.O. Box 39283
Ninilchik, AK 99639
Ph. 567-3344 (hm) 283-5831 (wk)

Subject: Moose Farming-SB 46

I sincerely hope that each committee member will carefully and objectively examine the information before them regarding the subject issue. I have and I find the published support and justification for SB 46 to be offensive, outrageous, hypocritical, self-serving, outright fraudulent and a blatant demonstration of autocratic posturing by at least one politician and several appointed government officials.

* There was no <u>public</u> meeting in Ninilchik to discuss the subject issue.

* We have some of the finest fish and game biologists in the country here in Alaska but because the subject proposal is scientifically ridiculous their opposition has been silenced because it is in conflict with "someone's" political agenda. Our biologists have won awards for their efforts with the Moose Research Center in Kenai and have been rewarded by having it shut down. In some 25 years of actual hands on, gone out and did it, non-profit, non-politically motivated, scientific oriented study, they have <u>proven</u> that moose farming is a BAD idea. Why don't we listen to them(re. official position of The Wildlife Society).

* The State of Alaska Department of Agriculture has something less than an outstanding record of accomplishment as regards "providing greater consumer availability of quality Alaskan grown products in the marketplace through inspection, certification, labelling, marketing, and education programs." If you are to believe what you read in the newspaper the State has poured who knows how much money into existing, and past, programs and they have basically zilch to show for it.

* We are supposed to be in a budget crunch. Our schools and prisons(Wildwood) are being neglected or shut out altogether. Our roads and emergency service personnel are suffering greatly. BUT, the subject plan would "assure the availability of financing sources for agricultural operations that are financially viable"(our experts say this plan is not); "continue the State's investment in agricultural science and technology to protect and enhance the quality of Alaskan soils, seeds, plants, produce,

(1)

animals, and other agricultural products, and the necessary knowledge transfer"(this probably means they'll shut down some other highly esteemed and long established study center); "facilitate the development and use of agriculture in conjunction with other Alaskan resource uses and needs". Where is all this funding going to come from?. I'm sure as hell not going to contribute.

* All of this land that the State is going to "make available for agriculture under a variety of provisions including fee-simple title with fair market value purchase or homestead credits". What exactly does that mean?. It sounds pretty dubious to me.

* The Department of Commerce & Economic Development makes statements that clearly are motivated by that all holy and most venerated, not to mention extremely profitable, of all endeavors, tourism. They make it sound like we're all going to starve to death unless this legislation passes. As far as a source of red meat is concerned, haven't these people heard of plain old cattle?. But then of course, what tourist is going to pull into the gift shop at Tok to look at and pet a Hereford or an Angus?.

* One of the major impacts of this legislation will be in the areas of law enforcement and quality control. This will naturally cost the State a great deal of money in terms of personnel and administrative costs. How can this be justified?.

Summary: There is a fixed amount of land in this country. As more people move to Alaska and those that are so inclined move further away from the cities there is less and less land, or wildlife habitat, left available for the animals. Unless this moose farmer is going to grow, on an annual basis, one tremendous amount of the kind of willows and other browse his moose like to eat, they will run out of food in their "pen" in very short order. I know for a fact that these guys will not eat just any old bush. So, more moose, more land & more food. Everything in nature, left alone of course, has a balance point. I contend that if you allow this ludicrous legislation to pass you will destroy that natural balance and cause harm beyond imagination. Please listen to the experts, they are the true stewards, when not politically pressured to do otherwise, of our resources. They, unlike the supporters of this legislation, are motivated by the perpetuation of a resource and truly "look to the future". The supporters of this legislation are a small, special interest group who apparently could care less how this legislation will impact future generations or other residents of the State. Please do not allow this legislation to pass.
The personal satisfaction of knowing that you have done the right thing in the instant case is, in my opinion, worth a great deal more in terms of integrity and ethical behavior than the long remembered notoriety that most certainly will be given those responsible for passing this bill.

My most sincere thanks and appreciation for your time and consideration in this matter.

Katherine C.E. Smith
1193 Cooper Crt.
Homer, Alaska 99603

February 22, 1994

Chairman Bill Williams
Alaska State Legislature
House Resources Committee
Room 128
State Capitol
Juneau, Alaska 99801-1182

Dear Chairman Williams:

Re: SB 46 (Authorizing Moose Farming)

The following is a copy of my February 18, 1994 testimony via tele-conference on SB 46 to the House Resources Committee:

This is Katherine Smith, a resident of Homer. I am a Certified Wildlife Biologist and 1983 Graduate of the University of Alaska, Fairbanks Master's program in wildlife management. I have been working with Alaska's big game species or as a consultant in game farming ever since.

I was Project Director and Manager of a private elk farm at high elevation in Hawaii where I oversaw construction of a state of the art quarantine and handling facility for elk, and importation of 50 head from the mainland in 1987. The herd is now up to several hundred animals and doing well as long as a rigorous health program and supplemental nutrients are provided. Even with year-round pasture and benign conditions in Hawaii, it is extremely expensive to keep fenced game healthy, and handlers safe. And elk are a herd animal, very tractable and easy to handle and provide for as compared to moose. Moose are more than a challenge--they are a mistake!

In winter, moose are wide-ranging browsers. They wander far as lone animals or cow-calf units seeking high quality, low availability willow, cottonwood, and birch buds and tender stems. When locked in by fences they quickly run out of this limited dietary requirement of high protein and roughage. Supplements are very costly, and as Charles Schwartz of the moose research center in Soldotna stated earlier in this teleconference, fencing and feeding moose creates conflicts and problems between animals which do not naturally group together.

With the high cost of game fencing, no one can afford to fence enough area to adequately provide for moose. Again, I agree with Charles Schwartz that animals are subjected to poor diet, inter-species aggression, and mishandling by caretakers who do not understand their needs or know how to provide for them. It is also very difficult to define what constitutes an "adequate handling facility" as stated in this bill. It would be even more difficult to regulate.

Moose are a proven poor choice for intensive game farming. In addition to the studies in Russia and Scandinavia cited

earlier, there are examples closer to home--the University of Alberta did studies as did the University of Saskatchewan, all concluding that moose are NOT suitable for game farming on any intensive basis. The land area required is too great to fence and the handling and feeding considerations make it uneconomical.

Meat and antler sales also present a problem. State Fish and Wildlife Protection is already overtaxed, under-staffed and under-funded in their efforts to check illegal take of moose. This bill will promote poaching and black market sale of meat by creating a market incentive.

Disease transmission to wild stock is also a very real problem when animals are confined, housed, trucked to new location, sold and traded. SB 46 unnecessarily places one of the State's most significant subsistence animals at risk and threatens the lifestyle of Native and rural Alaskans.

From one who has been in the game industry for a decade, I assure you that the State has nothing to gain form SB 46; it will in fact cost Alaskan's the health and welfare of moose, an important sport and subsistence animal. Substantial funds and personnel will also be diverted to administer, research and regulate this ridiculous bill. Promoting moose farming at a time when the State does not even have money for existing programs and needs, does not make sense. As such I respectfully urge the Committee to NOT foster this very harmful and costly legislation. Thank you.

Sincerely,

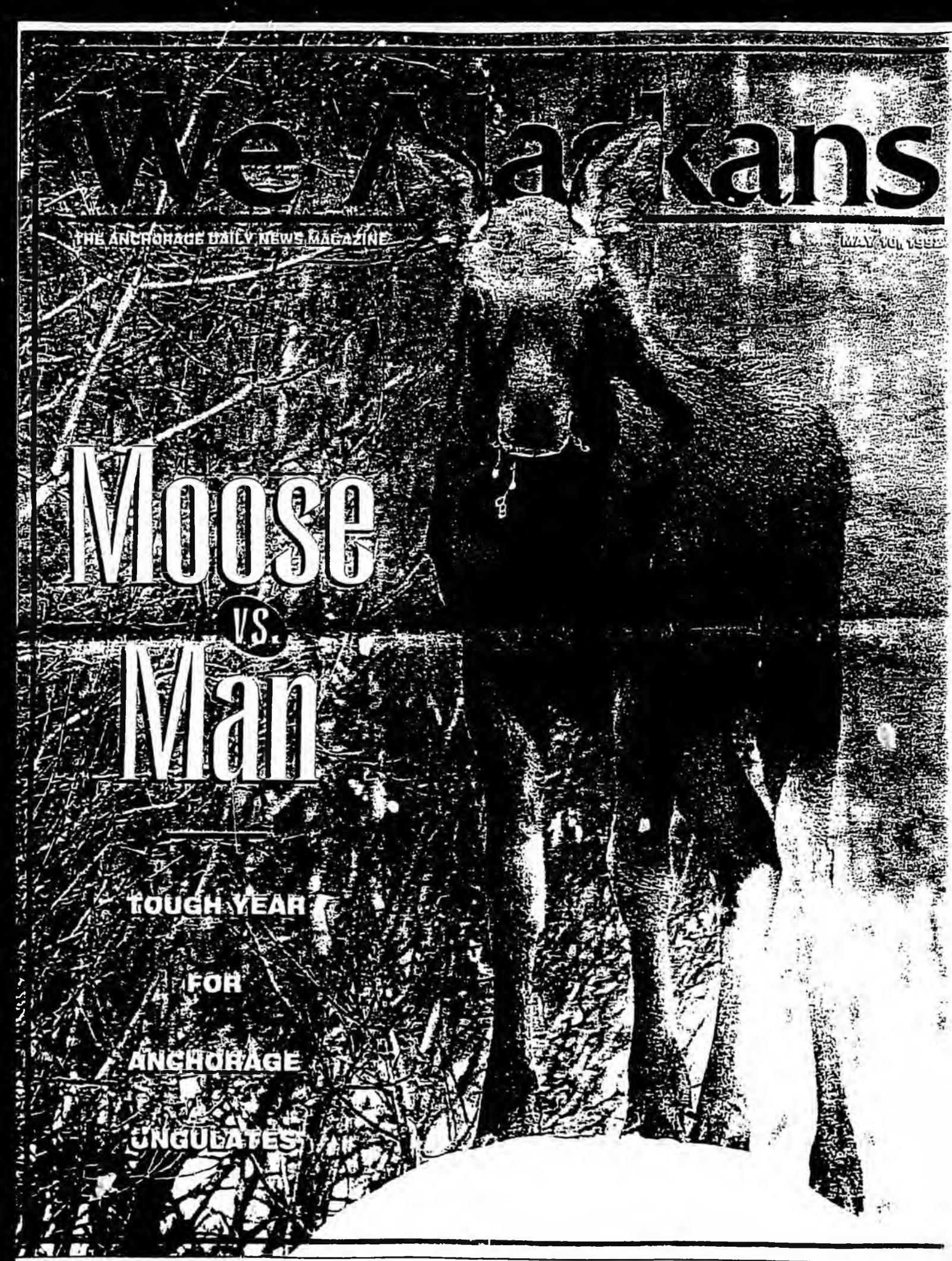
Katherine C.E. Smith

cc: Suzanne Little
Gail Phillips
Alaska Environmental Lobby

We Alaskans

THE ANCHORAGE DAILY NEWS MAGAZINE

MAY 10, 1998



Moose vs. Man

TOUGH YEAR FOR ANCHORAGE UNGULATES

This Week

COMING TO GRIPS: Mary Kay Blakely watched her son grow from boy to man as he wrestled for four years in high school. Now she must grapple with his power. **Page 6**

MOOSE UNDER SIEGE: Too many moose roam Anchorage during the winter because there is not enough habitat left in the wild. And the moose are sure losers in confrontations with humans. **Page 8**

COVER: A young moose chews on a willow in an Anchorage back yard. Photo by Bob Hallinen

JIM LAVRAKAS / Anchorage Daily News file

"Oscar" gets a handout.

n Schmid-Royall feeds a bull moose on his front steps in Midtown Anchorage in mid-January.

OUR MISERABLE MOOSE

You love the tree: exotic, delicate, beautiful when in bloom. It's the most amazing — and expensive — plant in your yard. A moose stands nearby. Its horsey snout extends, its incisors protrude. It bites. It tears. It chews. Crunch, crunch, crunch.

JIM LAVRAKAS / Anchorage Daily News

Doug Tryck battled two moose this spring but lost this mountain ash that was imported from China to the browsing animals.

By Doug O'Harra

The latest tale of Anchorage's wintertime encounter with hundreds of hungry moose begins with a single biological fact: When too much snow cloaks the ground anymore, the moose here simply can't find enough natural willow and birch to eat.

Some 1,250 moose range across the Anchorage Bowl between McHugh Creek and Ship Creek. Include the entire municipality — Portage to the Knik River — and the number goes up to more than 2,000 animals in an area that once held 1,000 or fewer only a few decades ago.

As the population of moose has risen, its range has steadily gotten smaller. "We're losing habitat all around the

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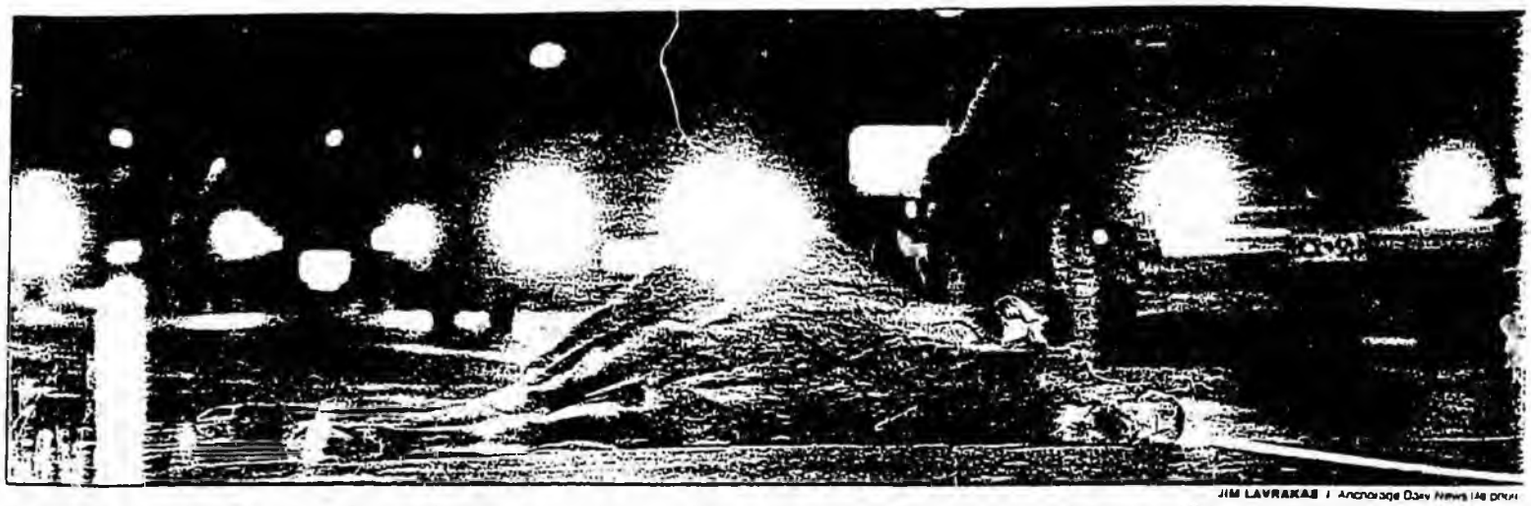

JIM LAVRAKAS / Anchorage Daily News (file photo)

A dead moose lies along the Glenn Highway. This winter, officials estimate, 120 moose were killed by vehicles in Anchorage.

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city here to development," says biologist Mike McDonald.

And the land that is available to provide winter moose food apparently has less and less of it with each passing year. Why? Because too many moose have eaten so much, so often that the trees and brush haven't had enough time to grow back.

"The fact is that there are more moose in the Anchorage area than the habitat can support," concludes Dave Harkness, the state's area biologist.

(Anchorage's moose simply don't have enough predators to keep their numbers down, biologists says. Sure, cars kill some, and animals are taken in hunts on Fort Richardson and up Ship Creek. But almost no predation occurs by wolves or bears. According to Harkness and McDonald, a traditional game-management solution would be to hold a hunt aimed at the moose living in the Anchorage Bowl. Yet the last urban hunt, nearly 10 years ago, was a public relations disaster for the state.)

In the meantime, what do the moose do during a winter of deep snow? They stumble out of the hills, emerge from the greenbelts, march into the subdivisions, forage off the sidewalks. Often they eat ornamental trees. And why not?

"They're not dumb" McDonald says. "They'll use the easiest way (to feed themselves) they can find. Once they get to a spot with food, they don't like to move away."

Think of it like an equation: Too many moose competing for diminished browse plus deep snow equals confrontations with humans and collisions with cars.

Some 120 moose died in Anchorage this winter after being hit by cars and trucks — the second highest number in the city's history. Hundreds of people called state officials and police with complaints: The moose are eating my trees.

To some extent, that sort of thing happens every winter. But this year, events took a bizarre turn. To the dismay of biologists and wildlife officers and people who understand wildlife ecology, large numbers of Anchorage residents were found feeding moose fresh groceries. Things like apples, carrots, cabbage, iceberg lettuce.

Feeding them caused scores of moose to associate people with dinner, creating some of the most ludicrous moose problems biologists here have ever seen. Calves trotted up to terrified strangers (all humans look alike) only to nudge or kick them for a serving. Young bulls belligerently charged people who — from the moose's point of view — rudely failed to bring the salad.

All over town, conflicts between humans and moose became as common as fender benders after an ice storm. Moose charged people, haunted school playgrounds, blocked access to doorways. Six people were kicked, and hundreds more experienced close encounters. Biologists and wildlife protection officers say they've never received so many calls about moose before.

"I can't remember a worse year," says McDonald. And others agree.

The Moose That Came To Dinner

The pink-fruited mountain ash from western China had flourished over 13 Alaska winters inside Doug Tryck's yard in South Anchorage. Carefully grafted to cold-climate roots, the rare ash was part of Tryck's collection of 3,000 trees and plants — Mongolian lindens, Russian rock birches, rare apple and pear trees among them. Like many of the other species in his collection, the mountain ash was just the sort of plant moose love to eat. "Moose candy," Tryck calls them.

But the Anchorage school teacher also knows how to protect his trees. Operating a small commercial nursery out of his home on Rabbit Creek Road each summer, Tryck has made it his business to instruct his customers on how to keep expensive ornamentals from becoming moose entrees.

He knows from experience. Once, eight years ago, a moose got inside his yard and permanently damaged several valuable trees. He beefed up his security, bought a case of Roman candles and erected a large gate to augment a 7-foot-high chain-link fence. Tryck then believed his trees were safe.

"I thought I had covered every base," he says now. "In eight years, no moose has been in here."

But Tryck didn't count on the second heaviest snow in 35 years creating new avenues into his compound — all-but burying his fence in some places, knocking a tree through it in another. Not even Tryck, who had gone to a lot of trouble to avoid feeding moose, was immune.

Which brings us to a young bull moose: Healthy, ornery, determined - and hungry.

Tryck had spent nearly every day during a two-week period in March chasing this young bull and a young cow from his yard. The animals would leave for a while, and Tryck would block what he thought was their access. But almost every day, they found a new place to leap the fence and dine on Tryck's trees.

They kept coming back because, as Tryck puts it, "this was a really tasty place."

After chasing the moose with Roman candle fireworks (a method used by state biologists and officers to scare off the animals) and surviving one moose charge at close quarters, Tryck thought he had prevailed. One day, the bull and cow didn't show. Dozens of trees already had been ravaged, but the nurseryman in Tryck thought he could prune them back to life. He wouldn't harvest any apples this year, but at least nothing was dead. And he'd seen the last of the moose.

But the young bull returned.

In the cold morning air of mid-April, it ambled through Tryck's collection once again, sniffing this plant, biting that bud. Eating tree after tree.

Finally the moose arrived at the mountain ash, Tryck's prize tree.

It commenced eating. After it consumed all the buds within reach, the bull tore several limbs to the ground — so it could eat those hard-to-get-at tips. Soon twigs and branches littered the snow, and the tree, representing more than a decade of dedicated horticulture, had a sort of bony, barren look. But the plate wasn't quite clean.

The moose snuffled the trunk, then began peeling it sliver by sliver. By the time a neighbor called Tryck to tell him that, *hey, there's another moose in your yard*, the young bull had scalloped the trunk clear around. It looked as though a team of cub scouts armed with pocket knives had spent the morning whittling.

Tryck dashed outside his house armed with a Roman candle and a box of strike-anywhere kitchen matches. He was furious. He reached a hill above the moose and started trying to ignite the fireworks. Man glared at moose: moose eyeballed man. The young bull flattened its ears, fluffed its ruff and began striding purposefully toward Tryck through the beds of nursery plants.

The Roman candle burst aflame and Tryck trained it on the moose. The first sparkling blast stopped the animal. The second made it rear. The third caused it to dash off into the woods. The Roman candle blazing, Tryck chased the moose around his 2½ acres and out the gate.

The young bull came back only one more time, chased Tryck onto his deck, then dashed through an opening in the fence — again under fire by Roman candles. For his own part, Tryck once again blocked the opening with chicken

wire. Then he called the state Department of Fish and Game and pleaded with area biologist Dave Harkness to do something about this moose.

Harkness brought Tryck some more Roman candles and urged him to build a higher fence. But it is a longstanding policy that the state does not move moose and only shoots them in extraordinary circumstances — when the moose is injured or a direct threat to human safety. There was nothing the state could do for Tryck.

A lifelong Anchorage resident, Tryck says he understands the state's policy. But he has spent more than a decade raising plants in an enclosed yard. He's taken some pretty expensive precautions to protect them from moose. He isn't some displaced Texan planting crab apples at the curb.

Tryck believes the state should have done something.

"I am a conservationist," he says. "But I don't feel I have to have moose and bear living inside my backyard.

"It's frustrating, because I've been led to believe there's nothing we can do. I should not have to go through that, it should not be that way. They need to be managed like all the rest of the wildlife."

Bulls Will Be Bulls

In the neighborhoods of South Anchorage, scores of moose breed, give birth, live out their lives. People come to recognize individual animals as they grow up. In the Ocean Park subdivision near Klatt and Johns roads, a young bull was born in the spring of 1991, remained with its mother throughout summer and fall — then branched off on its own during late winter of this year.

State wildlife protection officer Brian Larson lives in the same neighborhood. Over the winter, Larson watched and heard stories of how the cute young bull transformed itself from the neighborhood darling into a macho and cantankerous adolescent that had staked out subdivision streets as its personal dining room.

The moose would stand in driveways and charge residents who had the gall to step outside. He once kicked the side of a house — simply because someone looked out the window. Gradually, as the bull lay siege to the neighborhood, Larson's office received dozens of complaints.

"He has probably generated more calls than any other moose in town," he says.

An enforcement officer for three years, Larson was no stranger to this moose. When it was younger, he'd once stopped traffic on a busy street so the bull calf and its mother could cross. But Larson also knew how dangerous a rambunctious moose can become.

Last fall, while trying to drive a different young bull from a child-pedestrian path into the school grounds at Baxter Elementary, he found himself dodging repeated charges. His foot caught in a root and he went down. The moose tromped him in the shoulder before dashing away.

Such a kick could kill a child. So after the Ocean Park moose actually trapped a neighborhood kid on a porch for 30 minutes one morning, Larson decided the animal had become too dangerous. He found the bull and killed it with a shotgun slug.

What made the moose get so aggressive?

To Larson, it was obvious. "People feed the moose, and he becomes habituated to people. Probably half the people in the neighborhood were feeding that moose."

Moose that are fed quickly come to expect food from every human they see. They're no longer shy. Some even become demanding.

Larson investigated another incident this year where a moose bit and kicked a woman in the head outside her West Anchorage condo. It turned out that the woman had been feeding the moose all winter. For carrots, the moose was affable and pleasant. Then one day the woman made the mistake of offering the moose an outstretched mitten of snow. ...

Larson decided not to kill that moose. By the time he tracked it down, it had moved away from human dwellings and was feeding in a greenbelt. But human-fed moose often suffer a different fate.

"When you start feeding a wild animal, you start the process of its death," he says. "You speed it up."

After such incidents became more and more common, Larson and other officers scoured state law, searching for some regulation prohibiting the feeding of moose. "It would have given us something we could work with, something to stop the feeding," he said.

Here's what they found: It's illegal to feed bears, wolves and other predators. It's illegal to corral a moose and try to tame it. But nothing in state or municipal law prevents someone from feeding a wild moose. Even if it jeopardizes the moose's life.

"Maybe that's the point people are just missing," Larson says. "Humans become the cause of death."

Love and Death In Mountain View

Sometime in the cold, dark days of January, a cow and her bull calf ambled out of the wilderness along Ship Creek onto the streets of northern Mountain View.

Dinner was served.

As with most Anchorage neighborhoods, the streets of Mountain View offered a small amount of natural browse and ornamental trees. Along with another cow and calf — who eventually left the area on their own — the two moose would have swept through the neighborhood in a week or two, pruning back the browse, consuming the buds. Then they would have moved on.

But these moose did not move on. They stayed.

"I would say it's safe to say that half the people who live there were feeding the moose," says Larson.

Singling out an individual doesn't even make sense. According to Larson and other officers and residents, scores of people threw down grocery food — apples, carrots, cabbage, lettuce — for the moose to eat.

After Anchorage police and state wildlife officers started receiving calls once or twice a day, Larson started to tail the pair in his truck. With growing amazement, he watched them meander from one yard to the next, stopping to sniff and forage open areas of the snow.

"It was obvious they were going to places where they expected to be fed," Larson says.

He responded to the first complaint on Feb. 9: There was a cow and calf bothering children in a backyard. But, in what became a common pattern, the animals were browsing peacefully in someone else's yard by the time Larson arrived. They ignored him.

Nearly every day for the next two months, someone called to complain about the cow and her offspring. Larson and other wildlife protection officers responded 16 times, Anchorage police even more often. People began to behave stranger and stranger toward the moose.

Small boys of the neighborhood took to pelting the pair with snowballs, trying to get the animals to chase them. One boy was caught standing before the cow like a matador, his coat turned inside-out so the red lining showed.

Most of the time, Larson says, the cow stared with a moosey disdain at such antics. But on Feb. 27, she finally charged two boys who were throwing snowballs, knocking one down and stepping on him. The child, a 6-year-old, was bruised but not seriously injured when examined by paramedics. When officers arrived, the moose had bedded down in a yard nearby.

As long as people stayed clear, she seemed content to leave humans alone. The officers decided she wasn't unnaturally aggressive. "This cow was familiar with people," Larson says. "This cow did not get upset about people just being close."

During one call, Larson escorted two children past the mother and calf. Both moose scarcely glanced in the direction of the humans. Obviously, they had adapted well to life in town. Too well.

On the afternoon of March 10, a woman who police say was intoxicated went up to the cow in an alley outside some Mountain View apartment buildings — a place where people had been feeding the moose. She grabbed the moose by the ears and pulled her head down to give her a kiss, according to Larson. The cow jerked back, but did nothing else. Then the woman threw her loving arms around the calf's neck.

"And the cow unloaded on her," Larson says.

The moose bit the woman, knocked her down and stepped on her.

By the time Larson arrived at the scene, more than 25 people had crowded into the alley and the moose and her calf were hemmed in. The woman had gone into a friend's house and was refusing medical help. Using a vehicle and a Roman candle, Larson and Anchorage police Sgt. Gary Apperson chased the moose out of the alley and across the street. But it was difficult to get people out of the way.

"They wanted to see the show," Larson says.

Over the next few weeks, confrontations became more and more common: the cow and calf would stake out someone's yard and refuse to leave, they would stand at a school bus stop, they would be reported "bothering children." On March 18, the cow chased one boy up a tree after he pelted her with snowballs. Over and over, Larson says, he or other officers would respond to calls and conclude that the moose and her calf had been trying to mind their own business but had been bothered by people. Larson and other officials at the state division of wildlife protection began urging the state Department of Fish and Game to move this particular pair. But Anchorage wildlife managers held firm to their policy of never moving "nuisance" moose.

Anchorage police and wildlife officials continued to warn people that if they kept feeding the cow and calf, the moose would eventually get into trouble and die.

"It's a good chance that something is going to happen," Anchorage police Lt. Bill Gaither told a reporter on March 22. "It's the people that created the hazardous situation, and the moose that will have to pay the consequences."

Two days later, it happened.

Toward the end of the day, the Mountain View cow and calf had staked out a courtyard among a group of apartment buildings. They would not budge, and children coming home from school could not get into their homes. Larson and officer Bob Beasley arrived and decided they would

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try to drive the moose through the yards, down an alley, across a street and onto a path leading to Ship Creek and the woods.

With Beasley blocking an escape route with his car, Larson squared off and drove the cow and calf out between the apartment buildings. As he strode over the spot that the moose had staked out, he looked down: fresh carrots littered the snow. Once again, someone had been feeding the moose.

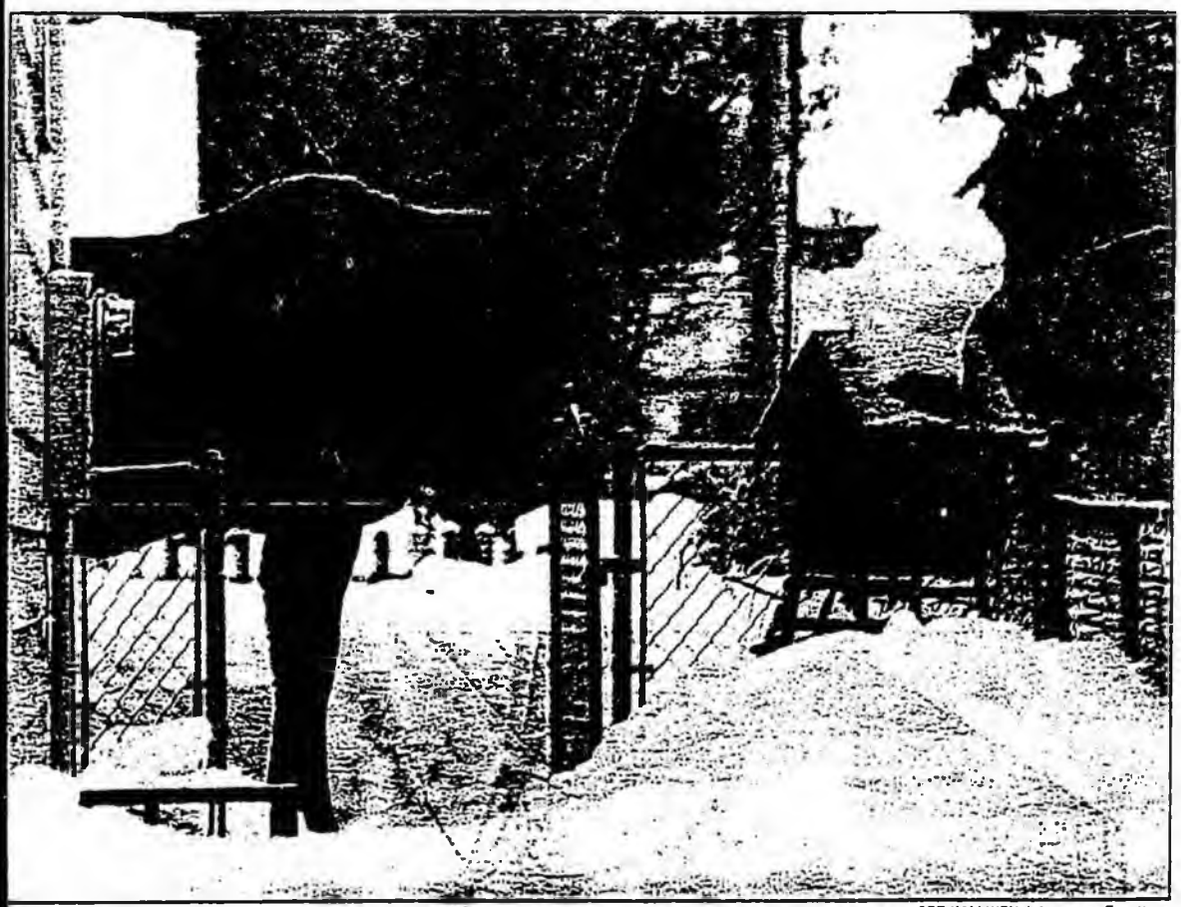
Gradually, a few hundred feet at a time, Larson and Beasley got the moose out into the street near the animal trail to Ship Creek. With their vehicles blocking the street, effectively putting a barrier between the moose and the neighborhood, the two men tried over and over to force the them to flee into the woods. They fired salvos of Roman candles and cracker shells. They shouted. They waved their arms. But the moose balked.

"They'd look at the trail and try to jump over the bumpers of the vehicles," Larson says. "They absolutely refused to go."

Finally the cow leapt past the men. The calf followed. The two moose dashed back toward the neighborhood. Destination? Carrot city.

Larson was disgusted and frustrated. But who could blame the moose? "They didn't want to eat willow browse," he says. "They wanted nice fresh grocery food. Stuff from Carrs is fresher than old, frozen willow twigs."

With Larson on its trail, the cow strode off through the neighborhood, calf following, and walked up into someone's yard.



BOB HALLINEN / Anchorage Daily News

When the snow gets deep, moose are a common sight in city neighborhoods.

'It's a good chance that something is going to happen. It's the people that created the hazardous situation, and the moose that will have to pay the consequences.'

— Anchorage police Lt. Bill Gaither talking to reporter March 22

BOB HALLINEN / Anchorage Daily News

A moose feeds in a vac[illegible] lot in

Suddenly a man stepped out of his house and threw down two carrots.

Larson was amazed — and angry. He told the man that he and another officer were trying to move the animals. Right that minute. He told him that feeding the moose made moving them harder. He told him that feeding the moose, in fact, would probably get the animals killed. It was hard, Larson would say later, to remain polite.

He says the man replied: "Oh, I didn't realize."

Larson drove the cow back into a yard, but the moose finally decided it had had enough pestering by the officer. "We wanted her to turn and go 180 degrees from where she was heading," Larson says.

The cow flattened her ears. Her hair stood up. As Larson realized charge him, he pulled out a canister of cayenne-pepper-based "Counter Assault" — a strong irritant used to discourage attacks by animals — and sprayed her.

The cow's eyes swelled shut and she stood for a few moments without moving. Then she moved 10 or 15 feet and bedded down. Larson and Beasley shot off a cracker shell, hoping to herd the animal back toward the woods. But now she wouldn't budge.

"At that point, we decided we weren't going to win the battle, and we backed off," Larson says.

The two men coaxed the calf away from the driveway toward its mother. The two animals moved further east — deeper into the neighborhood — and bedded down away from houses and people in the back of a vacant lot. "She was about as far away from people as you can get in Mountain View," Larson says.

When he left the neighborhood, it was about 5:30 p.m.

Larson decided he would make one more effort to ask Harkness and McDonald if they wouldn't consider moving the moose. If not, it seemed inevitable that the animal would have to be killed. The mother was simply getting too fearless, too bold, too street born. It was only a matter of time before she or the calf seriously injured a child.

Sometime in the next few hours, perhaps about 7:30 p.m., Anchorage police received a report of two gunshots in the area. Investigating officers found nothing.

In the morning, Larson drove straight to Fish and Game headquarters in mid-town. But before he could present state biologists with his plea to move the Mountain View moose, he received a call from his office: The cow had been found shot.

When Larson joined wildlife protection Sgt. Art Paul in Mountain View about 9:30 a.m., the moose was lying in an alley, about 50 feet from where Larson had left her the night before. Her head was down, and she wouldn't react when the officers tried to rouse her.

"She was nonresponsive," Larson says. "She was sick."

For an hour, the two men watched over the moose, hoping she would rouse up. But it became obvious the moose was dying. So Paul killed her with a shotgun slug to the head. An examination found two previous bullet holes to the torso — one back of the right shoulder, the other just forward of the pelvis. Gut shot.

Larson believes the shots came from a .22 caliber weapon that fired a hard, low-velocity bullet. The sort of cheap, rim-fire ammunition commonly used for target practice. Though no bullets were ever found, Larson believes the projectiles probably punctured the moose's internal organs.

PAUL SOUDERS / Anchorage Daily News

A cow and its calf, that made their home in Mountain View, take a break in the snow. Both animals were killed before the snow disappeared.

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flooding the moose's body cavity with toxins, leading toward a slow and agonizing death.

"It would have been very painful," he says. Similar to what a human being would feel after experiencing a burst appendix.

The moose flesh was salvaged by a charity, and the calf wandered off into the neighborhood. Larson and Paul went back to their office. Two suspects were later interviewed, but a lack of evidence eventually led Larson to drop the case.

Why would someone gut-shoot a neighborhood moose?

Perhaps it was someone who was cornered or got kicked. Perhaps it was someone who came upon the moose at random and simply shot it for thrills. But Larson believes the person who gut-shot the moose simply wanted to make the neighborhood safe again.

"Someone who thought, 'Enough is enough — since they (the state) can't do their job, I will assist them,'" the officer says, with some disgust.

The final chapter in the story of the Mountain View moose came one week later, on April 1. The day of fools.

The orphaned calf wandered onto Mountain View Elementary School grounds during recess,

BOB HALLINEN / Anchorage Daily News

A moose pauses in its wandering and feeding near a building this spring.

chasing children, charging the school principal. In the ensuing uproar the calf was driven into the street. From there someone tried to herd it away from the school with a vehicle. The calf stumbled on the ice, fell down, and the vehicle slammed into the animal's shoulder and broke it.

Larson and state biologist Mike McDonald showed up about 1 p.m. The calf was down and could not rise. Like horses, moose with broken shoulders or legs rarely heal. A moose in Anchorage with a broken limb would likely starve or be harassed to death by dogs. So the calf was shot and killed.

During his investigation of the calf's death, Larson tracked down the driver of the vehicle involved — but concluded no crime had been committed. The person had been trying to protect the children and was only driving 15 mph. "It was someone trying to help out."

People Deserve The Blame

In a town where too many moose compete for too little natural food, the Mountain View moose found a cornucopia of fabulous and juicy eats. Who can blame them for staying in Mountain View? No moose alive would choose sinewy willow twigs over Carrs carrots.

The people who fed them undoubtedly had good intentions. After all, weren't they just feeding hungry animals during a tough winter? Was that, in itself, such a bad thing to do?

But however innocent and well-meaning the impulse, feeding wild, 800-pound animals in a neighborhood full of children can only lead toward one end.

Left alone, those moose might have starved, though probably they would have struggled through the winter alive. People were repeatedly warned that the moose would end up dead if people didn't stop feeding them. If there's a lesson, it must be this: people will behave like people, and moose will behave like moose. The feeding didn't stop. And the moose died as a result.

The Elk-Ranch Boom

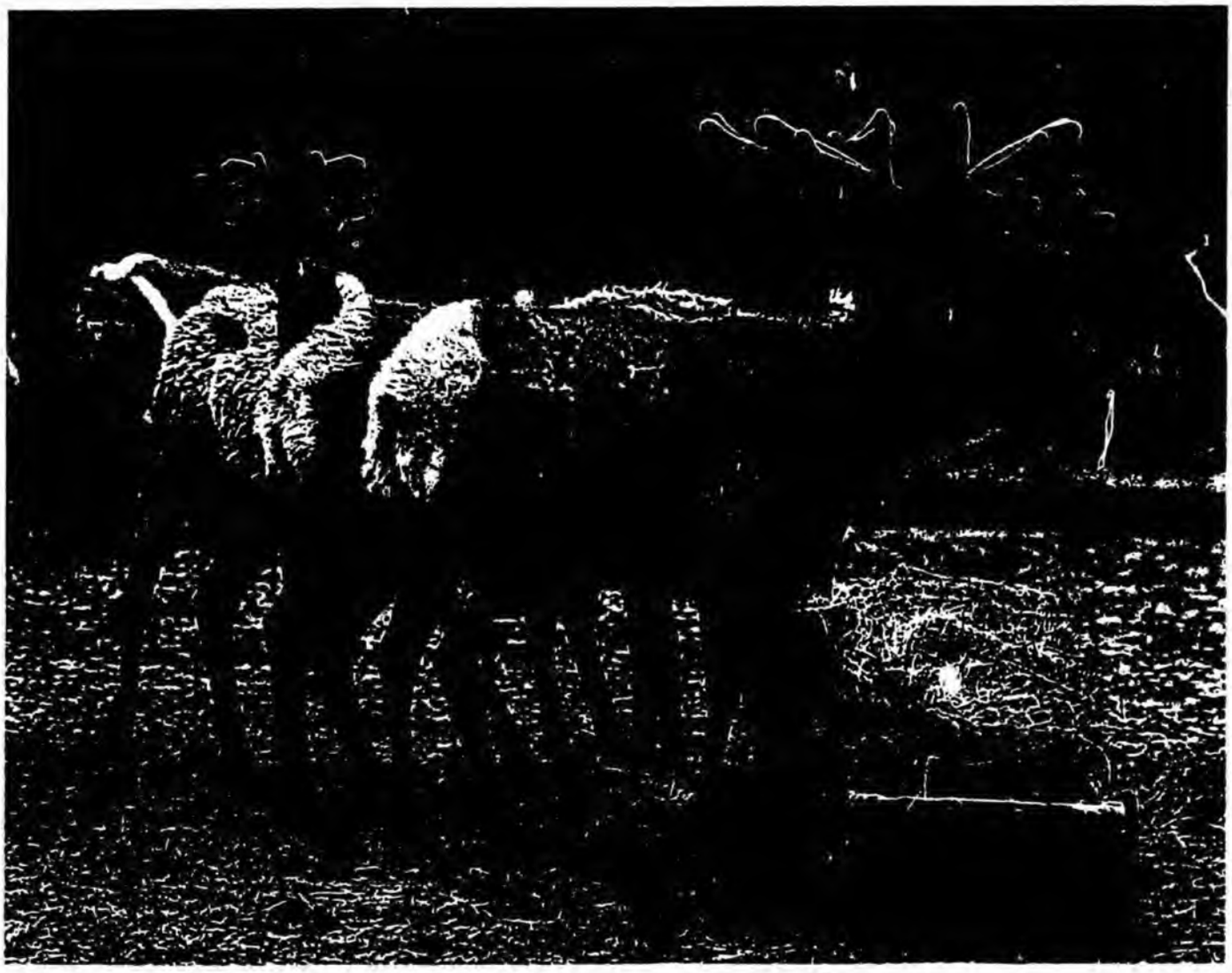
By Ted Williams

Elk ranching is thriving. But is it a livestock bonanza or a wildlife disaster?

FEBRUARY 13, and already spring is busting out all over central Colorado. Flights of horned larks, carried like cottonwood leaves on the sweet Chinook wind, swirl over muddy pastures; and along the creek beds, burbling redwings ride bobbing cattails. In front of us Long's Peak rises white and cold; behind us red sandstone cliffs are washed in muted sunlight. With my companions—Rick Kahn and John Seidel of the Colorado Division of Wildlife—I hike up into the realm of the wild elk. But now it is the realm of captive elk, too.

The yearling bull pushes his glistening black nose through the wire fence and browses the collar of my nylon parka. When I step back he rolls his eyes, showing the whites the way wild elk do, then butts me with the painted stumps of his amputated antlers. A plastic square with a "1" on it dangles like an automobile air freshener from his left ear, and both ears carry punch-through metal tags. His neck is bare with mange.

Not having been bottle-fed, the other elk in the pasture hang back; but their coats are ratty, too. Human-habituated cervids are not, as the ranchers like to call them, "domesticated," nor will they be for thousands of generations. So while they may appear calm as cattle, there's a stress factor that shows up in their general condition. Further, they seem to have difficulty assimilating trace elements, and parasite



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maladies and enhance sexual prowess. The state commissioner of agriculture was on hand to welcome us to the "Elk Capital of the World," so called for its free, not captive, elk. He was, he said, "proud" and "excited" to be associated with an industry so "dynamic" and "innovative," one that "epitomizes" agricultural diversification and has "blazed a trail" for the rest of agriculture.

dynamic and growing. And let me tell you, you just have to grab and get ahold of yourself because the speed at which these things are happening is phenomenal."

How right he was. In 1990 elk breeders powwowed to set up an organization that would promote their mutual interests, i.e., procuring a bigger chunk of the Asian antler market. Then there were 17 members. Now there are 700 and they control about 85 percent of the 20,500 captive elk in North America, 17,000 of which are incarcerated south of the Canadian line. Sounds impressive until you consider that there are 1 million European elk, better known as red deer, under fence in New Zealand.

Above: Antlers are cut from an anesthetized elk with a common wood saw, then sold to Asian buyers for use in medicines and aphrodisiacs. Left: A de-antlered bull in Alberta, Canada. Opposite: Elk, with antlers in the velvet-covered stage, feed on hay at a ranch in Checkerboard, Montana.

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Later there were speeches, seminars, movies, open bars, exhibits, and a lavish banquet of elk steaks—the best red meat that ever passed my lips, after Yankee whitetail. There were auctions, too, in which members bought live brood stock from around the country, shown live by satellite on TV screens, and elk-product gewgaws lofted about the room. President Withiam offered "two ampoules of semen rated 'excellent' in motility, volume, density, and morphological evaluation." This from his prize bull elk "Northern Exposure," sired by the great "Kojak."

Association president Sam Withiam, a beaming, white-haired Santa Claus of a man, warned about the forces of negativism that want "to see this industry fail and would enjoy seeing it fail." The association, he declared, is "an agent of an industry that is

We had lots in common, these elk ranchers and I. For instance, we adored wild cervids and were bored by domestic ungulates. I liked everyone I met. They struck me as more animated and, well, smarter than other stockmen; and certainly I couldn't blame them for wanting to diversify. Environmentalists had been nagging them about their cattle, trying to push grazing fees on public land closer to fair market value and chanting "Cow Free by '93." With America souring on beef and even cowboys, a light bulb switches on in the intelligent rancher's head when he looks out his bedroom window and sees a wild

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animal worth $8,000 grazing on the far side of his barbed wire.

Recently, environmentalists have been nagging ranchers about their elk, too. When NAEBA members asked for my opinions, I told them I hadn't come to Colorado to lecture but to listen and learn. When they pressed, I admitted to harboring grave concerns about the commercialization and privatization of any native fauna—an approach that has failed spectacularly in Europe and that clashes with 75 years of successful wildlife management on this continent. Amidst all the excitement and festivity and happy, positive, can-do attitudes, it pained me to throw in with the forces of negativism. But I suppose that's the lot of environmental reporters these days.

Regular reporters as well, according to the Colorado Elk and Game Breeders Association, whose officers I met at the convention. "As we all know, the press loves to

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distort and emphasize the negative," proclaims the group's publication, *Elk Family News*. The *Denver Post* had reported that two former members were "fined" $6,450 each after the state accused them of luring 25 free elk into pens. The real story, reveals *Elk Family News*, is that the two ranchers "each *donated* $6,450 to Operation Game Thief." Technically correct, although the "donation" was part of an agreement in which they pleaded guilty to illegal possession of elk for sale.

"Never trust the media's intentions," instructs NAEBA's quarterly magazine, *North American Elk*. And by all means keep it away from "velveting" operations (cutting antlers in the marketable "velvet" stage). Otherwise, the public will be reading such descriptions as this, from the October 16, 1989, *Albuquerque Tribune*: "The body of the drugged animal leaps. Its hooves paw the ground. . . ."

Working from the back of a pickup truck, Dean Baumann feeds oats to the elk herd at his Alberta ranch, where he has built a $275,000 "velveting" facility for cutting antlers and where he has hosted a major antler auction.

Velveting, at least as it is now practiced by most NAEBA members, is no more inhumane than any of the other things people do to livestock. The bulls are thoroughly anesthetized. Occasionally they are turned on their sides so more of the highly valued blood, from which the medicine supposedly gets its potency, will drain into the still spongy antlers. Sometimes Asian buyers hover around, asking to imbibe the raw liquid as it spurts from the antler stumps. ("I can't stand that—to see them guys drinking that," one rancher told the *Tribune*.)

You have about four days to velvet, during which the quality of this renewable resource goes from excellent to good to poor to worthless. Do it right and you can make as much as $110 a pound. Sometimes antlers get bacteria inside them, but you can sort these in the drying room—with your nose. ("It's the rottenest stink you ever smelled," said a convention panelist). Throughout the week I learned lots more about velveting, but it is hard for the public to comprehend its true nature. So hard, in fact, that when I attended a session on the subject I was asked to turn off my tape recorder.

So I took careful notes during a session entitled "Starting an Elk Farm—The First Two Years." The panel included a hunting outfitter who spoke about the booming trade in "shooter bulls," geriatric elk shot in enclosures by trophy hunters [see "Canned Hunts," January-February 1992]. "It's a management decision," he explained. "If he's absolutely prime, has a Boone and Crockett rack, I'll pay twelve thousand dollars for him. Is three thousand dollars' worth of horns this year worth a gamble on keeping him another year, when you can put twelve thousand dollars in your pocket?"

I learned even more at the bars and display booths. But when I asked about the dangers to free cervids posed by genetic swamping, disease, and the new infrastructure for laundering stolen wildlife, the ranchers got tight-lipped and testy. "The people worried about that stuff never had shit on their boots or signed a paycheck on the back," boomed NAEBA board member Bob Spoklie, of Antelope, Montana, a square-jawed man with green eyes and steel wool hair who looks as if he just stepped off the *Gunsmoke* set. In addition to annually harvesting 200 antlers from his own herd (more than any operation in the United

States), Spoklie canvasses the northwestern quarter of the nation, from Minnesota to Washington, collecting frozen velvet. He is honest, hardworking, and well respected in the industry. Recently he installed his own drying facility and staffed it with Koreans, some of whom were brewing up pungent antler tea at a convention booth. "Who are we to say it doesn't work?" he said.

But Spoklie hasn't used the stuff. I have. Sunny Chae showed me the ingredients—thin slices of dried antler perched like burned potato chips on a rat's nest of twigs, leaves, bark, and berries. "No," she said when I pointed suspiciously to the black, shiny pellets, "they are not elk droppings." She prescribed the $400 dosage; I opted for the $10 shot. Even this, said Sunny Chae, was a powerful aphrodisiac, and more important to me at the moment, it would cure my cold.

"Is your wife with you? This could get ugly," commented the rancher behind me as I pinched my nose and gulped. She wasn't and it didn't. During the rest of the evening I felt no more passionate than usual, and the next morning I awoke with clogged sinuses.

By far the most vocal opponent of privatization and commercialization of wildlife—the man elk ranchers love to hate—is Valerius Geist, 54, the ecologist who directs the Environmental Sciences Program at the University of Calgary, in Canada. Whenever an interview started to bog down, I'd bring up his name. It was like whistling "Marching Through Georgia" to the Savannah Elks Club.

"Valerius Geist! I'll tell you, the man is *crazy*," cried Welch Brogan, 84, when I phoned his ranch, in Corwin Springs, Montana. "The man is a radical."

The "Canadian Update" session was positively abuzz with talk of the vile and evil Geist. Wilf Jurke, president of the Saskatchewan Game Farmers Association, explained how this "self-acclaimed alien from another planet" had incited the Canadian Wildlife Federation to raise $1 million to sabotage game ranching and was helping it spread "half-truths and total lies," and how his group had "contacted one of the best lawyers in Saskatchewan" to write Geist a cease-and-desist letter.

> The antlers are cut off in the blood-engorged, velvet-covered stage and shipped to Asian markets.

Scarcely anything that walks or haunts this earth frightens Val Geist, least of all gored elk breeders brandishing puffy letters. His strong spine and custom of saying precisely what he believes make him aberrant in the wildlife business, where the meek and manageable rise fastest and highest. "Do we endorse the bestial cruelty to elk on Canadian game ranches in order to fatten the profits of whorehouses in Seoul, Hong Kong, Bangkok, and Tokyo?" Geist demanded of the Canadian minister of the environment.

Geist may be a radical, but he is not, as his enemies contend, a crackpot or a charlatan. One of the most respected wildlife professionals on the continent, he has worked with Ian McTaggert-Cowan and Konrad Lorenz, serves on all manner of international committees, and has advised foreign governments. "The consequences of game ranching were predictable and have been borne out entirely so far," he wrote last November, "only earlier and worse than predicted, even by pessimists."

What does frighten Geist is red deer, the European subspecies of our elk—at least when they are shuttled about the planet in the deadly shell game humans play with plants and animals. Red deer are redder than elk, thinner in the shoulders and hips, with antlers that rise more vertically. They don't "bugle," they "bellow"; and when they duel they don't lock up and push, they thrust and parry. Bull elk refuse to fight them. In fact, if a rutting elk hears a red deer bellow in another pasture, he'll lie down. So when an escaped red deer stag meets a band of elk, he absconds with the females and breeds them all.

At Wildlife Division headquarters, in Denver, I sat at Rick Kahn's desk as he showed me a computer model of what would befall 500 Rocky Mountain elk if one were to unleash upon them 10 red deer. In 80 years, 95 percent of the herd

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wouldn't be elk anymore. They'd be something else, something less—mongrels. This disturbs Kahn and his colleagues, because they know that the only real guarantee you get with "game-proof" fencing is that sooner or later it will be breached by water, wind, snow, fire, vandals, or free elk sparring with captives; and because they see in their native elk a treasure more valuable than trophies, venison, or even antlers, a treasure that belongs not just to Colorado but to the planet.

A worker uni pile of "hard' lers at a war in Ennis, Mont Although not highly prized those in the v stage, these a are sold to So Korean pharm cal firms.

So in late 1990 they set about testing Colorado's captive elk for red deer genes. Fourteen percent of the animals checked turned out to be hybrids. These the state ordered deported, paying the ranchers the difference between what they could hawk them for and their alleged worth. The bill came to half a million dollars.

But elk ranching can't really make it in North America *without* red deer. Or so says the man who should know best—Mike Bringans, the young, affable vet from New Zealand (and more recently Ontario) who supervises the care and artificial insemination of some NAEBA elk. Reds, he told me, are cheaper, gentler, and more adaptable to diet. When you cross them with elk, "hybrid vigor" ensures faster growth. "What about genetic pollution of free elk?" I asked.

"Tell me what genetic pollution by an animal that looks like an elk is going to do in the wild," he pronounced. " interbreed, what are they going t There was nothing left for me to were speaking different languages.

One thing they might do, even i breeding doesn't occur, is contamin with a nasty little nematode *Elaphostrongylus cervi*, which, in the l stage, lives in snails and slugs. R in Europe and New Zealand acci

ingest these and snails their brows young worm etrate the g and migrate to the spinal cord, brai muscles, where they mature and la Larvae flow with the blood to t ie and are coughed up in sput m, lowed, and shed with the f.ces then attract slugs and snails. Re can usually handle *E. cervi*. N American cervids have no natural i nity and very likely can't.

So last November ranchers and managers were appalled to learn th test by which they'd been confident tifying red deer *E. cervi*-free and shi

> The only real guarantee you get with "game-proof" fencing is tha sooner or later it will be breachec

them around the continent was u able. But at least the hosts and mayt worms were being kept within g proof fences. Except, of course, a Colorado's Eagle Rock Ranch, wh flash flood had taken out the game- fence, and where red deer, along wi sorts of other weird exotics us canned hunts, were reproducing i wild. Then in October, *E. cervi* show in three red deer held in New Bruns Solution: The three were immed killed, and the remainder of the her

taken to Ontario for routine slaughter.

All the red deer arrived safely in Ontario—whereupon 91 escaped, taking up residence in the woods before eventually being hunted down and shot by game managers on foot and in helicopters. No *E. cervi* were found in the carcasses. If any infected feces were deposited, they will remain contagious for three Canadian winters.

Wildlife advocates west of the Great Plains are even more terrified of *E. cervi*'s cousin, the North American brain worm. Eastern white-tailed deer, which evolved with brain worms, aren't bothered by them. However, probably because the Great Plains are too dry to support many slugs and snails, brain worm doesn't occur in the West. If it gets there, it will devastate mule deer, elk, moose, caribou, mountain sheep, and mountain goats. So after Alberta rewrote its Wildlife Act to permit private ownership of public wildlife, it required game ranchers wishing to import stock to certify that it came from somewhere west of brainworm land. Unfortunately, reports Margo Pybus of the provincial Fish and Wildlife Division, some of them cheated, laundering eastern game through western ranches. As a result Alberta closed its borders to all captive big game in 1988.

Another nasty creature threatening North American wildlife is the bacterium that causes bovine tuberculosis (TB). Elk, moose, and caribou are especially susceptible because they evolved in the dry, cold climate of Siberia, where pathogens were scarce and strong immune systems superfluous. Captive elk spread TB by mutually grooming open sores and by dripping contagious saliva, feces, pus, and probably urine.

"I don't know what we'll do if TB gets established in wildlife populations," remarked the thoroughly unexcitable Mitchell Essey, senior staff veterinarian for the USDA's Animal and Plant Health Inspection Service. "No one knows how we'd control it if it got into elk herds like those in Yellowstone National Park. The potential ramifications are almost inconceivable." Unfortunately, the USDA has no jurisdiction over cervids because they're not "livestock." Responsibility lies with the states, which don't like to dispatch TB carriers because they fear the courts will force them to pay compensation. Two years ago ranchers and game

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managers were appalled to learn that the test by which they'd been confidently certifying elk TB-free and shipping them around the continent had been detecting only about 20 percent of the cases.

Having been in the business 46 years, Welch Brogan is the grand old man of North American elk ranching. He says he's had problems with some of the statements the state veterinarian has made to the press about his TB-infected elk, now under quarantine. It has, however, been documented by U.S. and Canadian wildlife and health authorities that Brogan shipped 18 elk to Alberta in 1988, and that they were later diagnosed with TB. Some U.S. and Canadian officials believe that TB had arrived at Brogan's ranch a year earlier via a shipment of 27 infected elk from Nebraska.

During the last two years Canadian officials have found TB in pigs, cattle, bison, and deer. Infected animals destroyed to date, costing the Canadian government $10 million in compensation, include 2,200 elk—close to half of Alberta's captive herd. At this writing the disease has been seen in captive game in 5 Canadian provinces, from New Brunswick to British Columbia, and 14 states, from New Jersey to Oregon.

But the threat extends beyond livestock and wildlife. The disease can be contracted by humans who handle a host, inhale its breath, touch its body fluid, or drink its unpasteurized milk. It used to be rampant in its native Europe, where, according to a report in *Time* magazine, it may have caused lesions on Joan of Arc's brain and other organs, bringing on her visions and loss of menstruation. The recent outbreak in Alberta quickly spread to farmers, vets, postmortem technicians, meat inspectors, and tanning-plant workers, most of whom were put on preventive medication but at least one of whom developed the actual disease.

If TB does get a toehold in the wild, Geist predicts, then "in national parks tame, infected elk, dripping contagious body fluids, will mingle with the public on golf courses, lawns, picnic grounds, campgrounds, promenades, even school yards."

Because Yellowstone elk play in Brogan's backyard, wildlife officials were hoping he'd tend his game-proof fences. Alas, there has been ebb and flow between Brogan elk and public elk. Brogan told me he's been offended by statements made by the local game wardens, who, like the state vet, "get carried away with stories" when they talk to the press. However, the Montana Sixth Judicial District Court told this story as a "finding of fact": "The defendant [Brogan] within a few minutes after the game wardens left his home drove up through the 'cow' pasture to open the gate on the triangular pen and herd out the wild elk he had lured onto his premises . . . by leaving the gates open, baited with hay." On September 5, 1991, Brogan was found guilty of "capturing over eighty head of wild elk for use in his game farm business."

Brogan is the exception, not the rule. Were he an NAEBA member, he could be summoned before the organization's board of directors for possible reprimand, suspension, or expulsion. In all aspects of their privatization and commercialization of public wildlife, elk ranchers of the NAEBA want desperately to be responsible and ethical. The tragedy for them, as well as for wildlife and the public, is that the nature of the business makes this impossible.

According to the state of Colorado, TB bacteria allegedly hitched a ride from the Brogan ranch to the Royal Elk Ranch in Powderhorn—another atypical operation whose owner, accused by the U.S. government of passing cocaine and converting his barn into a "hydroponic laboratory for the growing of marijuana," also is not an NAEBA member. The point, though, is that pathogens, parasites, and alien genes don't care who's typical and who isn't.

Recently the Division of Wildlife gravely offended the NAEBA by showing slides of TB eradication at the Royal Elk Ranch, where it killed and burned 52 animals. In one photo a firestorm rages around the carcass of a diseased bull. But through the flames, standing as tall and beautiful as Joan of Arc, is a pair of perfect antlers. Antlers worth perhaps $2,500. It was the most powerful image I took home with me.

The Anchorage Times

Publisher: BILL J. ALLEN

"Believing in Alaskans, putting Alaska first

Editors: DENNIS FRADLEY, PAUL JENKINS, WILLIAM J. TOBIN

The Anchorage Times Commentary in this segment of the *Anchorage Daily News* does not represent the views of the *Daily News*. It is written and published under an agreement with former owners of *The Times*, in the interests of preserving a diversity of viewpoints in the community.

Let moose roam loose

TUCKED AWAY in the House Resources Committee awaiting hearings is a reprehensible piece of special interest legislation that runs counter to most sound game management principles.

The measure, already approved by the Senate, would clear the way for moose farms in Alaska to benefit only the few people who are pushing to make a buck at our expense.

This bill, which crawled from beneath a rock as SB46, would allow private individuals to acquire from the state "surplus" moose to begin fenced-in game farms.

The Alaska Department of Fish and Game, up to a few weeks ago, vociferously opposed such legislation for a variety of very good reasons. Those include:

- Large, fenced tracts would interfere with the movement of other species in the area.
- Moose are not herd animals. For the most part, they are solitary.
- Biologists say the most productive habitat in Alaska can support only six or eight moose per square mile in the long winter months, and Canadian researchers say packing them together increases disease transmission which could infect wild stocks.
- It would increase the poaching and sale of meat from wild moose.
- The agency would have little say in regulation of moose farming schemes.
- The economics of moose farming make it almost a certainty such ventures will fail.

And, presumably, we could in the future see moose tied up for viewing at tourist traps along the highways of Alaska, just as other states have had bears, alligators and other wild animals caged and subjected to this form of cruelty.

Before Alaska decides to go along with this scheme, it should note there are no viable commercial moose farming operations anywhere, and for good reason. And many states that have allowed such ventures with other species now find themselves searching for ways to get rid of them. In the former Soviet Union, they tried for decades to domesticate moose before the idea was abandoned as impractical.

Oddly, the Department of Fish and Game — adamant until a few weeks ago on the moose farming question — now is strangely neutral on the subject. Maybe having its budget trimmed by $3.3 million in Senate Finance played a role, or maybe it was having its world-class Moose Research Center in Kenai zeroed out of the budget.

If the agency that is supposed to be the authority on moose in Alaska now finds itself somehow choked into silence by Senate purse-strings, let us speak up in its behalf.

Game ranching is a lousy idea designed to benefit a few while costing the rest of us in resources, time and money. If you value Alaska's wildlife resources, let your legislators know.

Ap. 9, 1993

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FREE

Wildlife

VOLUME I, ISSUE 4
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FREE

TB outbreak scares wildlife managers

Disease could be devastating to wild elk & deer herds

By Steve Merritt

The threat of disease and parasites associated with the game ranching industry and their potential impact on wildlife and domestic livestock has long caused concern among wildlife managers and cattlemen. Game ranching advocates say these concerns are being blown out of proportion, that the facts are being sensationalized in an effort to diffuse the efforts of would-be game ranchers who simply want to diversify agriculture. The debate continues - are disease and parasite concerns really something to be worried about?

Today, more than ever before, it appears the answer to that question is yes.

Today, the game ranching industry is in the midst of a serious world-wide outbreak of bovine tuberculosis (TB), and the disease is rapidly spreading through game ranches across North America. The ramifications for wildlife are relatively unknown but potentially very serious; more is known about the risks to the cattle industry, where the ramifications are equally serious.

Nearly all of Wyoming's immediate neighbors have had recent problems with TB linked to game ranching operations:

- Officials in Montana and Colorado have had to quarantine and destroy TB-infected game ranch animals; investigations and testing to locate other infected or exposed animals are still being conducted.
- Officials in Nebraska had to destroy infected game ranch animals as well as 115 head of cattle that were apparently infected by the game ranch animals.
- A TB-infected beef cow imported from Alberta, possibly linked to a widespread outbreak of TB in Canada, was recently discovered at a slaughterhouse in Utah.
- South Dakota officials recently quarantined a game ranch with red deer and elk suspected of TB infections; cattle on the ranch are also under quarantine.

TB problems have also surfaced in Washington, Oregon, Oklahoma, Texas, Missouri, Iowa, Wisconsin, Florida, New York and New Jersey. Several Canadian provinces, including Alberta, Ontario, Manitoba, New Brunswick, British Columbia and Saskatchewan, have been hit as well, with *major* outbreaks reported in Alberta and Ontario. Many experts monitoring the situation expect more infected ranches to soon be added to the rapidly-growing list.

The WG&FD's concern about TB obviously centers around wildlife, but its concern doesn't end there. The outbreak is also posing a major risk to the livestock industry as well as [illegible] to human health.

Photo courtesy Colorado DOW

A Colorado Division of Wildlife employee uses an ATV to drag a bull elk closer to veterinarians performing necropsies on a captive elk herd that was slaughtered because of bovine tuberculosis. One captive herd of game ranch elk in Colorado was completely destroyed, two others were quarantined and several others are suspected of exposure to the disease. Wildlife managers say they don't know how a disease like bovine tuberculosis could be controled if it becomes established in wild, free-ranging elk herds.

IMPACTS ON WILDLIFE UNKNOWN

The possible ramifications TB has for free-ranging wildlife - specifically, cervids like elk and deer - are relatively unknown. Some experts claim the risk of passing the disease to wildlife is minimal but possible. They say TB has evolved over thousands of years specifically to infect cattle and that any infection in wildlife populations would be self-regulating. Other experts say TB *can* be passed to wildlife and that the end result can be disastrous.

Dr. Mitchell Essey, senior staff veterinarian for the USDA Animal and Plant Health Inspection Service's cattle diseases and surveillance staff, is one of the experts convinced that TB, if established in wild elk and deer, would be an unparalleled wildlife catastrophe.

"It's a picture you can paint as black as you want because that's the way it would be," Essey said. "I don't know what we'd do if TB gets established in wildlife populations - no one knows how we'd control it if it got into elk herds like those in Yellowstone National Park or in the Gunnison (Col.) area. The potential ramifications are almost unconceivable."

Dr. Victor Nettles, director for the Southeastern Cooperative Disease Study, says Wyoming has "a perfect scenario for transmission from animal to animal."

"Tuberculosis is a valid concern, especially in your state because of the large number of elk and the presence of feedgrounds," Nettles said. "Wyoming is probably more vulnerable than any other state in the nation."

Margo Pybus, wildlife disease researcher for the Fish & Wildlife Division of the Alberta Department of Forestry, Lands and Wildlife, agrees that the problem could potentially be very serious for wildlife but thinks the risks of

See TB, page 8

H U N T I N G · F I S H I N G · T R A P P I N G

8/30/91

A study of the prevalence and economic significance of diseases and defects of slaughtered farmed deer

P. Selwyn* and S. Hathaway[†‡]

Abstract

A survey was undertaken in a deer slaughterhouse to record the diseases, defects, and productivity-related information that were detectable at postmortem meat inspection. A total of 4762 farmed deer were surveyed in 1988-89 over the period of highest throughput (October-January). Comparative data were drawn from a further two deer slaughterhouses and from national disease and defect statistics for slaughtered cattle.

Farmed deer had a very different disease and defect status compared to cattle. Wounds and bruises ... disease and defect statistics, and resulted in an average loss of 26.9% in carcass value over all ...

6/17/92

Probable malignant catarrhal fever in a sika deer from an Alberta game farm

David L. Fritz, Michelle S. Mostrom, Leonard E. Lillie, Robert W. Coppock

Malignant catarrhal fever (MCF) is a frequently fatal, sporadic disease characterized by generalized, fibrinoid necrotizing vasculitis (1). The disease ...

expiratory grunt. Blood-tinged mucus drained from one nostril. On day 5, there was no ruminal or gastrointestinal motility. Death occurred on day 6. The three ...

SCWDS BRIEFS

A Quarterly Newsletter from the
SOUTHEASTERN COOPERATIVE WILDLIFE DISEASE STUDY
COLLEGE OF VETERINARY MEDICINE
THE UNIVERSITY OF GEORGIA
ATHENS, GEORGIA

Gary L. Doster, Editor

Phone (706) 542-1741
FAX (706) 542-5865

Volume 8 | April 1992 | Number 1

Malignant Catarrhal Fever

During December 1991, a private veterinarian in Andalusia, Alabama, contacted SCWDS because one of his clients had death losses in captive ... led deer. After state authorities ... examinations ...

... uncommon and almost always are seen in captive deer. In addition to our native deer, animals used in game farming such as axis deer, sika deer, red deer, blackbuck antelope, and bison also are susceptible. All of these animals suffer irreversible, fatal disease. The risk of virus transmission is enhanced by confinement near sheep or zoological animals of the wildebeest subfamily (wildebeest, topi, hartebeest, blesbok). For example, an MCF outbreak killed 23 of 28 white-tailed deer in a small New Jersey zoo in 1990 (see Journal of Wildlife Diseases, April 1992). In the recent case in Alabama, the potential for MCF virus exposure at the auction cannot be ignored, but the animals could have been infected prior to passing through the sale barn. Increased marketing of captive ruminants for game farming is likely to continue and could result in a greater prevalence of MCF. Persons should be alert to this disease and contact state or ... authorities when MCF is ...

...continued

Gross and microscopic lesions of naturally occurring tuberculosis in a captive herd of wapiti (*Cervus elaphus nelsoni*) in Colorado

Jack C. Rhyan, Dennis A. Saari, Elizabeth S. Williams, Michael W. Miller, Arthur J. Davis, Arach J. Wilson

Abstract. A *Mycobacterium bovis*-infected herd of captive wapiti (*Cervus elaphus* ...) ... depopulated after lesions of bovine tuberculosis were confirmed in 8 of 10 tuberculin ... 43 animals >1 year of age, 26 had gross lesions suggestive of tuberculosis ... tuberculosis, and 23 had acid-fast bacilli associated with the lesions. ... were the most frequently affected sites. Most lesions grossly and mic... however, some lesions resembled abscesses or ovine caseous ... nohistochemical techniques labeled few to numerous ...

Until recently, bovine tuberculosis w... an unusual and sporadic disease ... cases involved captive and ... attributed to contact w... With recent devel... ing, the prev... signific...

Colorado was ... ctors. Of the ... lesions of ... mph nodes ... in cattle ... immu-

the Park ... orts of ... North ...

Reports on Wildlife and Laboratory Animals

... of *Yersinia pseudotuberculosis* ... a wildlife park

... Ely, DVM, PhD; R. J. Holland, DVM

Animal Disease Diagnostic Laboratory where ... determined to be caused by *Yersinia* ... septicemia. Also during the same ... Department of Wildlife was ... analyze tissues for pestis ... were American gold... 20 miles of the ... mined to be

Mycobacterium bovis infection in a captive herd of Sika deer

Michael L. Mirsky, DVM; Daniel Morton, DVM, PhD; John W. Piehl, DVM; Howard Gelberg, DVM, PhD

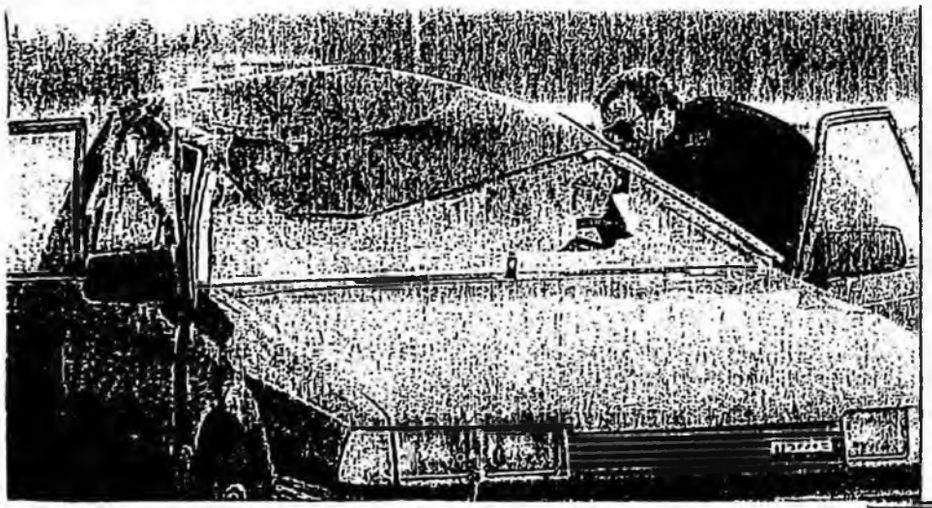
A 3-year-old male Sika deer from a small, privately owned herd in central Illinois ...

Mycobacterium bovis infection in North American elk (*Cervus elaphus*)

Charles O. Thoen, William J. Quinn, Lyle D. Miller, Larry L. Stackhouse, Bradford F. Newcomb, James M. Ferrell

Abstract. A naturally occurring outbreak of *Mycobacterium bovis* infection in captive wild elk (wapiti) in ...ntana was confirmed by mycobacteriologic examination. Twenty-eight of 143 elk responded to *M. bovis* ...ified protein derivative (PPD) tuberculin injected intradermally in the cervical region ... comparative cervical tuberculin skin tests conducted within ... PPD tuberculin than ...

3/30/94



AGAINST THE ODDS

THIS YEAR'S MILD WINTER HASN'T DONE MUCH TO KEEP MOOSE ROADKILLS DOWN

BY JAY BLUCHER

Go figure. When winters are harsh and the snowfall is deep, there are record numbers of moose killed on Alaska's roads.

But when the winter is mild and the snowfall is minimal, the same amount of moose get smacked by cars and die.

Consider this winter — one of the tamest in recent memory, with only 29 inches of snow fallen in Anchorage. And yet, there have been 100 moose killed on Anchorage roads alone this winter, according to Alaska Department of Fish and Game statistics. That's 10 more than were killed last winter, 10 more than the winter of 1991-92 and only eight less than the record of 108 moose killed in 1989-90, when the winter was particularly harsh.

And with two months of winter remaining, area biologists are concerned the tally might surpass 108.

It's happening up and down the highway in the interior and in southcentral Alaska — from Fairbanks, through the Matanuska Valley and southward to Kenai — there's an unexpectedly high number of moose being killed on roads. And the biologists whose job it is to explain why are left scratching their heads, groping for explanations and offering several theories.

Palmer has registered 137 moose roadkills so far; Fairbanks, 261 and the Kenai region, which is averaging eight to 10 moose roadkills a week now, 199. And all locations are still counting.

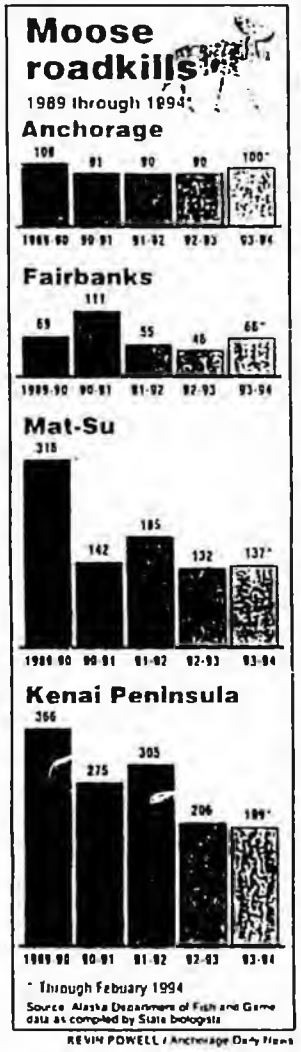
Considering the warm weather and good driving conditions over most areas of the state this winter, it's surprised area biologists to see moose deaths so high, and so early.

"That's the thing. The numbers are up and everyone sort of expects that given the nice weather we've had that the numbers would be way down — but it's not working out that way," said Fish and Game area biologist Ted Spraker in Kenai.

Kenai has an estimated moose population of more than 8,000, eight times that of Anchorage. And despite the fact that there are a lot fewer drivers in Kenai than Anchorage, the Kenai averages two times more moose killed on its roads than Anchorage, about 250 every winter.

Please see Page F-2, ROADKILL

ROADKILL: Mild winter hasn't done much to keep deaths low



KEVIN POWELL / Anchorage Daily News

Continued from Page F-1

since 1983-84, according to Spraker, with the exception of 1989-90, when 366 moose were killed.

"And here we are at 200 already, with a lot of winter still to go, so I expect we'll hit 250 easy," he said.

In a convoluted bit of logic, clear road conditions this winter and a healthy moose population on the Kenai may actually have contributed to the roadside carnage this year.

"When the roads are good, the bottom line is folks just drive too fast," said Spraker.

But even 200 is an unacceptably high number to Spraker, because he estimated the actual numbers of moose killed by cars are probably 20 percent higher than reported totals. Many more animals are unaccounted for because they don't die on the road. Many are hit, seriously injured and fall prey to predators.

All moose killed on the roads are put to good use. The state Fish and Wildlife Protection Office in Kenai maintains a list of more than 600 names of people willing to accept road-killed moose meat. Similar programs in Anchorage, Fairbanks and Palmer distribute the meat to various charitable organizations for distribution to needy people.

In the Mat-Su valleys, where both moose density and traffic volume is high, car-moose collisions are increasing, too. Yet assistant Fish and Game area biologist Mark Masteller is as much at a loss for ready explanations for the numbers as Kenai's Spraker.

"Perhaps it's because the weather's been so good this winter that *more* people have been out driving than if the conditions were bad, so maybe that's got something to do with it, too," he said.

There's even a sign posted on the Glenn Highway near Palmer as part of a public awareness program known as "Give Moose A Brake" to educate drivers to the hazards of driving with no regard to moose. This running tally sheet of road-killed moose offers a grim daily reminder to commuters that 137 area moose have been hit by cars so far this year.

"Signs get ingrained after a while and pretty soon, drivers don't pay them any attention. They may slow down just after the sign perhaps, but then it's back to driving as fast as usual," said Masteller.

Another Fish and Game biologist, Rick Sinnott, in Anchorage, sounds a similar refrain. For the last five years an average of 95 moose have been killed by cars annually in the area between the Knik and Portage rivers.

"I'm really not sure why it's so high except that there's more moose, more people driving all the time and more of them seem to be driving faster," he said.

"We can't blame the weather this year, can we? Well, maybe we can, sort of, in a backhanded way, I mean."

Toby Boudreau, assistant area biologist with Fish and Game in Fairbanks, admits he's completely stumped for an explanation.

"The snow isn't deep here this year, so there's nothing driving the moose down from their winter ranges to the highway like in previous years, and their food supply is not limited. I just don't know why so many are getting hit," he said.

There also is a huge property and injury cost involved whenever car and driver collide with a moose. No one in either the automobile insurance industry or the state Department of Transportation can peg exact costs, but moose collisions have caused an estimated $1 million in property damage alone every year for the last five years in the state, according to state transportation officials. Personal injury figures are anyone's guess.

While moose are often killed by the collision, more cars are totaled — the cost of repairs exceeds the vehicle's value.

According to Don Hunter, property claims superintendent for State Farm Insurance, a typical collision with a 600- to 800-pound moose results in car repair bills that easily can exceed $5,000. Repair bills of $10,000 or more are common.

"It usually involves a total paint job as a minimum, and that will cost you $2,000 right there," he said.

"The windshield is smashed, nearly always, and it either takes out the entire roof or pushes it back — and sometimes you'll even see an almost perfect impression of the moose's body left on the windshield of the wrecked car where it passes over the hood, but in general, it's terrible — a real mess. I recommend avoiding them."

Neither State Farm nor any other automobile insurance company in Alaska said it keeps specific statistics on the numbers of moose collisions annually.

But Tony Barter, chief of the traffic and safety division at the state Department of Transportation, said when fencing was installed on both sides of the Glenn Highway near Fort Richardson in 1989, moose collisions along this stretch of highway were reduced by 80 percent in the first year.

Miles of fencing in areas with a large number of side streets is not always a feasible or cost-effective option either, said Barter. Better lighting and wider cleared path — 150 feet from the center line on both sides of the highway — are other possible options that have been successfully used in other areas to reduce moose roadkill.

"But ultimately, the responsibility still rests with drivers to slow down and to be alert in areas where moose are present in high numbers, which is just about anywhere you drive up here," he said.

HOW TO AVOID MOOSE

- Reduce your driving speed to no more than 45 mph when visibility is reduced at night.
- Keep windshield and headlights clean at all times.
- Be sure your headlights are working. Promptly replace them when they burn out.
- Watch the sides of the highway and anticipate that a moose may step on the highway at any time.
- If one moose crosses in front of you, be ready for the second moose. Calves often trail behind the cow and panic when vehicles threaten to get between them and their mother.
- Think moose and be ready to give them a brake.

Source: Alaska Department of Fish and Game

Guest Opinion–

The time has come for moose farming

By DOUG WELTON

As I go through this life here on planet Earth, amidst all the confusion and grime, I am constantly aware of how unsettled society is–the soaring crime, suicide and destruction.

I get up in the morning and turn on the radio and hear the day's recital of what we are doing to ourselves, and to each other, and what our government is doing to all of us. And then I compare the way I live my life, and the way I treat others, and think about what I want to do in this crazy world. And I can only wonder how what I want to do is illegal, while all the grief and greed and grossness of the world is apparently acceptable.

What do I want to do? My family and I have for four years now studied and dreamed about a way of life separate from all that we see going wrong in this world. All we want to do is salvage the orphaned, the hurt, and the problem moose, and put them to good use.

Through our extensive research, we have concluded that not only is this quite possible, but is exactly what is being done successfully in other countries, such as Russia. It may not be the biggest breakthrough since man on the moon, but it is definitely an option to the present policy of allowing moose to be hunted and killed only.

The Alaska Department of Fish and Game has this attitude that our wildlife should not be used commercially, or be privatized. But again, as I look out on this world, I see big game guides making millions carting people around, and getting paid to kill, kill, kill. I am also aware of people being allowed to display these animals, and charging others to have a look. Then, how about the research facilities that have for decades been allowed to privately conduct every imaginable kind of experiment on these animals?

Why can these people exploit our wildlife, and I cannot? While game farming science doesn't hold the moose to be the most economically viable species, in my view it is the most loved and desirable and enjoyed of them all. Most game farms in Canada keep a couple around, just because. And the fact that we've not yet realized how to capitalize on the potential, doesn't mean the potential is not there.

It's known for a fact that moose tame as easily as calves, that they give the most nutritious milk on earth, that they will pull a sleigh or a cart, that they can be ridden in places other animals would find inaccessible, can breed at one year of age, and generally throw twins from the second calving on.

When raised in captivity, they grow year round, and achieve larger size. When castrated they don't participate in the rut and continue to gain weight. They can provide a reliable source of meat to a family, and don't require watering in winter like all other farm animals. The antlers, hides, hooves, and bones provide materials for crafts and clothing, and yet it is not legal to raise them here in Alaska.

The Alaska Department of Fish and Game says that raising them would ruin the "Alaskan experience" for our visitors, and that they simply cannot be raised. I can't believe that this one department in our corrupt government has been allowed to become so powerful. They are a dark cloud over this state, and I wish the people would wake up and see the truth.

I suppose if I were Oscar Meyer, I would get somewhere, but I'm not. I'm just a little ol' Alaskan. Do you have to be a mult-national corporation or millionaire to to develop an industry, or even a way of life, in Alaska today?

Our legislators have all thrown in the towel, and won't even dispute what our so-called experts say. However, they have an opportunity with two bills legalizing the raising of moose, and predictably, Fish and Game will say no. Who owns this state anyway, and who owns all the wildlife and other renewable resources?

House Bill 478 and Senate Bill 216 would do more than legalize moose and caribou farming. It would give people like us a purpose and something to do. Are our children going to be forced to seek their fortunes elsewhere? Or are we going to open opportunities to enrich their lives with the resources with which this state has been blessed? Or is Alaska just for the rich and powerful?

I am sick of hearing no, of denial and discrimination. I'm tired of getting nowhere and numb from the cold evasiveness of politics as usual. I'm not wanting any damned welfare or privileges: I'm not looking for a hand out, just a hand.

I see opportunities and I've sought them, but not got them. This country was built by dreamers and doers, not the passive and the politicians. Exxon us and BP you! Funny, they seem to get to do whatever they want to do. It doesn't matter what it takes, whether it's a park or refuge or forbidden place, they seem to run this whole damn human race.

Please consider what I've had to say; there is a better way!

Doug Welton is president of the Alaska Game Rancher's Association, a thirteen year resident of Alaska, and an advocate of the legalization of moose farming for the past four years.

GAME FARMING ARTICLES & EDITORIALS

Alaska could benefit from game ranching

Of Alaska wilderness and wildlife, relative to the rest of the nation, there s a very great amount. Empty lands? Not necessarily.

After the large acreage transfers authorized under the historic land settlement act have been accomplished, he state of Alaska will own about 104 million acres, about 28 percent of the otal Alaska land mass; Alaska Native people will own an additional 44 million acres, about 12 percent, or roughly ⅛ of all Alaska. Together the non-federal lands will represent a bit more than two-fifths or 40 percent of he total. The federal government will retain ownership of nearly three-fifths or 60 percent of Alaskan lands.

This vast acreage apparently is dedicated almost entirely to wilderness and wildlife purposes. Initially after transfer much of the land in Native private ownership will remain essentially wilderness with minimum use by people. Of the state's portion, nearly ⅔ has been classified for fish and wildlife. A tiny amount has been classified for agriculture, about 2 percent, and only 16 percent for commercial forestry production.

Then an inescapable fundamental top-priority question facing all Alaskans, including Native Alaskan communities, is working out some reasonable balance in the use of their lands.

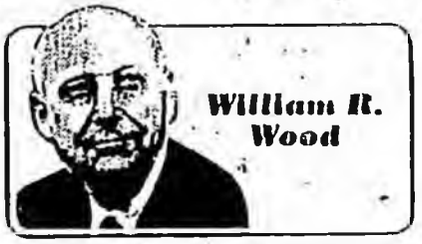
To resolve the fundamental "All Alaska" question will take more than emotionalism, fixed ideologies of any extreme, and selfish specialized interests, however attractive out of context, or in isolation from consideration of the general good.

Any acceptable resolution will require a painfully realistic assessment of potential land resource uses, creative concepts for immediate, midterm, and long-range uses that fit into a reasoned and well-balanced design for utilization. Truly this is a process without end—so long as the human mind and sprilt prevail on earth. There is no quick fix in prospect.

Given the above, is there a common-sense approach to bringing Alaskan wilderness and wildlife into greater production for the benefit of residents in an all-inclusive sense? That is what our endless quest for an answer to our land issue is all about.

The goal of leaving a place better than we found it, over-simplified for clarity, exemplifies husbandry-at-its-best of the natural resources available to us, in reality merely lent to us for a brief time.

For some of the state's marginal



William R. Wood

Views expressed here do not necessarily represent those of the Daily News-Miner

lands, including private ownership lands, game ranching holds much promise. It may offer the soundest approach to bringing a portion of Alaskan wilderness and wildlife into greater production to enhance the several "good-life" styles we enjoy in the North.

A strong case can be made for game ranching in Alaska, particularly in the Interior, but also in Southcentral and southwestern and northwestern areas. In Southeast Alaska the game ranching principle already is being used successfully in the fishing industry. The good case for can be spelled out readily in outline from successful game ranching operations elsewhere. Such experience and state-of-the-art practices must be examined closely in relation to the particular Alaska project or series of projects that undoubtedly will be proposed this year and subsequently.

For discussion, to whom does Alaska state wilderness wildlife belong? All of us? Then how can we best preserve it and increase its productivity in multiple ways for the common good?

How can a reasonable portion of Alaska state and private lands be set aside for game ranching, beginning perhaps with a pilot project or two?

There are several types of game ranching operations, including but not limited to: those government-operated for preservation of species and tourism, with culling of herds open for recreational hunting, including trophy taking, on a limited permit basis; private club-type operations with access limited to members and their guests only; and private operations for profit, featuring a wide range of income-producing possibilities, from meat production and trophy taking to general recreation, sightseeing, picture taking, and esthetic fulfillment to be derived from wilderness and wildlife.

Paramount for consideration of continued success for private enterprise game ranching is not only the preservation but the enhancement of scientific principles of both wilderness and wildlife. Attempts at "exploitation for profit only" are doomed to fail promptly. An enlightened, well informed people will not tolerate them.

To what extent might limited game ranching, especially in Interior Alaska, relieve pressure upon other wilderness lands and their wildlife? That pressure is building up dramatically. In particular, might a game ranching pilot project featuring Delta buffalo serve more than one good purpose, including resolution of the present farmer vs. buffalo conflict in the Delta agricultural area? Both/and rather than either/or.

Let's think this game ranching prospect through together beginning with a positive and constructive analysis of possibilities as well as problems. Let's reason together and act sensibly for the general good without political posturing or attempted manipulation. Is this too much to ask in face of the number one priority basic issue of land utilization in Alaska?

There is urgent necessity here that demands immediate attention.

FAIRBANKS NEWSMINER. 17 NOV. 1982

Capital Press 2/12/93

Let ag dept be responsible for alternative stock health

A bill in the Washington State Senate looks like a smart way to govern the domestic production of deer. It would rely more on sound science than would a House bill in the area of alternative livestock.

In the last few years, diet-conscious Americans have discovered that venison raised on farms is delicious and low in calories. Several years ago, a group of enterprising farmers in Oregon, Washington and British Columbia decided to cash in on a growing demand for this new product, which they found could be produced at about the same cost as beef but would sell for three to four times as much.

A marketing cooperative was established and the outlook was promising, but the Washington state Wildlife Department and Wildlife Commission last year used false information to justify an order that banned the import of deer from farms in Oregon and British Columbia for slaughter at a specialized USDA-inspected plant in Burlington, Wash. A ban on propagation of deer on Washington farms was overturned by a federal judge, but the ban on imports remained. Permanent regulations adopted in January permit farming of reindeer and fallow deer but outlaw sika deer.

Two bills before the Washington Legislature would give statutory protection to the alternative livestock industry. Deer farms would be regulated primarily by the Department of Agriculture under both bills, with a limited role for the Wildlife Department.

House Bill 1135 specifies that reindeer and fallow deer and Rocky Mountain elk would be designated as alternative livestock. Other species could be added if agreed to by the two departments. A three-member review board could make recommendations, but the Department of Wildlife would have virtual veto power over adding more species.

Senate Bill 5418 would allow farming of any species except those the two departments agree should not be farmed because they might pose a threat to native wildlife. The Senate bill specifies a review board to include chairs of the state veterinary board of governors, the Washington State University College of Veterinary Medicine and the WSU Natural Resource Science Department.

The Senate bill would be best because it would ensure that decisions would be based on sound science rather than the questionable, one-sided criteria used by the Department of Wildlife.

Legislative testimony has shown that disease problems on deer farms have occurred only in states where they were regulated by wildlife agencies. There have been no problems where animal disease control on deer farms is handled by state departments of agriculture.

The state veterinarian in the Washington Department of Agriculture has done an admirable job of protecting native wildlife as well as domestic livestock from tuberculosis, brucellosis and other animal diseases.

It's time for the Department of Wildlife to step aside and let the job be done by people who have demonstrated that they know what they are doing.

The preservation[ist] rient is a lucrative [business] and will continue to [be] as they can brainwa[sh] supporters into belie[ving] the world will come to [an] they don't keep the [donations] tions rolling in.

However, "Friend[s] support such monstr[osities] the Oregon Land Con[servation] and Development Co[mmission] are just as much of a [threat to] agriculture.

The next step a[fter] will be an agricultu[ral] tices act where [farmers] will be told exactly farm, when and if [pesticides] fertilizer or pesticide[s] used, and eventual[ly] crops to grow. The on[ly] will be to pay taxes.

The free-enterpri[se] with private propert[y] built the United Stat[es] ism will destroy it.

George Pe[ck]
Cornelius, Or.

Grazing fee hike countereconomic

To The Editor:

In President Clinto[n's] news release, he told t[he] he wanted to rais[e] fees on public l[and] would force a lot of ra[n]ch public lands.

President Clinton realize that most of land in the Western very marginal, lands t[hat] not worth homeste[ad] were taken back in t[he]

These lands produ[ce] to 150-pound-lighter calf than the more p[ro]ductive private lands. With calves at near $1 p[er] ranchers running [on]

HOUSE COMMITTEE REPORT

((9)

Date Referred: March 15, 1993 FURTHER REFERRALS: Finance

Date of Committee Action: 4/20/94

The RESOURCES Committee considered: CSSB 46(FIN)

CS FOR SENATE BILL NO. 46(FIN) AUTHORIZE MOOSE FARMING

"An Act relating to moose farming and relating to game farming."

RECOMMENDATIONS: [√] the same title
be replaced with HCS CSSB 46 (RES) [ ] a new title

[ ] have attached amendments(s)
[√] do pass
[ ] do not pass
[ ] no recommendations
[ ] individual recommendations
[ ] additional referral to the _____ Committee

ADOPTS: _____ letter of Intent

ATTACHES NEW FISCAL NOTE(s): (Dept)

[1] fiscal impact DNR

[2] zero fiscal note F&G, DEC

APPROVES PREVIOUS: (Dept/Date)

[ ] fiscal note(s) _____

[ ] zero fiscal note(s) _____

SIGNING DO PASS	DP	OTHER RECOMMENDATIONS	DNP	NR	AM

CHAIRMAN'S SIGNATURE

SB

46

SFIN

FILE

SENATE FINANCE COMMITTEE REPORT

DATE: 2/5/93

FURTHER:

DATE TURNED INTO OFFICE: 3-3-93

The Finance Committee considered SENATE BILL NO. 46

"An Act authorizing moose farming."

and recommends:

[✓] replace with ____ CS SB 46 (FINANCE)

or [ ] adopt previous ____ CS _____ (_____)

[ ] attaches amendment(s)

[ ] same title
[✓] new title
[ ] technical title change (HB only)

[ ] adopts _____ Letter of Intent

[ ] further referral to the _____

[✓] do pass

[ ] do not pass

[ ] no recommendation

[ ] individual recommendations

CS (Fin) coming

NEW FISCAL NOTES

Department	Date	Zero	Fiscal
DNR	2-17-93	0	
DF&G	3-2-93	0	
DEC	3-1-93	0	

PREVIOUS FISCAL NOTES

Department	Date	Zero	Fiscal

[ ] Appropriation No Fiscal Note

DO PASS. Tim Kelly, Steve Rieger, Bert Sharp, Brad

OTHER RECOMMENDATIONS: Do Not pass

1. _____
Co-Chair: Signature/Recommendation

2. Irene Pearce - 10 pass
Co-Chair: Signature/Recommendation

FISCAL NOTE

STATE OF ALASKA
1993 LEGISLATIVE SESSION

BILL NO. SB46

Revision Date: Original
Department Affected: Natural Resources
Title: "An act authorizing moose farming"
BRU: Agricultural Development
Components: Agricultural Developmen
Sponsor: Senators Miller, Frank, Pearce
Requestor: Senators Miller, Frank, Pearce
Component Serial No. 455

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES						
TRAVEL	0.0	1.0	2.0	5.0	10.0	10.0
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND&STRUCTURES						
GRANTS,CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	1.0	2.0	5.0	10.0	10.0
CAPITAL						
REVENUE fund source:						

FUNDING: (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	0.0	1.0	2.0	5.0	10.0	10.0
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
TOTAL	0.0	1.0	2.0	5.0	10.0	10.0

POSITIONS:

FULL-TIME	0	0	0	
PART-TIME	0	0	0	
TEMPORARY	0	0	0	

Changes in CSSB 46 (FIN) reflect NO FISCAL CHANGE from the original fiscal note. This fiscal note is appropriate.
3-3-93 (date) (Comte Aide (initial))

Estimate of current year (FY93) Impact: $ No fiscal impact anticipated

ANALYSIS: (Attach a separate page if necessary)
The Department of Fish & Game currently has authority to declare buffalo and musk oxen surplus and allow for their private use. This bill would allow moose to be declared surplus and thus allow the raising and breeding of moose as domestic stock for commercial purposes, or for scientific and educational purposes. The bill will also authorize the sale of moose meat.

Prepared by: John Cramer, Director
Phone: 745-7200
Division: Agricultural Development
Date: 17-Feb-93
Approved by Commissioner: For Glenn A. Olds (Claire McCord)
Date: 17-Feb-93
Agency: Department of Natural Resources

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FISCAL NOTE

STATE OF ALASKA
1993 LEGISLATIVE SESSION

BILL NO. CSSB 46(FIN)

Revision Date: 3/2/93

Department Affected: Fish and Game

Title: An Act relating to moose farming and relating to game farming.

BRU: Wildlife Conservation

Component: Wildlife Conservation

Sponsor: Senator Miller

Requestor: Senate Resources

COMPONENT SERIAL NO. 0473

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	0	0	0	0	0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE FUND SOURCE:	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

1002 Federal Receipts	0	0	0	0	0	0
1003 GF Match	0	0	0	0	0	0
1004 GF	0	0	0	0	0	0
1005 GF/Program Receipts	0	0	0	0	0	0
1006 GF/MHTIA	0	0	0	0	0	0
Other	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

Estimate of current year (FY93) impact: $ 0

ANALYSIS: ADF&G has no regulatory authority for game farming under CSSB 46(FIN) and therefore we anticipate a zero fiscal note. **See attached page for extraordinary costs** that cannot be predicted or estimated in advance.

Prepared By: David G. Kelleyhouse

Phone: 465-4190

Division: Wildlife Conservation

Date: March 2, 1993

Approved by Commissioner: Don Collinsworth

Agency: Department of Fish and Game

Date: 3/4/93

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Under this bill, regulatory authority for moose farming and game farming is under the Departments of Natural Resources and Environmental Conservation. The ADF&G is limited to one-time approval of fencing and recording information received by recipients of moose. Consequently, we do not anticipate additional ordinary operating costs. In the department's view, however, a regulatory effort sufficient to adequately protect Alaska's wildlife resources in the event this bill becomes law would have significant fiscal impacts that should be evident on Fiscal Notes provided by DNR, DEC, and the Division of Fish and Wildlife Protection of DPS.

Under any game farming bill, we anticipate extraordinary but unpredictable costs to the department and state. For example, (1) control of disease: Alberta has spent over $10 million and destroyed over 2,000 game farm animals in an unsuccessful attempt to control an outbreak of Tb; (2) capturing escaped animals: an unsuccessful effort to prevent escaped game farmed bison in Delta Junction from mixing with the Delta Bison Herd cost the department approximately $3500 in 1991; (3) predator/prey conflicts: the department periodically has had to respond to demands from livestock ranchers (cattle and bison) on Kodiak Island for control of brown bears.

If the game farming bill were amended to incorporate "recommendations" from the ADF&G *Revised Position Paper*, we would prepare a fiscal note that includes a 12-month, full-time Wildlife Biologist III and associated operating expenditures. This employee would be responsible for coordinating with the state veterinarian, making personal annual inspections of all facilities housing captive game animals (including moose, elk, bison, muskoxen and fur farm animals), issuing and renewing permits, collating and recording reported information from game farmers, keeping abreast of genetic and disease problems identified in other jurisdictions, coordinating and directing all efforts to recover escaped animals and control outbreaks of diseases or parasites in wild game populations.

FISCAL NOTE

STATE OF ALASKA
1993 LEGISLATIVE SESSION

BILL NO. CSSB46 (FIN)

Revision Date: March 3, 1993
Title: An Act Authorizing Moose Farming

Department Affected: Environmental Conservation
BRU: Enviromental Health
Componen Animal & Dairy

Sponsor: Senator Miller
Requestor: Senate Finance

COMPONENT SERIAL NO. 647

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99
PERSONAL SERVICES	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
TRAVEL	0.0	0.0	0.0	0.0	0.0	0.0
CONTRACTUAL	0.0	0.0	0.0	0.0	0.0	0.0
SUPPLIES	0.0	0.0	0.0	0.0	0.0	0.0
EQUIPMENT	0.0	0.0	0.0	0.0	0.0	0.0
LAND&STRUCTURES	0.0	0.0	0.0	0.0	0.0	0.0
GRANTS,CLAIMS	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*
CAPITAL						
REVENUE FUND SOURCE:						

FUNDING:

1002 FEDERAL RECEIPTS	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF MATCH	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/PROGRAM RECPT	0.0	0.0	0.0	0.0	0.0	0.0
1006 GF/MHTIA	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

POSITIONS: NONE

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year (FY93) impact: $ NONE

ANALYSIS: (Attach a separate page if necessary.)
*Zero fiscal impact providing number of animals farmed is limited to 1000 or less.

Prepared by: Kit Ballentine
Division: Environmental Health
Phone: 465-5280
Date: 3/1/93

Approved by Commissioner: Daniel Adaci
Agency: Department of Environmental Conservation
Date: 3/1/93

Distribution (by preparer):Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

8-LS0371\J
Utermohle
3/1/93

CS FOR SENATE BILL NO. 46(FIN)

IN THE LEGISLATURE OF THE STATE OF ALASKA

EIGHTEENTH LEGISLATURE - FIRST SESSION

BY THE SENATE FINANCE COMMITTEE

Offered:
Referred:

Sponsor(s): SENATORS MILLER, Frank, Pearce, Lincoln, Sharp

A BILL

FOR AN ACT ENTITLED

"An Act relating to moose farming and relating to game farming."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 03.05.010(a) is amended to read:

(a) The commissioner of natural resources shall

(1) direct, administer, and supervise promotional and experimental work, extension services, and agricultural projects for the purpose of promoting and developing the agricultural industry within the state including such fields as horticulture, dairying, cattle raising, fur farming, **game farming,** grain production, vegetable production, and development of other agricultural products;

(2) procure and preserve all information pertaining to the development of the agricultural industry and disseminate that information to the public;

(3) assist prospective settlers and others desiring to engage in the agricultural industry in the state with information concerning areas suitable for agriculture and other activities and programs essential to the development of the

agricultural industry in the state;

(4) review the marketing, financing, and development of agricultural products inside the state including transportation, with special emphasis upon local production, and negotiate for the marketing of agricultural products of the state with federal and state agencies operating in the state;

(5) regulate and control the entry into the state and the transportation, sale, or use inside the state of plants, seeds, vegetables, shell eggs, fruits and berries, nursery stock, animal feeds, remedies and mineral supplements, fertilizers, and agricultural chemicals in order to prevent the spread of pests, diseases, or toxic substances injurious to the public interest, and to protect the agricultural industry against fraud, deception, and misrepresentation; in this connection the commissioner may require registration, inspection, and testing, and establish procedures and fees; and

(6) regulate **game** [THE] farming of elk **and moose** in a manner similar to the manner in which the commissioner regulates domestic animals and livestock, to the extent that is appropriate.

*** Sec. 2.** AS 03.05.011(b) is amended to read:

(b) The commissioner of environmental conservation shall regulate **game** [THE] farming of elk **and moose** in a manner similar to the manner in which the commissioner regulates domestic animals and livestock, to the extent that is appropriate.

*** Sec. 3.** AS 03.05 is amended by adding a new section to read:

Sec. 03.05.075. IMPORTATION OF MOOSE. A person may not import moose into the state for the purpose of moose farming.

*** Sec. 4.** AS 03.25.010 is amended to read:

Sec. 03.25.010. COMMISSIONER AUTHORIZED TO EMPLOY VETERINARIANS. The commissioner may either independently or in cooperation with the United States Department of the Interior or a college or a university or like institution employ veterinarians for periods found to be to the best advantage for the purpose of aid and service to the fur raising industry **and game farming industry**, and for the purpose of aid and service to those engaged in raising livestock and other domestic animals.

*** Sec. 5.** AS 03.25.020 is amended to read:

Sec. 03.25.020. DUTIES OF VETERINARIANS. Veterinarians shall

(1) visit the fur farms **and game farms** of the state, study problems incidental to raising fur bearing animals **and captive game animals** and advise those engaged in the industry in matters pertaining to the breeding and care of fur bearing animals **and captive game animals** and the prevention and cure of diseases of fur bearing animals **and captive game animals**;

(2) prepare, publish, and distribute such data as the veterinarian, with the advice and consent of the commissioner, considers useful to those engaged in the industry;

(3) make reports to the commissioner when required by the commissioner for transmittal to the state legislature;

(4) initiate and carry on experiments, on or in connection with a fur farm **or game farm**, with relation to the care and feeding of fur bearing animals **or captive game animals**, the improvements of the breed, or the cure or prevention of any disease to which they may be subject or the extermination of the parasites by which they may be attacked, and in this connection employ and pay for the necessary assistance and rent and use of necessary facilities;

(5) perform other duties as may be prescribed by the commissioner as are not inconsistent with the duties specifically imposed by this chapter;

(6) study problems incidental to the raising of livestock, [AND] other domestic animals, **and captive game animals,** and advise those engaged therein upon matters pertaining to the breeding, care, and the prevention and cure of diseases of livestock, [AND] other domestic animals**, and captive game animals;**

(7) issue a certificate to a person, group, association, partnership, or corporation who has applied to the Department of Fish and Game to receive surplus moose under AS 16.40.010 if the applicant has demonstrated to the satisfaction of the veterinarian that the applicant

(A) has the ability to prevent and detect the spread of disease and parasites from

(i) captive moose to wild game; and

(ii) domestic animals to captive moose; and

(B) possesses facilities sufficient to prevent injury to animals and handlers.

* **Sec. 6.** AS 03.40.010 is amended to read:

Sec. 03.40.010. BRANDS AND MARKS. Any person owning cattle, reindeer, bison, **musk ox, moose,** [MUSKOX,] sheep, horses, mules, or asses [,] may adopt a brand or mark. After recording the brand or mark as provided in AS 03.40.030, the person has the exclusive right to its use.

* **Sec. 7.** AS 03.40.050 is amended to read:

Sec. 03.40.050. USE WITHOUT CERTIFICATE PROHIBITED. A person may not brand any horse, cattle, reindeer, bison, **musk ox, moose,** [MUSKOX] mule, or ass, unless the person using the brand holds a written certificate of acceptance from the commissioner.

* **Sec. 8.** AS 16.40.010 is amended to read:

Sec. 16.40.010. DISPOSITION OF SURPLUS **GAME ANIMALS** [BUFFALO AND MUSK OXEN]. Whenever it is determined by the department that a surplus [EXISTS IN THE HERDS] of buffalo, **moose, or** [AND] musk oxen **exists** [UNDER ITS CONTROL], the department may, under regulations adopted by it, grant the surplus or portions of **the surplus** [IT] to persons, groups, associations, partnerships, or corporations for the purpose of raising and breeding the animals as domestic stock for commercial purposes, or for scientific and educational purposes. A person, group, association, partnership, or corporation may receive animals only after

(1) obtaining a certificate from a veterinarian under AS 03.25.020, if the person, group, association, partnership, or corporation intends to raise and breed moose; and

(2) proving to the satisfaction of the department

(A) [(1)] intent to raise and breed the animals; and

(B) [(2)] possession of facilities for maintaining the animals under positive control.

* **Sec. 9.** AS 16.40.010 is amended by adding new subsections to read:

(b) A person, including a group, association, partnership, or corporation, who

receives moose under (a) of this section after the effective date of this subsection shall

(1) brand or mark each animal received and the progeny of any animal received with an appropriate mark, brand, or tattoo as approved by the commissioner of natural resources under AS 03.40 and with a highly visible, numbered ear tag;

(2) register the animals received, other captive game animals however acquired, and the progeny of those animals with the commissioner of fish and game, the Department of Natural Resources, and the Department of Environmental Conservation within 30 days after the animals are acquired;

(3) construct and maintain a fence that is adequate to prevent the escape of the animals and their progeny and to exclude wild game;

(4) establish and maintain a contractual relationship with a veterinarian to examine the animals and their progeny semi-annually;

(5) notify the commissioner of fish and game of the birth, sale, slaughter, escape, or death of the animals and their progeny;

(6) provide at the person's cost for a complete necropsy by a veterinarian approved by the commissioner of fish and game to determine the cause of death of all the animals and their progeny;

(7) notify the commissioner of fish and game within 24 hours after wild big game enters a facility where the animals or their progeny are present.

(c) A person who receives moose under (a) of this section after the effective date of this subsection may not raise moose and domestic livestock in the same fenced area.

* **Sec. 10.** AS 16.40.020 is amended to read:

Sec. 16.40.020. SALE OF MEAT. The sale of buffalo, **moose,** or musk oxen meat resulting from the slaughter of animals obtained under AS 16.40.010, or their offspring is authorized. **The slaughter of animals and sale of meat authorized under this section are subject to AS 03, regulations adopted under AS 03, and other applicable law.**

Back-up

DIVISION OF LEGAL SERVICES

LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

MEMORANDUM February 1, 1993

SUBJECT: Permits to possess live game (SB 46)

TO: Senator Mike Miller
ATTN: Sharon Clark

FROM: George Utermohle GU
Legislative Counsel

You have asked two questions regarding permits to possess live game.

ONE: What is the meaning of "surplus" as used in AS 16.40.010?

The term "surplus" is not defined for purposes of AS 16.40.010.[1] In the absence of a particular legal or technical definition for a term, a term is given its ordinary and common meaning which can be determined by consulting a dictionary. AS 01.10.040; Foreman v. Anchorage Equal Rights Commission, 779 P.2d 1199 (Alaska 1989). According to the dictionary[2], the definition of "surplus" is "a quantity or amount over and above what is needed or used; something left over; excess." Applying this definition of "surplus" to AS 16.40.010, it is apparent that this section provides for the disposition of buffalo and musk oxen that are excess to needs of the state to retain buffalo and musk oxen for other uses.

1/ AS 16.40.010 states:

> DISPOSITION OF SURPLUS BUFFALO AND MUSK OXEN. Whenever it is determined by the department that a surplus exists in the herds of buffalo and musk oxen under its control, the department may, under regulations adopted by it, grant the surplus or portions of it to persons, groups, associations, partnerships, or corporations for the purpose of raising and breeding the animals as domestic stock for commercial purposes, or for scientific and educational purposes. A person, group, association, partnership, or corporation may receive animals only after proving to the satisfaction of the department
>
> (1) intent to raise and breed the animals; and
>
> (2) possession of facilities for maintaining the animals under positive control.

2/ Webster's New World Dictionary of the American Language, 2d College Edition, Simon and Schuster, N.Y., N.Y., 1980, p. 1433.

Under AS 16.40.010, the Department of Fish and Game has authority to define what "surplus" means and to determine the number of animals that are surplus and available for grants to private parties. 1986 Inf. Op. Alaska Atty. Gen., July 31 (661-86-0532). The department may define "surplus" broadly to mean those animals that are in excess of needs for only certain specified consumptive and nonconsumptive uses or narrowly to mean only those animals that are in excess of needs for all other uses. In defining "surplus," the department is constrained by applicable provisions of the Alaska Constitution and other statutes. The mandate to manage fish and game on a sustained-yield basis under article VIII, section 4 of the Alaska Constitution precludes the disposition of buffalo and musk oxen that are necessary to maintain buffalo and musk oxen populations at sustained-yield levels. Subsistence use of certain game populations identified by the Board of Game has a preference over all other consumptive uses of those populations including grants to private parties for commercial use. AS 16.05.258. Thus under AS 16.40.010, "surplus" means excess to the number of animals necessary to satisfy constitutional and statutory mandates for the management or utilization of buffalo and musk oxen, and may also mean excess to the number of animals needed for other uses, as defined by the department.

The Department of Law has recommended that the Department of Fish and Game adopt regulations to define "surplus." 1986 Inf. Op. Alaska Atty. Gen., July 31 (661-86-0532). The Department of Fish and Game has not adopted such regulations as yet.

TWO: Do AS 16.05.340(b) and AS 16.40.010 - 16.40.030 achieve the same ends?

The short answer is no.

AS 16.05.340(b) authorizes the commissioner of fish and game to issue what are known as collecting permits and to issue permits to collect bivalve spat and wild fur animals.[3/] Collecting permits authorize the permittee to collect fish and game for scientific, propagative, and educational purposes. It is important to note that subsection (b) does not provide that fish or game taken under a collecting permit

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3/ AS 16.05.340(b) states:

> (b) The commissioner may issue without cost a permit to collect fish and game, including fur animals, subject to limitations and provisions that are appropriate, for a scientific, propagative, or educational purpose. The commissioner also may issue a permit for the collection of bivalve spat for use in connection with an aquatic farm. In addition, the commissioner shall issue a permit for the collecting of wild fur animals for improving the genetic stock of fur farm animals. Permits issued under this subsection shall be in accordance with current sustained yield management practices for the species of wild game for which the permit is requested. The annual permit fee for an Alaska resident to collect wild fur animals for fur farming purposes is the same as the fee for resident trappers.

may be used for commercial purposes. In the two instances where animals (oivalve spat and wild fur animals) may be taken and used for a commercial purpose under subsection (b), the subsection expressly authorizes the issuance of a separate permit to collect those animals for that purpose. The Department of Law has concluded that subsection (b), when construed in light of other provisions AS 16.05, provides for private possession of game, but not private ownership of game. 1986 Inf. Op. Alaska Atty. Gen., November 14 (661-87-0149). Other provisions of AS 16.05 allow for continued regulation of possession of game acquired under a collecting permit. See, AS 16.05.930(a) and (d).

AS 16.40.010 authorizes the Department of Fish and Game to grant ownership of surplus buffalo and musk oxen to private parties for commercial purposes or for scientific and educational purposes, if the private parties prove an intent to raise and breed the animals and possess facilities for holding the animals. Though AS 16.40.-010 does not expressly state that it provides for the transfer of ownership of buffalo and musk oxen, it is implicit in the section that a transfer of ownership occurs as the result of the grant of the animals to a private party.[4/] AS 16.40.020 authorizes the sale of the meat resulting from the slaughter of animals subject to a grant under AS 16.40.010.[5/] Except as provided under AS 16.40.030[6/] or under the terms of the agreement granting the animals to the private parties, once the transfer of ownership occurs the animals are generally outside of the jurisdiction of the department because they have become private property and are no longer game animals. See, AS 16.05.940(18).

There are significant differences between the purposes and effects of AS 16.05.340(b) and AS 16.40.010 - 16.40.030. In particular, AS 16.40.010 - 16.40.030 provide for the commercial use of buffalo and musk oxen and for transfer of ownership of buffalo and musk oxen, while AS 16.05.340(b) does not. Thus AS 16.05.340(b) and AS 16.40.010 - 16.40.030 are not redundant statutes.

4/ Further evidence of the intent that AS 16.40.010 provide for the transfer of ownership is found in the title of HB 121, Second Legislature, the bill that enacted AS 16.40.010 - 16.40.030. HB 121 was entitled: An Act relating to the disposition of surplus buffalo and musk oxen; providing for private ownership.

5/ AS 16.40.020 states:

> SALE OF MEAT. The sale of buffalo or musk oxen meat resulting from the slaughter of animals obtained under AS 16.40.010, or their offspring is authorized.

6/ AS 16.40.030 states:

> INFORMATION REQUIRED. The recipient of animals obtained under AS 16.40.010 shall furnish the department the information the department requests regarding the status of the animals or their offspring.

If I may be of further assistance, please advise.

GU:mi:pl
93-014.mai

Alaska State Legislature

SENATOR
MIKE MILLER
P O Box 55094
North Pole, Alaska 99705
(907) 488-0862

Senate District O

While in June in
State Capitol
Juneau Alaska
99801-1182
(907) 465-4976

Senate

To: Senator Steve Frank, Co-Chair
Senator Drue Pearce, Co-Chair
Senate Finance Committee

From: Senator Mike Miller

Re: SB 46 - Authorizing Moose Farming

Date: February 5, 1993

I would like to request that you schedule a hearing in the Senate Finance Committee on Senate Bill 46 - "An act authorizing moose farming."

The back-up for the bill is attached. If you need additional information please contact Sharon or Teresa at 4976.

Thank you for your consideration.

Alaska State Legislature

SENATOR
MIKE MILLER
P O Box 55094
North Pole, Alaska 99705
(907) 488-0862

Senate District Q

Senate

While in Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-4976

SPONSOR SUMMARY

SB 46

The purpose of this legislation is to amend state law relating to game farming and to allow moose farming if the Department of Fish and Game determines that a surplus of moose exists. If there is an existing suplus,it can grant the surplus or portions of it to persons, groups, associations, partnerships or corporations for the purpose of raising and breeding domestic stock for commercial purposes, or for scientific and educational purposes.

This bill also amends existing statutes, to allow the sale of commercially raised moose meat.

Game farming can provide opportunities for food production, economic diversification, and social stability in Alaskan communities where the development of alternative resources is limited or nonexistent. It can provide jobs and productive activity for people on a sustainable basis. Game farming can be a significant economic and social benefit for Alaskans.

In the specific case of farming, permissible species can be raised on private land bases and help add this missing dimension of management to our State goals.

AMENDMENT TO PROPOSED CSSB 46

PAGE 3, LINE 31 BY SHARP

7) issue a certificate to a person, group, association, partnership or corporation who has applied to the Department of Fish and Game to receive surplus moose under AS 16.40.010 if the applicant has demonstrated to the satisfaction of the veterinarian

(A) that the applicant has the ability to prevent and detect the spread of disease and parasites from

(i) [(A)] captive moose to wild game; and

(ii) [(B)] domestic animals to captive moose;

and,

(B) possession of facilities sufficient to prevent injury to animals or handlers.

(now line 25)

SENATE FINANCE COMMITTEE
Amendment Number: 2
Bill Number: CSSB 46
Sponsor: Sharp Date: 3/1/93
Logged In By: [illegible]

SENATE AMENDMENT

By Senator Frank

To: Proposed CS SB 46 SENATE BILL No. 46

To: _____ HOUSE BILL No. _____

PAGE: 5 LINE: 18 and 19

DELETE: After word "lifestock" delete "on the same facility".

ADDE After word "livestock" add "in the same fenced area".

(now line 21 & 22)

8-LS0371\E
Utermohle
2/26/93

CS FOR SENATE BILL NO. 46( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

EIGHTEENTH LEGISLATURE - FIRST SESSION

BY

Offered:
Referred:

Sponsor(s): SENATORS MILLER, Frank, Pearce, Lincoln, Sharp

A BILL

FOR AN ACT ENTITLED

"An Act relating to moose farming and relating to game farming."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 03.05.010(a) is amended to read:

(a) The commissioner of natural resources shall

(1) direct, administer, and supervise promotional and experimental work, extension services, and agricultural projects for the purpose of promoting and developing the agricultural industry within the state including such fields as horticulture, dairying, cattle raising, fur farming, <u>game farming,</u> grain production, vegetable production, and development of other agricultural products;

(2) procure and preserve all information pertaining to the development of the agricultural industry and disseminate that information to the public;

(3) assist prospective settlers and others desiring to engage in the agricultural industry in the state with information concerning areas suitable for agriculture and other activities and programs essential to the development of the

agricultural industry in the state;

(4) review the marketing, financing, and development of agricultural products inside the state including transportation, with special emphasis upon local production, and negotiate for the marketing of agricultural products of the state with federal and state agencies operating in the state;

(5) regulate and control the entry into the state and the transportation, sale, or use inside the state of plants, seeds, vegetables, shell eggs, fruits and berries, nursery stock, animal feeds, remedies and mineral supplements, fertilizers, and agricultural chemicals in order to prevent the spread of pests, diseases, or toxic substances injurious to the public interest, and to protect the agricultural industry against fraud, deception, and misrepresentation; in this connection the commissioner may require registration, inspection, and testing, and establish procedures and fees; and

(6) regulate **game** [THE] farming of elk **and moose** in a manner similar to the manner in which the commissioner regulates domestic animals and livestock, to the extent that is appropriate.

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(b) The commissioner of environmental conservation shall regulate **game** [THE] farming of elk **and moose** in a manner similar to the manner in which the commissioner regulates domestic animals and livestock, to the extent that is appropriate.

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(1) visit the fur farms **and game farms** of the state, study problems incidental to raising fur bearing animals **and captive game animals** and advise those engaged in the industry in matters pertaining to the breeding and care of fur bearing animals **and captive game animals** and the prevention and cure of diseases of fur bearing animals **and captive game animals**;

(2) prepare, publish, and distribute such data as the veterinarian, with the advice and consent of the commissioner, considers useful to those engaged in the industry;

(3) make reports to the commissioner when required by the commissioner for transmittal to the state legislature;

(4) initiate and carry on experiments, on or in connection with a fur farm **or game farm**, with relation to the care and feeding of fur bearing animals **or captive game animals**, the improvements of the breed, or the cure or prevention of any disease to which they may be subject or the extermination of the parasites by which they may be attacked, and in this connection employ and pay for the necessary assistance and rent and use of necessary facilities;

(5) perform other duties as may be prescribed by the commissioner as are not inconsistent with the duties specifically imposed by this chapter;

(6) study problems incidental to the raising of livestock, [AND] other domestic animals, **and captive game animals,** and advise those engaged therein upon matters pertaining to the breeding, care, and the prevention and cure of diseases of livestock, [AND] other domestic animals, **and captive game animals;**

(7) issue a certificate to a person, group, association, partnership, or corporation who has applied to the Department of Fish and Game to receive surplus moose under AS 16.40.010 if the applicant has demonstrated to the satisfaction of the veterinarian that the applicant has the ability to prevent and detect the spread of disease and parasites from

(A) captive moose to wild game; and

(B) domestic animals to captive moose.

* **Sec. 6.** AS 03.40.010 is amended to read:

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Sec. 03.40.050. USE WITHOUT CERTIFICATE PROHIBITED. A person may not brand any horse, cattle, reindeer, bison, **musk ox, moose,** [MUSKOX] mule, or ass, unless the person using the brand holds a written certificate of acceptance from the commissioner.

* **Sec. 8.** AS 16.40.010 is amended to read:

Sec. 16.40.010. DISPOSITION OF SURPLUS **GAME ANIMALS** [BUFFALO AND MUSK OXEN]. Whenever it is determined by the department that a surplus [EXISTS IN THE HERDS] of buffalo, **moose, or** [AND] musk oxen **exists** [UNDER ITS CONTROL], the department may, under regulations adopted by it, grant the surplus or portions of **the surplus** [IT] to persons, groups, associations, partnerships, or corporations for the purpose of raising and breeding the animals as domestic stock for commercial purposes, or for scientific and educational purposes. A person, group, association, partnership, or corporation may receive animals only after

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(2) proving to the satisfaction of the department

(A) [(1)] intent to raise and breed the animals; and

(B) [(2)] possession of facilities for maintaining the animals under positive control.

* **Sec. 9.** AS 16.40.010 is amended by adding new subsections to read:

(b) A person, including a group, association, partnership, or corporation, who receives moose under (a) of this section after the effective date of this subsection shall

(1) brand or mark each animal received and the progeny of any animal received with an appropriate mark, brand, or tattoo as approved by the commissioner

of natural resources under AS 03.40 and with a highly visible, numbered ear tag;

(2) register the animals received, other captive game animals however acquired, and the progeny of those animals with the commissioner of fish and game, the Department of Natural Re rces, and the Department of Environmental Conservation within 30 days after the animals are acquired;

(3) construct and maintain a fence that is adequate to prevent the escape of the animals and their progeny and to exclude wild game;

(4) establish and maintain a contractual relationship with a veterinarian to examine the animals and their progeny semi-annually;

(5) notify the commissioner of fish and game of the birth, sale, slaughter, escape, or death of the animals and their progeny;

(6) provide at the person's cost for a complete necropsy by a veterinarian approved by the commissioner of fish and game to determine the cause of death of all the animals and their progeny;

(7) notify the commissioner of fish and game within 24 hours after wild big game enters a facility where the animals or their progeny are present.

(c) A person who receives moose under (a) of this section after the effective date of this subsection may not raise captive game animals and domestic livestock on the same facility.

*** Sec. 10.** AS 16.40.020 is amended to read:

Sec. 16.40.020. SALE OF MEAT. The sale of buffalo**, moose,** or musk oxen meat resulting from the slaughter of animals obtained under AS 16.40.010, or their offspring is authorized. **The slaughter of animals and sale of meat authorized under this section are subject to AS 03, regulations adopted under AS 03, and other applicable law.**

2-17-93
SFC-93
#29
S.122

My name is Opal Welton
6810 Steese Hwy 36.4 m.
WELTOWN/FAI, ALASKA 99712

My husband, Doug and I have studied domestic moose extensively for five of the 14 years we've lived in Alaska. We've visited the M.R.C. (Moose Research Center), on the Kenai Peninsula. We've visited three game ranches with moose in Canada. We've visited with and have information from Dr. Lyle Renecker, who has had eight years experience with domestic moose. We have many stories and historic photos of people and their tame moose.

Based on our studies we are supporting Senate Bill 46, Moose Farming. There are FOUR Gov. agencies who are in support of this bill, NATURAL RESOURCES, COMMERCE AND ECONOMIC DEVELOPMENT, HEALTH AND SOCIAL SERVICES, ENVIRONMENTAL CONSERVATION. The Fish and Game Department does not have to shoulder all (or perhaps even any) of the responsibilities for allowing moose farming.

Surplus

Fish & Game Dept maintain that surpluses do not exist. However there are regularly 10 to 20 orphaned moose given to zoos and research every year. These orphaned moose would DIE in the wild if not raised by people. These are the surplus moose I'm talking about. I'm also talking about moose hit by traffic who are not beyond help. There may also be surplus moose where they need to be relocated due to lack of adequate food and habitat.

Domestic Characteristics

Tame moose are highly tractable, that is to say they are not interested in wondering off. At one time the M.R.C. had their tame moose herds trained to come to the call of a whistle. We also have a story from Russia where the tame moose are bugled in in the morning and at night for milking. Here we see that extensive fencing may not be necessary for moose in remote areas.

Most people who could have moose would only be able to have a few. The number of moose raised in any particular area would depend on the condition of the land, and the age and purpose of the animals. A small scale frontier farm would typically raise and keep approximately two to six moose, depending on age and purpose. Peoples in the remote villages with the vast amount of land around them could possibly have larger herds of moose. Moose need alot of land!!!

Moose are much better suited to the land then cattle and horses. Keeping cattle and horses in Alaska are not only expensive to feed, they require an incredible amount of

care in winter. They require water during winter months, while moose only require snow. When the weather dips to anything much colder than -40 you must concern yourself with making sure cattle and horses are in the barn, as they burn alot of energy to keep warm and can drop weight rapidly during a cold spell. Moose will survive outside in extremely cold temperatures without need of a barn, bedding down in the snow.

The game farmer can create food for his moose by enhancing the willows in natural moose habitat. New growth on willows provides moose with over a yard of edible sprouts each year, while old growth only provides approximately an inch worth of food. This new growth is also available to other wild game in the area. Supplemental food sources are also available to prevent overbrowsing of natural habitats on the game farms. A pelleted moose food is available in Fairbanks feed stores. In Russia they have success in feeding cabbage and beets during the winter to their tame moose herds. On our visits to game ranches in Canada we received a 'recipe' for making our own moose feed. We also have the breakdown of the M.R.C. Ration.

Benefits

Moose farming will provide many benefits to the rural economies of Alaska, from tourist and educational opportunities, production of meat, milk and many by-products. Most importantly, it will create employment in rural areas where jobs are almost non-existant, allowing people to meet their subsistence needs.

The game ranches in Canada found it necessary to give a tour of their place once or twice a week since they had an overwhelming public interest from local individuals, schools, and tourists interested in viewing, photographing, and learning about the animals. The money people pay to see the animals went towards helping to buy feed, as also is the case with the muskox farm near Fairbanks.

Moose farming will furnish a reliable source of traditional food for Alaskans thereby relieving pressure on wild stocks allowing more viewing and hunting. The by-products can be used, such as tanned hides, and antlers can be made into clothing or crafts, tools, jewelery, fertilizer.

Though moose do not provide large quantities of milk, they provide more milk with more milkings, Russia has sixth generation moose and has found that moose cows can be bred for milk production (like cattle), a moose can produce about a gallon of milk a day, this can be increased. Moose milk is richer than domestic cow's milk, containing up to 11% fat, 9% protein, and a host of vitamins and

micro-elements. Tame cows are said to be very gently and easily milked in the field untethered. Moose milk could provide my children fresh healthy milk along with milk products such as butter, cheese, yogurt.

Any Problems?
It is suggested poaching will increase if the meat can be sold commercially. This is improbable since the government inspection of animals before and after slaughter is required under the rigorous standards applied to sale of any commercial meat. In everything there are the unscrupulous peoples such as with banks and bankrobbers, we do not shut down the banks from the majority who are good because of the few who are bad.

From examples around us, we found the M.R.C. does not have alot of problems with predators, occasionally they live trap and relocate bears. We most recently visited the tame deer research farm (Sitka Black tail) here in Juneau, with high bear populations. They successfully keep bears out with two, close to the ground, electric wires. Probably there are several possible solutions. Also keep in mind that game farms have a positive overflowing effect to the surrounding wild life, thus the predators would have more game to content themselves with out side the gamefence.

A look at the examples of the M.R.C. also shows us they have never had a disease problem, and in fact their biggest problem is keeping the wild moose out. Game farmers have so much invested in their stock that they are the most concerned about their animals health and safty.. It is a FACT that the moose in Alaska do not have disease problems. Also cattle and other livestock which have had disease problems in the past and present are not outlawed but solutions are found and the appropriate changes are made.

I believe our facts give a complete picture of the benefits to moose farming in Alaska. I would like everyone to note that at the first hearing on this bill, there were FOUR testimonies concerned with the Fish & Game Department's being less than honest about this issue. A highly respected biologist told us, "They wont out right lie to you, they just wont tell the whole truth."

We have information available on all of the above, thank you.

Opal

POSITION PAPER

Department of Commerce & Economic Development

SB 46 An Act authorizing Moose Farming

The bill is intended to increase Alaskans' options to provide red meat for personal and commercial use.

As rural cash sources deplete under declining state budget scenarios, it will become more important that tools exist for citizens to provide or acquire food supplies for their families. Personal use species will acquire more significance in the non-urban economy. The animals envisioned as breeder stock for this use are indigenous Alaskan animals which bear no risk of importing disease or contamination from other geographic areas.

The animals which are determined to be "surplus" would generally be from two sources: orphaned calves which would not be expected to survive on their own; and animals which would have elevated mortality due to natural conditions leading to diminished carrying capacity of the animal's natural habitat.

Over a 4 1/2 year period, an average of 200 animals was killed or mortally wounded along the Alaska Railroad corridor. This statistic omits the extreme winter of 1989-90 when 722 moose were killed between October and April. This condition of unnatural risk-taking was the result of high snows and limited mobility as well as limited food supplies except in the rail corridor where young hardwoods had grown. The net impact was a decrease in local animal populations, as well as local hunting opportunities.

We support this legislation in order to give greater opportunity to Alaskans to provide for their families and have the option of selling meat to others. We support the development of appropriate regulations which would put domesticated animals under the supervision of the DNR/Division of Agriculture. This would allow technical assistance and economic monitoring of the moose projects in a similar manner to other private agricultural projects.

The DCED/Division of Tourism is standing by to offer technical assistance to moose farm owners to add a tourism/educational component to their operations. As many visitors are unable to observe these unique animals in the wild, we support the additional economic opportunity that observation facilities will provide to the moose farm operations.

David Fuller

DEPARTMENT OF FISH AND GAME

POSITION PAPER

Bill No: SB 46 (1/14/93)

Sponsor: Senator Miller

Division: Wildlife Conservation

Bill Title: An Act authorizing moose farming.

Department Position: Speculative benefits of this bill are greatly outweighed by serious concerns described below.

Background/Legislative Intent: This bill would amend AS 16.40.010-.020 to allow moose to be raised as domestic animals for commercial purposes and legalize the sale of moose meat. The department would be responsible for determining when a surplus of moose existed that could be made available for disposition to private ownership.

Analysis of Bill/Program Effects: Public ownership of wildlife and prohibiting sale of game meat are foundations of wildlife management in North America. We believe the passage of legislation legalizing these activities would be a major error and detrimental to successful wildlife management in Alaska. These and other concerns, listed below, are currently causing most other western states and provinces to tighten their laws governing private ownership of big game animals.

(1) Moose are the most highly sought after big game species by hunters, wildlife viewers, and photographers. Approximately 50,000 hunters pursue moose each year, harvesting from 7,000 to 8,000 animals. Thirty-six drawing permit applications are received for each permit available. The demand for moose greatly exceeds supply; surpluses do not exist.

(2) Moose farming/ranching will require large acreages. Some proponents of this bill have expressed interest in leasing state agricultural lands. Highly productive state-owned wildlife habitat, currently used by the general public, could be removed from production of wildlife. Conflicts between big game farms and large predators are certain to occur. Populations of wolves, black bears, and grizzly bears will be impacted over a large area surrounding any big game farm.

(3) Ensuring the general welfare and humane treatment of big game on farms will become a responsibility of the department. Moose are not herd animals and do not tolerate crowding. High densities of animals in confinement will cause behavioral and disease problems with the potential for spreading diseases to wildlife and domestic animals outside the farms.

(4) Some individuals will use the opportunities provided by this bill to own a few moose as pets, for a hobby, or to promote their tourist businesses. Allowing wildife to be exploited by roadside attractions diminishes the

value of all wildlife and may lead to legal liability for the state if animals are abused or someone is injured by a moose.

(5) Allowing sale of moose meat will create serious law enforcement problems. Poachers will have an added economic incentive that they presently lack. Current and proposed levels of wildlife law enforcement are inadequate to cope with this added burden.

(6) Moose are expensive to maintain in captivity. The high stocking levels proposed for moose farming would require high levels of supplemental feeding. Moose require a special diet and cannot survive on diets that sustain domestic livestock. Moose farming has proven to be uneconomical in Canada where game farms are more common. The Yukon Territory has prohibited the use of moose on game farms. Attempts to domesticate moose in Alberta have been economic failures due to the biology of the animal (moose are unsuitable as beasts of burden, produce small volumes of milk under labor intensive conditions, and are very expensive to feed). To expect moose farming to succeed in Alaska where no infrastructure exists and no market has been established is unrealistic. The state has promoted agricultural projects in the past that resulted in continuing subsidies. The department considers the transfer of publicly owned wildlife to private ownership to be a subsidy.

(7) Alaska's wildlife resources generate hundreds of millions of dollars annually through tourism, guiding, hunting, and subsistence. Tourists list wildlife viewing as their primary reason for visiting Alaska. This experience will be diminished if tourists observe wildlife at roadside attractions and game farms.

(Please refer to the department briefing paper, *Farming of Big Game Animals*, for additional information.)

Commissioner's Signature Ron Somerville by G.B. Date 1/28/93

BRIEFING PAPER, DEPARTMENT OF FISH AND GAME, JANUARY, 1993

FARMING OF BIG GAME AMINALS

INTRODUCTION

This paper will further document the position of the Alaska Department of Fish and Game regarding game farming, and specifically, the proposed legislation authorizing moose farming in the state.

Proposed legislation (SB 46) would amend AS 16.40.010 authorizing the transfer of surplus moose into private ownership as domestic stock for commercial or scientific/educational purposes; AS 16.40.020 would be amended to allow meat from the slaughter of these moose, and their offspring, to be commercially sold.

Alaska's *Species Management Policies*, similar to those throughout North American states and provinces, have long held that the transfer of game animals to private ownership for commercial purposes is not a wise use of these resources. These policies were adopted following public hearings and approval by the Board of Game. The Department has consistently discouraged commercialization and privatization of big game for over 20 years. Past legislation has provided for the transfer of excess wild muskoxen and bison into private ownership. These species, as well as elk (under AS 16.04.050), may now be privately raised in Alaska. *Species Management Policies* must be modified to recognize commercial uses of these species. However the Department continues to have serious concerns that follow many other states and provinces regarding the private ownership of other native big game animals.

Current Status of Moose

Moose are one of the most highly desired big game species in the state. Approximately 50,000 hunters harvest about 7,000 to 8,000 moose annually There are about 32 drawing permit hunts for moose throughout the state, and for each available permit, 36 applications are received. Clearly, the demand for moose greatly exceeds the supply. Surplus animals do not exist.

Moose are also a major attraction for wildlife viewers, photographers and outdoor enthusiasts. Millions of dollars are

generated annually by these visitors to Alaska. A primary reason why these groups travel to Alaska is to view wildlife, and moose are an important component of that opportunity. Diminishing this experience by privatizing moose or other big game species would not be in the best economic interests of the state.

Economic Considerations

Moose are very expensive to maintain in captivity. Average moose food consumption is 20-30 pounds per day during summer, and 10-12 pounds per day in winter. The most productive natural areas in the state can only support 6-8 moose per mile ^{2} during winter. Moose farming advocates have proposed stocking densities in excess of 16 moose per mile^2. A high level of supplemental feeding would obviously be required. All moose held in captivity throughout the world are fed either native browse (which is very labor intensive to acquire) or a pelleted ration containing 33% aspen sawdust which is very expensive to produce; roughly twice the cost of domestic livestock feed. The Department's Moose Research Center (MRC) spends $15,000 per year on winter supplemental feed for 20 animals.

Fencing required to keep moose contained in an area is a substantial capital cost. Material costs alone (no labor) for fencing adequate to keep moose contained averaged $13,000 per mile (1987 figures). Therefore, a 1 mile^2 enclosure (4 linear miles of fence) would cost $52,000.

Moose farming has not proven to be economically feasible in areas where game farms have already been established and where considerable effort has been spent establishing markets for wild game products. Game farms in Alberta do not commercially raise moose because they are not profitable.

The Yukon Territory Department of Renewable Resources contracted a private consulting firm in 1986 to analyze the economic feasibility of game farming in the Yukon. The feasibility study concluded that moose are not suitable game farming animals because of their tendency to develop density-related disease. The Yukon government subsequently adopted a policy that prohibits the use of moose in game farming. The same study indicated that game farming of other species might be feasible, however the initial investment would be at least $400,000 to 450,000 and annual operating costs would be $17,000 to $20,000 excluding labor.

Proponents of farming moose refer to the reported success of Russian moose farming, where moose have been used as work animals, and for milk and meat production. These reports are not accurate. Alaska Department of Fish and Game biologists have confirmed through literature review and personal discussions with Russian project biologists that moose farming in Russia was unsuccessful.

In the early 1940's, two large farms were built for moose farming; one in the Pechora River Valley and one in central Siberia. By the mid 1960's, the Siberia site was abandoned, and the Pechora Valley site is now only a field research site, similar to the MRC. The experiment was abandoned for the following reasons:

*Moose could only be used as work animals in winter because they do not have sweat glands and summer work caused overheating and death;
*Milk production was low and very labor intensive;
*Intensive management of wild animals produced as many animals as on the farms;
*hand-cutting browse for feeding was too labor intensive;
*there were many behavioral problems with the farmed moose.

Additional costs for a moose farming project, which should be considered in any discussion, are those associated with the oversight, inspection and enforcement of the program. There is no doubt that these costs would be substantial, and would have to be absorbed by either the state or the industry.

Conflicts with Large Predators

Game farming, for moose or other species, would result in significant conflicts with large predators such as wolves, and grizzly and black bears. These predators are common in most places of Alaska were game farming might occur.

Large predators would certainly be attracted to concentrations of farmed animals, and losses to game farm stock would occur. Large powerful predators such as brown bear could destroy fences, resulting in increased maintenance costs to the farmer, as well as the release of stock into the wild. Game farmers would either destroy wild predators attracted to their operations, or expect the state to resolve the problem. Either way, valuable resources belonging to the people of the state would be needlessly destroyed.

Additional conflicts could occur between farmed and wild individuals of the same species. Adult wild bull moose during the rutting period, could be attracted to farmed animals and easily destroy a fence or injure animals during rutting displays or fights.

Disease

This issue is, without doubt, the most serious concern in terms of monetary costs to agencies, as well as to the health of the public and wild populations.

Importation and transportation of wildlife species poses the risk of spreading disease to free-ranging populations. Major diseases of concern include bovine tuberculosis (*Mycobacterium bovis*) and bovine brucellosis (*Brucella abortus*) in elk, rangiferine brucellosis (*Brucella suis* type 4) in reindeer, and bluetongue in elk. Bovine tuberculosis and brucellosis are transmissible to humans as well as native wildlife. In Alberta, over $10 million has been spent in an unsuccessful attempt to control tuberculosis, and at least 30 people have contracted the disease from game farming situations.

Other diseases and parasites potentially present in translocated wildlife include anaplasmosis (*Anaplasma marginale*), meningeal worm (*Parelaphostrongylus tenuis*), carotid artery worm (*Elaeophora schneideri*), and giant liver flukes (*Fascioloides magna*). Quarantine and inoculation of ranched game can reduce the risk of disease transmission to native wildlife, but these measures will fail when animals escape quarantine, when tests for disease are not foolproof, or when an unethical game farmer attempts to circumvent proper procedures. Introduced parasites and diseases could seriously diminish Alaska's wildlife populations and reduce opportunities for consumptive and nonconsumptive users of these species.

Genetics/Hybidization

Individuals or groups of animals that are farmed or herded will eventually escape captivity through accidents or inadequate fencing. For example, bison and reindeer have escaped captivity in Alaska, and elk in Alberta and Colorado. In 1992, at least 5 elk with ear tags were killed during the hunting season in Colorado. Overall, a total of 155 exotic free-ranging animals have been killed in Colorado; all escapees from game farms.

Wildlife that escapes captivity poses the risk of contaminating the genetic integrity and fitness of Alaska's wildlife species through hybridization. Native wildlife populations exhibit particular genetic adaptations to their environment, which have caused them to be successful through time. Some domesticated stocks, especially exotic species, may be able to out-compete wild populations. Colorado has spent over $750,000 in a 3 year program to eliminate genetic contamination from red deer for elk farms in the state.

Habitat Loss

Game farming for some species requires the fencing of large blocks of public land if the operation is to be economically feasible. This would present two major problems:

1) Fencing of the land and the associated habitat (with fencing adequate to contain farmed animals) would preclude use of that area by native wildlife, resulting in a loss of production on these lands and a decline in populations of wild species favored by the public.
2) Fencing would also preclude use of the area by the general public for consumptive and non-consumptive uses, and may increase access or trespass problems.

Some states, for example Colorado, do not allow any public land to be incorporated into game farms. They also can deny any game farm application if it is in a critical habitat area, such as a calving area or migration route.

Poaching

An established commercial market for the sale of game meat introduces an incentive for large scale poaching of free-ranging wildlife species and for illegal sale of game meat. A poacher could sell poached wild meat to an unethical game farmer to mix with farmed meat or sell directly to an unscrupulous retailer.

Unauthorized capture of wild animals, in this case moose, to supplement farmed breeding stock could also occur. In some areas where these farms would be located, it would be very easy to capture wild adult or calf moose for commercial sale or harvest. In Colorado for example, 3 prosecutions in 5 years have been made for capturing wild animals to stock game farms. A large regulatory network and inspection force would be necessary to reduce the incentive for illegal take and sale of game. Current levels of law enforcement are inadequate to cope with this situation.

The public would be the eventual losers in this situation, as public wild resources would become scarce in areas adjacent to unethical farms, and reductions in hunting opportunity would be necessary to maintain wildlife populations at minimum levels.

Experience in Other States

Wyoming, in the mid 1970's, declared a total ban on all forms of game farming.

Washington, in 1992, approved permanent regulations prohibiting the importation, propagation and movement of native deer, elk, moose and caribou in the state. These regulations were established to "protect the state's free-ranging animals from disease, interbreeding and other risks..." from game farm animals.

Utah prohibits ownership of all native big game except bison, and all exotics except fallow deer.

California has a moratorium on importation of any new, non-domestic stock pending development of new disease testing protocols.

Oregon is currently working to adopt new regulations concerning the private holding of all deer species (cervids).

Yukon Territory has banned moose farming.

Alberta had spent over $10 million and destroyed over 2,000 game farm animals in an unsuccessful attempt to control an outbreak of Tb.

Montana, in May 1992, adopted a new, more restrictive set of regulations covering game farming in that state. New legislation, modifying game farming operations was introduced in January 1993.

DIVISION OF ENVIRONMENTAL HEALTH
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February 26, 1993

Senator Mike Miller
Alaska State Legislature
PO Box 55094
North Pole AK 99705

Senator Miller:

The first statement "High densities of animals will cause behavioral and disease problems with the potential for spreading diseases to wildlife and domestic animals outside the farms" interests me. Does this mean the Department of Fish and Game would favor low densities of domestic animals under open range conditions??

Confined animals have difficulty transmitting disease to wildlife or other animals if there is no contact. Disease could only be transmitted from confined animals to others using a vector or intermediate host. To date I am not aware of any vectors, i.e. flies, ticks, or snails, in Alaska which have been incriminated in disease transmission in livestock. To be correct one must add that canines and felines do get tapeworms from shrews, rabbits and some fleas.

Therefore the chance of disease transmission without contact or vectors appears remote.

To address the specific diseases I would like to start with Mycobacterium bovis or Tuberculosis (TB) Canada introduced TB into their elk farms when they (Agriculture Canada and USDA) used the caudal fold intra dermal test. To find the infected elk they switched to the single cervical intra dermal test. The reactors were condemned, killed, and an indemnity was paid based on breeding value as opposed to slaughter value. Hence the high indemnity cost.

To prevent the introduction of TB, Alaska has taken the position that all imported elk shall have a negative TB test using the single cervical test and originate from a herd which has had a negative herd test within the last twelve months using the single cervical method.

Bovine brucellosis (Brucella abortus) can occur in elk. To prevent the introduction of this disease, elk for importation must test negative for brucellosis and originate from a herd which has had a negative herd test within the last twelve months.

Rangiferine brucellosis (Brucella suis type 4) is a problem because it currently exists throughout the state of Alaska in numerous species of animals.

Everyone knows it occurs in reindeer but, according to Dr. Zarnke of Alaska Fish & Game in his research report, "Serologic Survey of Alaska Wildlife for Microbial Pathogens," the disease is found in many species in many areas of Alaska. For example:

1. Grizzly Bear - Admiralty I, Kodiak I, Becharof, Noatak, Units 13, 26C, 26A, and 20.
2. Wolves - Denali Park and ANWAR.
3. Moose - Unit 13.
4. Musk Ox - Nunivak Island.
5. Caribou - Nelchina, Porcupine, Central Arctic and western Arctic herds.

My experience has demonstrated with the William's herd that total confinement combined with test and slaughter procedures can eliminate brucellosis from herds.

Research completed but not yet published by UAF and Agriculture Canada, has shown that healthy, pregnant cows and bison infected with B. suis 4 ran a transient temperature and titer, but did not abort. Since it doesn't cause pathology in cattle or bison; can be eradicated with confinement using test and slaughter procedures; and appears to be endemic in the state in several species; is it really the dread disease of the North???

Blue tongue in elk can be fatal as with other domestic species. The Blue tongue virus is transmitted by a biting gnat. The gnat is found in the lower 48 states and occasionally as far north as the Okanagan Valley in Southern British Columbia. Without that gnat there is no natural transmission. Additionally, all livestock and elk must have a negative blue tongue test prior to entering Alaska. Once again, in Dr. Zarnke's publication, he states he has found serologic evidence of Blue tongue (BT) or Enzootic Hemorrhagic Disease (EHD) already in Alaska, i.e.:

a. Elk - EHD - Kodiak
b. Dall Sheep - BT - Unit 20A
c. Caribou - BT - Mulchatna, Porcupine Herds
d. Caribou - EHD - Western Arctic Herd

Regarding Anaplasmosis, the textbook "Veterinary Medicine", by Blood, Radostits & Henderson, 6th ed., states:

> "Deer can become infected and act as reservoirs of infection for cattle. There is little point in establishing anaplasmosis-free herds when cattle share pasture with roaming deer. American bison (Bison bison) appear to be naturally resistant to infection."

Anaplasmosis is spread by ticks primarily, and occasionally by biting flies and eye gnats.