

**Name:** David Klein  
**Date of Interview:** March 6, 2014  
**Location of Interview:** Home of David Klein in Fairbanks, Alaska  
**Interviewer:** Karen Brewster and Pat Valkenburg

**Brief Summary of Interview:** This interview is for the Wildlife Society's COWCH [Conserving our Wildlife Conservation Heritage] Program. Dave talks about how he gained his international contacts by traveling to places such as Norway, Denmark, British Columbia, Scandinavia, South Africa, Portugal, and other areas throughout Europe. He talks about various projects he did and sabbaticals he went on including the following; doing a study on habitat relationships to body size of roe deer in Denmark, impala and blesbok studies in South Africa at the Mammal Research Institute at University of Pretoria, and muskox studies in Greenland. Dave also mentions doing habitat studies in Alaska, getting his PhD, and being in Washington D.C. on September 11. He mentions people that influenced him and/or worked with such as Sig T. Olson, Bob Scott, Dave Spencer, Bob Jones, Will Troyer, and Jim King. He also talks about what he feels are his significant contributions to the field of biology.

KAREN BREWSTER: So today is March 6, 2014 and I'm Karen Brewster and we're here interviewing Dave Klein and joined by Pat Valkenburg. And it's for the Wildlife Society COWCH Interview Project, Conserving Our Wildlife Conservation History. So thank you guys for being here tonight, here at Dave's house in Fairbanks, Alaska. So we'll get started.

DAVID KLEIN: Sounds good.

PAT VALKENBURG: Dave, one of the really positive things about your involvement with hundreds of students over the years at the University of Alaska has been the inclusion of quite a few foreign students, particularly from Northern Europe, Norway, Germany, Denmark. How did you come to have such extensive international contacts?

DAVID KLEIN: That's a good question. Well, I've always been -- I wasn't born in Alaska, I was born in New England and grew up there. And came to Alaska and discovered that this other side of the continent was -- in the north country -- man it was fabulous, and so I fell in love with Alaska, but then I was focused on the north. And even in high school I started -- I wasn't a good reader, but I got started and was interested in northern exploration, arctic exploration, and polar exploration, and then geography. And I

was interested in the Soviet, or the Russian, north at that time, and the geography there. And I realized it was all connected to Alaska and the Arctic. And it stimulated me to think broadly, and part of that is Alaska. That Alaska was – its geographic position is not typical U.S. Our closest neighbors are other countries, rather than other states; Canada and Russia. And any rate, and then I was working with species like caribou that are circum-Arctic in their distribution. And interested in other circum-Arctic species like muskoxen, but also sub-Arctic, and moose and other ungulates. I was pretty much ungulate-focused. So, I've always been, you know, what can I learn from other people that are outside of my area? Well, like when I was in southeast Alaska working as a brand new biologist for the Fish and Wildlife Service in territorial days with a major responsibility was Sitka black-tailed deer, their habitat, and management. So it was a split position. You were supposed to be doing studies, which I loved and I realized that's where I learned that science was my primary interest. But the management part of it was interesting, too, because it tied the people into the resource and I became fascinated also in the people in the native cultures as well as the newer comers, like the rest of us, into Alaska. And which were there partly because you could make a living, but also we were tied to the land and the resources. So then when I came to the university and became -- joined the faculty here, I was doing research throughout Alaska --began to do research throughout Alaska with both caribou and reindeer -- some of the reindeer work was funded by the Bureau of Land Management. And they wanted me to be more of an expert than I was. I was about the most informed one they thought, and they wanted me to be better informed, then why shouldn't I go to Scandinavia and look at reindeer ranges. And I thought that would be great. I was doing some studies out on the Aleutian Islands where reindeer had been introduced on Atka and Umnak and I was fascinated with their ecology there. And why hadn't they gone through a big population explosion when they're introduced into a new environment without predators. And so then I got funding from the Bureau of Land Management to make a trip to grazing lands in northern Sweden and Norway. And the idea of going there -- I think I'm getting ahead of myself, actually. I went there earlier because I was working on the Sitka black-tailed deer in southeast Alaska. And I was -- there wasn't a lot of work being done with deer in the Lower 48; more on deer than any other of the large ungulates. But then I realized that there was some work being done in Europe and some of their observations were quite different. And some of that was related to Aldo Leopold's experience in going to Germany and spending time studying wildlife and wildlife management and land use in relationship to wildlife. And so I began to think I'm pretty narrow in my understanding of the situation and then here we are in -- and here I was in southeast Alaska, sort of on the northwestern fringe of the deer distribution with having had very little impact, whereas in the Lower 48 it was agriculture and the relationship of deer to agriculture, which Aldo Leopold worked with. But he also spent time in Germany and realized things were done differently there. And sometimes there were better understanding of the relationship of deer to habitat but other times less appreciation for natural habitat. And they tried artificial feeding of deer and selecting genetic selection without a realization of the actual situation. So at first, when I was working in Southeast, I thought what can I learn from coastal areas for the south in northwestern Alaska? And the closest place was British Columbia. So then I -- I -- through correspondence mainly, I was able to get in touch with people -- biologists there that were working with deer. And it was a different situation. We hadn't had any

logging on a large scale, clear-cut logging in southeast when I was doing this but, it was being proposed and pushed by the Forest Service. Well, I had misgivings about clear-cut logging and a little bit of experience, but not a lot ecologically, and seeing how deer handle the winters. And then Vancouver Island, the Canadians said -- found that by clear-cut logging, they could increase the number of deer tremendously and hunters were super happy. And so -- but it was complicated because of the second growth stages following logging. But the way they were logging, it tended to mean more deer for hunters. And so I was able to get permission to go down and spend time visiting there. So that was my first international kind of experience, and it was all positive. The biologist I interacted with, Robinson, was a terrific guy. And we spent time in the field and I could compare it with southeast Alaska and realized that it was just really positive; I learned so much in a short period of time. And made the connection, which then we exchanged more information continuously, and that was part of the stimulation for me to go to the University of British Columbia for the PhD at the time of statehood.

PAT VALKENBURG: You eventually developed a very strong relationship with people in Norway, and you probably had more Norwegian students then...

DAVID KLEIN: Right.

PAT VALKENBURG: -- any other foreign students.

DAVID KLEIN: So then that was the BLM support for going to Scandinavia. But before that I did take a -- like a -- as a Wildlife Unit Leader I didn't have a sabbatical or anything like that. I wasn't a university professor, but I had good support from the federal government for what I was doing. And so I thought it would be healthy for me to learn more about -- some of the best studies in Europe with deer had been with roe deer in Denmark following -- right after the Second World War. And with controlled populations in different estates on Denmark, some of which had been under control of the Germans who had bought up some of the land and, of course, that all changed after the war and this became area for studies. And so I went over there and spent six months and took the family in Denmark and did studies with roe deer with Helmut Strandgaard, who was a biologist working mainly -- beginning to work with radio collars and monitor movements of animals, and was collecting good data. And I joined him, and I focused on habitat in relationship to body size of the roe deer that were hunted in different areas. And published that paper in *The Journal of Wildlife Management* on habitat relationships of the roe deer. And that was, it was an important paper for me. And also to get it into literature on the habitat relationship of the roe deer that fencing them was not a solution; that they dispersed and you'd better let them disperse because when the population gets too high for them to maintain productivity. If you fence them, productivity goes down, body size goes down, etc., etc. At any rate --

KAREN BREWSTER: What year was that, that you were in Denmark?

DAVID KLEIN: See, I think that was '65 or '67, I'll check on that. And so after that, then I began to meet people in Europe. So that was great. And I tied it in with some kind

of a conference, I forget which one it was, maybe the International Game Biology Conference. And then I met some Norwegians, Eigel Reimers, who was a student at the time but he was doing caribou work in Norway. And he had good connections in Norway and was doing just top-notch research showing how caribou there had been -- what they called wild reindeer, were -- with -- where predators had been largely removed and so there was hunting pressure that managed them. But it also was disturbance by humans, including railroads and roads and cutting up their habitat and then overgrazing some say of the winter lichen ranges, and forcing them to frequently either move or populations went down. So that began my association in Norway and then that led to connections with the Swedes and the Finns when it came to domestic reindeer in the north of all three countries. And Norway has this unique situation with wild reindeer or caribou in the south. And then as you go north, there's feral reindeer and then finally herded reindeer by the Sami people, the -- what were called at that time, Laplanders. And so I made connections and continued to keep this focus and stimulated my interest in tying all this together with Alaska and northern Canada, where I had some connections there because of graduate students who were working -- from Canada, who were working at the university. And I should mention in the case of the -- in the northwestern Canadians, like -- there was an agreement early on with the University of Alaska when it only existed that Fairbanks -- That students from -- that wanted to come to attend the University in Fairbanks from Yukon and Northwest Territories could come without paying foreign tuition rates, so they paid the same tuition as rates of Alaska. And that was from very early on at the University of Alaska and that was important, so our connections there were strong from the beginning with Canada and particularly Yukon, but to a lesser extent with other parts of Canada. That was followed many years -- quite a few years later when the University of Northern British Columbia was established a similar relationship was established between the University of Alaska Fairbanks and the University of Northern British Columbia. Relating first to forest management in relationship to caribou, moose, deer.

KAREN BREWSTER: Well, you say that some of those animals, caribou, moose, and deer move across our borders between Alaska and Canada, right?

DAVID KLEIN: Definitely.

KAREN BREWSTER: And in terms of wildlife management, is there cooperation between the two countries? How does that work?

DAVID KLEIN: Yeah...

KAREN BREWSTER: I'm going off subject.

DAVID KLEIN: It gets complicated, but the major herd that's international between Alaska and Canada is the Porcupine caribou herd. So that's tied in with the federal government. That's the calving grounds is -- and the Arctic National Wildlife Refuge includes the calving grounds and a lot of the migration routes and some of the wintering areas. But some of the calving grounds and some of the migration routes, and some of

the wintering areas are also in Canada. And so yeah, there's been excellent cooperation, even though technically that kind of cooperation was supposed to go through -- if it was Fish and Wildlife Service, as Wildlife Unit Leader I was part of that -- it had to go through the State Department and the Canadian's, whatever it's called in Canada similarly. But we tended to avoid that, because here they're our neighbors and we worked well together. And we did accomplish a lot and we tied in both the State Department of Fish and Game and the Yukon Wildlife Branch, in addition to the Canadian Wildlife Service. So it was both state and federal, or provincial and federal. And then we cooperated as biologists and scientists in doing biological studies to the extent that we sometimes passed money back and forth, which was sort of a no-no if we had gone through channels.

PAT VALKENBURG: Well, I remember, you know, 20 years ago we used to get away with crossing the border and landing on the other side without having to clear customs. And that's all changed a little bit now, but it was very informal and a very good working relationship. I think besides the Migratory Bird Treaty Act -- the agreement -- the International Agreement we have on the Porcupine herd, may be the only agreement we have for mammals that I know between Canada and the U.S.

KAREN BREWSTER: There's polar bears.

DAVID KLEIN: Except for marine mammals.

KAREN BREWSTER: Yes.

PAT VALKENBURG: Marine mammals, too.

KAREN BREWSTER: And polar bears we have.

DAVID KLEIN: Yeah. And the belugas, yeah.

KAREN BREWSTER: So when was that trip to Norway? Did you do a sabbatical year?

DAVID KLEIN: I did a sabbatical then finally in 1972/'73 -- so that was a full year, and I went with the family again to the University of Oslo. And that was kind of tough financially because we didn't have any sabbatical program through the Fish and Wildlife Service and the Cooperative Wildlife Unit Program. So I had to take -- you know, accumulate annual leave without using it for a while. And plus I had a family with three children, three young children, but I was -- the whole family was excited about doing it and we had to -- we were fortunate to be able to rent our home while we were gone. And had a Fulbright grant to cover the travel costs for the whole family over and back. And then the University of Oslo came up with some funding to give some lectures on environmental management, mainly wildlife orientated. And then I was able to be involved with research with the wild reindeer in the southern Norway and Hardangervidda area, a plateau area between Oslo, and Bergen, and Trondheim.

PAT VALKENBURG: And you also later did a sabbatical to South Africa where you did work on the browsing of impala was it, and various other species?

DAVID KLEIN: Yeah. The South Africa thing was a product of going to conferences mostly in northern Europe on ungulate research and management. And meeting with South Africans, who I was impressed with, and some at the Mammal Research Institute at the University of Pretoria were doing some excellent work with African wildlife, but particularly African ungulates. And I thought, you know, really here I've been working with ungulates species primarily in the north in the Arctic and how they're adapted and yet the evolution of these species occurred in Africa. Of these groups, occurred in Africa. And I should become more familiar ecologically with that. Evolution and ecology have been tied together in my life and was essential for understanding ecosystem dynamics in relationship to the animals to their environment. So, I arranged to go there for actually only four months and the Mammalogical Institute was able to come up with some funding for doing research there on comparing impala and blesbok, both in terms of their habitat use but also their water relationships. And their -- they lived in different kind of habitats primarily with the impala being -- needing to go to water on a daily basis, and because -- partly because they were feeding on a -- they're very selective feeders and they fed on a lot of evergreen shrubs in the dry season, which are loaded with secondary chemicals and they need a lot of water to pump those secondary chemicals out. Whereas the blesbok were a high veld species, mostly grassland. And they could go for several days without going to water, because they could get enough water from the forage and they didn't have the problem with the secondary chemicals. And so I compared the behavior of the two species and it was fascinating because of the physiological adaptations. And yeah, I got more and more into physiology including a collaborator in the Mammal Research Institute, whose name I think I can't remember at the moment. But he helped me with -- we worked together, and published together on water turnover rates and developed some unique techniques to determine water turnover. Where we injected -- we were able within a wildlife preserve that was fenced, so we had the animals under control. But it was wildlife habitat, typical habitat, and we used double-labeled water that we'd inject into the animals that was radioactive. And you couldn't do this out in the wild where other people were harvesting animals to eat. And then we found that -- the problem was to avoid having to capture these animals twice, if we could get the urine, of course, but we couldn't get the urine until we -- unless we captured them. We found that the feces were loaded with water and that if we collected fresh feces -- and we had marked animals once we -- we put plastic markers on their horns and -- so we could identify animals and then we'd rush out and collect the fresh feces when an animal pooped. And then we could extract the water and develop this technique for assessing how much of the water was passing through their body.

KAREN BREWSTER: Oh, the glammers of being a wildlife biologist. Picking up the poop.

DAVID KLEIN: Right, yeah. So that was a terrific experience for me because it was a totally new environment, my eyes were wide opened and I learned so much ecology, as

well as evolution of all of the African large mammals, primarily. But you couldn't help but begin to learn about vegetation and the habitat and the birds and other members of the environment. And such a complex system, I realize it's understandable but you gotta look at it closely.

PAT VALKENBURG: Well, later on, now, you also got really interested in muskox and eventually worked in northern Alaska and in Greenland.

DAVID KLIEN: Right, and partly that the muskoxen were re-established in northern Alaska and were expanding. And so I had student projects then to look at the kind of habitat the muskoxen were selecting, and we were getting basic information on these muskoxen. But obviously it was a unique situation where an animal's been introduced and they didn't have a history of being present in the area. They had a prehistory of being present, but not a history of being present there, and so the animals were unfamiliar with the environment. And so then I realized that – it would be – I'd like -- I was more interested in the complex relationship of the muskoxen to their environment and that the best place to look at this was to go into the high Arctic where muskoxen have been highly adapted for life in the high Arctic. And it's a polar desert, sort of, in terms of precipitation, but nevertheless the plants have to grow there and to provide food for the muskoxen. And then there was – sort of about the simplest – the northernmost land there, where there are muskoxen and there were potential predators, wolves came and went from Canada periodically and built up and then frequently died out if they over-harvested the muskoxen. And the muskoxen were spotty, but it was a small – I mean, it was ecosystem – very – patch dynamics were all important. And so there'd be patches of lush green vegetation where melting snow would provide the water and then scree areas with -- that had been glaciated perhaps in the past but not in recent years. And how could the muskoxen live there throughout the year where there were other herbivores such as Arctic hares and lemmings that were there all year round where a lot of the other animals that were there migrated out like the migratory birds, so waterfowl and other high Arctic bird species with very few exceptions? So it was, again, sort of the other extreme from South Africa to northern Greenland. And from an ecological standpoint, it was easier to make comparisons within the ecosystem where there's only, say, five species of plants that are primarily important for the muskoxen year round.

PAT VALKENBURG: Well, I guess that --

KAREN BREWSTER: Well, I have one, I guess, follow up question since we're talking international, if that's okay, before we move to the next subject. Which is, how did going and doing this work in other countries, how'd that influence your work back in Alaska? What did you bring back home with you that effected your science?

DAVID KLEIN: That's a good question because wherever I've been, whether it was going from New England into western states or Alaska, yeah, I was interested in the people. And the people, both the westerners that have come there, but as well as the native people -- well, didn't have much contact with native people in New England. But in Alaska, I realized that native people were part of the environment and they were closer

to the ecosystem dynamics of the environment than were the westerners that came in. Some few, you know, joined in as trappers or hunters, but the majority of people were in the urban environments and they might hunt and fish, but they mostly spent their lives in the urban environments. But when I went to other countries, I was fascinated by the people. And sometimes their language was different, but also their life was different. The Norwegians were different than other northern Europeans, the Germans and Danes and Dutch and French. And then they were different from southern Europeans. Yeah, when I was on sabbatical, I just the idea that I was there and the Fulbright Program wanted you to interact, wanted those under Fulbright Grants to interact with other countries. And so even though you had a commitment to the country, your host country, which I did, and I had some lectures I had to give and research that I was involved in. But I also had invitations to go to other Fulbright country members in Europe, and to go and give lectures or talks. And I went to a couple. I went to Northern Ireland and that was interesting. And I went to Sweden. And it was easy to go to Sweden because it was so close to Norway. And then I had an invitation to go to Yugoslavia, that was interesting but I couldn't take it because it was just too much time involved and I was overlapped with the research. And I think I had an invitation to go to Belgium, too, but I couldn't take that one. And then I had an invitation to go to Portugal, and they wanted me to take a tour of their new national park that had just been established in northern Portugal on the border with Spain. And I thought -- first I was, "Why would they want someone from Alaska?" But they were looking for someone who had ecological training. And fortunately, my undergraduate work in Connecticut, yeah, forestry was my minor there when I took a degree at the University of Connecticut. And these were hardwood oak forests. And I realized once I got there that yeah, I had some knowledge of that area. And that just opened my eyes tremendously to see how people in the mountain communities are living in the same way they had for centuries and using the land extremely efficiently.

Grazing animals in terrace areas, and almost totally self-sufficient from the land. And I got super fascinated then in Portugal and then that connection led to more and more invitations to go back. At that time, the government was still under the -- well, it was under a dictatorship, the Caetano dictatorship that he followed Salazar, who was an economist. Both of them were economists and they sort of got the country back on their feet, but it was too restrictive on everyone. And very oriented toward the wealthy members of society, so then they had the bloodless coup. And then the young college student who had been my advisor was now -- not my advisor my interpreter, and colleague -- he had been studying in England, studying ornithology for graduate studies. So he suddenly became head of the new wildlife program within the Division of -- Administration of Forestry and he invited me back to tour Portugal, and this led to continuing connections with Portugal. And in a way, a very positive way from my standpoint, but it's also from their standpoint because they were trying to introduce good land use management. And once they joined the EU [European Union] that built strength in what they were doing and they were working through the University and trying to get more science education into the schools. Environmental education in the schools, which has been a priority with me here in North America and Alaska. So it's been a terrific experience.

KAREN BREWSTER: I was wondering if scientifically, you brought things back and it changed the way you were doing wildlife biology and influenced your thinking about your work here in Alaska?

DAVID KLEIN: Yeah, definitely, it definitely did and especially with some of the student projects were working in areas where indigenous people, the Alaskan natives, especially in the Yukon-Kuskokwim delta area where the Yupik native people -- It enabled a better understanding of the people and recognition that you can learn a hell of a lot from those people if you get to know them and hire them to work as field assistants, etc. So yeah, that definitely paid off. And the more I learned about them, the more interested and, and I became fascinated with -- I always had been interested in anthropology, but I became much more interested and became better read on this, and continue to maintain a strong interest in the native peoples of Alaska. It's like we used a generic term for the native peoples of Alaska, but when we realized how many different native cultures exist in Alaska and they're primarily focused on the differences in the environments in which they live, whether they're on the north coast where there's no forest, or the rainforest in southeast Alaska versus the Aleutians Islands versus the Bering Sea coastal areas or the interior. So its tremendous diversity, and that's what makes Alaska exciting for me. It's just not a giant geological, biological -- but also the people diversity.

PAT VALKENBURG: Well, if you're ready to change the subject away from international issues. One of the things -- you've obviously been active in the wildlife profession in Alaska for probably 60 years or more. And obviously the profession has changed a lot in those 60 years from -- I can remember back when the emphasis was on trying to introduce some science into the profession and into wildlife management in general. And over the years, in the early years, there was a lot of emphasis on fieldwork. Lately, there's much more emphasis on quantitative techniques and probably less emphasis on fieldwork, but in general, can you say something about your impression of how the wildlife profession has changed for the good and for also perhaps, for the bad?

DAVID KLEIN: Sure. And that's where I have a keen interest and part of it is trying to -- Generally, I tend to avoid polarization in my thinking and, you know, this was good or this was bad. This is what happened in the past and how can we learn from the past and try to take advantage of that in planning for the future. So it's so easy to get polarized politically and in one's thinking. I mean, it's like -- over various issues like, say gun control and hunting, and non-hunting and protection of wildlife. Is it protection or conservation or harvest? And what about non-game species? I mean, what's the value in non-game species? Is there any economic value? Do we have to put economics on everything?

PAT VALKENBURG: So do you think we're more polarized now than we used to be, you know, 30, 40 years ago?

DAVID KLEIN: Yes and no. I mean, that's a problem. When I was first employed in southeast Alaska, then it was pretty primitive in some ways. There were virtually no

game wardens in Alaska, there were no biologists, game biologists in Alaska. And the big concern was like salmon and the, you know, God damn grizzly bears, they ate the salmon. And then we put – the territorial legislature put a bounty on virtually everything.

PAT VALKENBURG: And there was plenty of polarization then. I remember the polarization over antlerless deer harvest, too.

DAVID KLEIN: Well, that's when I -- I stepped into that and fortunately the fellow I replaced, Sig Olson, he was a mentor for me. That was Sigurd T. Olson. His father was Sigurd F. Olson, who was the outdoor writer who grew up -- well both of them grew up in Lake of the Woods country [Minnesota]. And Sigurd F. Olson played a big role in the development of the Wilderness Society and the early conservation work and protection of unique habitats like the Lake of the Woods. And Sig, his son, did a master's on -- his master's thesis was on loons, I think, in Minnesota. And then he got hired to come to Alaska. And he had been in the military and was a veteran, got shot up a bit, but he had -- from reading his father's writings, he was very similar to his father and wonderful sense of humor, always happy guy, but a very sharp and knowledgeable. And he had -- the one that had preceded me in southeast, said going to local meetings of the hunters and trying to convince them that there's no point in protecting the antlerless deer, that there were too many deer in the environment -- there were so few hunters in the communities there and access was very limited because there were no roads, you went by boat to go hunting. And if you saw another boat anchored on the beach, you didn't hunt there. There were always places where there were no hunters to go hunting. And so there were no accidental shooting of other hunters in those days. And the attitude was, you know, you were out there for meat. You always shot the animal in the neck or the head because these weren't huge animals and you wanted as much meat as possible. So you had to have a good shot. And you don't shoot running animals. And so you were very careful and if you wounded an animal you stayed on it until you got it. And so there was good sportsmanship in that regard, but to convince some of these long-time hunters that the best way to have more deer to kill was -- because obviously the deer were not always where you wanted them to be during the hunting season. They might be up in the alpine areas and you didn't want to go hike all the way up there. And that's where the big bucks were early in the season. Well, you have to wait till the rut and then, damn it, it rains all the time. And then snow came.

PAT VALKENBURG: Well, do you think people had that attitude, that bias against shooting does, because deer had been rare at one time, or -- ?

DAVID KLEIN: Well, yes, deer population fluctuated over time, and they fluctuated mainly in relation to winter severity, at least in the central, southeastern and Petersburg and northern southeastern. And in central southeastern, where there were wolves. Northern on Admiralty, Baranof and Chichagof there were no wolves, they never got there. But in the severe winters, they'd go down towards the beach, they'd be forced down by the snow, and then they'd overeat the available winter browse and starve in large numbers if you had snow that lasted for more than two to three weeks at a time that was really deep, so that they couldn't forage. But the way they could survive was in the

old growth timber close to the beach. So, when the logging started, it focused on that close to the beach because they were using -- they were logging from the beach with rafts and cables, and would bring the logs down the beach without building roads. So they were harvesting the wintering habitat of the deer in severe winters. So yeah, populations would fluctuate widely, especially in the central and northern part of southeast in relationship to winter conditions and snow depth and severe storms. So populations would fluctuate over a five to ten year period. And you'd have mild winters, a series of mild winters, there would be deer everywhere and hunters never had any problem and they didn't complain about anything. But then, when they decreased, they blamed the wolves and they wanted the wolves to be poisoned. And the federal government was happy to go out and poison wolves with the Predator and Rodent Control people. They needed something to do. Early on, the eagles were considered bad for fish and even some of the hunters claimed they were killing young deer. And so bald eagles were -- they weren't protected and then they put a bounty on -- The state legislature put a bounty on them, I think it was fifty cents for a pair of eagle legs.

PAT VALKENBURG: That doesn't sound like much, but apparently it was enough of an incentive.

DAVID KLEIN: Well, I remember then they suddenly stopped that about -- I think, two years before I went down there. I went down in 1955 and then a federal law protected eagles. And we visited some old semi-abandoned trapper's cabins and under the eaves were these bundles of eagle feet that they hadn't gotten around to taking in and getting their fifty cents per feet. But fifty cents then was a hell of a lot more money than fifty cents today. And so it was a different time, and we frequently forget that. I remember reading a report, I still have a copy in my files somewhere if I can find it, from some game warden from Washington or Oregon. The federal game warden was assigned to come up by steamship to Alaska, because there were rumors that there was wanton killing of wildlife. And he came up into Petersburg and Wrangell Narrows and here were all these hunters out there, natives as well as the Norwegian fishermen. They're out harvesting deer, and so they come in with just like ten or so deer in their boat and this fellow, "This is terrible. It's terrible like this." And the wording he used was amazing. He said, "You know these savages that are out there killing them." Referring to the natives. "And indiscriminate killing." Well, they were -- obviously, they were in their boats, they were bringing the meat back home to use and they would starve if they didn't. There was tremendous starvation. This was a deep snow winter. They were all down at the beach.

PAT VALKENBURG: It was nothing like he'd ever seen down south.

DAVID KLEIN: And then he said the only white person in Petersburg was Sing Lee [SP?] who ran a restaurant. A Chinese. And says, "The restaurant is where savages and sons of Norway, and they were doing, they were out there -- taking all these --"

PAT VALKENBURG: Yeah, times were different all right.

KAREN BREWSTER: What else has changed in the field of wildlife biology?

DAVID KLEIN: Pardon?

KAREN BREWSTER: What else has changed in the wildlife profession?

DAVID KLEIN: Well, the big change that I see over time from the early days is under the federal government, which was under the territorial government technically, but it was supported by the federal government. The Fish and Wildlife Service worked through what was called the Alaska Game Commission. And their focus was on trying to understand what was, how habitat related to numbers of animals. And so I was encouraged to get information on harvest of animals. And so I'd go and interview hunters and get lower jaws and get age and sex composition of the harvest, which is valuable for estimating the condition of the population. But I also was encouraged to do habitat studies and that's where I started. And some of that was encouraged by Sig Olson, but some I figured I was definitely interested in. I had a good background in botany in undergraduate training. And so I started building some enclosures, or exclosures, deer enclosures with enclosed areas, small ones ten by ten or something like that. And Sig was a good cartoonist, an artist, and had a wonderful sense of humor. So I have a copy of the first technical publication I'd done, and it was done through the Fish and Wildlife Service at that time in territorial days. And it was just sort of like a statement on deer management in southeast Alaska. Number one in the wildlife series for the Fish and Wildlife Service, under statehood. And Sig illustrated it with some cartoons. The cover in fact has a picture of some deer and a biologist. I forget the exact title. I'll photocopy that, I brought it home. And then he put -- made the charts showing population fluctuation of the deer over time, and with deer going up and down the slope. And then an enclosure with deer looking in and salivating and then a sign saying, "Keep Out! D. R. Klein, biologist." And that wasn't -- And they put those cartoons in the annual reports, too, that would go to Washington. And somebody in Washington that was over us all said they didn't particularly approve of this. I thought it'd liven the reports and people -- hunters started looking at them when they were amusing like that, and it made them real.

KAREN BREWSTER: Well, it seems to me that studying habitat to understand the animals makes sense. It's a very holistic approach and ecosystem approach. But wildlife biology didn't start out that way?

DAVID KLIEN: Well, that's what I was leading into. It takes me a long time to get into the meat of the question. But, yeah, under the territorial days virtually all of the land in Alaska was federal land. So there was no state land. It's all federal land, and no native land. It was eventually federal land. So, all of the habitat was all federal. And the federal agencies, particularly the Fish and Wildlife Service, yeah, they were doing studies, especially for waterfowl, they were doing a lot of studies that related to habitat. Why were there more ducks produced in some area than another? And my own work was what kind of habitats are most important for wildlife? And that was what I finally focused on for my PhD work, which started before statehood. And then after statehood, I went to work for the Department of Fish and Game because I wanted to stay in Alaska. If I

stayed with Fish and Wildlife, there were no jobs because they were cutting back. And so the new state constitution and their attitude, and justifiably so, was that their job was to determine the number of animals out there and then being sure that you didn't over harvest, but then you allocated through the Board of Game or what was available at the time, allocated the harvest. But the wildlife habitat was considered that's federal government, they own all the habitat. And, of course, with statehood, things began to change. But it was like, who's going to be responsible for habitat. Still a lot of the land is under federal administration, even the state land. And so there was a tendency then, with a tight budget, why should you hire people and train people and create positions to investigate habitat. Partly the assumption being that habitat is not -- it's wildlife habitat, it's not agricultural land. Wildlife habitat, wild habitat, natural habitat, why do you assume it's going to change over time? And there was not an appreciation for the fact -- for the effect that herbivores may have an impact on the environment. But we didn't have these other factors like increasing agriculture, increasing mining, etc., etc. And climate change in recent decades is bound to have an effect on the environment. And how does that affect wildlife? Well, it's not built into the system to focus on that. And so I think the Department of Fish and Game started out with their new, what was called a Game Division then and became Division of Wildlife Conservation, they had top-notch people. They were mostly graduates, initially, of our university program. And they were top-notch biologists. And some of the things they focused on initially was get rid of the God damn -- don't use poison to kill anything; don't kill wolves with poison. And get rid of the bounties. I mean, if wolf control is needed, okay, but the bounty system just spreads it all over whether it's needed or not, and it's a welfare program for people living in the bush. And so we were lobbyists on this new state legislature in a sense, and finally were -- the bounties were gradually removed. Like there were bounties on everything. Seals and Dolly Varden trout tails because they ate salmon eggs. A lot of it was salmon related but --

KAREN BREWSTER: I've never heard of a bounty on fish. That seems funny.

DAVID KLEIN: Well, they ate salmon eggs.

PAT VALKENBURG: Anything that ate salmon had a bounty on it.

DAVID KLEIN: Yeah, everything. And it was common for -- there were -- The guided hunting was an important part of the economy in rural Alaska, especially in the coastal areas on southeast, and Prince William Sound, and Kodiak. That was important to the economy. And what were they hunting? Well, brown bears were a big item. Sometimes it was other species in the coastal areas, but certainly brown bear. But at the same time, fishermen who were opposed to, say, logging on salmon streams, they also didn't like the bears. They wanted to see the bears -- They didn't give a damn about wolves. They were more concerned that, especially brown bears, they were eating a hell of a lot of salmon. So they would, the hand trollers, who were trolling for king salmon in the wintertime, they knew the waters well and they'd cruise close to shore. If they saw -- and of course bears wouldn't be out in the winter, but going into the winter or in the spring time, if they

saw a bear on the beach, they frequently would just shoot it and keep trolling along. They eat salmon, and we don't like them.

KAREN BREWSTER: Well, I'm going to change the tape.

[End of Part 1, start Part 2]

PAT VALKENBURG: -- differences of opinion among professionals in Alaska, and the public as well, have been over the issue of predator management, particularly with wolves and bears. If you go far back enough in statehood, as we talked about before, there were bounties on everything. But the controversy over wolf and bear management has persisted as long as I've been in Alaska over the last 40 years and before that. It's interesting because professionals have come down as advocates on both sides, as have members of the public. Since you've been around that controversy for many decades, what observations do you have about how the controversy has changed, or are there any ways you think the controversy will change in the future? Or how can professionals add to it or contribute to the discussion?

DAVID KLEIN: Yeah, well, that's a good question. And I should point out my association with these two panels for the National Research Council that I'm involved with. The first one was wolf and bear management in Alaska, in which there were only -- there were three Alaskans chosen to be on this panel. And putting the panel together -- this was -- that panel was funded by Department of Fish and Game money from Tony Knowles, governor at the time. Which he was sort of confronted with this problem, irresolvable problem of how to deal with wolf management in Alaska in a way that wouldn't have real negative effects on Alaska, economically or otherwise, and that included tourism and the whole works. And so in selecting that panel -- that was done by the National Research Council. They tried to put people -- a cross section of people on the panel who were university academics who were working with population dynamics and generally, not necessarily focused on predator relationships, but understood whole systems. Some were, like there was one Canadian who was a bear specialist from British Columbia, I believe. And then there were a number of Alaskans were only three, two of them were natives; one was a woman whose name I can't recall at the moment, who was the head of the Native Science --

KAREN BREWSTER: Oh, Patty Cochran, is that her name?

DAVID KLEIN: She's from Nome. Seward Peninsula. I think --

PAT VALKENBURG: The Alaskan Native Science Council?

DAVID KLEIN: Yeah. I'll think of her name, maybe. And then there was another younger guy, who was from, an Athabaskan from the Interior, I think, originally from -- I don't know where he's from. He was maybe Ya -- Wasa -- Yaser --

PAT VALKENBURG: Oh, Yaska?

DAVID KLEIN: Yaska. He had done an undergraduate degree in wildlife at UAF. And then myself. Now they didn't want anybody that was polarized on this issue one way or another. And I had -- I've always tried to be deliberate to avoid polarization on controversial issues that aren't strictly biological. That they're more than that. And take more of a science position. And that included the D-2 lands, and the Arctic National Wildlife Refuge and whether it should be opened for oil development, etc., etc. I tried to avoid taking positions on what my real feelings were on everything. I tried to stick to what I had good scientific basis for on stating my position and restrict it to the biological, ecological relationships. And so I was selected to be on this panel. And then, I can't remember the guy who was the chair -- he was so humorous at Washington --

PAT VALKENBURG: Oh, Gordon Orians.

DAVID KLEIN: Gordon Orians was the chair and so we met with groups here in Alaska. And it was very well done, I thought, under the circumstances because it was such an inflammatory kind of issue. And then Fran James, who was head of the biological -- American Biological Society, respected ornithologist and a good ecologist, and she was on the committee. And the others were top-notch people, some from University of Massachusetts and as well as other universities. So there was a good cross section of people and they also tried to get some focus on economics. I didn't know the people very well that were involved in that. But anyway, we had, -- and they didn't -- they weren't the greatest at showing up for meetings. But at any rate, there were good meetings here in Alaska and I felt relatively good about that because I think what we -- we looked at different wolf control efforts, and there were some good ones that were monit -- what we thought were good ones -- were -- was there was follow-up to see whether there was any sound basis. And what's the name of the biologist here that...

PAT VALKENBURG: Rob Boertje.

DAVID KLEIN: No, before that.

PAT VALKENBURG: Oh, Bill Gasaway.

DAVID KLEIN: Bill Gasaway. Gasaway had been involved in designing the control programs, which included some follow-up on a couple of projects. So it was like the big money was spent frequently to wolf control but nobody knew whether -- how much good it did, and didn't know how many wolves were left. And there were one or two projects, wolf control projects in Yukon that fell in that same category. To demonstrate that there was justification for control in order to bring about recovery of moose after they had been in decline and that the habitat was not the limiting factor. So that report, the major findings were that yeah, in some cases there can be justification, scientific justification and ecological justification, for wolf control. But if there's any control to be done it should be done as an experiment where it's assigned to follow up afterwards and see what happens. Whereas the main criticism I had at the time, and I think I wrote a column

to that effect in the paper, when Regelin [Dr. Wayne Regelin] in defense of, he was then Commissioner --

PAT VALKENBURG: Director.

DAVID KLEIN: -- Director. He argued that it was science-based what we were extrapolating from other areas and that, that's good enough. And I disagreed with him. I said, "Not all habitats are alike, in fact they're all different." And to extrapolate, I mean if you -- you can't argue that it's all science-based. And there were questionable situations that he couldn't rationalize away in that -- So at any rate, then we -- the point that I stressed strongly was that Fish and Game had been, I didn't say negligent, but they had failed because they weren't funded. The legislature had cut them -- their funding to explain what they were doing with regard to environmental studies and especially predator/prey relationship studies where they were doing some studies, but in most cases they weren't able to explain what they were doing to the general public. They had had, in early days, earlier in statehood time, there was a line item in the budget for putting out a journal, which was like three times a year or something explaining the studies that were going on, what they were doing and what they were finding out. So it was like -- that was cut off by the legislature, so my concern was -- and this came out not so directly in that report, but at any rate, it was there, that the legislature had cut this funding and what wasn't written into it was they wanted -- they didn't want the public to be too informed. They felt that they should be able to make judgment and the legislature taking more responsibility for management of wildlife without being trained. And they -- especially when the Board of Game would overrule, not overrule, but would accept the recommendation of Fish and Game and say, "But nevertheless, we're going to go ahead and do the wolf control." And then some of those went to the courts and they got shot down. So it was like -- what bugged me was the media was blaming Department of Fish and Game, and it was the politicization of it, which was the problem. And then there was -- under Wally Hickel, there was a wolf summit they had here and I remember then Dick Bishop and I both got up and made statements to the effect supporting wolf control *if* there was good scientific basis to do it. At any rate, we touched upon habitat, but we didn't dwell heavily on habitat. So then the second one was the National Resources Council, they asked me to be chair of one that had to do with the problem in Yellowstone National Park, northern Yellowstone, which is a wintering area. Both northern Yellowstone and adjacent parts of the adjacent states, a wintering area for elk, and it was an overpopulation of elk. And wolves had just been introduced, and so they weren't established. They were established, but they hadn't increased significantly. And so that was a tough one because we couldn't make any judgment on the wolves. It was too soon for that. But we had some good people there. There was this one woman, I forgot her name, who had done a lot of studies on probably -- mostly in Africa, but on predator behavior and prey behavior. And she made a good case, and I supported it as well, ultimately the whole group, that wolves are going to change things. It's not just the number of wolves. Because some of the people that were involved in releasing the wolves were saying, "Oh, this is great, you know, we're going to have lots of wolves and they're going to control the elk." And others were saying, "No, no, they're going to establish territories. They're going to have packs, and they're going to change the system

somewhat, but you – there's only -- You can only have a limited number of packs and they're not going to control that elk population." But this woman said, "They're going to change the behavior of the elk." And the big concern was, not so much overgrazing on the poor quality, dry vegetation habitat, it was the riparian habitat that was being hammered by the elk. And also the aspen and cottonwoods close to the riparian where the streams were coming down out of the hills. And there wasn't any reproduction on these. Beavers had disappeared because there was no longer willows along the streams. And so we said that there probably would be a reduction in use of these riparian areas. Well, we couldn't say any more than that because the elk would be more vulnerable to wolf predation in those areas. Whereas out in the open terrain, they're group animals and it's harder for them to be stalked effectively by the wolves. And that's the way it played out, but after the fact. And the worst case scenario was then I went to Washington to meet with my sort of supervisor with the National Research Council who'd been a participant, a top-notch guy. And he was so good he was assigned also to a study at the same time of the cumulative impacts of oil development on the North Slope. And they wanted me to be on that too, and I couldn't be on both, and -- which in retrospect, it was probably just as well. So at any rate, I was due to meet him there in Washington and I had been subpoenaed, not quite subpoenaed, threatened to be -- subpoenaed me to go if there was a question about opening up the coastal plain of the Arctic Refuge at that time. And the Alaska Coalition of conservation groups contacted me and they said would I be willing to go there, they would pay my way. And I was then Wildlife Unit Leader and I had to get approval from the federal government to travel. I said, "Yeah, I would, but I can't do it if -- technically, I have to get approval for travel." Even though they're paying for it, I would have to declare it. And they -- so I sent in this request and they probably also sent another request in, too, that they wanted me to -- and they would pay my expenses. And so then the head of Fish and Wildlife had to go to the Secretary of the Interior, it was under the Republican administration and they denied the travel request. So then the Alaska Coalition conservation groups, they contacted me by phone, said, if they subpoenaed me, would I be willing to go. And I said, "Yeah, yeah, I'd be willing to go. If they subpoenaed me and they were paying all the expenses, etc. I'd have to take leave." And so they then contacted the Director of the Fish and Wildlife Service and said, "We're going to subpoena Dave Klein and if you won't authorize his travel." So then they backed off and they said, "No, we'll pay for his travel, too."

PAT VALKENBURG: They didn't want to be accused of muzzling you.

DAVID KLEIN: Right. So went and did that. But any rate, there I am and what the Alaskan Conservation Coalition wanted me to do was to talk to young people about lobbying members of Congress. I said, "I'd be happy to do that while I was there." And we'd go and lobby members of Congress. And so we had one meeting. And then -- that was September 11. I'm walking to a meeting on -- we were meeting in the basement of a Lutheran Church that's only about a block and a half from the Capitol building. And so we met there for breakfast and then we'd already lined up meetings with -- at offices of varying state legislators. And there was some -- these mostly young people and I agreed to go with a team to the office, I think it was a House Office Building just on the other side of the Capitol. And so I was going to meet them there, and I had breakfast and I

started over there and I just got close to the Capitol and suddenly the people started streaming out of the Capitol and so I kept walking. And the police directing and then I'm in the crowd and they said to go to this park right on the east side of the Capitol building. And as you're walking you look down the Mall and I said, "What's going on?" And he says, "Well, there's bombs, bombs in the Mall." And you look down there and you could see some smoke from the Pentagon and it looked like it was in the -- they'd already flown into the Pentagon. But I didn't know, and he -- this guy -- I finally went in there and this guy with a cell phone and he was dressed up like -- I don't know he was either probably a legislative aide of something, but he was in his 40's and he said, "I don't know, I can't tell what's going on." So we stood there in the park for -- with the rest of the people that had come out. And then they were evacuating all these federal buildings. And then finally it came out, everybody should go home.

PAT VALKENBURG: So that was the end of the hearings I guess.

DAVID KLEIN: There were no --

PAT VALKENBURG: There were no hearings --

DAVID KLEIN: No hearings, no. And then the next -- It was a disaster because one of the students from Texas, a college, university there, Reed, I think it is.

PAT VALKENBURG: Oh.

DAVID KLEIN: It's a good school, and this young gal, super sharp gal, but she was a little too outspoken so she kind of turned you off. But she was, she was totally broken up and here we went back to the hotel and the bar in the hotel it says planes flying into the building, the U.N. building, or the --

KAREN BREWSTER: Twin Towers.

DAVID KLEIN: Yeah. And she said, "My mom works there!" And then you couldn't help but feel for this poor gal. And there it took a day and a half -- we're stuck there, of course, I'd flown into Washington Reagan Airport. And Alaska Airlines were saying, "Well, we don't know anything and we may never fly again out of this airport." So we're just stuck there in this hotel and this poor girl -- Fortunately, there were other young people and they spent time with her in her room. And it was a day and a half, she finally got a phone call from her mom, who had just barely got out, covered with all this dust and everything. But she wasn't injured. And so that -- I mean it was psychologically -- And then everybody was, "How do we get home?" And some of these young people from the Midwest that's never been to Washington, D.C. before, and mostly young people, university students then, and there were a few older people and you know, what do you do? And then you begin to realize, well it may be awhile before planes are flying again, 'cause they're shut down in Canada as well. And so some of them rented a car right away, and decided to drive back.

PAT VALKENBURG: Well, it sounds like you've been involved in lots of controversy over the years. I know there doesn't seem to be any shortage of controversy surrounding wildlife management in Alaska or anywhere else for that matter. Talk a little bit about how you think professionals should handle controversy. That's probably a valuable insight that I think people could get from your experience.

DAVID KLEIN: Well, I think that what I felt over time as a professor and as Wildlife Unit Leader and working with a lot of grad students over time, I've always felt that sometimes people have been critical of the way you're training these people; there may not be jobs available for them. But I think the kind of training they get in our program is broad and it makes them good citizens. And that yeah, we should be good citizens, not just scientists who are so focused on what they're doing that they're not aware of how it relates to the society in general and the world in general. And so I still feel that way, that at least at the University of Alaska Fairbanks that there's been -- there's a broad focus. And students -- partly it's Alaska. We have diversity here and the geographical position, we're more inclined to think globally than just nationality.

PAT VALKENBURG: So you think that helps students see the big picture and prepares them to handle whatever controversy they may be facing.

DAVID KLEIN: I've become more and more, in my advanced years, feeling that understanding ecology and understanding ecosystems and understanding humans in relationship through ecology and ecosystems, but that means understanding ourselves as a biological entity. And I think it all ties together. And that includes -- for young people, one of the problems now they don't even understand their own bodies. And they have these problems when they don't understand puberty, but they don't understand nutrition. And yet the whole system has failed to put emphasis there. Now there's some reasons for that, but the reasons are usually related to, well, we didn't -- that wasn't a problem in the past. But the past was different than the present. We had rural people living on the farms, and it was a totally different kind of situation. And now with urban people, they go to the supermarket and they don't realize where that meat came from and how it came to being. They don't know about feed lots and feeding corn to the beef to make it super fat. And then why do they have obesity problems. And the same with sugar and foods -- And so I've been involved on campus on this whole issue of health on campus. And we should understand ourselves, and understand ourselves in the environment in which we live.

PAT VALKENBURG: Sounds like you're making an argument for eating wild game.

DAVID KLEIN: That's part of it. Where it's available for sure. And if you eat -- why not eat locally produced both wild game but also Delta, range-fed beef and pork, rather than the corn lot stuff. And that doesn't have to be shipped here at high costs, in terms of fossil fuel use if you bring it here. And you don't have to use all of these supplements including hormones, which have impact on humans, especially young people.

KAREN BREWSTER: I think your point about controversy and wildlife biologists often find themselves in the midst of controversy and how you handle it, that kind of makes me

think about scientists in general. Even if it's not a controversial subject, what is your role as a scientist, in advocacy?

PAT VALKENBURG: Yeah, and I think that's very difficult for professionals, especially in the conservation field where they work for an agency. The agency has policies that may not always be in concert with their own thinking and yet they have to make a decision about whether to oppose those kinds of policies or if a dispute gets serious enough to resign and do something else, and I think it's --

KAREN BREWSTER: And how, Dave, in your experience, how do you balance your personal views versus the agency views and being an advocate or not being an advocate?

DAVID KLEIN: Yeah. By avoiding generalization too much and avoiding polarizing. I mean, it's not a question of Fish and Game going to pot, or Fish and Game is all glorious. The times changed and we don't keep up with the changing times. And that means education of young people, I think, is all important. I mean, I think young people should have more ecological training in the schools. And the teachers -- many teachers want to do this but they don't know how to do it. And they need help. Well, the positive thing is that here in Fairbanks and Anchorage, the universities have made good progress working with the school systems and they have these science outreach programs. And this current controversy now over guns on campus, campuses and the president of the university, who I've never had too much patience of drawing any conclusions about, he says -- and he's an ex-military general -- I don't know whether he was a general -- But any rate he, in effect, says, "Well, we've got all these K-12 students coming to the university now in both Anchorage and Fairbanks. And getting extra credit. And they're heading in the right direction because many of them are going to be top-notch in the fields they go into." And here it's the sciences, but not just the sciences. Well, this is the way it should be. I don't think there should be a big distinction between K-12, or K-8 and then high school, and then undergraduate. Nowadays, with the advances in learning tools, mainly the internet, that young people are advancing their knowledge much more rapidly. But that knowledge should be all inclusive and especially related to their own wellbeing, which is understanding themselves, and how they fit into the environment. And that means how they're using resources in the environment. How they're using the non-renewable versus the renewable resources. And how that relates to the economy, their health and wellbeing, and their future and their kids and their kids and their kids. And so that's what most people in the Congress and legislature, there's relatively few that think that way. Well, I would like to see people coming of voting age and becoming members of the legislature and Congress that have had a good background that includes understanding themselves in relationship to the living world. And if the living world is changing, then we should know more about how it's changing. Can we adapt? We have to adapt. How can we adapt more effectively to the changes that are occurring, whether they're human-caused changes or just natural changes?

KAREN BREWSTER: Would you advise young people today to go into the career of being a wildlife professional? Has that been a good career choice?

DAVID KLEIN: Sure, I think they should go where they think they have interest and capabilities, but they should be informed about what -- They should have better counseling in schools, in K-12, so they start heading in a given direction earlier. But in the sciences, you can change directions in any area. And I think that's the difference between now and in the past. In the past, when I was growing up, you generally thought who was the ones -- who were the people that advised you on where you should go? It was your parents, because there wasn't any system in the schools to help you. And your parents were limited because they represented a different era and if you're lucky, and I was lucky, I had parents that were pretty broad looking. And I think -- and we had rural farming experience and all of that. And they understood their environment much better than nowadays. Parents in the urban environment, they don't understand this. And what they get is -- the information they get is mostly from commercial TV. And it's not in-depth knowledge.

PAT VALKENBURG: Speaking of a TV, I don't see one in your cabin here.

DAVID KLEIN: No, I've had -- when we were raising our kids, we first decided not to have a TV and then finally we did, but we had it under control. And then we gave up on it after a while, too. And then since then, I thought it'd be nice at times maybe to look at something, but -- and I always wanted one that I could put -- a small one that I could put outside because I didn't like the idea. Because it's so -- I mean it's sort of like -- I remember when TV was first came aboard, it was like, oh man, this is a potential for learning; wonderful -- And here in Alaska, the same way out in the rural areas, I mean, at first it was the villages didn't have any control over their programs and it was heavily funded by the state for educational purposes. So the programing was done out of Juneau. Well, the natives, understandably, said, "Why shouldn't we have a voice in the programming?" And of course those people that were saying that, they were saying it because as citizens they should have a voice. But on the other hand, they weren't really -- quickly they were out voted for, we've got to have an emphasis on sports, and other kinds of things, which are not easy to control once you get them. And then the negative side was -- I did these Arctic visits, no, it was a visiting speakers program under Jay Hammond. Where the state would pay the University expenses of a faculty member if they had the time to go out and visit village schools and talk about -- it was mostly science. So I did that and I went to St. Mary's, which was a Catholic boarding school, which had a pretty good reputation, and I was pretty impressed. The teachers were mostly lay teachers that were young people out of -- fresh out of college that had good training, but they didn't have any experience. And they were doing a great job. And the kids, I was so impressed with the kids, and then they monitored them. And then I went to Mountain Village where I'd been told this teacher there was an award-winning teacher and she was, that handled my visit, and science in the school. And she apologized, she said, "Now don't be too upset, some of these -- " these were like freshmen in high school level students -- "some of them will just put their heads down and go to sleep." And she said, "It's because they go home in this small house, and they've got the TV. They've only had it for a few months, and the parents stay up and people come in and they stay up late in the night. And so they don't get any homework done and they don't get any sleep." So they come there and they can't stay awake. And so then these people, the

teachers, were really frustrated about this. And you could see how handicapped they were. In the boarding school they had control over that, 'cause they didn't have any TV. And they had things like you could go to the gym and play basketball or whatever, but they were monitored by these lay teachers. The priests and nuns didn't have much to do. There was one nun who was a dog musher and she was a very popular nun. And would take the kids out and teach them. I mean, they had an excellent record there and the high numbers of these kids that were coming to school. But they -- they were all together and they weren't too far from their villages and so they didn't feel isolated from their culture. But the school shut down, they couldn't afford to keep it going.

KAREN BREWSTER: Should we get back to wildlife?

PAT VALKENBURG: Sure, away from television, back to wildlife. Yeah, you know, Dave, I think at least for me and probably for you as well, one of the really interesting things about working in the wildlife profession in Alaska is the great number of really dedicated, talented, sometimes eccentric, people who have been attracted to the state of Alaska. And I'm sure going back into the old days of the '50's when you were first up here establishing your career, you ran into some key people along the way who had a major influence on you. Some of whom perhaps got a lot of credit because they were more flamboyant, but others who were more low-key and underappreciated. Can you think of two or three people that were role models for you in the '50's back in the Fish and Wildlife Service that you think really contributed to the establishment of the profession?

DAVID KLEIN: Well, yeah. In terms of the Fish and Wildlife Service, in particular, well, I mentioned Sig Olson and that was important. He was -- it was important, because he was well-trained and a sharp guy as a biologist, but he had this wonderful sense of humor and he tended to, "Let's not get too serious about things, there's a certain amount of humor here. Let's see the lighter side. And then maybe we can resolve the issue." And he frequently was successful when we'd have our annual meeting and they would get some controversy, he would sometimes sketch something and pass it around and it was just a spoof on -- here these guys were, two people were arguing and why. And our overall boss was Clarence Rhode then, and Rhode began to appreciate Sig. Sometimes they weren't making any progress at all and then Sig would pass one of these things around and he's, "Let me see that." And then he'd say, "Well, that's a good joke. Let's pass it around so everybody sees it. Now let's start over." But then there were other people that -- When I first came, I worked that first summer when I came to do a master's degree my -- the head of the Wildlife Unit at that time was Neil Hosley, who later became Dean. Soon after he arrived, he became Dean of the university. But he got me a job on the wildlife refuge on Kenai, working under Dave Spencer. And it was just, you know, there was no road to Anchorage then, and there were only two employees. He was the refuge manager and then the maintenance man that kept vehicles going and that was it. He didn't even have a secretary; his wife volunteered to be secretarial service.

PAT VALKENBURG: And Dave Spencer eventually became Chief of Refuges, I think.

DAVID KLEIN: Yeah. And he was -- I thought he was being easy on me and then he came back from -- he was a pilot and he was so dependent on flying because he's such a good pilot and he was doing waterfowl work and going everywhere. Nunivak and Alaska Peninsula and come back and he'd say -- I was collecting plants and building camp grounds and then we'd try to do some -- we tried to do some -- at that time it was moose range and it was emphasis on habitat improvement for moose. And so we tried to do a controlled burn. It was working with the -- I think it was the Bureau of Land Management had responsibility there at that time. And we had the teams out there and we had built fire lines, and up in some of the sub-alpine habitat, a lake on one side. And we had radio contact for the weather, and we had a big team out there ready to go with fire lighters and stuff. And it was too damn windy or too damn dry, and then it'd get too wet and we couldn't get it going. We tried to start a fire once, when we thought it was a compromise, and so we went along lighting this fire and it just wouldn't burn. It was too moist. But it was too risky because we had no way to control it if it -- But any rate, it was an attempt to improve habitat. And then later on I used to take students down there and they would -- Dave and then subsequent refuge managers, including one of our students, whose name I can't recall. And then Will Troyer, who I had known from southeast, we worked together there when he first went there.

PAT VALKENBURG: Well, Will Troyer was one of the people I was thinking of, too.

DAVID KLIEN: And so I worked with Will in southeast Alaska. And then as refuge manager when I'd go down there with students, he would just join us and give us a tour including hiking up into the mountain sheep areas. And he was just a terrific person with the students, yet he also had a good sense of humor. We all did. And it was just added to my trip down there with the students and to meet people like Will. And Will had influence on me.

PAT VALKENBURG: Well, one other person I think of from the '50's was Bob Scott.

DAVID KLIEN: Yeah, well I was just going to get to him because when I came to the University then -- Well, that summer down on the Kenai, Dave Spencer had me -- flew me into a lake, a sub-alpine lake, and then I hiked up into the Indian Creek area on the Kenai which was between Skilak and Tustumena Lakes in the mountains. Mountain sheep habitat where Bob Scott -- Bob Scott was -- they used to partition the Fish and Wildlife Service by species. So Bob was the mountain sheep guy, Ed Chatelain was the moose guy, and then Sig Olson was -- when he left the Southeast, he became the caribou guy in Fairbanks. And so I worked for Bob Scott there doing sheep ewe/lamb ratios. And he had already set up some vegetation plots up there. He had a master's degree from Oregon State in wildlife. He was the only one that had an advanced degree. The were all veterans from the Second World War, and most of them were pilots, including Bob. Ed Chatelain was -- I worked with him just sometimes. He was a terrific biologist, good scientist, and always asking complex biological questions. And Bob Scott was just -- he and I related so well together because I -- when he would drop me off and I'd go out in the mountains and work by myself. And he would fly me out there and pick me up after a

few days, and I'd come back and I'd go to another place. And it was like nirvana for me. I was fascinated with the alpine ecology.

PAT VALKENBURG: But they had no problem dropping a graduate student off on his own in the mountains.

DAVID KLEIN: In those days, no, you didn't have a radio. But you learned a lot and you had a feeling of self-reliance. You had to have that, develop it after a while, and I did. And that was, I felt, this is why I came to Alaska from New England. This was nirvana.

PAT VALKENBURG: Well, you know another person that I can think of in those days, and I got to know him a little bit when he came to University of Alaska, he started on a PhD, was Bob Jones. Who had an amazing career out in the Aleutians.

DAVID KLEIN: Well, I got to meet Bob when I was doing some of this reindeer habitat relationships out in the Aleutians. And BLM was funding that. And so I had to go through Cold Bay. And I had met Bob at annual meetings and stuff. And he had a good reputation at the time for just work in the most extreme conditions and developed in ways to do it. And so I got -- I would usually stay there coming and going, at the refuge, and got to know him well. And then he wanted to do a master's. He was looking at radar in relative to when brant took off and headed south. And, of course, this was important for air traffic, because here were tens of thousands of brant all flying together over -- direct from Cold Bay, Izembek Lagoon, all the way to the Gulf of California and Mexico where there's their wintering area, non-stop, and what about planes flying. And so he was able - - worked with both the military and the FAA. And so he did any excellent master's degree in showing what kind of weather was necessary and how they could monitor when the birds were about to take off, and then they could radio in and say where these birds were heading and that they're taking off and with the upper wind conditions, they'll be in these different locations. And that was a terrific master's project.

PAT VALKENBURG: Did you have an opportunity to work very closely with some of the wildlife protection agents, like Stan Frederickson or Ray Tremblay?

DAVID KLEIN: Yes. A little with Ray Tremblay, but also with Robards in southeast Alaska, and then, what was the one that preceded -- Oh, and Jim King.

PAT VALKENBURG: Oh right, Jim King, sure.

DAVID KLEIN: Jim King and I were both employed there on the Kenai that first summer. I was working with the Refuge, and he was -- we shared the bunkhouse and cooked together in this old military building that was a garage and had one room with some bunks in it. And he was -- had a position that he was sort of like a -- not like a stream guard, but he was responsible for law enforcement at the mouth of the Kenai River with regard to fishing. So I got to know him well and we spent quite a bit of time together. And then I kept in touch with him since then. Of course, when he was flyway

biologist, then he played a big role in some of my early students who were working on waterfowl projects.

KAREN BREWSTER: So can you just explain what a wildlife protection agent is?

PAT VALKENBURG: Well, there's been various names for them over the years, but those were the people who were responsible for enforcing the territorial game laws in the '50's set by the Alaska Game Commission. And then the names changed after statehood. They became Fish and Wildlife Protection Officers. Now they're called wildlife troopers.

DAVID KLEIN: They were within the Department of Fish and Game right after statehood and then they were moved into the state troopers, but they were designated as wildlife specialists, wildlife enforcement.

KAREN BREWSTER: And that's different than being a game warden back in the days -  
- ?

PAT VALKENBURG: No, that's the same thing as being a game warden.

KAREN BREWSTER: Okay. We don't have game wardens anymore, do we?

PAT VALKENBURG: No, not called game wardens. Some states still have protection people call game wardens.

DAVID KLEIN: Yeah.

KAREN BREWSTER: So Dave, just as a sort of final reflective question, what would you say are the three most significant contributions you've made in the field of wildlife biology throughout your career?

DAVID KLEIN: Probably can't --

KAREN BREWSTER: It doesn't have to be limited to wildlife biology.

DAVID KLEIN: I can't really --

PAT VALKENBURG: Probably supplying Alaska with most of the wildlife professionals. I think I did a tally of the people in Fish and Game who had been associated with you as either graduate students or undergraduates, and it was over 50% of the entire staff of the Department of Fish and Game.

KAREN BREWSTER: Which is like how many people?

PAT VALKENBURG: Hundreds. Hundreds and hundreds.

DAVID KLEIN: I had -- as a major professor, a major advisor in both master's and some PhD students, out of 67, I think, in my career that actually finished up that. Some started and -- a few started and didn't quite finish but went on and did good things.

PAT VALKENBURG: But you were on committees of many more.

DAVID KLEIN: I was on committees of many more. And I tried to think of the whole graduate student body in wildlife and biology as students who I had some responsibility for.

KAREN BREWSTER: So you'd say being an educator and working with those students is one of your biggest accomplishments?

DAVID KLEIN: Yeah, definitely, that would be it. But my own research focus has been on ungulates primarily and plant relationship and habitat relationship. But it's in the later years that was more broader Arctic ecology, in general, and mostly terrestrial. And now I'm finding that because of my work with The Nature Conservancy on their board and their focus has been heavy on some aspects of the marine environment, particularly salmon, that I'm becoming more of a broader ecologist dealing with the marine environment, as well. And salmon are a good one, because they tie everything together. I mean, they're so important to wildlife management as well as to the marine environment. And Pacific Salmon are such unique species that having enriched the terrestrial environment as well as the aquatic fresh water -- aquatic environment for their own benefit as well as the other animals that are involved. And that's some of my students, including Merav Ben-David, who did this stable isotope work showing how these marine nutrients moved through the whole system in southeast Alaska. Including mink and marten and otters and vegetation and trees, sort of like this salmon in the trees kind of thing, that's so important for everything. And enrich, you know -- when you think of why is the rainforest so damn productive? Well, part of it is it's these marine resources are brought in to fertilize those streams. And then the insect life, and the bird life, and the mammal life, and everything is enhanced by it.

KAREN BREWSTER: Well, you seem to be such a broad ecologist, and is that unusual in the field of wildlife biology and wildlife professionals, or is that something that's -- important?

DAVID KLEIN: Yes and no. Yes, because often if you -- for example, as a wildlife biologist in a university system, you gain recognition as being a specialist. And you become -- in your own research and everything, you can make a name for yourself if you're doing good work, and get a lot of publications that support yourself as a specialist. Well, if you're a specialist, you're not a generalist. And it used to be that that was the way to go. Now there's more of a tendency to recognize that we should be broader in our understanding, especially from the standpoint of applied management. We should be broader in our understanding of the systems in which we're working with.

KAREN BREWSTER: Okay. We're out of time.